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Environmental Impact Report

1M Warehouse Project

State Clearinghouse No. 2023020285

SEPTEMBER 2023

Prepared for:

TOWN OF APPLE VALLEY
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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) (Section 15367) and the CEQA. This EIR has been prepared to evaluate the environmental impacts associated with implementation of the 1M Warehouse 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 approximately 67.3-acre Project site is located in the northern part of the Town, which is within the Victor Valley region of San Bernardino County. The Project site is located at the northeast corner of Central Road and Lafayette Street. The Project site is located south of Johnson Road, west of Sycamore Lane, north of Lafayette Street, and east of Central Road. The Project site consists of Assessor's Parcel Numbers (APNs) 0463-241-02 and 0463-241-03. The Project also includes an approximately 1.75-mile off-site utilities alignment within developed roadways for proposed water and sewer lines. Regional access to the Project site is provided via Interstate 15, located approximately 4.6 miles west of the Project site.

1.3 Project Description

Project Summary

The Project involves construction and operation of a 1,080,125-square-foot industrial/warehouse building on a 67.3-acre undeveloped site located at the northeast corner of Central Road and Lafayette Street in the Town of Apple Valley, California. Construction of the Project is anticipated to commence in December 2023 and conclude in October

2025, lasting approximately 22 months. A tenant for the proposed industrial warehouse building has not yet been identified, but the Project would operate as an unrefrigerated warehouse and/or distribution facility.

The Project would include improvements along Lafayette Street 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 building and throughout the Project site.

The Project would support a variety of activities associated industrial/warehouse building, 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.

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 an industrial building approximately 1,000,000 square feet ± in size 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.
- **Objective 5:** Implement the development patterns envisioned in the North Apple Valley Industrial Specific Plan.

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:

Discretionary Approvals

Planning Commission

- **Site Plan Review.** A review by the Planning Commission is held in order to evaluate the Project's consistency with the General Plan, North Apple Valley Industrial Specific Plan, and applicable Development Code standards.
- **Lot Line Adjustment.** The Planning Commission will review and approve or deny the proposed lot line adjustment to modify the boundaries of the two parcels within the Project site.
- **Certification of EIR.** The Planning Commission will review this EIR and certify or reject it. If the Planning Commission decides to certify this EIR, it will make the appropriate CEQA Findings and adopt the mitigation monitoring and reporting program.

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. These additional approvals may include approvals such as a site-specific Stormwater Pollution Prevention Plan.

1.6 Summary of Impacts

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

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
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 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: ▪ **Solar Power.** At a minimum, the roofs of the warehouse building shall be designed to provide the structural capacity to accommodate roof-top solar panels. The Project shall be designed to include rooftop solar panels that generate sufficient power to meet at least 50% of the Project's total operational base energy requirements from within the Project's building envelope. The Town of Apple Valley shall verify the size and scope of the solar energy system based upon the analysis of the projected power requirements and generating capacity as well as the available solar panel installation space. In the event sufficient space is not available on the Project site to accommodate the needed number of solar panels to produce the operation's base power use, the Project Applicant or success or interest shall demonstrate how all available space has been maximized (e.g., roof, parking areas) for solar energy system use. Areas that provide for truck movement may be excluded from these calculations unless otherwise deemed acceptable by the supplied reports and applicable building standards. The Project Applicant or successor in interest, or as contractually delegated by the Project Applicant or successor in interest, shall install the solar energy system when the Town of Apple Valley has approved building permits and the necessary equipment has arrived. The operation of the system shall commence only when it has received permission to operate from the applicable utility. The solar energy system owner shall be responsible for maintaining the system at not less than 80% of the rated power for 20 years. At the end of the 20-year period, the owners, operators, or tenants shall install a new photovoltaic system meeting the capacity and operational requirements of this measure, or continue to maintain the existing system, for the life of the Project. As the Project's demand for solar power increases, additional solar panels may be added to the Project.	Less-than-significant impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		▪ **Electrical Infrastructure for Electric Equipment and Vehicles.** The Project shall be designed to include electrical infrastructure to accommodate the required number of electric vehicle charging stations, the anticipated number charging stations for electric cargo handling equipment, and the potential installation of additional automobile and truck electric vehicle charging stations. Electrical conduit shall be installed within reasonable locations (e.g., parking areas, at or near dock doors) at the time of building construction to satisfy this requirement. The Project's electrical rooms shall be of sufficient size to accommodate the upsizing of electrical equipment to accommodate potential future electrical loads. ▪ **Electric Vehicle Charging Stations.** Prior to issuance of a Certificate of Occupancy, Level 2 (or faster) electric vehicle charging stations shall be installed 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 January 1, 2030, Level 2 (or faster) electric vehicle charging stations shall be installed for 25% of the employee parking spaces required. ▪ **Sustainable Energy, Waste, and Water Design Measures.** The Project Applicant or successor in interest shall implement the following measures: - The Project's landscape plan shall emphasize drought-tolerant plants and use water-efficient irrigation techniques - All heating, cooling, lighting, and appliance fixtures shall be Energy Star-rated - All fixtures installed in restrooms and employee break areas would be U.S. Environmental Protection Agency WaterSense Certified or equivalent - 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	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		- Provide storage areas for recyclables and green waste, as well as food waste storage if a pick-up service is available - Buildings shall include high efficiency particulate air (HEPA) filtration systems within in all warehouse facilities ▪ **Zero-Emission or Near-Zero-Emission Equipment.** The following measure shall be implemented during all ongoing business operations and shall be included as part of contractual lease agreement language to ensure that tenants and operators of the Project are informed of the following operational responsibility: - All equipment and appliances operating on the Project site shall be zero-emission or near-zero-emission equipment. This requirement shall apply to indoor and outdoor equipment such as forklifts, handheld landscaping equipment, yard equipment, office appliances, etc. The building manager or their designee shall be responsible for enforcing these requirements. ▪ **Truck Requirements and Restrictions.** The following measure shall be implemented during all ongoing business operations and shall be included as part of contractual lease agreement language to ensure that tenants and operators of the Project are informed of the following operational responsibility: - 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. In addition, tenants shall 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, and the Statewide Truck and Bus Regulation. The building manager or their designee shall be responsible for enforcing these requirements. ▪ **Idling Time Restriction.** The following measure shall be implemented during all ongoing business operations and shall be included as part of contractual lease agreement language to ensure that tenants and operators of the Project are informed of the following operational responsibility:	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		- Upon commencement of operations, the tenant/operator of the Project shall be required to restrict truck idling on site to a maximum of 3 minutes, subject to exceptions defined by the California Air Resources Board's commercial vehicle idling requirements. The building manager or their designee shall be responsible for enforcing this requirement. ▪ **Anti-Idling Implementation Measures.** The following measures shall be implemented to reduce air pollutant emissions from idling: - **Signage.** Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify the Project's 3-minute idling restriction. 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 3 minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; (3) telephone numbers of the building facilities manager and California Air Resources Board (CARB) to report violations; and (4) that penalties apply for 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. - **Efficient Load Management.** The facility operator(s) shall be required to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks. - **Anti-Idling Training.** Tenants and operators on the Project site shall ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at CARB-approved courses (such as the free, 1-day Course No. 512).	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		▪ **Transportation Demand Management Plan.** For occupants with more than 250 employees, a Transportation Demand management Program to reduce employee commute vehicle emissions shall be established, subject to review and approval by the Town of Apple Valley. The Transportation Demand Management Plan shall apply to Project tenants through tenant leases. The TDM plan shall discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. Examples of trip reduction measures may include, but are not limited to: - Transit passes - Car-sharing programs - Telecommuting and alternative work schedules - Ride sharing programs	
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	Less-than-significant impact
Would the Project expose sensitive receptors to substantial pollutant concentrations?	Potentially significant impact	MM-AQ-1	Less-than-significant impact
Would the Project have a cumulative effect on air quality resources?	Potentially significant impact	MM-AQ-1	Less-than-significant impact
Biological Resources			
Would the Project have a substantial adverse effect, either directly or through	Potentially significant impact	MM-BIO-1. Conservation of Western Joshua Tree Lands. Mitigation for direct impacts to one western Joshua trees will be fulfilled through a payment of the elected fees as described in Section 1927.3 of The Western Joshua	Less-than-significant impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
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?		Tree Conservation Act In conformance with the fee schedule, mitigation will consist of payment of $1,000 for each western Joshua tree 5 meters or greater in height, and $500 for each western Joshua tree less than 5 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 for the species. The application shall include a detailed plan for removal of all protected plants on the Project site. The plan shall be prepared by a qualified western Joshua tree and native desert plant expert(s). The plan shall include the following measures: ▪ Salvaged plants shall be transplanted expeditiously to either their final on-site location, or to an approved off-site area. If the plants cannot be expeditiously taken to their permanent relocation area at the time of excavation, they may be transplanted in a temporary area (stockpiled) prior to being moved to their permanent relocation site(s). ▪ Western Joshua trees shall be marked on their north facing side prior to excavation. Transplanted western Joshua trees shall be planted in	

Table 1-1. Summary of Project Impacts

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		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 permitted impact footprint. Weekly written observation and inspection records that summarize oversight activities and compliance inspections and monitoring activities required by the Incidental Take Permit shall be prepared. **MM-BIO-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 performing impacts. 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 CEQA document. Interpretation for non-English-speaking workers will be provided, and the	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		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 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: Delineation of Property Boundaries.** Before beginning activities that would cause impacts, the contractor shall, in consultation with the Designated Biologist, clearly delineate the boundaries, consistent with the grading plan, within which the impacts will take place with fencing, stakes, or flags. All impacts within 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-8: 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-9: 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 Applicant shall apply herbicides only when wind speeds are less than 7 miles per hour. All herbicide application shall be performed by a licensed applicator	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		and in accordance with all applicable federal, state, and local laws and regulations. **MM-BIO-10. Pre-construction Clearance Surveys for Mojave Desert Tortoise and Avoidance.** Two consecutive pre-construction clearance survey in accordance with current U.S. Fish and Wildlife Service (USFWS) protocol shall be conducted to reevaluate locations of potential Mojave desert tortoise burrows within the Project limits so take of Mojave desert tortoise can be avoided. The first pre-construction clearance survey shall be conducted in areas supporting potentially suitable habitat 14 to 21 days prior to the start of construction activities, and a second survey shall be repeated within 72 hours prior to the start of construction activities; or alternatively, pre-construction clearance surveys may be conducted at any time following construction of a desert tortoise–proof fence encompassing the Project site that would ensure that tortoises cannot enter the Project after clearance surveys are completed. If no Mojave desert tortoises are found during the surveys, no further mitigation would be required; however, desert tortoise–proof fence encompassing the Project site shall remain in place until Project construction is completed and shall be monitored by a qualified biologist in compliance with current USFWS protocol. Should Mojave desert tortoise be located during the clearance survey, all methods used for handling desert tortoises during the clearance surveys must be in accordance with the USFWS Desert Tortoise Field Manual or Project-specific guidance contained in a biological opinion or Incidental Take Permit. No take of Mojave desert tortoise shall occur without authorization in the form of an Incidental Take Permit pursuant to California Fish and Game Code Section 2081 and a biological opinion or Habitat Conservation Plan. The Project applicant shall adhere to measures and conditions set forth within the Incidental Take Permit. Anyone who handles desert tortoises during clearance activities must have the appropriate authorizations from USFWS. The area cleared and number of Mojave desert tortoises found within that area shall be reported to the local USFWS and appropriate state wildlife agency. Notification shall be made in accordance with the conditions of the biological opinion or Incidental Take Permit.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		Should Mojave desert tortoise be located during the clearance survey, the Project would result in the loss of 75.1 acres of suitable habitat for Mojave desert tortoise. Mitigation for direct impacts to 75.1 acres shall be fulfilled through conservation of suitable Mojave desert tortoise 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 75.1 acres or as otherwise determined through coordination with the USFWS and/or California Department of Fish and Wildlife. **MM-BIO-11: Restoration of Temporary Impacts.** Site construction areas subjected to temporary ground disturbance from the off-site utility improvement areas (e.g., trenching for installation of associated off-site utilities including sewer and gas), shall be recontoured to natural grade (if the grade was modified during the temporary disturbance activity), The Project does not include revegetation or restoration of temporary impacts after Project completion. However, natural vegetation will be allowed to regenerate in temporary disturbed areas. Furthermore, if topsoil is removed during construction, the segregated topsoil will be replaced, and the native seed will be allowed to regenerate naturally. This measure does not apply to situations that are urban/developed that are temporarily impacted and will be returned to an urban/developed land use. **MM-BIO-12: 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 and off-site improvement areas shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the California Department of Fish and Wildlife's 2012 (or most recent version) Staff Report on Burrowing Owl Mitigation. If burrowing owls are detected, the Burrowing Owl Relocation Plan shall be implemented in consultation with the California Department of Fish and Wildlife (CDFW). As required by the Burrowing Owl Relocation Plan,	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers shall be established around occupied burrows in accordance with guidance provided in CDFW's Staff Report on Burrowing Owl Mitigation. No Project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed. Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate Project area and within a buffer zone by installing one-way doors in burrow entrances. These doors shall be placed at least 48 hours prior to ground-disturbing activities. The Project site shall be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat shall be provided following the guidance in CDFW's Staff Report on Burrowing Owl Mitigation. Where possible, burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow. Should burrowing owl be located during the clearance survey, the Project would result in the loss of 75.1 acres of suitable habitat for burrowing owl. Mitigation for direct impacts to 75.1 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 75.1 acres. **MM-BIO-13: Pre-construction Nesting Bird Surveys and Avoidance**. Special-status bird species that were observed within the Project include burrowing owl and LeConte's thrasher, and two additional special-status bird species have a moderate to high potential to occur: Bendire's thrasher and loggerhead shrike. The Project also contains trees, shrubs, and other	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		vegetation that provide opportunities for other non-sensitive birds and raptors to nest on site. Construction activities shall avoid the migratory bird nesting season (typically February 1 through August 31) to reduce any potential significant impact to birds that may be nesting in the survey area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the Project site and within 500 feet of all impact areas must be conducted to determine the presence/absence of protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans, along with an appropriate buffer established around the nest, which shall be determined by 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 be conducted when construction occurs in close proximately to an active nest buffer. No Project activities shall encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that the nestlings have fledged, and the nest is no longer active. **MM-BIO-14. 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 shall be developed in consultation with the California Department of Fish and Wildlife. At a minimum, the plan shall do the following: ▪ Identify pre-construction survey methods for American badger	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		▪ 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-15. 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 shall be established around the active den, unless otherwise authorized by the California Department of Fish and Wildlife (CDFW). Where required buffering will not be feasible, passive relocation, as outlined in the desert kit fox relocation and mitigation plan, shall be allowed with concurrence from the County of San Bernardino, CDFW, and U.S. Fish and Wildlife Service. If an active natal desert kit fox den is detected, an initial 200-foot no disturbance buffer shall be established around the natal den, and this buffer shall be maintained until the den can be verified to not host pups. Construction activities shall 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, shall be provided (including a comprehensive summary, tables, maps, and other necessary materials) at the end of the construction period. Data shall be readily available to the CDFW upon request. If an injured, sick, or dead desert kit fox is detected on any area associated with the Project, the designated CDFW personnel at	

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Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		both the Ontario office and the Wildlife Investigation Lab shall be notified as described within the desert kit fox relocation and mitigation plan. **MM-BIO-16. Trash and Debris.** The following avoidance and minimization measures shall be implemented during Project construction: ▪ Fully covered trash receptacles that are animal-proof shall be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles shall be removed at least once a week from the Project site. ▪ 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-17. Invasive Plant Management.** To reduce the spread of invasive plant species, landscape plants within 200 feet of native vegetation communities shall not be on the most recent version of the California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/ inventory/index.php). Post-construction, the Project applicant shall continually remove invasive plant species on site by hand or mechanical methods, as feasible. **MM-BIO-18. Lighting.** Lighting for construction activities and operations within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife shall be directed away from natural areas. **MM-BIO-19. Aquatic Resources Mitigation.** The Project site supports aquatic resources that are considered jurisdictional under 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) to ensure conformance with the requirements of the Porter–Cologne Water Quality Control Act (waste discharge requirement). Prior to activity within CDFW jurisdictional	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		streambed or associated riparian habitat, the applicant shall coordinate with CDFW (Inland Deserts Region 6) relative to conformance to the Lake and Streambed Alteration permit requirements. The Project shall mitigate to ensure no-net-loss of waters at a minimum of 1:1 with purchase of credits (0.58 acres RWQCB/CDFW; specifically, 0.464 acres of on-site permanent impacts, 0.083 acres of permanent impacts within off-site improvement areas, and 0.033 acres of temporary impacts within off-site improvement areas) for impacts to aquatic resources as part of an overall strategy to ensure no net loss. 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 RWQCB and/or CDFW based on agency evaluation of current resource functions and values and through each agency's respective permitting process. Additionally, the 0.033 acres of temporary impacts within the off-site improvement areas shall be recontoured to pre-Project contours, and a native seed mix shall be applied. Should applicant-sponsored mitigation be implemented, a Habitat Mitigation and Monitoring Plan (HMMP) shall be prepared in accordance with State Water Resources Control Board guidelines and approved by the agencies in accordance with the proposed program permits. The HMMP shall include a conceptual planting plan including planting zones, grading, and irrigation, as applicable; a conceptual planting plant palette; a long-term maintenance and monitoring plan; annual reporting requirements; and proposed success criteria. Any off-site applicant-sponsored mitigation shall be conserved and managed in perpetuity. Best management practices shall be implemented to avoid any indirect impacts on jurisdictional waters, including the following: ▪ Vehicles and equipment shall not be operated in ponded or flowing water except as described in permits. ▪ Water containing mud, silt, or other pollutants from grading or other activities shall not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		▪ Spoil sites shall not be located within 30 feet from the boundaries of jurisdictional waters or in locations that may be subject to high storm flows, where spoils might be washed back into drainages. ▪ Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from contaminating the soil and/or entering avoided jurisdictional waters. ▪ No equipment maintenance shall be performed within 100 feet of jurisdictional waters, including wetlands and riparian areas, where petroleum products or other pollutants from the equipment may enter these areas. Fueling of equipment shall not occur on the Project site	
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-3 MM-BIO-4 MM-BIO-5 MM-BIO-6 MM-BIO-7 MM-BIO-9	Less-than-significant impact
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-7 MM-BIO-8 **MM-BIO-19. Aquatic Resources Mitigation.** The Project site supports aquatic resources that are considered jurisdictional under 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) to ensure conformance with the requirements of the Porter–Cologne Water Quality Control Act (waste discharge requirement).	Less-than-significant impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		Prior to activity within CDFW jurisdictional streambed or associated riparian habitat, the applicant shall coordinate with CDFW (Inland Deserts Region 6) relative to conformance to the Lake and Streambed Alteration permit requirements. The Project shall mitigate to ensure no-net-loss of waters at a minimum of 1:1 with purchase of credits (0.580 acres RWQCB/CDFW) for impacts to aquatic resources as part of an overall strategy to ensure no net loss. 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 RWQCB and/or CDFW based on agency evaluation of current resource functions and values and through each agency's respective permitting process. Should applicant-sponsored mitigation be implemented, a Habitat Mitigation and Monitoring Plan (HMMP) shall be prepared in accordance with State Water Resources Control Board guidelines and approved by the agencies in accordance with the proposed program permits. The HMMP shall include a conceptual planting plan including planting zones, grading, and irrigation, as applicable; a conceptual planting plant palette; a long-term maintenance and monitoring plan; annual reporting requirements; and proposed success criteria. Any off-site applicant-sponsored mitigation shall be conserved and managed in perpetuity. Best management practices shall be implemented to avoid any indirect impacts on jurisdictional waters, including the following: ▪ Vehicles and equipment shall not be operated in ponded or flowing water except as described in permits. ▪ Water containing mud, silt, or other pollutants from grading or other activities shall not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows. ▪ Spoil sites shall not be located within 30 feet from the boundaries of jurisdictional waters or in locations that may be subject to high storm flows, where spoils might be washed back into drainages.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		▪ Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from contaminating the soil and/or entering avoided jurisdictional waters. ▪ No equipment maintenance shall be performed within 100 feet of jurisdictional waters, including wetlands and riparian areas, where petroleum products or other pollutants from the equipment may enter these areas. Fueling of equipment shall not occur on the Project site.	
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-18**	Less-than-significant impact
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
Would the Project have a cumulative effect on biological resources?	Potentially significant impact	**MM-BIO-1** through **MM-BIO-19**	Less-than-significant impact
Cultural Resources			
Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially significant impact	**MM-CUL-1. Cultural Resource Monitoring and Inadvertent Discovery Plan.** Prior to ground disturbance activities, the Applicant and/or subsequent responsible parties shall retain a Principal Investigator/Archaeologist, meeting the Secretary of the Interior's Standards, and with experience in California prehistoric and historic resources (including experience within San Bernardino County preferred), to compose a Cultural Resource	Less-than-significant impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		Monitoring and Inadvertent Discovery Plan (Plan). The purpose of the Plan is to outline cultural monitoring protocols and a program of treatment and mitigation in the case of an inadvertent discovery of cultural resources during ground-disturbing phases and to provide for the proper identification, evaluation, treatment, and protection of any cultural resources in accordance with CEQA throughout the duration of the Project. Existence and importance of adherence to this Plan should be stated on all Project site plans intended for use by those conducting the ground disturbing activities. **MM-CUL-2. 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 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-3. On-Call and Periodic Archaeological Construction Monitoring.** In consideration of the general sensitivity of the proposed Project site for cultural resources, a qualified archaeologist shall be retained to conduct periodic 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	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		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-4. 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.	
Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?	Potentially significant impact	**MM-CUL-4. Inadvertent Discovery of Human Remains.** In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the county coroner shall be 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.	Less-than-significant impact
Geological (Paleontological Resources)			
Would the Project disturb any human remains, including	Potentially significant impact	**MM-GEO-1.** Prior to commencement of any grading activity on site, the applicant shall retain a qualified paleontologist per the SVP (2010)	Less-than-significant impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
those interred outside of dedicated cemeteries?		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 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.	
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-AQ-1** **MM-AQ-2**	Significant and unavoidable impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
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	MM-AQ-1 MM-AQ-2 MM-AQ-3	Less-than-significant impact
Would the Project have a cumulative effect on greenhouse gas emissions?	Potentially significant impact	MM-AQ-1 MM-AQ-2	Significant and unavoidable impact
Transportation			
Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Potentially significant impact	MM-AQ-1	Significant and unavoidable impact
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 No. 5. Since the Town does not have jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy.	Significant and unavoidable impact
Would the Project have a cumulative effect with regard to transportation?	Potentially significant impact	The Project could result in potentially significant impacts associated with increasing hazards due to a geometric design feature related to queuing. Improvement measures required to mitigate Project's impact would include fair-share contribution to Intersections No. 5. Since the Town does not have jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy. MM-AQ-1	Significant and unavoidable impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
Tribal Cultural Resources			
Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
(a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Potentially significant impact	MM-CUL-1 MM-CUL-2 MM-CUL-3 MM-CUL-4 MM-CUL-5	Less-than-significant impact
(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 MM-CUL-5	Less-than-significant impact

Significant and Unavoidable Impacts

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

- **Greenhouse Gas Emissions.** Construction and operation of the Project would result in the generation of approximately 22,145 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-1 and MM-AQ-2 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 or taken credit for at this time. Additionally, 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 operational deficiency 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. Additionally,

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 I-SP designation.

Permitted uses in the I-SP designation include manufacturing facilities with showrooms and offices, regional warehousing facilities, and support services for manufacturing and warehousing. The North Apple Valley Industrial Specific Plan lists several different uses that are either specially or conditionally permitted under the I-SP designation. These include commercial storage facilities/mini-warehouses (i.e., self-storage facilities), offices, manufacturing, small and large equipment sales and rental, schools, vehicle rental and sales, minor and major vehicle repair, and vehicle wash facilities.

No zoning variances are being requested as part of the Project, and thus, the Project would be constructed consistent with the design requirements set forth for the I-SP designation in the North Apple Valley Industrial Specific Plan. 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. For purposes of this analysis, it assumed that Alternative 2 would consist of a 900,000 square-foot warehouse and 100,000 square-foot showroom (i.e., Ikea or similar). It is also assumed that this alternative would share a similar development intensity/floor-area-ratio/site coverage as the Project. Land uses that are expressly not allowed under the I-SP designation—specifically residential—would not be considered under Alternative 2.

Reduced Development Intensity Alternative (Alternative 3)

In an effort to reduce the Project's significant and unavoidable impacts, the Town considered a Reduced Development Intensity Alternative (Alternative 3). A Reduced Development Alternative would reduce project-related impacts associated with air quality, energy, GHG emissions, and trip generation.

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 60%, equating to an industrial/warehouse project consisting of approximately 432,050 square feet, compared to the Project's 1,080,125 square feet. Since the building footprint would be reduced by 648,075 square feet (approximately 14.8 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, 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. Although Alternative 3 would reduce impacts compared to the proposed project, it would not avoid or substantially lessen impacts to below a level of significance. Alternative 2 would result in similar impacts as the project, but with a slight increase in trip generation rates, and would meet all of the project objectives.

However, Alternative 3 would not meet project Objective 1 of developing an industrial building approximately 1,000,000 square feet in size. Alternative 3 would also not meet Objective 2 to the same extent as the proposed project. Alternative 3 would produce less jobs and generate less tax revenue compared to the proposed project. In addition, Alternative 3 would also not meet Objective 5 to the same extent as the proposed project. Therefore, while Alternative 3 would have reduced impacts compared to the proposed project, it would not eliminate any of the significant and unavoidable impacts and it would not meet all project objectives.

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 February 3, 2023, through March 6, 2023; comments received during a public scoping meeting held on February 13, 2023, 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 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			
State of California Department of Justice	February 23, 2023	▪ Concerns regarding Project impacts on air quality, noise, transportation, and hazards. ▪ Recommendations for best practices and mitigation measures for warehouse projects.	Section 4.2, Air Quality; Section 4.7, Hazards and Hazardous Materials; Section 4.10, Noise; Section 4.12, Transportation
Quechan Indian Tribe	February 23, 2023	▪ States that the Quechan Indian Tribe does not wish to comment on the Project.	4.4, Cultural, Tribal Cultural, and Paleontological Resources

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

Commenter	Date	Summary of Environmental Issues Raised	EIR Chapter/Section Where Comment is Addressed
Southern California Association of Governments (SCAG)	March 14, 2023	▪ Recommends the Project be evaluated for consistency with the adopted 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS or Connect SoCal). ▪ Provides demographic and growth forecasts. ▪ Recommends the Connect SoCal Final Program Environmental Impact Report be reviewed for guidance and mitigation measures.	Section 4.9, Land Use and Planning
Organizations and Individuals			
Dale Wedge	March 5, 2023	▪ Concerns regarding impacts on transportation, pollution, and noise.	Section 4.2, Air Quality; Section 4.6, Greenhouse Gas Emissions; Section 4.8, Hydrology and Water Quality; Section 4.10, Noise
Californians Allied for a Responsible Economy ("CARE CA")	March 13, 2023	▪ Concerns regarding Project objectives, the unspecified uses of the building, the potential for cold storage to be used, and air quality impacts.	Chapter 1, Executive Summary; Chapter 3, Project Description; Section 4.2, Air Quality; Section 4.6, Greenhouse Gas Emissions

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.

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 1M Warehouse 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 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 Site Plan Review, Lot Line Adjustment, 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 and responsible agency, because the Project has the potential to impact plant and wildlife species that are managed and protected by the state. The Regional Water Quality Control Board is also a responsible agency, because the Project has the potential to impact drainages that may be under its jurisdiction.

2.4 Summary of Project Analyzed in this Environmental Impact Report

The Project includes the construction and operation of a 1,080,125-square-foot industrial/warehouse building on approximately 67.3 acres. 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 Lafayette Street and Central Road such as 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.

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

- **Site Plan Review.** The Community Development Director has authority to approve a Site Plan Review application, which can be appealed to the Planning Commission (NAVISP P. 111-52).
- **Lot Line Adjustment.** The Planning Commission will review and approve or deny the proposed lot line adjustment to modify the boundaries of the two parcels within the Project site.

Ministerial Approvals

Town of Apple Valley Subsequent Implementing Approvals

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

Liberty Utilities

- Approvals for water and sewer infrastructure

California Department of Fish and Wildlife

- Incidental Take Permit for take of western Joshua tree
- Lake and Streambed Alteration Agreement for discharge of fill materials into potentially jurisdictional waters

Regional Water Quality Control Board

- Waste Discharge Requirements Program for discharge of fill materials into potentially jurisdictional waters

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 February 3, 2023, through March 6, 2023; comments received during a public scoping meeting held on February 13, 2023, 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			
State of California Department of Justice	February 23, 2023	▪ Concerns regarding Project impacts on air quality, noise, transportation, and hazards. ▪ Recommendations for best practices and mitigation measures for warehouse projects.	Section 4.2, Air Quality; Section 4.7, Hazards and Hazardous Materials; Section 4.10, Noise; Section 4.12, Transportation
Quechan Indian Tribe	February 23, 2023	▪ States that the Quechan Indian Tribe does not wish to comment on the Project.	4.4, Cultural, Tribal Cultural, and Paleontological Resources
Southern California Association of Governments (SCAG)	March 14, 2023	▪ Recommends the Project be evaluated for consistency with the adopted 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS or Connect SoCal). ▪ Provides demographic and growth forecasts. ▪ Recommends the Connect SoCal Final Program Environmental Impact Report be reviewed for guidance and mitigation measures.	Section 4.9, Land Use and Planning
Organizations and Individuals			
Dale Wedge	March 5, 2023	▪ Concerns regarding impacts on transportation, pollution, and noise.	Section 4.2, Air Quality; Section 4.6, Greenhouse Gas Emissions; Section 4.8, Hydrology and Water Quality; Section 4.10, Noise
Californians Allied for a Responsible Economy (“CARE CA”)	March 13, 2023	▪ Concerns regarding Project objectives, the unspecified uses of the building, the potential for cold storage to be used, and air quality impacts.	Chapter 1, Executive Summary; Chapter 3, Project Description; Section 4.2, Air Quality; Section 4.6, Greenhouse Gas Emissions

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 wildfire)
- 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 (see Section 2.8 below).

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) (2023 [Updated])
- North Apple Valley Industrial Specific Plan (2012)
- 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

Town of Apple Valley Code of Ordinances

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

Town of Apple Valley North Apple Valley Industrial Specific Plan

https://www.applevalley.org/services/planning-division/north-apple-valley-industrial-specific-plan

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, Greenhouse Gas Emissions, and Energy Modeling Inputs and Outputs, Appendix B-1
- Health Risk Assessment, Appendix B-2
- Health Effects of Criteria Air Pollutants Associated with the 1M Warehouse Project, Appendix B-3
- Biological Resources Technical Report, Appendix C
- Archaeological Resources Assessment for the 1M Warehouse Project, Appendix D
- Geotechnical Investigation, Appendix E
- Phase I Environmental Site Assessment, Appendix F
- On-Site Hydrology Study, Appendix G
- Preliminary Water Quality Management Plan, Appendix H
- Noise Attachments, Appendix I
- Transportation Impact Analysis, Appendix J
- Water Supply Assessment, Appendix K

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 (identified above in Section 2.4.1), 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 September 15, 2023, to October 30, 2023, 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 1M Warehouse 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 further detail below, the Project involves the construction and operation of a 1,080,125-square-foot industrial/warehouse building on a 67.3-acre undeveloped site located at the northeast corner of Central Road and Lafayette Street in the Town of Apple Valley (Town), California. Construction of the Project is anticipated to commence in December 2023 and conclude in October 2025, lasting approximately 22 months. A tenant for the proposed industrial warehouse building has not yet been identified, but the Project would operate as an unrefrigerated warehouse and/or distribution facility.

3.1 Project Location

The approximately 67.3-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 Project Location, Figure 3-2, Vicinity Map). The Project site is located at the northeast corner of Central Road and Lafayette Street. The Project site is located south of Johnson Road, west of Sycamore Lane, north Lafayette Street, and east of Central Road. The Project site consists of Assessor's Parcel Numbers (APNs) 0463-241-02 and 0463-241-03. Specifically, the Project site is located in Section 23, Township 6N, Range 3W, as depicted on the U.S. Geological Survey Apple Valley North, California 7.5-minute topographic quadrangle maps. The Project includes an approximately 1.75-mile off-site utilities alignment within developed roadways for proposed water and sewer lines. This alignment is depicted in Figure 3-3, Project Aerial, and is located within portions of Johnson Road, Central Road, and Lafayette Street.

Regional access to the Project site is provided via Interstate 15, located approximately 4.6 miles west of the Project site.

3.2 Environmental Setting

1M Warehouse Project Summary

Description: 1,080,125-square-foot industrial/warehouse building
Location: Northeast corner of Central Road and Lafayette Street in north Apple Valley
Existing Setting: 67.3 acres of undeveloped land with low densities of native brush/scrub vegetation

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 toward 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 contain 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 San Bernadino 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 67.3-acre Project site consists of vacant, undeveloped land. According to the Town's General Plan, the Project site falls within the North Apple Valley Industrial Specific Plan land use designation (Town of Apple Valley 2015, 2021) (see Figure 3-4, Land Use Designations, and Figure 3-5, Zoning). According to the North Apple Valley Industrial Specific Plan, the land use designation for the site is Specific Plan Industrial (Town of Apple Valley 2012) (see Figure 3-6, Specific Plan Land Use Designations).

Photos of the Project site and off-site utilities alignment are included in Figures 3-6 through 3-7B, Existing Conditions. As depicted within these figures, ground surface cover on the Project site consists of low densities of native brush and shrub growth. The off-site utilities alignment is located within public rights-of-way comprising developed asphalt roadways primarily surrounded by undeveloped areas with vegetation compositions similar to the Project site.

The site's surface elevation ranges between approximately 3,130 and 3,170 feet above mean sea level. Land uses surrounding the Project site consist of vacant land and relatively small developments. Specific land uses located in the immediate vicinity of the Project site include the following:

- **North:** Johnson Road and vacant land
- **East:** Sycamore Lane and primarily vacant land with a few residential uses
- **South:** Lafayette Street and the Apple Valley Fire Center
- **West:** Central Road and vacant land

In the broader Project vicinity, development includes commercial uses, warehouse/industrial buildings, and the Apple Valley Airport. Figure 3-8, Project Development Setting, depicts existing development within the vicinity of the Project site.

As discussed in further detail below in Section 3.4.1, utility infrastructure would be installed along Central Road, Johnson Road, and Lafayette Street and would be connected to the existing utility infrastructure around the Project site. Local connectivity to the Project site from the center of the Town and surrounding urban communities is provided via Central Road (directly west of the Project site) I-15, (approximately 4.6 miles west of the Project site), and Highway 18 (approximately 6.5 miles south of the Project site). Additionally, as discussed in Section 4.12, Transportation, the Project is currently served by the Victor Valley Transit Authority, a public agency serving the Victor Valley area within San Bernardino County, with bus service along Central Road, Highway 18, Corwin Road, and Johnson Road.

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.

This Draft EIR assesses potential cumulative impacts of the Project in combination with other projects anticipated to occur by the year 2040[1]. The cumulative analysis in this Draft EIR utilizes a combined "list" and "projections" method, pursuant to State CEQA Guidelines Section 15130(b)(1). The list incorporates available information about existing and reasonably foreseeable development in the vicinity of the Project site, including implementation of the draft North Apple Valley Specific Plan. The projections are regional projections regarding anticipated changes in population and employment.

The geographic scope of the Draft EIR's analysis varies by topic, depending on the nature of potential impacts and where physical changes would occur. Impacts have been assessed at a level of specificity based on available information for each of the components of the proposed Project. Cumulative projects analyzed are identified below in Table 3-1.

Table 3-1. Cumulative Projects

Project Name	Location	Total Square Feet	Status	Acres
Apple Valley 143 - Covington Development	north side of Stoddard Wells Road,	2.6-million-square-foot industrial warehousing distribution development	Scheduled Approval for November 2023	143

[1] This EIR uses the 2040 traffic volume forecasts method by using the countywide transportation model of the San Bernardino County Transit Authority (SBCTA) San Bernardino County Transportation Analysis Model and existing traffic volumes, which reflect past, present, and future developments expected by year 2040. (Additional detail provided in Section 4.12, Transportation and Circulation). Cumulative land use, population, and employment assumptions rely on the Southern California Association of Government's (SCAG's) Connect SoCal projections for year 2040.

Table 3-1. Cumulative Projects

Project Name	Location	Total Square Feet	Status	Acres
	2,500 feet east of Interstate 15 Freeway			
Redwood Industrial – The Development	Located southeast corner of Lafayette Street and Dale Evans Parkway	1.2-million-square-foot warehouse distribution center	Scheduled Approval for August/ September 2023	76
Loves Travel Center	located north of Stoddard Wells Road and east of Interstate 15 Freeway	Travel center and RV park	Project Approved July 2023	33.5
Inland Empire Logistics Center	Parcel A is southeast of I-15/Outer Highway 15 South and south of Norco Street in the Town of Apple Valley, CA. Parcel B is north of I-15 in the City of Victorville, CA.	3.9-million-square-foot logistics center	Two draft EIRs anticipated Summer 2023	Unknown
Quarry	Southwest corner of Flint Road/Quarry Road.	1.46 million-square-foot industrial development in the NAVISP	Consolidated Draft EIR anticipated Summer 2023	76
Cordova	Southwest corner of Cardova Road/Navajo Road	1.56 million-square-feet industrial development in the NAVISP		
Green Trucking Solutions Cold Storage	Northwest corner of Lafayette Street and Navajo Road.	400,000-square-foot cold storage facility	Scheduled Approval for October 2023	86

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),[2] resulting in high numbers of residents commuting out of the region for work. A low jobs-to-housing ratio can result in adverse environmental

[2] 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).

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 an industrial building approximately 1,000,000 square feet ± in size 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.
- **Objective 5:** Implement the development patterns envisioned in the North Apple Valley Industrial Specific Plan.

3.4 Project Characteristics

3.4.1 Project Components

The Project would include construction of a 1,080,125-square-foot industrial/warehouse building and associated improvements on 67.3 acres of vacant land (see Figure 3-10, Building Site Plan; Figure 3-11, Overall Project Site Plan). The Project would involve associated improvements, including loading docks, truck and vehicle parking, and landscaped areas.

Approximately 15,000 square feet of office space would be provided within the building. The building would have a maximum building height of 50 feet, measured from the finished floor to the top of building parapets. The building would have a floor area ratio (FAR) of 0.369.

The Project would include improvements along Central Road, Lafayette Street and Johnson Road, including construction of new roadways, frontage landscaping and pedestrian improvements (See Section 4.12, Transportation, Threshold C). 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 building and throughout the Project site.

To account for the maximum potential disturbance associated with all on-site and off-site improvements, a maximum disturbance footprint has been developed, as shown on Figure 3-10, Building Site Plan and Figure 3-11, Overall Project Site Plan. Areas in which lateral utility connections may occur or where other roadway and pedestrian improvements may be necessary are also depicted. This maximum disturbance footprint was developed by accounting for all known improvements. In some cases, the exact location of some off-site utility lines within rights-of-way has not yet been confirmed with a high degree of certainty. Thus, to account for the possible movement of utility lines (which may occur if there are existing utility lines that conflict with the currently proposed alignments), the maximum disturbance area includes the full right-of-way in which improvements may occur. For the purposes of this EIR, it is conservatively assumed that the Project may result in ground disturbance within the full Potential Maximum Disturbance Footprint.

Together, the Project's off-site improvements are referred to as the Off-Site Street and Utility Improvements. The Off-site Street and Utility Improvements are discussed in detail in sections below and are summarized in Table 3-2.

Table 3-2. Project Components

Improvement Area	Project Components
Project Site	A 1,080,125-square-foot industrial/warehouse building (inclusive of 15,000 square feet of office/mezzanine space), internal roadways, trailer/automobile parking, landscaping, and stormwater facilities

Off-Site Street and Utility Improvements	▪ **Off-Site Water Line**
	  ▪ One **16-inch water line** within **Johnson Road**, starting approximately 1,500 feet west of the intersection of Johnson Road and Central Road, extending to the northeast corner of the Project site at the intersection of Johnson Road and Sycamore Lane
	  ▪ One **16-inch water line** within **Central Road**, starting at the intersection of Johnson Road and Central Road, extending to the southwest corner of the Project site at the intersection of Central Road and Lafayette Street
	▪ **Off-Site Sewer Line**
	  ▪ One **12-inch sewer line** within **Johnson Road**, starting at the intersection of Johnson Road and Central Road, extending to the southwest corner of the Project site at the intersection of Central Road and Lafayette Street
	  ▪ One **12-inch sewer line** within **Lafayette Street**, starting at the intersection of Navajo Road and Lafayette Street, extending to the southwest corner of the Project site at the intersection of Central Road and Lafayette Street
	▪ **Off-Site Street Improvements**
	  ▪ **Construction** of **Central Road** from the eastern edge of the existing pavement surface to Central Road's eastern ROW from Johnson Road/Central Road to Central Road/Lafayette Street
	  ▪ **Construction** of **Johnson Road** to varying widths from Johnson Road/Central Road to Johnson Road/Sycamore Lane
	  ▪ **Construction** of **Lafayette Street** from its northern ROW boundary to approximately 6 feet south of its centerline from Lafayette Street/Central Road to Lafayette Street/Sycamore Lane

Note: See Figure 3-10, Building Site Plan and Figure 3-11, Overall Project Site Plan; ROW = right-of-way.

Site Access, Circulation, and Parking

Access to the Project site would be provided by four driveways (Figure 3-12, Vehicular Circulation and Access Plan). Two driveways would be located on Lafayette Street, one driveway would be located on Central Road, and one driveway would be located on Johnson Road. All driveways would be 40 feet wide and would provide full access for passenger vehicles and trucks.

Consistent with Section 9.72.070 of the Town's Municipal Code (Town of Apple Valley 2022), all Project driveways have been designed to accommodate the turning radii of large trucks with trailers, fire trucks, and garbage trucks. Signage and striping would be provided to demarcate fire lanes and clear spaces throughout the site. The Project's two truck courts would include gated entrances. These gated entryways would be equipped with rapid-access Knox boxes to provide emergency access to these areas.

Paved passenger vehicle parking areas would be provided along the southern and northern portions of the building, while tractor-trailer stalls and loading docks would be provided along the western and eastern portions of the building. In total, the Project would provide approximately 224 loading dock positions, approximately 317 tractor-trailer stalls, and approximately 1,262 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.

Off-Site Street Improvements

To facilitate adequate on-site circulation, sufficient site access for both passenger vehicles and trucks, and to ensure efficient off-site circulation on nearby roadway facilities, the Project would involve the following off-site street improvements.

- **Central Road.** The Project would involve the construction of Central Road from the eastern edge of the existing pavement surface to Central Road's eastern ROW, starting at the intersection of Johnson Road and Central Road, extending to the southwest corner of the Project site at the intersection of Central Road and Lafayette Street. The portion of this improved roadway along the Project's frontage would include a curb, gutter, and sidewalk. The remaining undeveloped ROW on the western portion of the ROW would be completed at a future time, either by the Town or a future developer that is constructing a project fronting this ROW.
- **Johnson Road.** The Project would involve the construction of Johnson Road to varying widths, starting at the intersection of Johnson Road and Central Road, extending to the northeast corner of the Project site at the intersection of Johnson Road and Sycamore Lane. A portion of this road would be protected by an approximately 500-foot by 20-foot area of rip rap within the northern portion of Johnson Road's ROW to protect against flooding from a drainage, referred to as the N-02 drainage in the Apple Valley Master Plan of Drainage, in the north. A portion of this improved roadway along the Project's frontage and near the Project's northeast driveway would include a curb, gutter, and sidewalk. The remaining undeveloped ROW on the northern portion of the ROW would be completed at a future time, either by the Town or a future developer that is constructing a project fronting this ROW. When this occurs, the rip rap feature may be removed to accommodate the ultimate construction of Johnson Road.
- **Lafayette Street.** The Project would involve the construction of Lafayette Street from its northern ROW boundary to approximately 6 feet south of its centerline, starting at the intersection of Lafayette Street and Central Road, extending to the southeast corner of the Project site at the intersection of Lafayette Street and Sycamore Lane. The portion of this improved roadway along the Project's frontage would include a curb, gutter, and sidewalk. The remaining undeveloped roadway area within the southern portion of the

ROW would be completed at a future time, either by the Town or a future developer that is constructing a project fronting this ROW.

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. Figure 3-13, Conceptual Utility Plan, depicts existing and proposed utilities that would serve the Project. These utilities are described in detail below.

Domestic Water

Domestic water service would be provided by Liberty Utilities. As part of the Project, new off-site water lines would be installed along Central Road and Johnson Road. Within Johnson Road, a 16-inch water line would be installed from an existing water line approximately 1.500 feet west of the intersection of Johnson Road and Central Road, extending to the northeast corner of the Project site at the intersection of Johnson Road and Sycamore Lane. Within Central Road, a 16-inch water line within be installed from the proposed 16-inch water line within Johnson Road to the southwest corner of the Project site at the intersection of Central Road and Lafayette Street. The proposed warehouse building would connect laterally to these proposed off-site water line improvements. To ensure adequate water pressure, an underground booster pump station would be located within the Project site in coordination with Liberty Utilities.

Sanitary Sewer

Sanitary sewer service would be provided the Victor Valley Wastewater Reclamation Authority (VVWRA). As part of the proposed Project, new sewer lines would be installed along Central Road and Lafayette Street. Within Johnson Road, a 12-inch sewer line would be installed starting at the intersection of Johnson Road and Central Road, extending to the southwest corner of the Project site at the intersection of Central Road and Lafayette Street. Within Lafayette Street, a 12-inch sewer line would be installed within Lafayette Street, starting at the intersection of Navajo Road and Lafayette Street, extending to the southwest corner of the Project site at the intersection of Central Road and Lafayette Street.

Storm Drainage

A new stormwater drainage system would be constructed on the Project site to collect and treat on-site stormwater (see Figure 3-14, Conceptual Stormwater Plan).

Under the existing conditions, the Project site is vacant and undeveloped. Central Road, along the site's western border, is a paved road with dirt shoulders. Johnson Road and Lafayette Street, along the site's northern and southern borders, respectively, are graded and unpaved roads. The N-02 drainage extends across the Project site's northwest corner, coming from northeast of the site, crossing Johnson Road, and flowing towards the southwest. The drainage crosses Central Road, flows further southwest, and becomes undefined near the Apple Valley Airport. Within the balance of the Project site outside of the N-02 drainage, stormwater sheet flows from the northeast towards the southwest, sheet flowing outside of the Project site across Central Road and Lafayette Street.

Under Project conditions, the Project's stormwater system involves capturing, treating, and infiltrating stormwater on site; conveying flows that exceed the capacity of the stormwater system off site onto and across Central Road; and collecting and rerouting run-on flows off site towards their historical flow areas.

On-Site Capture, Treatment, and Infiltration of Stormwater

Stormwater flows would fall throughout the Project site onto the building's roof, paved areas, landscaped surfaces, and aboveground stormwater detention basins. Stormwater flowing onto the building's 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 along the eastern, western, and southern frontages of the Project site. These basins would be 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 San Bernadino 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 overflow onto Central Road via an outflow pipe located at the top of the western basins. These flows would flow onto and across Central Road towards the N-02 drainage west of Central Road, consistent with the existing hydrological patterns.

Collecting and Rerouting Run-On Flows Offsite

Run-on refers to surface runoff from an external area that flows on to an area of interest. The Project site receives run-on flows from the north from the N-02 drainage as well as from the east via downgradient sheet flow. The Project would involve the construction of an engineered drainage channel along the northwestern corner of the site. Run-on flows coming from the north, which cross over Johnson Road, would run onto the site and into the drainage channel. As part of the Project, Johnson Road would be paved and feature an approximately 500-foot by 20-foot area of rip rap on its north side to slow run-on flow velocities. After passing through the rip rap feature, flowing over Johnson Road, and flowing into the drainage channel, flows would be routed within the channel in a southwesterly direction towards the channel's termination point at the center of the site's western boundary, north of the driveway on Central Road. At this termination area, the channel would transition to an approximately 300- to 400-foot-wide apron area where flows would sheet flow onto and across Central Road towards the N-02 drainage west of Central Road, consistent with the existing hydrological condition.

The on-site drainage channel would feature an above-grade earthen berm on the westerly side to protect the Project site from run-on flows, a slightly below-grade earthen bottom to route flows, and an at-grade easterly downslope to allow from run-on flows to be collected.

For additional information, see Section 4.8, Hydrology and Water Quality.

Gas, Electric, and Telecommunication Facilities

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

Architecture

The Project's design employs a variety of architectural strategies to create a contemporary, unified, and high-quality business park environment. 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. Building elevations include vertical and horizontal elements that would break up the overall massing of the buildings (Figure 3-15, Conceptual Elevations).

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 3-16, Landscape Plan, approximately 43,998 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 along Lafayette Street and Central Road. Landscaping along the site's frontages would include a mixture of trees, shrubs, and groundcover. All proposed trees are 24-inch box trees and include blue palo verde, desert willow, Afghan pine, Chinese pistache, London plane, Chilean mesquite, scrub oak, African sumac, California pepper, and Brisbane box. The Project's landscaping would also include a number of shrubs as well as accent and groundcover plants. Plant materials were selected for low water and minimal maintenance. The Project's overall landscaping plan has designed to be consistent with Chapter 9.75 of the Town's Municipal Code, which contains landscaping regulations for development.

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, exterior lighting would be located and designed to avoid direct glare onto adjacent properties.

Sustainability Features and Project Design Features

The Project has been designed to include a number of Project Design Features (PDFs) to incorporate best management practices for warehouse facilities. These PDFs are included within the Project. To ensure that these PDFs are implemented during construction and operation, they will be tracked within the Project's Mitigation Monitoring and Reporting Program. These PDFs are provided below and organized by site and building design, construction, and operation.

Construction

- **Heavy-Duty Off-Road Construction Equipment Requirements/Restrictions.** During Project construction, all internal combustion engines/construction equipment greater than 150 horsepower operating on the Project site shall meet U.S. Environmental Protection Agency-certified Tier 4 Interim emissions standards. The Project Applicant or successor in interest shall include this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities. An exemption from these requirements may be granted by the Town of Apple Valley

in the event that the Project Applicant or successor in interest 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.[3] Before an exemption may be considered by the Town of Apple Valley, the Project Applicant or successor in interest shall be required to demonstrate that at least two construction fleet owners/operators in the High Desert and San Bernardino Region were contacted and that those owners/operators confirmed Tier 4 Interim or better equipment could not be located within the High Desert and San Bernardino Region.

- **Provision of Electrical Infrastructure for Construction and Use of Electric Construction Equipment.** After the grading phase of Project construction, the Project Applicant or successor in interest shall provide temporary electrical hook ups to the power grid, rather than diesel-fueled generators, for contractors' electric construction tools, such as saws, drills, and compressors. The use of diesel-fueled generators for on-site construction activities shall be prohibited unless electrical infrastructure is not yet available on the Project site. Diesel-fueled generators may be used for off-site construction work. All off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used on site during Project construction must be electric-powered. The Project Applicant or successor in interest shall include these requirements in applicable bid documents, purchase orders, and contracts with successful contractors.
- **Construction Equipment Idling Restrictions.** The idling of heavy construction equipment for more than 5 minutes shall be prohibited. Signage shall be posted throughout the construction site informing construction personnel of the idling time limit. Idling time limits shall be noted in construction specifications. Subject to all other idling restrictions, heavy construction equipment shall not be left in the "on position" for more than 10 hours per day.
- **Construction Haul Truck Requirements.** All haul trucks entering the Project construction site during the grading and building construction phases shall meet California Air Resources Board model year 2014 engine emission standards. All heavy-duty haul trucks should also meet CARB's lowest optional low oxides of nitrogen (NO_x) standard.
- **Dust Control Measures.** In compliance with all applicable Rules and Regulations of the Mojave Desert Air Quality Management District (MDAQMD), including, but not limited to Rules 401 (Visibile Emissions), 402 (Nuisance), and 403 (Fugitive Dust). To ensure compliance with these Rules and Regulations, the Project Applicant or successor in interest shall prepare and submit a Dust Control Plan to the MDAQMD for approval. The Dust Control Plan shall document the best management practices (BMPs) that will be implemented during Project construction to prevent, to the maximum extent practicable, wind and soil erosion. BMPs that will be included in the Dust Control Plan shall include, but are not limited to, covering soil stockpiles when not in use and watering soils during earth-moving activities. On days when the hourly average wind speed for north 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.
- **Construction Waste Recycling and Management.** Consistent with Section 5.408.1 of the California Green Building Standards Code Part 11, a minimum of 65% of the nonhazardous construction and demolition waste shall be recycled and/or salvage for reuse.
- **Architectural Coating Requirements.** Architectural and industrial maintenance coatings (e.g., paints) applied on the Project site shall have volatile organic compound levels of less than 10 grams per liter (g/L).

[3] For example, if a Tier 4 Interim piece of equipment is not reasonably available at the time of construction and a lower tier equipment is used instead (e.g., Tier 3), another piece of equipment could be upgraded from a lower tier to a Tier 4 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 Interim standards.

- **Construction Logs.** The Project's construction manager shall maintain on the construction site construction logs detailing the following:
  - An inventory of construction equipment, maintenance records, and datasheets, including design specifications and emission control tier classifications
  - Verification that construction equipment operators have been advised of idling time limits and photographic evidence that signage with idling time limits have been posted around the construction site
  - Evidence that construction contractors have been provided with transit and ridesharing information for construction workers
- Construction logs shall be made available in the event that local, regional, or state officials (e.g., officials from the Town of Apple Valley, Mojave Desert Air Quality Management District, or California Air Resources Board) conduct an inspection at the Project site.

Site Design

- **Sustainable Design/LEED Measures.** The Project shall be designed so that it is able to achieve Leadership in Energy and Environmental Design (LEED) certification at the time of building permit application. Documentation shall be provided to the Town of Apple Valley demonstrating that the Project meets this requirement prior to the issuance of building permits.
- **Design of Ingress/Egress Points.** Entry gates into the loading dock/truck court areas shall be sufficiently positioned to ensure that all truck and other vehicles are contained on site and inside the property line. Queuing, or circling of vehicles, on public streets immediately pre- or post-entry to the Project shall be strictly prohibited unless queuing occurs in a deceleration lane or right turn lane exclusively serving the Project site.
- **Measures to Reduce the Urban Heat Island Effect.** The following measures shall be implemented to reduce the urban heat island effect:
  - The Project's roof structures shall be designed to include "cool roof" materials with a minimum aged reflectance and thermal emittance values that are equal to or greater than those specified in the current edition of the California Green Building Standards (CALGreen), Table A5.106.11.2.3 for Tier 1 standards.
  - Sufficient shade trees shall be provided throughout the Project site so that at least 30% of the automobile parking areas will be shaded within 15 years after Project construction is complete (excluding the truck courts where trees cannot be planted due to interference with truck maneuvering).

Operation

- **Truck Routing Plan.** The Project Applicant or successor in interest shall establish and submit for approval to the Town of Apple Valley a Truck Routing Plan that provides for routes between the Project site and the State Highway System. The Truck Routing Plan shall include measures, such as signage, pavement markings, and enforcement, for preventing truck queuing, circling, stopping, and parking on public streets. The Truck Routing Plan shall make every effort to avoid passing sensitive receptors, to the greatest extent possible, unless otherwise superseded by an applicable truck routing ordinance adopted by the Town of Apple Valley. The tenant/operator of the Project shall be responsible for enforcement of the Truck Routing Plan. A revised plan shall be submitted to the Town of Apple Valley prior to a business license being issued by the Town of Apple Valley for any new tenant/operator of the Project site. The revised plan shall expand upon the original Truck Routing Plan and describe the operational characteristics of the use of the tenant/operator, including, but not limited to, hours of operations, types of items to be stored within the building, and whether any modifications to the Project's designated truck routes are necessary. The Town

of Apple Valley shall have discretion to determine if changes to the Truck Routing Plan are necessary including any additional measures to alleviate truck routing and parking issues that may arise during the life of the Project. Signs and drive aisle pavement markings shall clearly identify the on-site circulation pattern to minimize unnecessary on-site vehicular travel.

- **Yard Sweeping to Reduce Fugitive Dust.** The following measure shall be implemented during all ongoing business operations and shall be included as part of contractual lease agreement language to ensure that tenants and operators of the Project are informed of the following operational responsibility:
  - Yard and parking area sweeping shall be periodically conducted to minimize dust generation from the Project site. The building manager or their designee shall be responsible for enforcing this requirement.
- **Restriction on Cold and/or Refrigerated Space.** Operations involving cold or refrigerated storage shall be prohibited unless additional environmental review, including a Health Risk Assessment, is conducted and certified pursuant to the California Environmental Quality Act.
- **Provision of Information Regarding Programs to Reduce Emissions from Trucks.** 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 informational documentation regarding:
  - Funding opportunities that provide incentives for using cleaner-than-required engines and equipment, such as the Carl Moyer Program and Voucher Incentive Program
  - The U.S. Environmental Protection Agency (EPA) SmartWay Program, which assists freight shippers, carriers, logistics companies, and other stakeholder partners with the U.S. EPA, to measure, benchmark, and improve logistics operations and reduce air pollutant emissions from the transport of cargo.
- **Provision of Information Regarding Reducing Emissions from Area and Energy Sources.** 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 informational documentation regarding:
  - Information regarding energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs
  - Information regarding and a recommendation to use cleaning products that are water-based or containing low quantities of volatile organic compounds
  - Information regarding and a recommendation to use electric or alternatively fueled sweepers with high efficiency particulate air (HEPA) filters.

As noted above, during process of preparing this Draft EIR, certain measures have been identified as required to reduce the Project's environmental impacts with regard to air quality, greenhouse gas emissions, and energy. These measures are identified as mitigation measures within the applicable environmental analysis chapters.

Lot Line Adjustment

The Project consists of two parcels (APNs 0463-241-02 and 0463-241-03), as depicted on Figure 3-17, Existing and Proposed Property Lines. The Project involves a lot line adjustment to reconfigure the property lines on the Project site. A lot line adjustment generally involves modifying the boundary line between two or more adjacent legal parcels to take land from one parcel and add it to another parcel. As part of the Project's proposed lot line adjustment, the portion of APN 0463-241-02 that is north of Lafayette Street and west of Sycamore Lane would be added to the Project site. After accounting for the portion of property granted to APN 0463-241-02, the balance of this property would remain the same and unaffected by the Project. The lot line adjustment is subject to coordination and approval by the owners of both properties.

Operational Characteristics

A tenant for the proposed industrial warehouse building has not been identified. 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 building, with the exception of the ingressing an egressing of trucks and passenger vehicles accessing the site, passenger and truck parking, the loading and unloading of trailers within designated truck courts/loading areas, and the internal and external movement of materials around the Project site via forklifts, pallet jacks, yard hostlers, and similar equipment. While operational hours are anticipated to follow common working hours (e.g., 8-12 hours per day), this EIR assumes that the facility could be operated 24 hours a day, 7 days a week. Cold or refrigerated storage would not be permitted in the proposed building. Should cold or refrigerated storage be required in the future, the addition of such space would be subject to additional environmental review and approval by the Town.

Because an end user of the building has not yet been identified, specific details regarding future operational activities on the Project site are not yet available. However, for the purposes of CEQA, this EIR assumes development of a "high-cube" warehouse. High-cube warehouses or distribution centers are primarily used for the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations and other warehouses. Thus, the modeling assumptions used for the air quality, health risk assessment, greenhouse gas, energy, and traffic impact analyses summarized in subsequent chapter of this EIR assume a "high-cube, non-sort" warehouse use.

3.4.2 Project Construction

Based on information provided by the Project Applicant, it is assumed that construction of the Project would begin December 2023 and would conclude towards the end of October 2025,[4] lasting approximately 22 months. On-site facility development and off-site improvements were accounted for within this schedule. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Site preparation: December 2023 -- January 2024
- Grading: January 2024 – March 2024
- Pipeline installation: March 2024 – August 2024
- Building construction: September 2024 – May 2025
- Paving: May 2025 – July 2025
- Architectural coating: July 2025 – October 2025

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.

[4] The analysis assumes a construction start date of December 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.

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

The six phases of construction are described in detail below and activities are differentiated between activities on the Project site and activities occurring within the Off-Site Street and Utilities Improvements alignments.

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. In addition, the Project would involve the relocation of certain plant specimens pursuant to Town and state regulations. For these affected plant specimens, construction crews would excavate the specimens from their current locations and stockpile them in a storage area that would be approved by a certified arborist or desert native plant expert. Specimens 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. Additional detail about this process is provided in Section 4.3, Biological Resources, and the Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan for the 1M Warehouse Project (Appendix B of Appendix C, Biological Resources Technical Report). Plant specimens within the Project site that cannot be transplanted would be removed in the same manner as other trees and shrubs on the site.

Site preparation activities would occur throughout the entirety of the Project 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.

The relocation of plant specimens pursuant to Town and state relocation requirements is not anticipated to be required within the Off-Site Street and Utility Improvements areas.

Grading

Project Site

Following the site preparation phase, grading would occur. Grading generally refers to the process of using heavy machinery to alter the surface of a site to obtain a specified slope. Grading would involve the use of several pieces of heavy machinery, including bulldozers, track-hoe excavators, front-end loaders, dump trucks, motor graders, water trucks, and rollers for compaction. All grading would be done in accordance with a formal stormwater pollution prevention plan for the Project, which would employ best management practices, such as using hay bales and diversion ditches, to control stormwater runoff during construction.

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 building 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 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. All parking spaces would be striped.

Off-Site Utility Improvements

During this phase, asphalt trenching would be required to install the water and sewer infrastructure along Johnson Road, Central Road, and Lafayette Street. During construction of off-site utilities, a traffic control plan would be implemented to ensure sufficient circulation in the area is maintained. Once the infrastructure has been installed, asphalt trenching repair that complies with the Town's standards would be conducted to return affected street areas back to operating conditions.

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 Activities Subject to Regulatory Permitting

The Project involves several components that are subject to regulatory permitting by local, regional, and state agencies. Table 3-3 below provides a summary of the Project components subject to these regulations, describes which activities trigger permitting, the regulatory agencies tasked with issuing permits, anticipated permits required, and summarizes anticipated mitigation measures included within this EIR to address permit requirements.

Table 3-3. Activities Subject to Regulatory Permitting

Project Component	Description of Activity	Regulating Agency	Anticipated Permits Required	Applicable Regulations	Summary of Anticipated MMs	Additional Notes
Removal of western Joshua tree	▪ Removal of 1 western Joshua tree during site preparation phase of construction	CDFW	Incidental Take Permit	CFG §2081 *et seq.*	MM-BIO-2: Conservation of Western Joshua Tree Lands MM-BIO-3: Relocation of Desert Native Plants	Relocation of western Joshua tree is not anticipated to be required per the requirements of an Incidental Take Permit or the CDNPA; AVMC requires relocation of impacted trees. Affected trees would be stockpiled and incorporated into the landscape plan pursuant to Town requirements.
		SBC	Native Plant Removal Permit	CNDPA §8000 *et seq.*	MM-BIO-3	
		Town of Apple Valley	Native Tree or Plant Removal Permit	AVMC Chapter 9.76 *et seq.*	MM-BIO-3	
Removal of Wiggin's Cholla and Branched Pencil Cholla	▪ Removal of 7 Wiggins' cholla and 12 branched pencil cholla during the site preparation phase of construction	SBC	Native Plant Removal Permit	CDNPA §8000 *et seq.*	MM-BIO-3	Relocation of Wiggin's Cholla and Branched Pencil Cholla is not anticipated to be required per the CDNPA; AVMC requires relocation of these impacted plants. Affected plants would be stockpiled and incorporated into the landscape plan pursuant to Town requirements.
		Town of Apple Valley	Native Tree or Plant Removal Permit	AVMC §9.76 *et seq*	MM-BIO-3	
Improvements within N-02 drainage and modification of N-02 Drainage	▪ Grading and drainage reconfiguration ▪ Construction of Johnson Road ▪ Placement of rip rap north of Johnson Road	CDFW	Lake and Streambed Alteration Agreement	CFG §1602 *et seq.*	MM-BIO-19: Aquatic Resources Mitigation	N/A
		RWQCB	Waste Discharge	CWC §13260	MM-BIO-19	

Table 3-3. Activities Subject to Regulatory Permitting

Project Component	Description of Activity	Regulating Agency	Anticipated Permits Required	Applicable Regulations	Summary of Anticipated MMs	Additional Notes
	▪ Improvements to Central Road Installation of sewer line within unnamed drainage		Requirements Program			

Notes: CDFW = California Department of Fish and Wildlife; CFG = California Fish and Game Code; § - Section; SBC = San Bernardino County; CNDPA = California Desert Native Plants Act; AVMC = Town of Apple Valley Municipal Code; MM = Mitigation Measure; RWQCB = Regional Water Quality Control Board.

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. These conditions will be considered by the Planning Commission in conjunction with its consideration of the Project. If approved, the Project will be required to comply with all imposed Conditions of Approval.

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

3.6 Requested Actions

The 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]).

Town of Apple Valley

Discretionary Approvals

Planning Commission

- **Site Plan Review.** The Community Development Director has authority to approve a Site Plan Review application, which can be appealed to the Planning Commission (NAVISP P. 111-52).
- **Lot Line Adjustment.** The Planning Commission will review and approve or deny the proposed lot line adjustment to modify the boundaries of the two parcels within the Project site.

Ministerial Approvals - Subsequent Implementing Approvals

- Lot Line Adjustment
- Remove and relocate on-site protected native desert plants
- Issue grading permits
- Issue building permits
- Issue encroachment permits

Liberty Utilities

- Approvals for water and sewer infrastructure

California Department of Fish and Wildlife

- Incidental Take Permit for take of western Joshua tree
- Lake and Streambed Alteration Agreement for discharge of fill materials into potentially jurisdictional waters

Regional Water Quality Control Board

- Waste Discharge Requirements Program for discharge of fill materials into potentially jurisdictional waters

3.7 References

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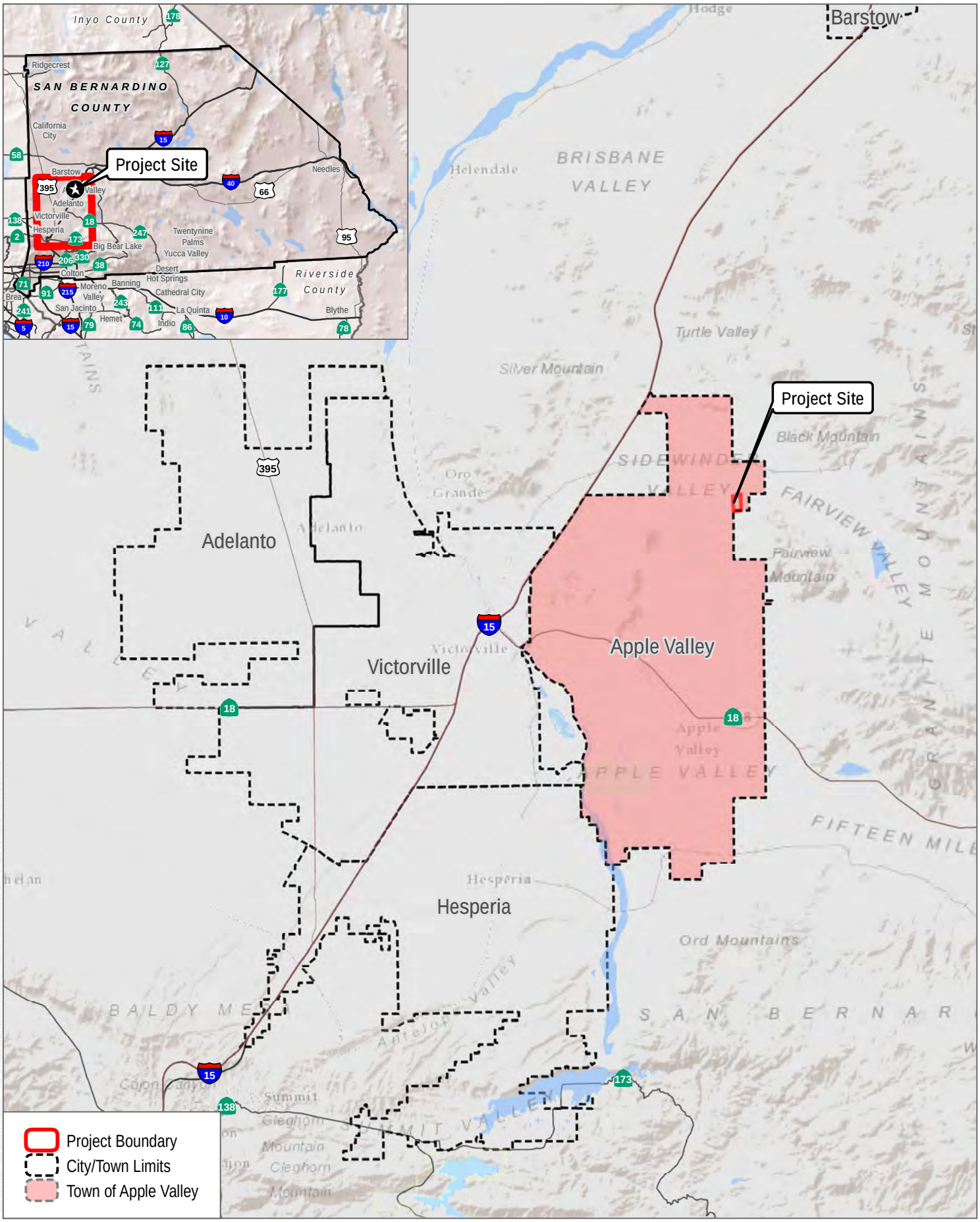

SOURCE: DigitalGlobe 2017; San Bernadino County 2021

FIGURE 3-1

Regional Project Location

1M Warehouse Project

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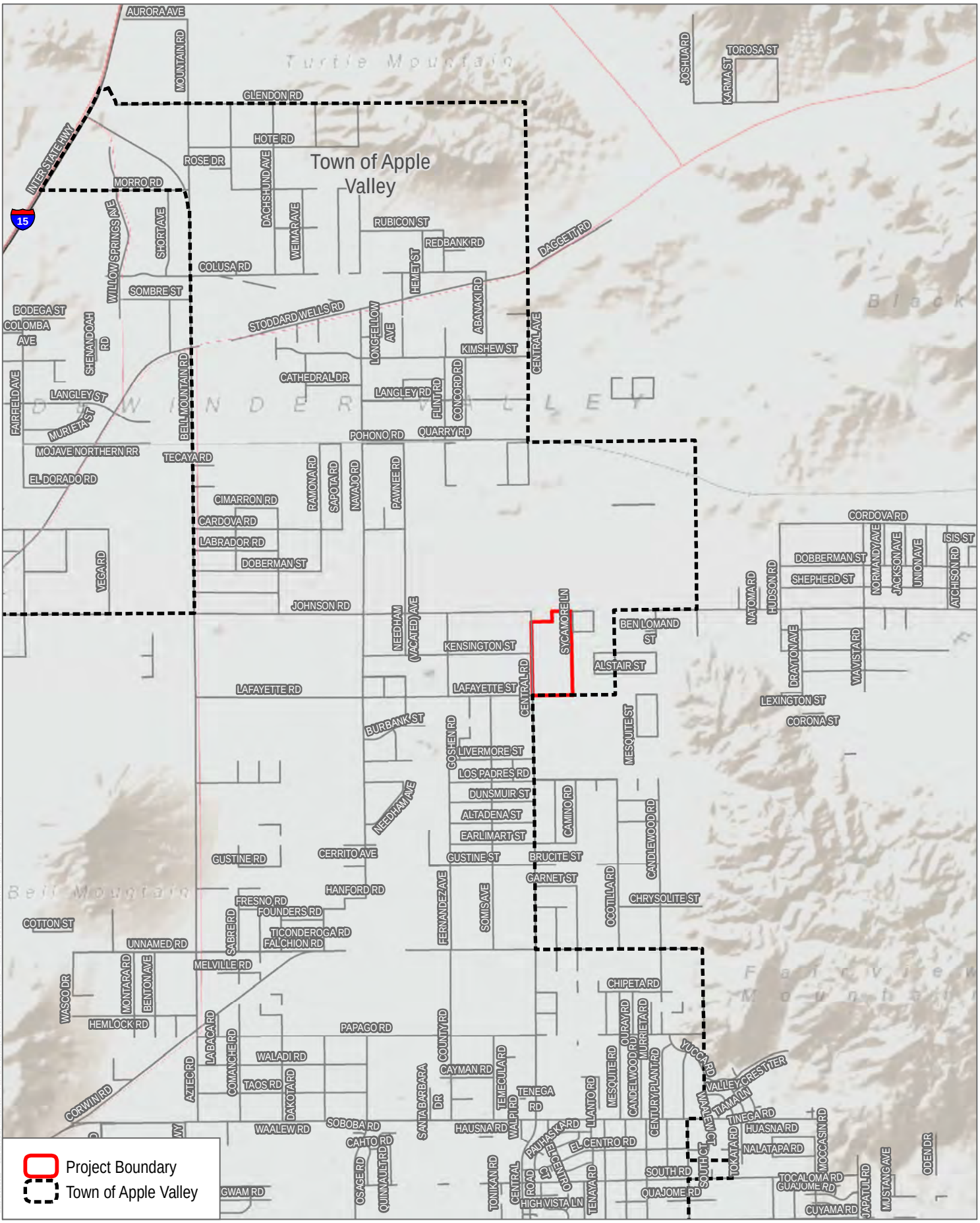

SOURCE: DigitalGlobe 2017; San Bernadino County 2021

DUDEK

0 2,000 4,000 Feet

FIGURE 3-2

Vicinity Map

1M Warehouse Project

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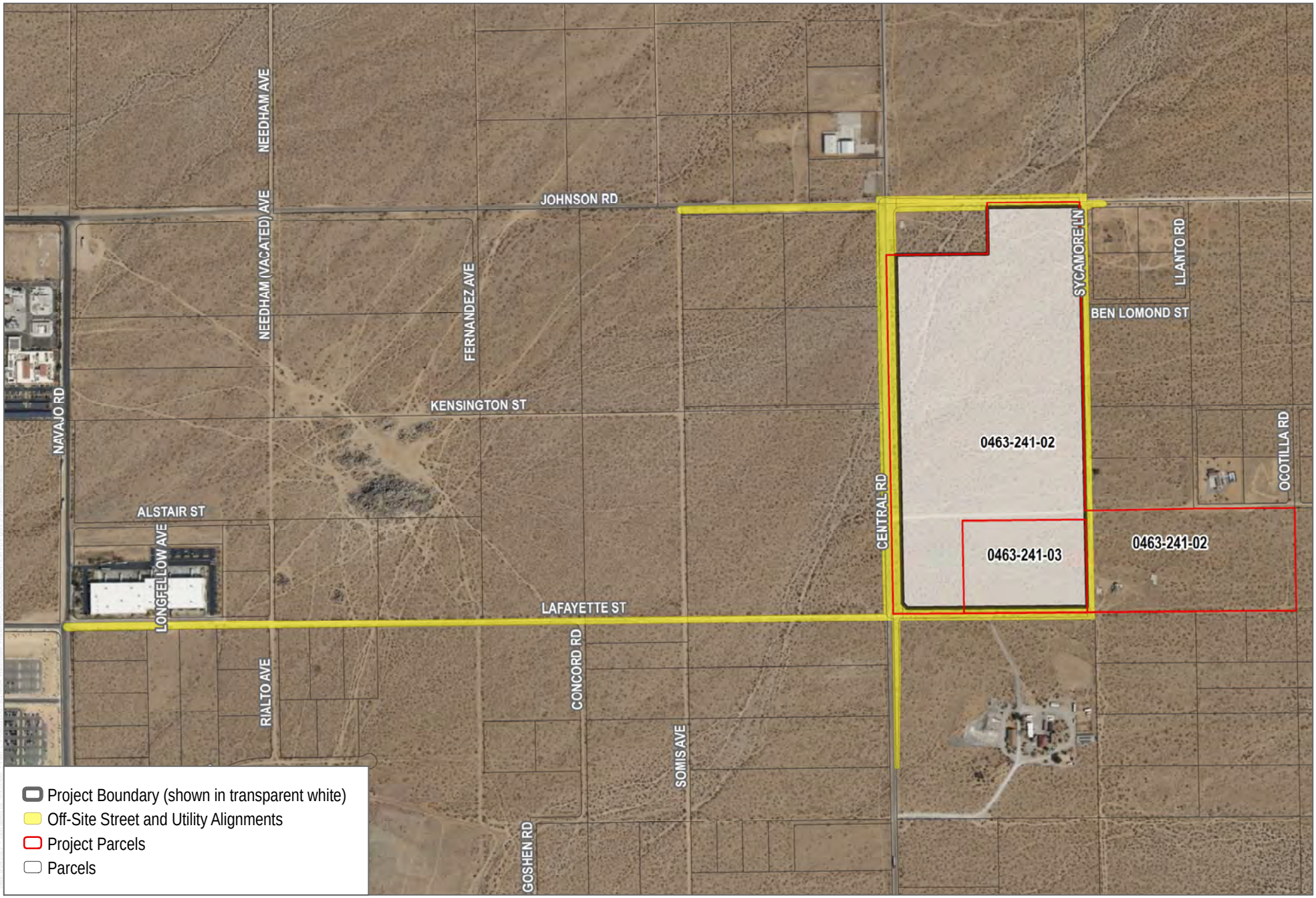

SOURCE: DigitalGlobe 2017; San Bernadino County 2021

DUDEK

0 420 840 Feet

FIGURE 3-3

Project Aerial

1M Warehouse Project

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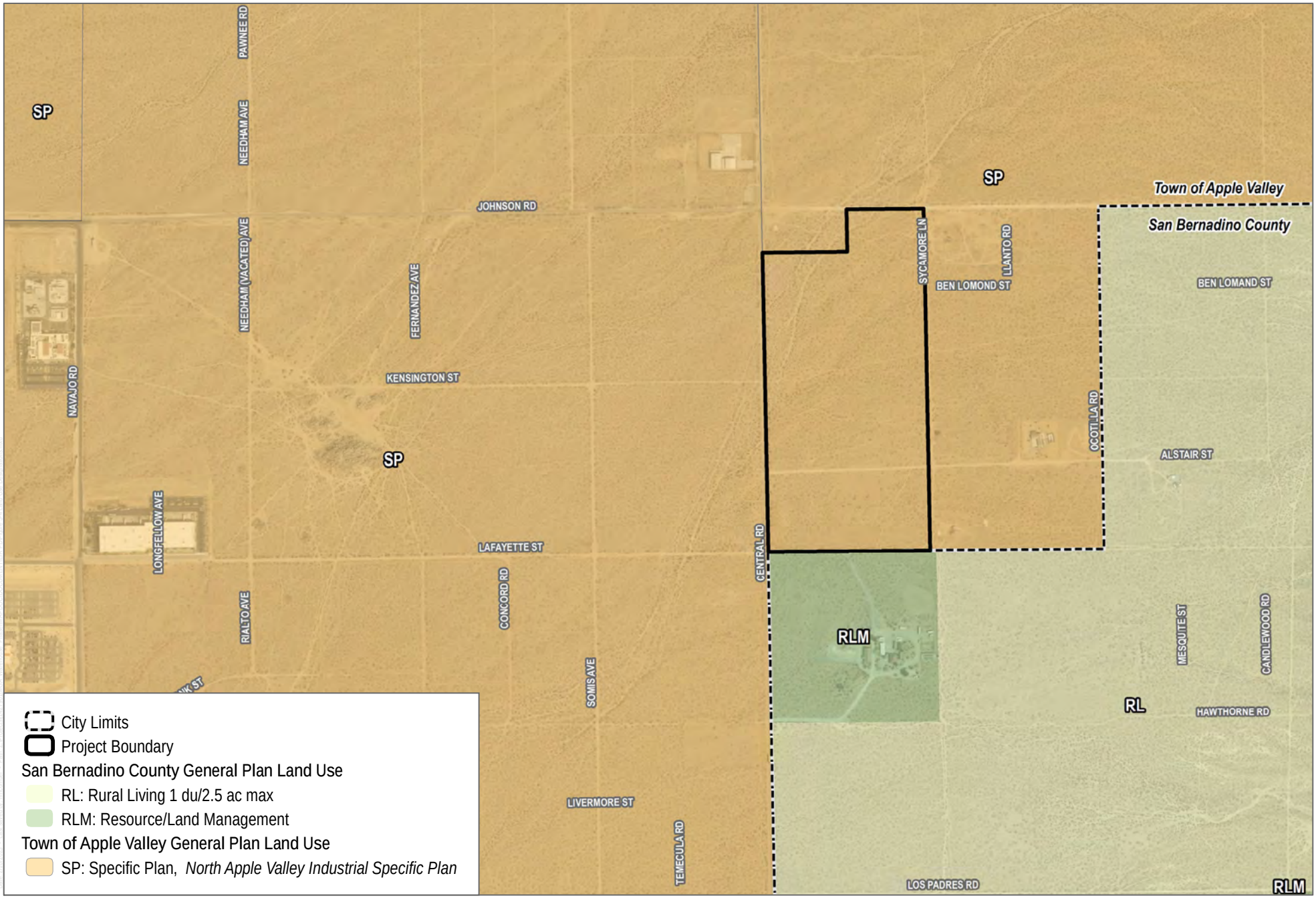

SOURCE: DigitalGlobe 2017; San Bernadino County 2021; Town of Apple Valley 2009

DUDEK

0 500 1,000 Feet

FIGURE 3-4

Land Use Designations

1M Warehouse Project

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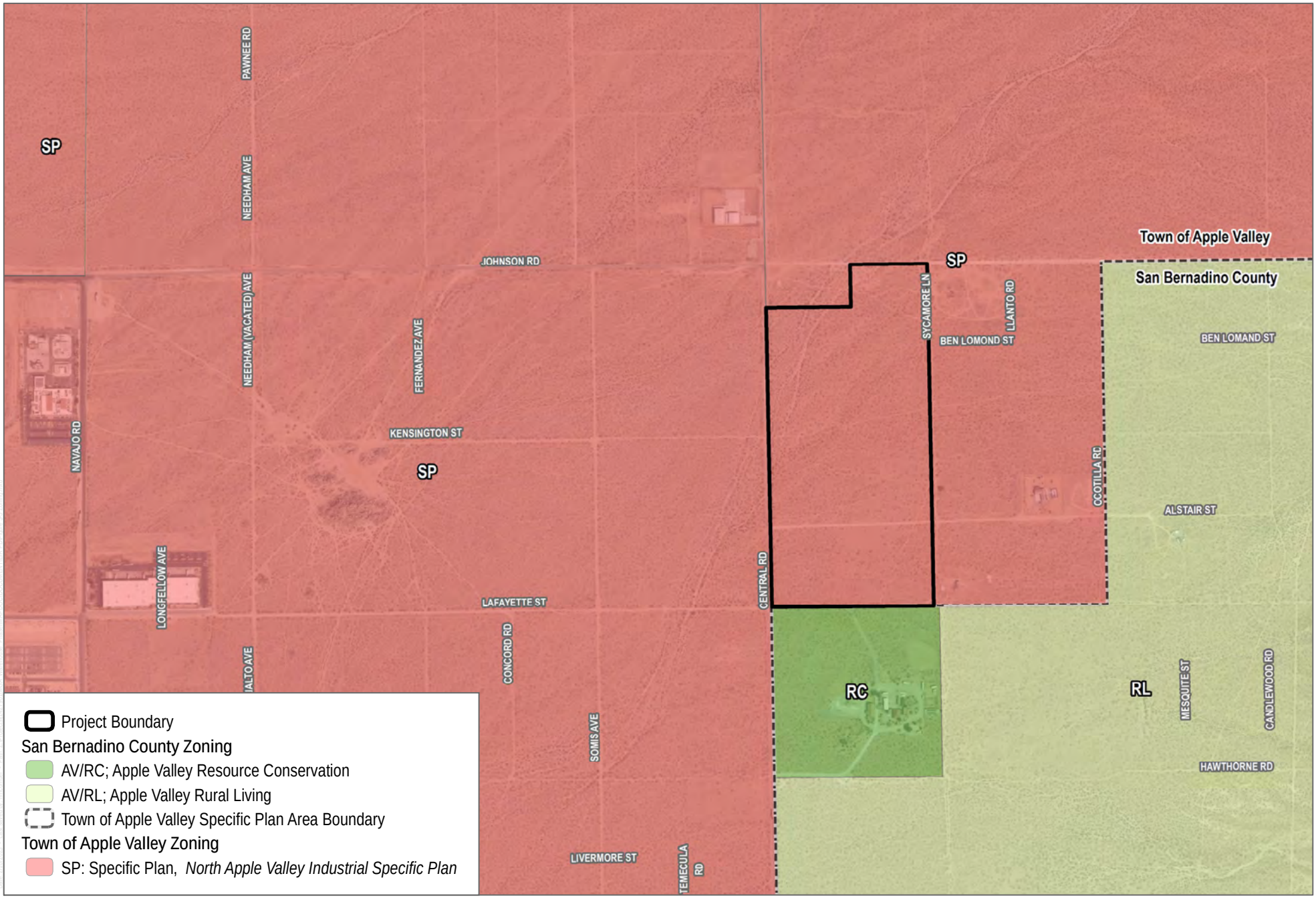

SOURCE: DigitalGlobe 2017; San Bernadino County 2021; Town of Apple Valley 2009

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0 500 1,000 Feet

FIGURE 3-5

Zoning

1M Warehouse Project

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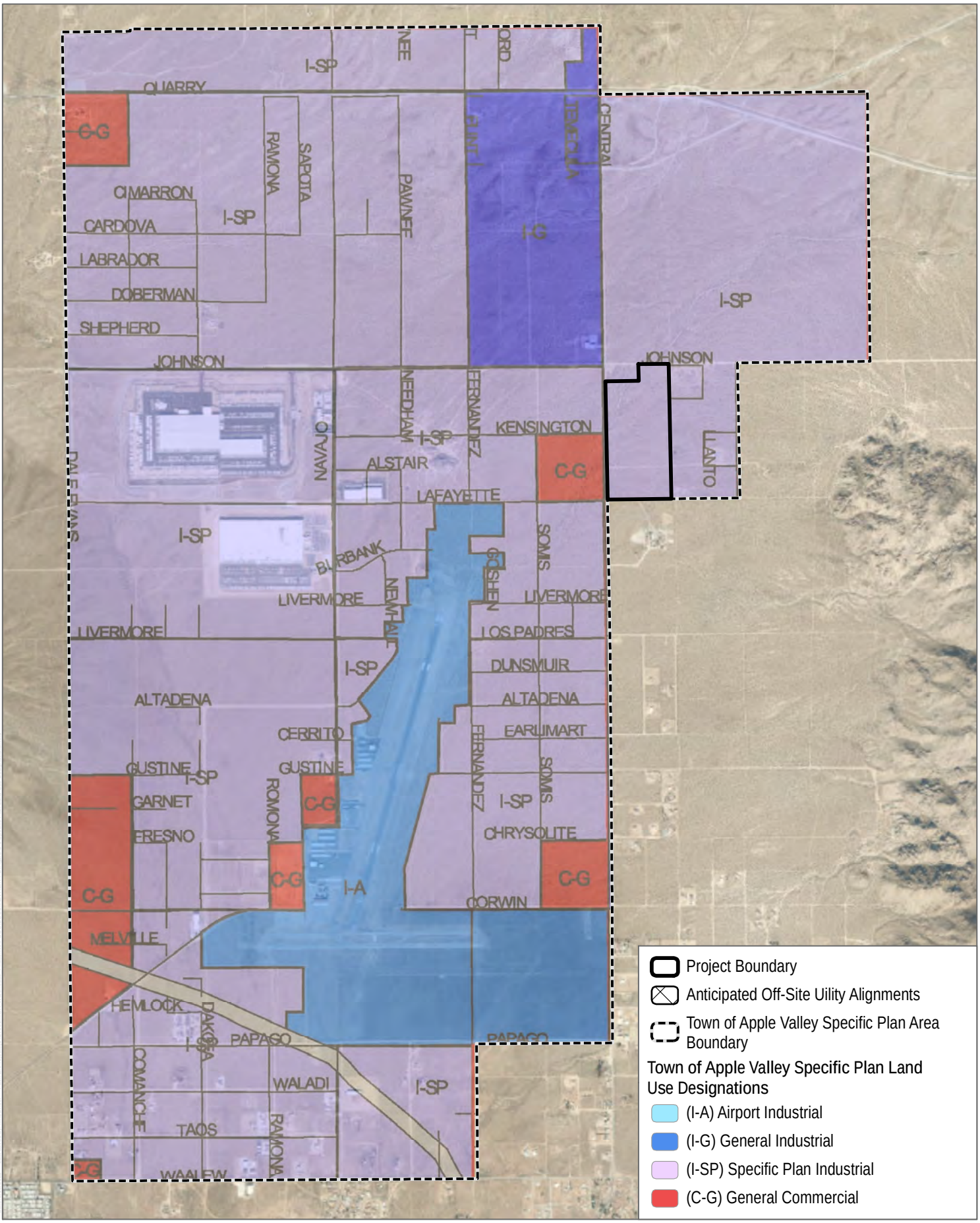

SOURCE: DigitalGlobe 2017; San Bernadino County 2021; Town of Apple Valley 2009

DUDEK

0 1,250 2,500 Feet

FIGURE 3-6

Specific Plan Land Use Designations

1M Warehouse Project

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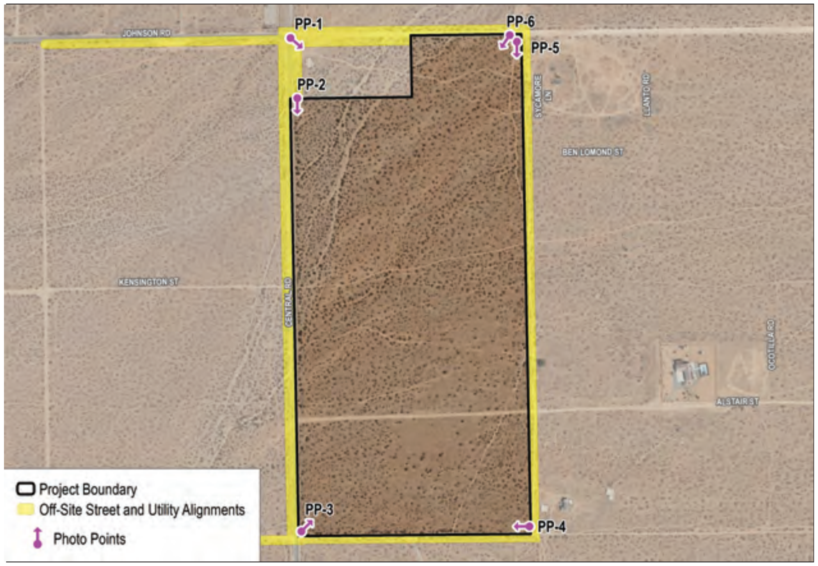

Photo Key

Photo Point 1.

Photo Point 2.

Photo Point 3.

DUDEK

FIGURE 3-7A

Existing Conditions

1M Warehouse Project

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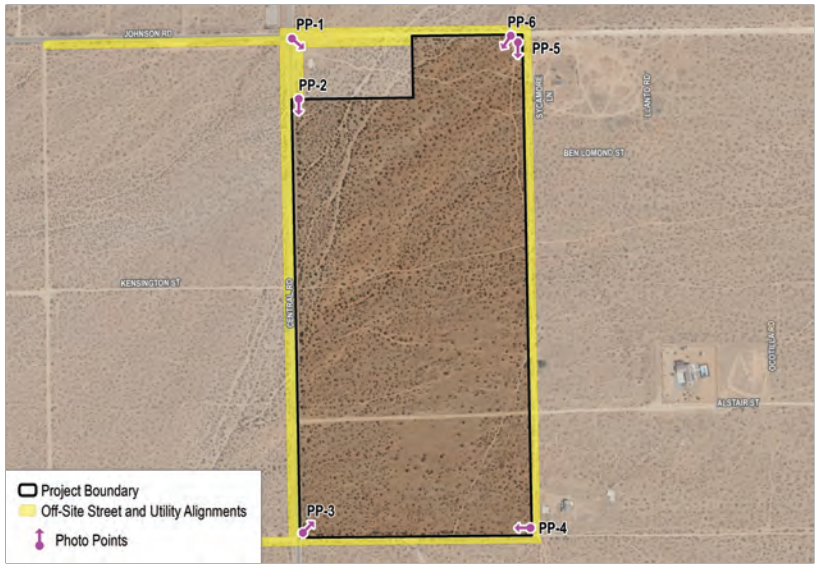

Photo Key

Photo Point 4.

Photo Point 5.

Photo Point 6.

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FIGURE 3-7B

Existing Conditions

1M Warehouse Project

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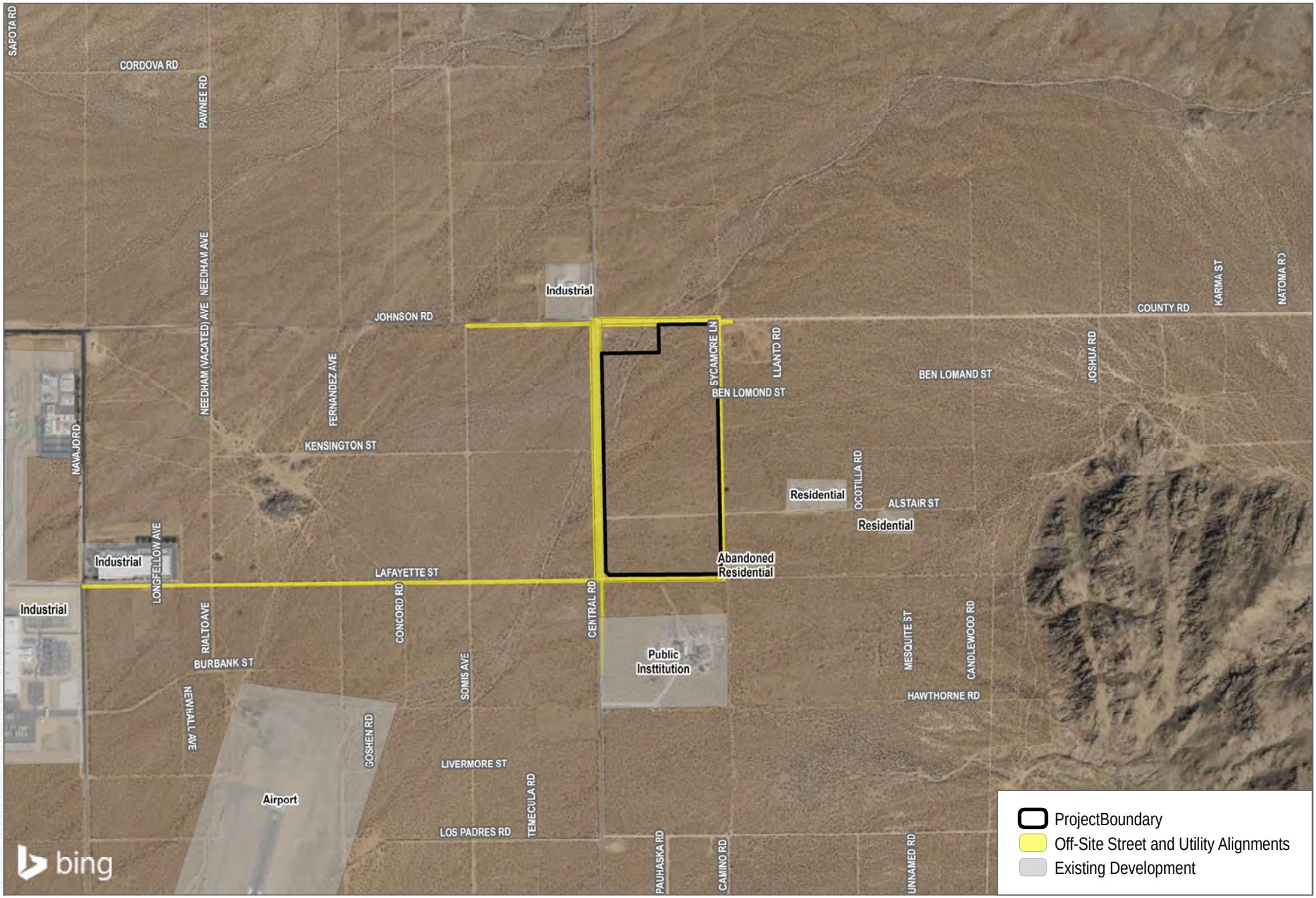

SOURCE: Bing Maps (accessed 2022); San Bernadino County 2021

DUDEK

0 650 1,300 Feet

FIGURE 3-8

Project Development Setting

1M Warehouse Project

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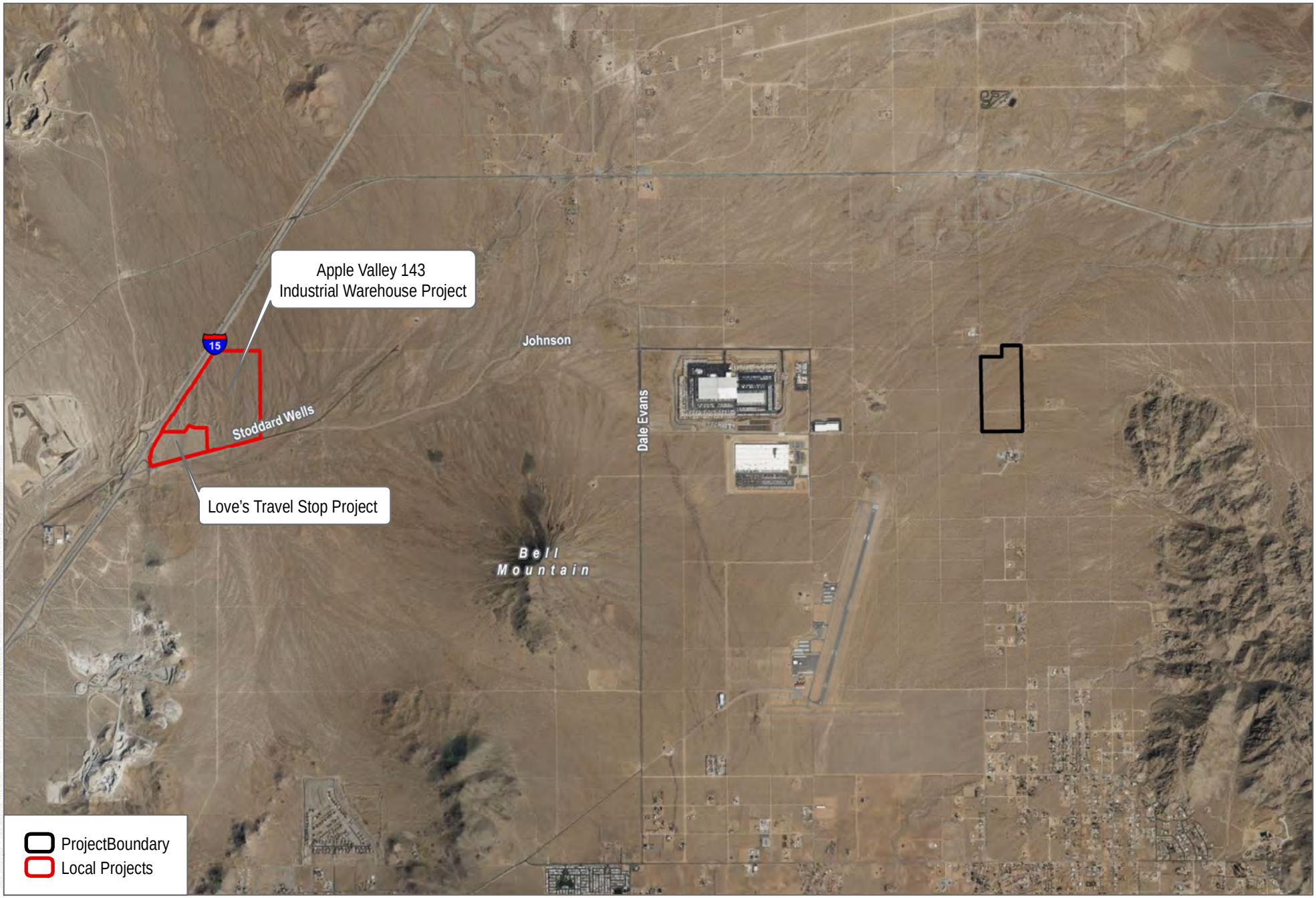

SOURCE: Bing Maps (accessed 2022); San Bernadino County 2021

DUDEK

0 2,000 4,000 Feet

FIGURE 3-9

Cumulative Projects

1M Warehouse Project

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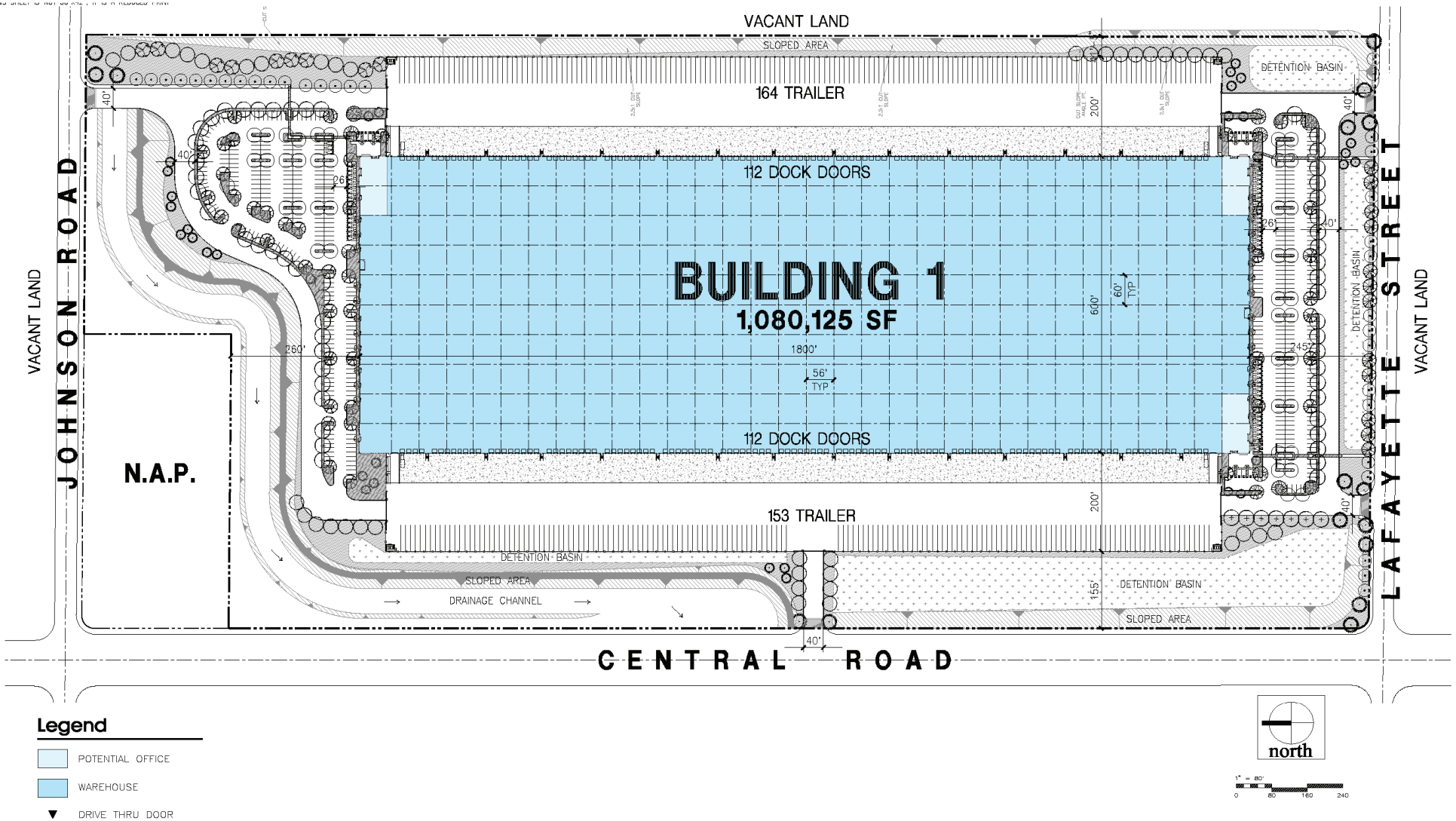

SOURCE: HPA Architecture 2022

FIGURE 3-10

Building Site Plan

1M Warehouse Project

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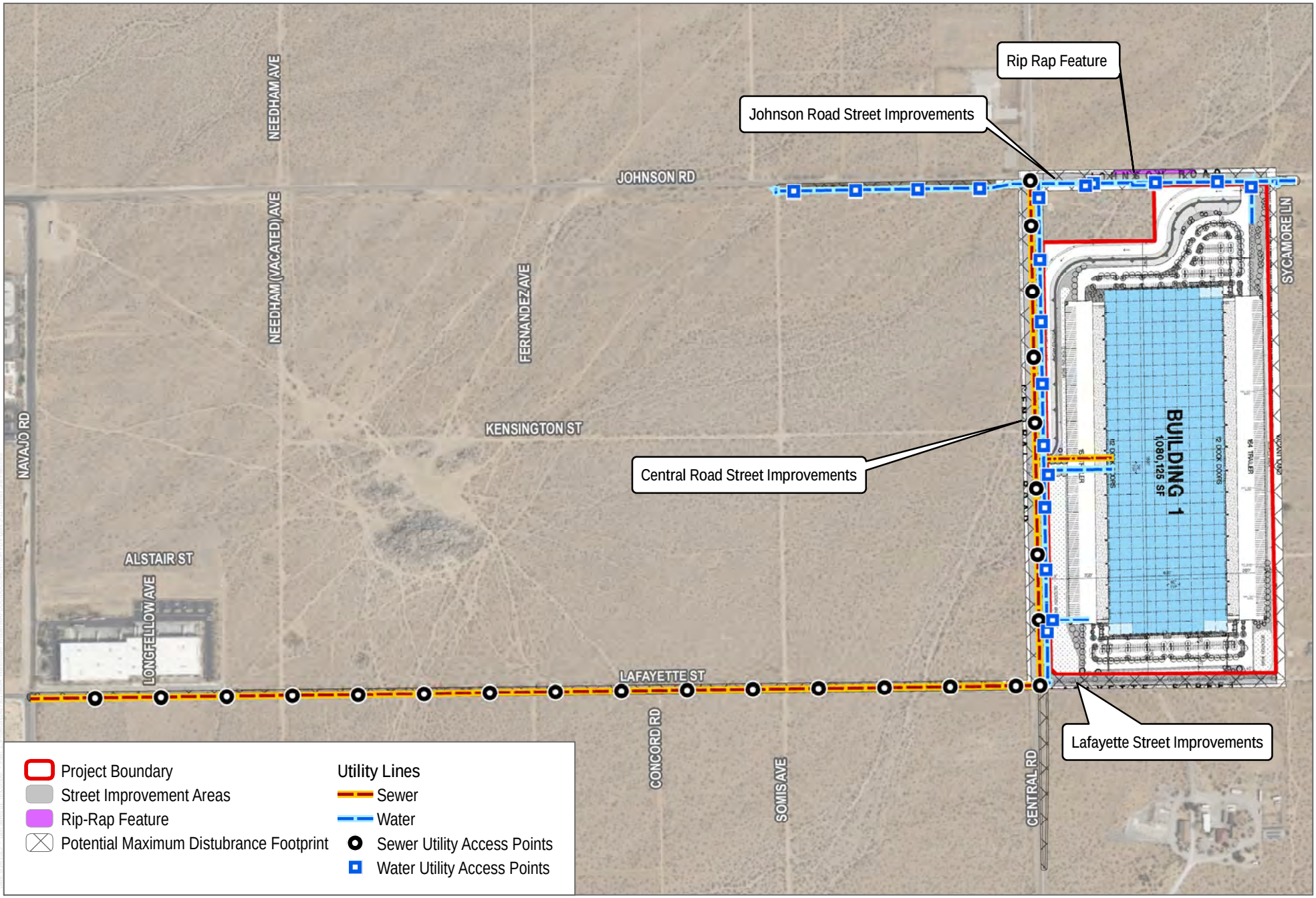

SOURCE: DigitalGlobe 2017; San Bernadino County 2021

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0 345 690 Feet

FIGURE 3-11

Overall Project Site Plan

1M Warehouse Project

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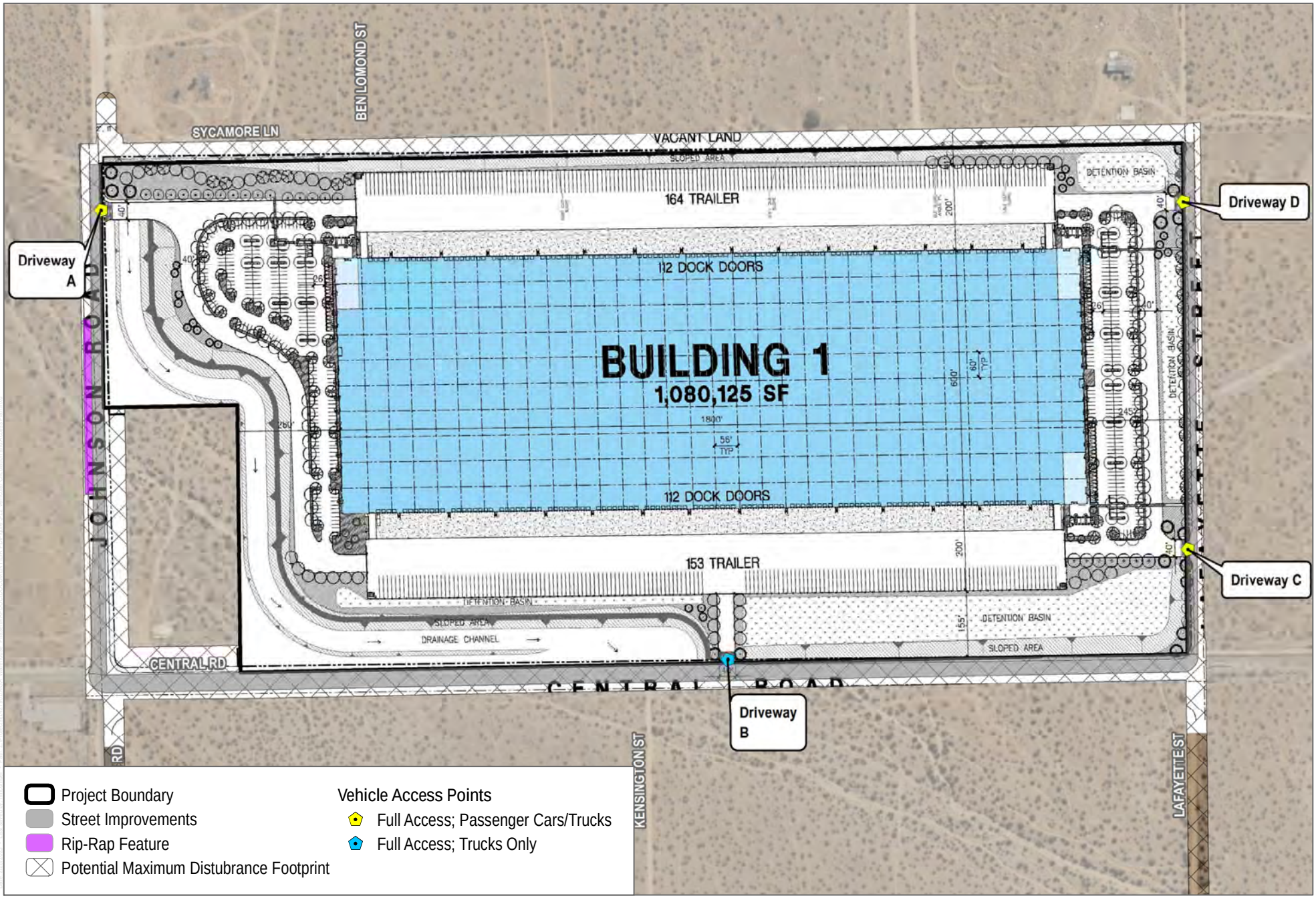

SOURCE: DigitalGlobe 2017; San Bernadino County 2021

DUDEK

0 160 320 Feet

FIGURE 3-12

Vehicular Circulation and Access Plan

1M Warehouse Project

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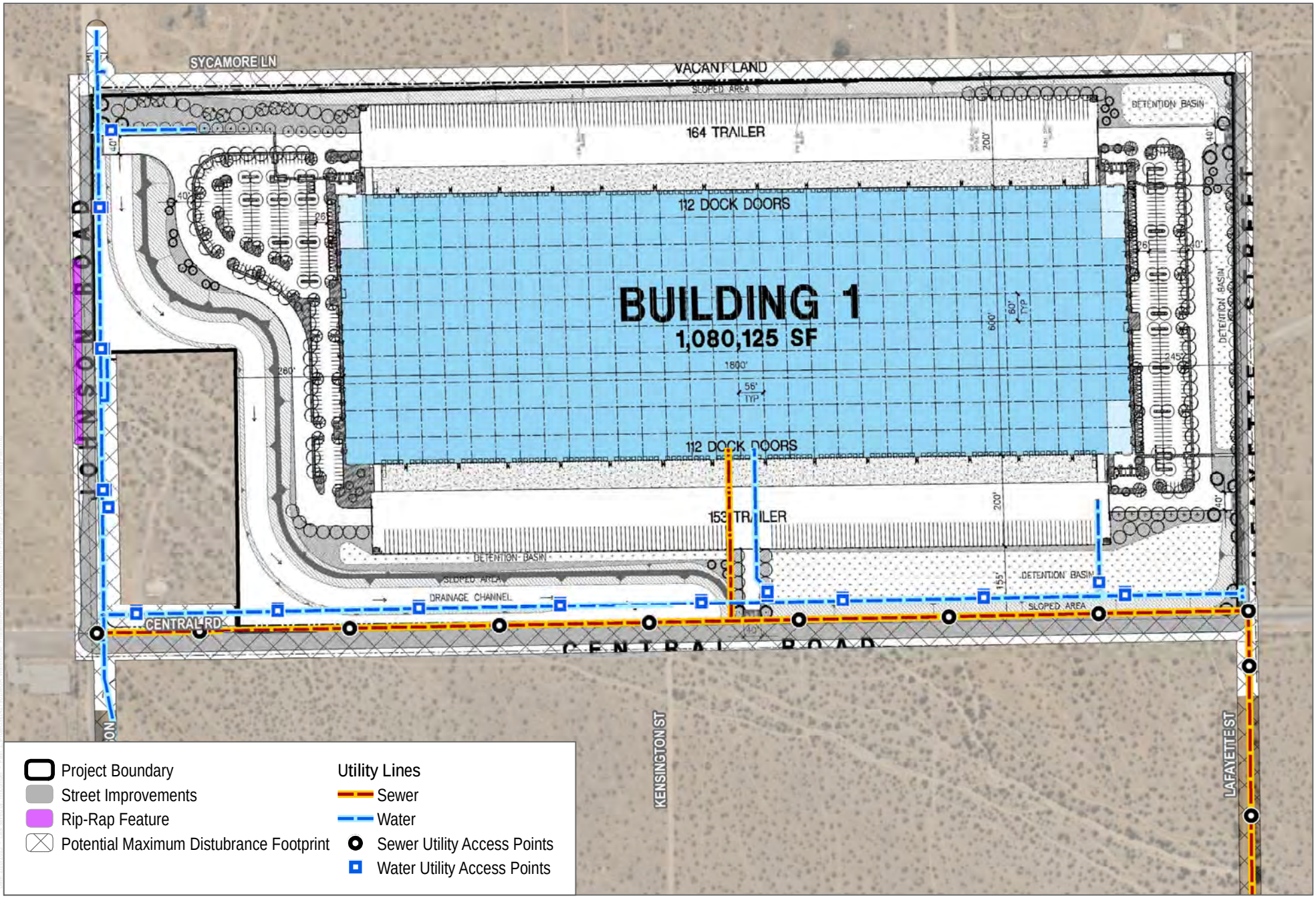

SOURCE: DigitalGlobe 2017; San Bernadino County 2021

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0 150 300 Feet

FIGURE 3-13

Conceptual Utility Plan

1M Warehouse Project

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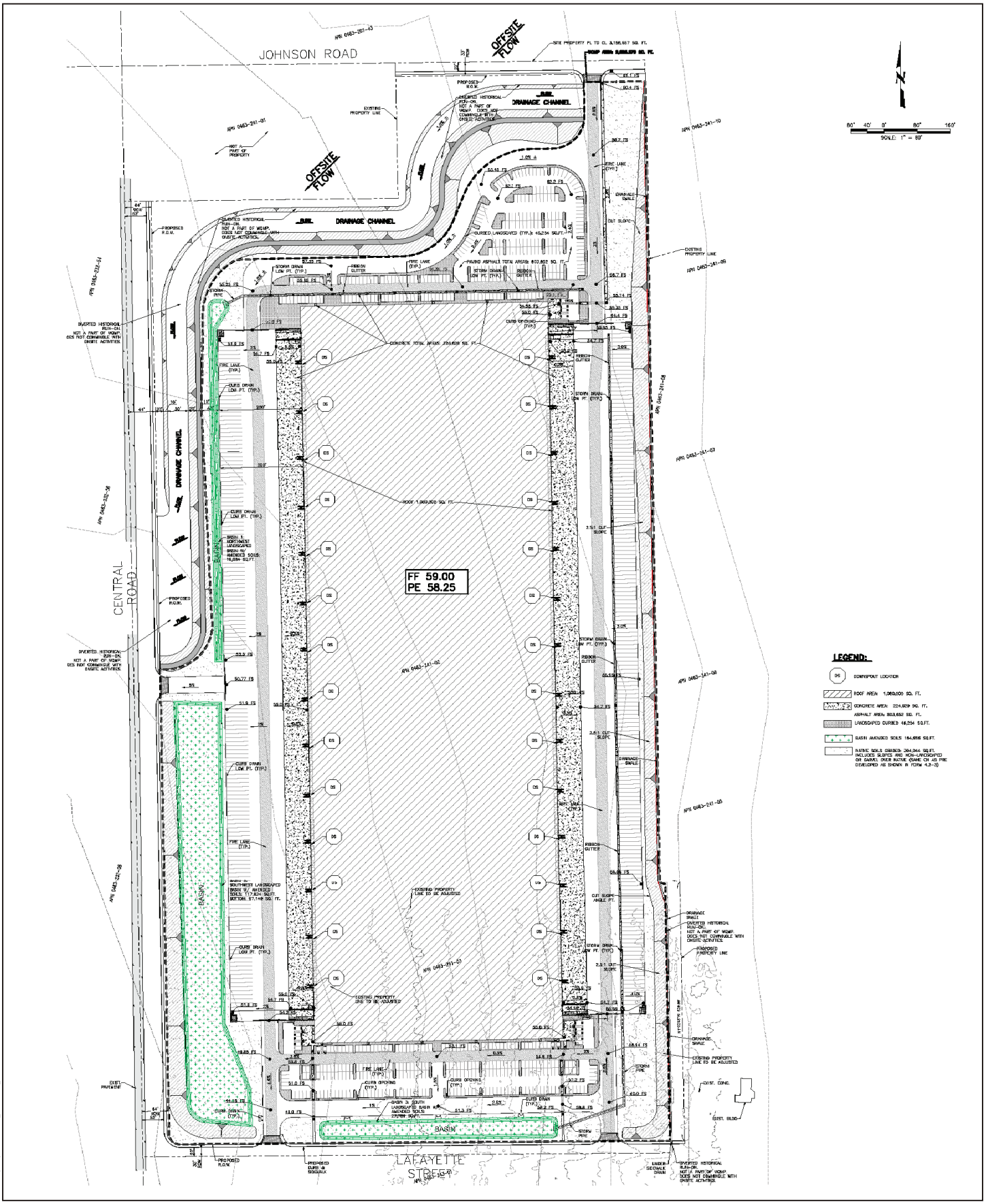

SOURCE: Merrell Johnson Engineering, Inc. 2023

FIGURE 3-14

Conceptual Stormwater Plan

1M Warehouse Project

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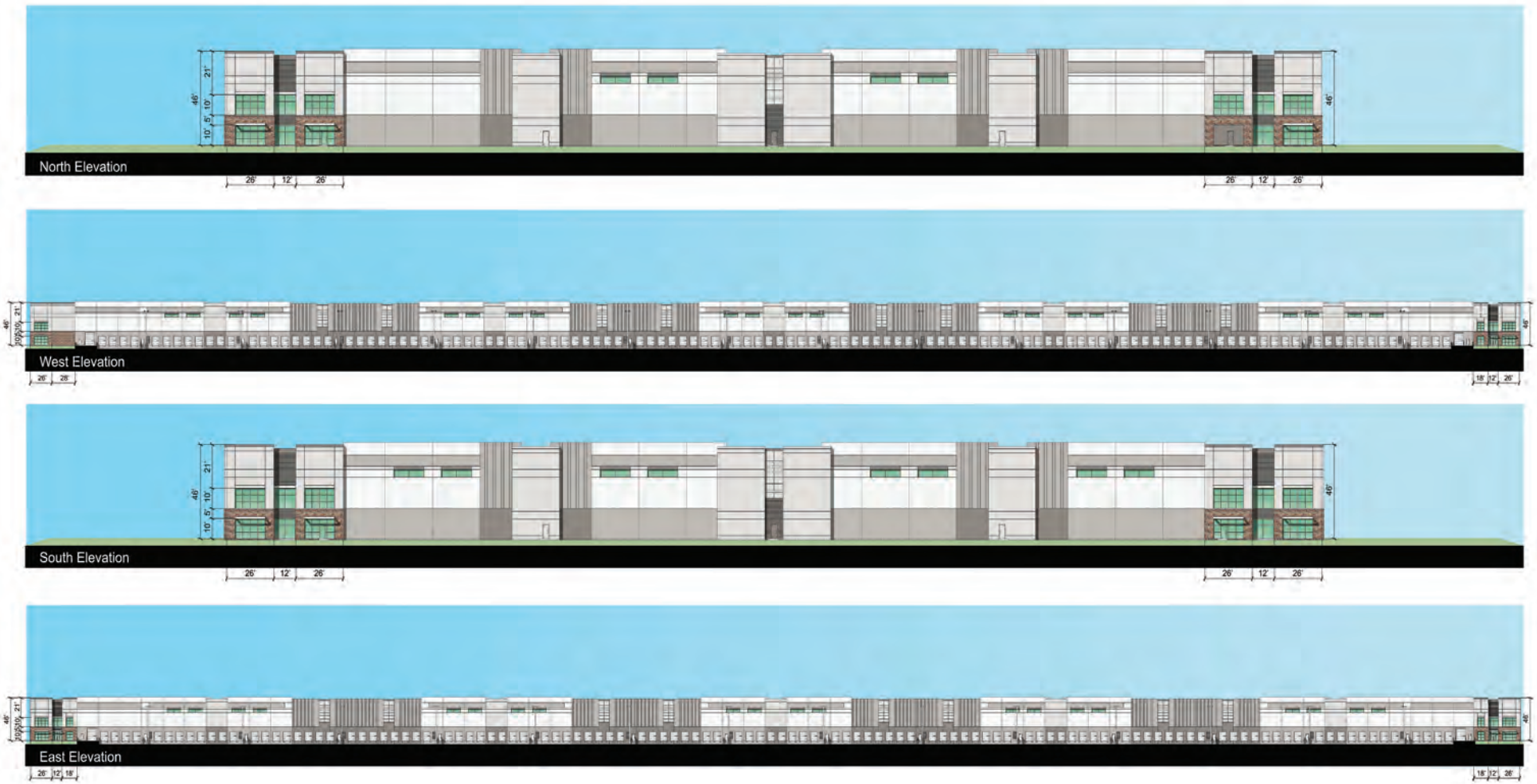

SOURCE: HPA Architecture 2022

FIGURE 3-15

Conceptual Elevations

1M Warehouse Project

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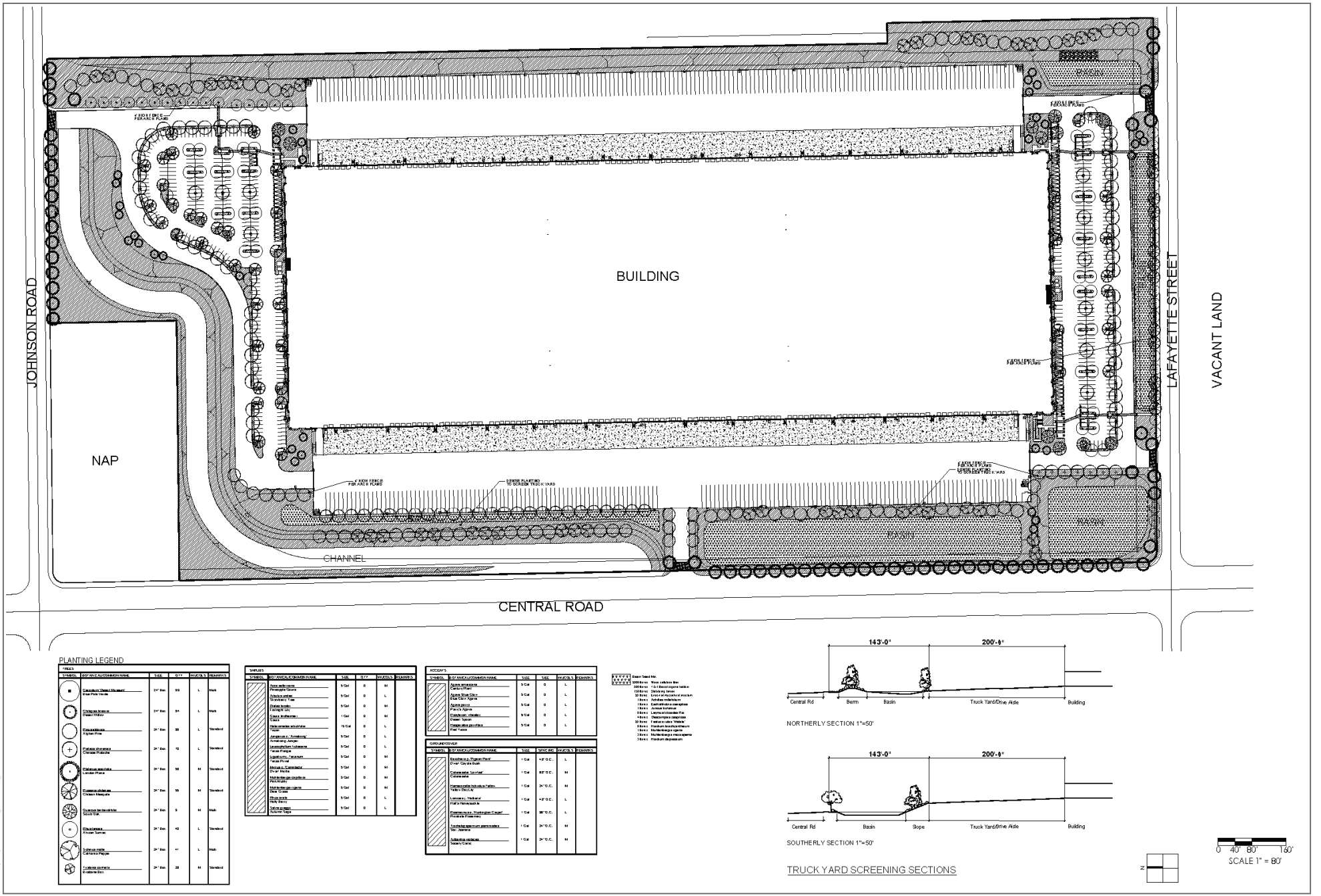

SOURCE: Hunter Landscape 2023

FIGURE 3-16

Landscaping Plan

1M Warehouse Project

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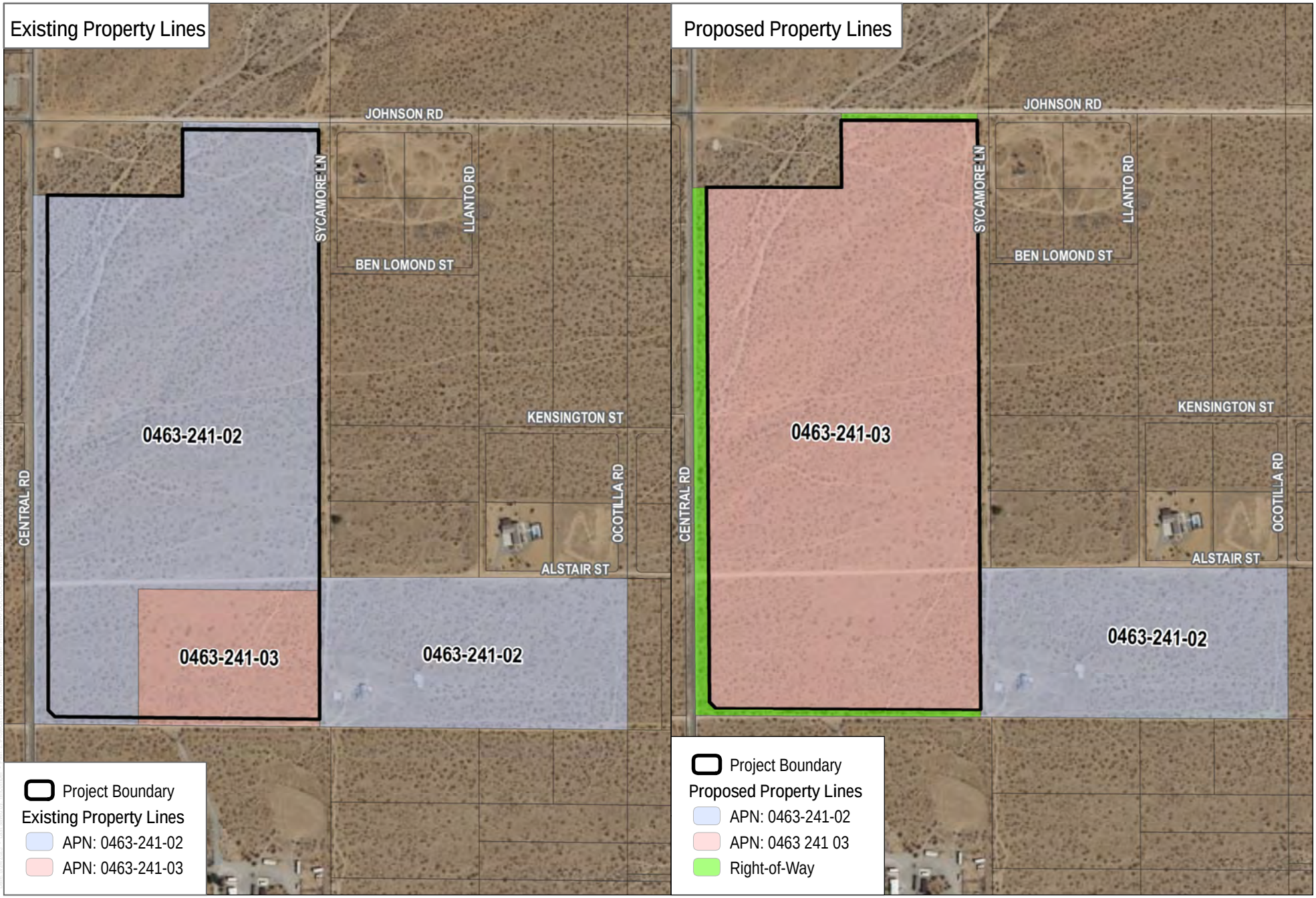

SOURCE: DigitalGlobe 2017; San Bernadino County 2021

DUDEK

0 285 570 Feet

FIGURE 3-17

Existing and Proposed Property Lines

1M Warehouse 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 1M Warehouse Project (Project). The Town of Apple Valley (Town) circulated a notice of preparation (NOP) beginning on February 3, 2023, with the public review period ending on March 6, 2023. 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, 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

Technical Studies

Technical studies were prepared to analyze air quality and greenhouse gas emissions, health risks, biological resources, cultural resources, geologic site conditions, 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 Apple Valley Town Hall, Planning Department, and the San Bernardino County Library.

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. Cumulative impact discussion is also included within the impact analysis for each issue area.
- **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 1M Warehouse Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

4.1.1 Existing Conditions

Regional Setting

The Project site is located in the northern part of the Town of Apple Valley (Town), which is within the Victor Valley region of San Bernardino County (County). The region contains open space with a variety of topographical features and vegetation communities, including the Mojave River to the west, San Bernardino Mountains and San Gabriel Mountains 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., Mojave River, Oro Grande Wash, Antelope Valley Wash, Honda Valley Wash, and Bell Mountain 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 toward 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.

Project Setting

The Project site is located at the northeast corner of Central Road and Lafayette Street, south of Johnson Road, and west of Sycamore Lane. Highway I-15 and State Highway 18 are the major highways of the Town. I-15 is located approximately 4.6 miles to the west of the Project site 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 Project area is undeveloped, transportation- 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 to the immediate Project area, the Project area includes a mix of undeveloped desert landscape interspersed with industrial, institutional, and rural residential development. The Apple Valley Fire Center is also located south of the Project site. Big-box warehouses/distribution centers are located approximately 1 mile west of the Project site, the Apple Valley Airport is located approximately 1 mile to the southwest, and large-lot rural

residences are located approximately 2 miles to the south. The Project area is also marked by industrial-scale aggregate mining operations, including an active quarry approximately 3 miles to the northeast.

Specific to the Project site, 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. (see Figure 3-7A and 3-7B, Existing Conditions, in Chapter 3, Project Description). Various dirt roads and trails that appear well-traveled by motorized off-road vehicles form bands of exposed, bare soils that traverse the site and surrounding area. The site is bound by Johnson Road to the north, Central Road to the west, Lafayette Street to the south, and Sycamore Lane to the east.

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's General Plan provides a definition for a scenic corridor, which is land area outside of the highway right-of-way within the line of sight which can be realistically subjected to protective land use controls.

Natural visual resources that provide the planning area with special character include uninterrupted expanses of "wide skies" and panoramic vistas of distant mountains. Characteristic views of the Mojave River floodplain bluffs and terraces, areas of riparian forest flora, the Turtle Mountain, Fairview Mountain, Sidewinder Mountain, the Black Mountains, the San Bernardino and San Gabriel Mountain ranges and the surrounding Victor Valley, along with neighboring hillsides and the natural desert environment also occur. The low-lying landscape surrounding the Town allows unobstructed, distant views in all directions and these create a prevailing sense of openness and spaciousness. Although the visual character of most parts of the Project area have been impacted to some extent by residential, commercial, and industrial development, many acres of undeveloped desert lands remain that provide unobstructed views of the scenic vistas.

Relative to the Project site, undisturbed areas of the natural desert environment and sprawling valley are located surrounding the Project site; the Mojave River is located approximately 7 miles to the southwest of the Project site; the Turtle Mountain is located approximately 4 miles to the north, Fairview mountain is located approximately 2.5 miles to the southwest, Sidewinder Mountain is located approximately 5 miles to the northeast, the Black Mountain is located approximately 3 miles to the northeast and the foothills and elevated terrain within the San Gabriel and San Bernardino Mountains are located approximately 20 miles to the south. Since the surrounding area contains most of the natural desert landscape of the Town, the area holds scenic value that could comprise a scenic vista. Although scattered industrial, institutional, and rural residential development 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 Mojave River and the Oro Grande Wash. The nearest well-defined wash area to the Project site is the Bell Mountain Wash, which flows at an angle in a general southeast to southwest direction, approximately 2.7 miles east of the Project site. Given that this watercourse is below the grade of the general topography and consists of intervening vegetation, views of this water course is not available from the Project site. Several other unnamed ephemeral dry washes are located throughout the Project area, but given their minimal streambed definition and lack of aquatic vegetation, these features do not provide significant visual interest in the Project area's viewshed. Moreover, these features are often obscured by existing desert shrubs and low growing vegetation, minimizing their presence as character-defining features within the landscape.

Scenic Routes

According to the California Department of Transportation (Caltrans), there are no officially designated state scenic highway in the County and only one eligible scenic highway (Caltrans 2019). Route 247 is the eligible scenic highway that is closest to the Project site, located approximately 16 miles east of the Project site, near 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, streetlights, and exterior building lights in scattered commercial and light industrial areas.

Viewshed and Visibility

Due to the relatively flat nature of the Project site and surrounding area, the site is visible from surrounding roads and land uses, including commercial and light industrial uses. Views of the Project site from surrounding public vantage points consist of undeveloped land within a flat valley characterized as a desert landscape with disturbed soils where dirt roads and trails cross the Project site 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 3-7A and 3-7B).

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

Viewer Groups

Motorists

Local Roads and Surrounding Commercial/Light Industrial Areas

Views of the Project site from local roads (i.e., Johnson Road, Central Road, and Lafayette Street) are visible to motorists traveling through light industrial/commercial areas in the vicinity of the Project site. Similar views are also available to occupants and visitors of the surrounding commercial/light industrial uses and residents accessing their residences. Views to the Project site from these areas include views of flat desert terrain with moderate vegetation cover (see Figure 3-7A and 3-7B). Views from local roads also include views of the surrounding industrial/commercial, and mining uses.

4.1.2 Relevant Plans, Policies, and Ordinances

State

California Scenic Highway Program

California's Scenic Highway Program was created by the state legislature in 1963. This program's purpose is to "preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands

adjacent to highways" (Caltrans 2008). The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The California Scenic Highway System includes a list of highways that are officially designated as scenic highways or eligible for designation as scenic highways. As discussed in Section 4.1.1, Existing Conditions, there are no state-designated or eligible state scenic highways within the viewshed of the Project site.

California Code of Regulations

Title 24 – California Building Standards Code

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

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

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

Title 24, Part 6 – California Energy Code

The California Energy Code (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 (Town of Apple Valley 2009) 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.

North Apple Valley Industrial Specific Plan

Chapter III, Development Standards and Guidelines, of the North Apple Valley Industrial Specific Plan (NAVISP; Town of Apple Valley 2012) serves as the NAVISP's Development code. The NAVISP establishes land use districts to encourage the development of well-planned projects which are consistent with the goals and objectives of the Town's General Plan. The Project site is located within the Industrial – General Land Use District, which allows more intense industrial activities, including manufacturing, warehousing, wholesale distribution, storage, and outdoor

manufacturing activities. Chapter III includes development standards, design standards, and guidelines to shape development consistent with the development vision of the Industrial – General Land Use District. Table 4.1-1 summarizes the development standards for the Industrial – General Land Use District applicable to the Project.

Table 4.1-1. Applicable NAVISP Development Standards

Applicable NAVISP Development Standards for the Industrial – General Land Use District
Minimum Lot Size: 5 Acres **Minimum Width:** 200 feet **Minimum Depth:** 200 feet
Minimum Front Setback or Street Side Setback ▪ Landscaping ○ On Central Road: Not applicable ○ On any other road: 15 feet ▪ Building ○ On Central Road: Not applicable ○ On any other road: 25 feet
Minimum Building Rear Setback: 15 feet
Minimum Building Interior Side Yard Setback: 0 feet
Maximum Building Coverage (%): 45%
Maximum Height within Airport Influence Area (A-2): 50 feet
Minimum Landscape Requirement: 5% of interior parking surface area

Source: Town of Apple 2012.
Note: NAVISP = North Apple Valley Industrial Specific Plan.

In addition, Chapter III of the NAVISP includes Design Standards and Guidelines pertaining to architecture, landscaping, lighting, walls and fences, signage. The NAVISP specifies that projects subject to Site Plan Review shall be reviewed by the Town's Planning Department to ensure that projects are consistent with the General Plan, the NAVISP, the Development Code, and the development policies and standards of the Town.

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, institutional, and residential uses exist in the area, the Project site and vicinity provide scenic views of the surrounding landscape. Therefore, the Project site and vicinity hold scenic value to the Town of Apple Valley.

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 0.5 to 5+ miles away from the Project site, the Project would not result in any physical modifications to scenic resources that comprise a scenic vista. In addition, the Project site is in compliance with existing land use and zoning designations and would comply with the development standards of the NAVISP.

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 Mountain, Black Mountain, Fairview Mountain, Sidewinder Mountain 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, employees and visitors of the nearby commercial and light industrial areas, and residents traveling to and from their residences. 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, mining operations, and other man-made elements in the surrounding area (i.e., transmission lines, signage) 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 Johnson Road, Central Road, and Lafayette Street). Moreover, these views would remain intact from areas within Town and surrounding unincorporated areas where the Town and County designated publicly accessible land and elevated hillside areas for preservation.

In addition, the Project has been designed such that building colors mimic the colors and tones found in the natural desert landscape, including a color palate with soft beiges, whites, and greys. Incorporation of these colors would soften the contrast of the proposed buildings with the surrounding desert terrain. The Project's landscaping would also have a similar effect by providing natural elements throughout the Project site, including a variety of box trees, shrubs, and drought tolerant plants with varying heights to break up the overall massing of the building.

Based on the foregoing, Project would not result in a significant impact to scenic vistas, as the Project buildings would result in minor blockage of views, views would be restored as viewers move through the Project area; and existing intervening features within and surrounding the Project site detract from existing views through and beyond the Project site. 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 10 miles east of the Project site (Caltrans 2019). Due to distance and intervening terrain, the eligible scenic highway is 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 Bureau 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 unincorporated County land to the east. The combined population of the Town 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.

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) and the NAVISP include 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 and Chapter III of the NAVISP set forth development standards for industrial development. The design specifications for the Project have been reviewed by Town staff for compliance with all applicable provisions relating to visual quality and design. In previously deeming the Project's application complete via the Site Plan Review process, which is a process separate from CEQA review, Town staff has determined that the Project design conforms to the Development Code, NAVISP, 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 Industrial – General Land Use District (Chapter III, Development Standards and Guidelines, NAVISP).

Table 4.1-2. Project Consistency with Applicable NAVISP Development Standards

Applicable NAVISP Development Standards for the Industrial – General Land Use District	Project Design
Minimum Lot Size: 5 Acres **Minimum Width:** 200 feet **Minimum Depth:** 200 feet	***Consistent.*** The Project site is a 67.3-acre lot with a minimum width of approximately 1,250 feet and minimum depth of approximately 2,300 feet.
Minimum Front Setback or Street Side Setback ▪ Landscaping o On Central Road: Not applicable	***Consistent.***

Table 4.1-2. Project Consistency with Applicable NAVISP Development Standards

Applicable NAVISP Development Standards for the Industrial – General Land Use District	Project Design
○ On any other road: 15 feet ▪ Building ○ On Central Road: Not applicable ○ On any other road: 25 feet	▪ Landscaping: The Project has a 25-foot front landscape setback on Central Road and a 50-foot front landscape setback on Johnson Road and Lafayette Street. ▪ Building: The Project has a 50-foot front building setback on Central Road and 75-foot front building setback on Johnson Road and Lafayette Street.
Minimum Building Rear Setback: 15 feet	***Consistent.*** The Project has a 50-foot front building setback on Central Road and 75-foot front building setback on Johnson Road and Lafayette Street.
Minimum Building Interior Side Yard Setback: 0 feet	***Consistent.*** The Project has a 0-foot interior side yard setback.
Maximum Building Coverage (%): 45%	***Consistent.*** The Project's site coverage is 36.9%.
Maximum Height within Airport Influence Area (A-2): 50 feet	***Consistent.*** The Project has a maximum height of 50 feet.
Minimum Landscape Requirement: 5% of interior parking surface area	***Consistent.*** The Project provides 17% landscape coverage throughout paved parking areas.

Source: Town of Apple 2012.
Note: NAVISP = North Apple Valley Industrial Specific Plan.

As provided in Table 4.1-2, the Project would be consistent with the development standards of the Industrial – General Land Use District of the NAVISP.

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 of the Development Code and Chapter III of the NAVISP provide in-depth information regarding design standards and guidelines for industrial development. In accordance with the Development Code and NAVISP design guidelines, all setback areas would be landscaped, and building orientation, siting and entrances have been designed to minimize conflicts with the surrounding visual environment.

Additionally, as discussed previously, the Project has been designed such that building colors mimic the colors and tones found in the natural desert landscape, including a color palate with soft beiges, whites, and greys. Incorporation of these colors would soften the contrast of the proposed buildings with the surrounding desert terrain. The Project's landscaping would also have a similar effect by providing natural elements throughout the Project site, including a variety of box trees, shrubs, and drought tolerant plants with varying heights to provide visual relief. Similarly, the proposed building would incorporate a variety of 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 Figure 3-15, 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 light industrial/commercial, institutional, and residential uses (i.e., Walmart Distribution Center, Big Lots Distribution Center, Apple Valley Airport, Apple Valley Fire Center). Undeveloped areas consist of flat desert terrain with sparse vegetation. As a result, the Project site and surrounding area can be characterized as containing low density

exurban industrial, commercial, and residential development within a desert landscape setting. The Project would result in the development of vacant, undeveloped land with an industrial building that would feature of contemporary architecture landscaping, and streetscape improvements that would achieve development goals set forth in the General Plan and NAVISP.

In summary, the Project would not conflict with applicable zoning or other regulations governing scenic quality and the Project would be consistent with the visual character of the surrounding area. Therefore, with compliance with the Town's Development Code, NAVISP, and General Plan guidelines and implementation of site-specific landscaping, the Project would not conflict applicable zoning or other regulations governing scenic quality and impacts 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. 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, given the minimal extent during which nighttime construction activities could occur, which would also be coordinated with the Town's Building and Safety Department, 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 and site planning. The Project would comply with the Town's municipal code, specifically with Title 9 Development Code (Section 9.47.090 Lighting) and Chapter III of the NAVISP, which contains general performance standards related to light and glare for lighting uses associated with industrial development in Town. Given that the Project is located adjacent to sensitive receptors to the east, the Project's lighting has been designed such that lighting is directed on site and away from neighboring parcels. Moreover, the Project's grading plan calls for sloped areas along the eastern boundary of the Project site to shield light trespass from the adjacent residential use, which is located approximately 0.15 miles to the east of the Project boundary.

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.

With regard to glare, the warehouse building would incorporate a variety of building materials. As depicted on Figures 3-15, Conceptual Elevations, building materials would primarily include concrete, metal, aluminum, and glass windows. Metal canopy overhangs 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, NAVISP, 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 (where projects located within the NAVISP would be subject to the NAVISP development standards and design guidelines), 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 would 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.

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 not result in a substantial adverse effect on a scenic vista and impacts would be less than significant.

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

The Project 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 is located in an urbanized area as defined by California Public Resources Code Section 21071 and would not conflict with applicable zoning or other regulations governing scenic quality. Impacts 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?

The Project could 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 cumulatively considerable impacts with regard to aesthetic and visual considerations. Cumulative Project aesthetic impacts would be less than significant.

4.1.6 References Cited

CALGreen (California Green Building Standards Code). 2019. https://codes.iccsafe.org/content/CAGBSC2019/cover.

Caltrans (California Department of Transportation). 2008. Scenic Highway Guidelines. https://dot.ca.gov/-/media/dot-media/programs/design/documents/scenic-hwy-guidelines-04-12-2012.pdf.

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4.2 Air Quality

This section describes the existing air quality conditions of the 1M Warehouse 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, Greenhouse Gas Emissions, and Energy Modeling Inputs and Outputs, prepared by Dudek in May 2023 (Appendix B-1).
- Health Risk Assessment, prepared by Dudek in May 2023 (Appendix B-2).
- Health Effects of Criteria Air Pollutants Associated with the 1M Warehouse Project prepared by Dudek in February 2023 (Appendix B-3).
- Transportation Impact Analysis, prepared by Dudek in January 2023 (Appendix J).

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

[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).

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).

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,

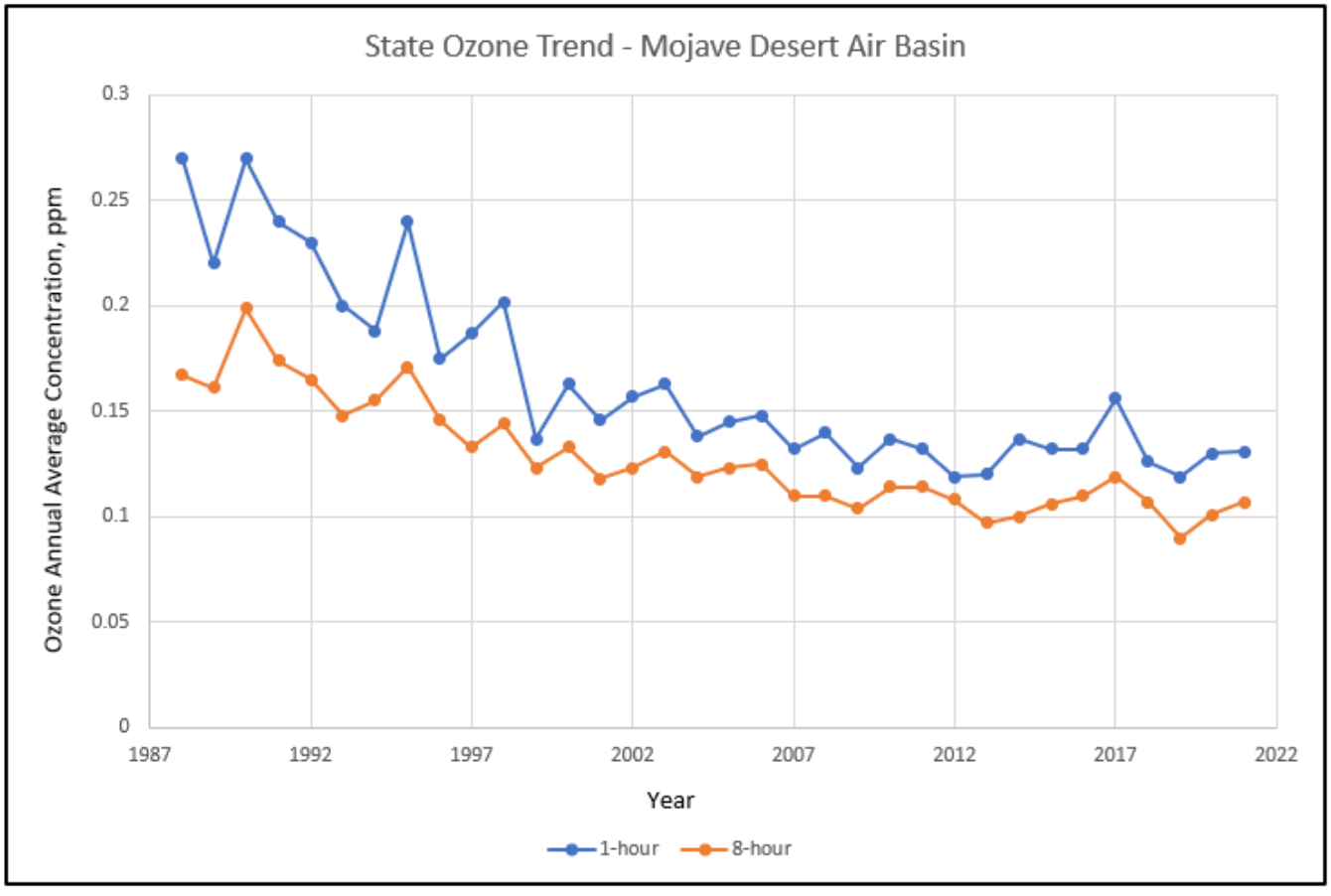
[2] The descriptions of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2021a), as well as the California Air Resources Board's "Glossary" (CARB 2021a)

[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.

even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O_3 exposure. While there are relatively few studies of O_3's effects on children, the available studies show that children are no more 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. Exhibit 4.2-1 State Ozone Trend – Mojave Desert Air Basin, demonstrates the reduction in O_3 over time.

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



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

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

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

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

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

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

Adverse Health Effects: Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic

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

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

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

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

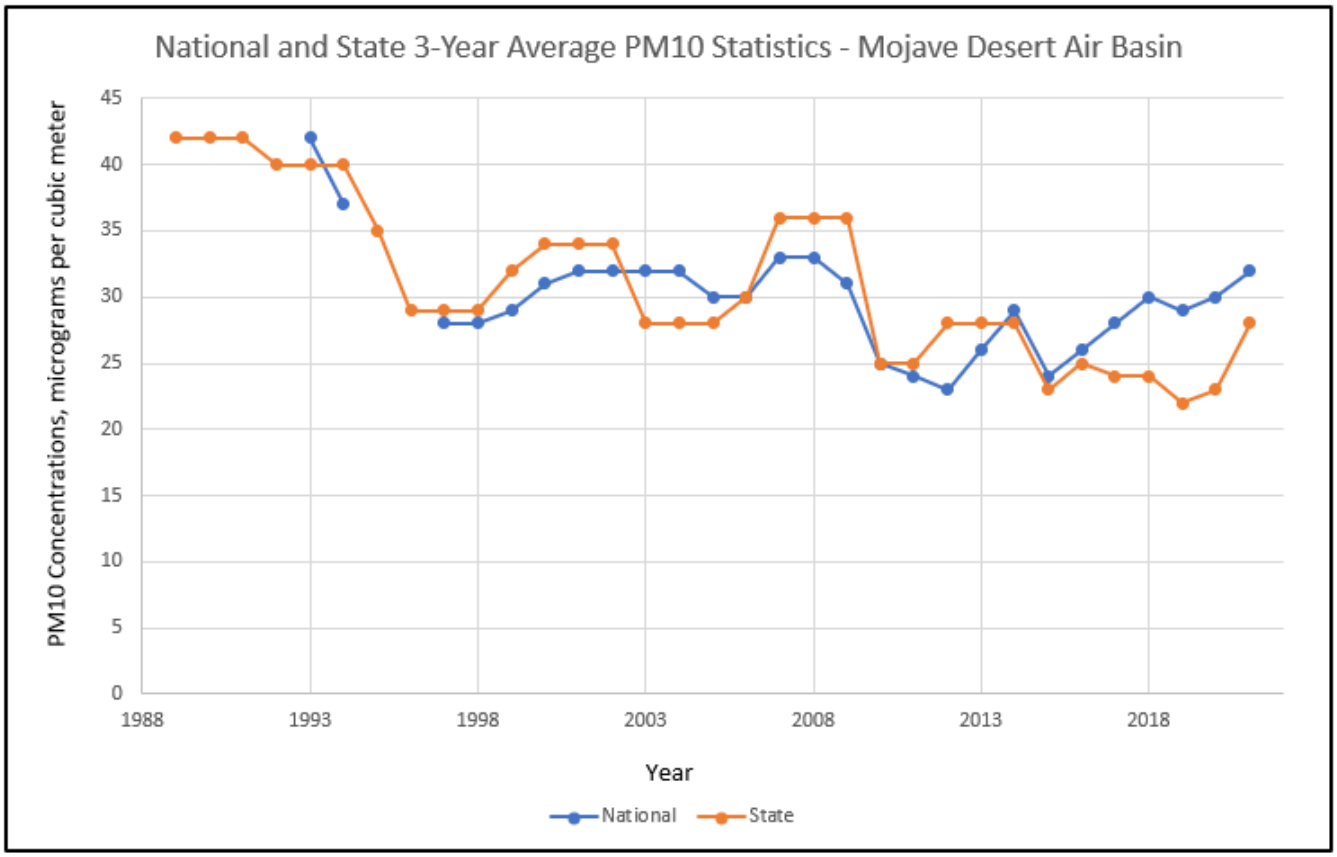
A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma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

Long-term exposure (months to years) to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory

mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2021f).

As discussed for Ozone, air quality in the MDAB has generally improved since the inception of air pollutant monitoring including PM_{10} ambient concentrations. Exhibit 4.2-2, National and State 3-Year Average PM10 Statistics – Mojave Desert Air Basin, demonstrates the reduction in PM_{10} trend over time.

Exhibit 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 PM2.5, DPM also contributes to the same noncancer health effects as PM2.5 exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2021g). Those most vulnerable to noncancer health effects are children, whose lungs are still developing, and the elderly, who often have chronic health problems.

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

Valley Fever. Coccidioidomycosis, more commonly known as "Valley Fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils. San Bernardino County is not considered a highly endemic region for Valley Fever as the latest report from the California Department of Public Health listed San Bernardino County as having 1.8 cases per 100,000 people (CDPH 2017).

Sensitive Receptors

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

Local Ambient Air Quality

Mojave Desert Air Basin Attainment Designation

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

Table 4.2-1. Mojave Desert Air Basin Attainment Classification

Pollutant	Designation/Classification[a]	
	Federal Standards	State Standards
O_3 – 1 hour	No federal standard	**Nonattainment**
O_3 – 8 hours	**Severe nonattainment[b]**	**Nonattainment**
NO_2	Unclassifiable/attainment	Attainment
CO	Unclassifiable/attainment	Attainment
SO_2	Unclassifiable/attainment	Attainment
PM_{10}	**Moderate nonattainment[c]**	**Nonattainment**
$PM_{2.5}$	Unclassifiable/attainment	Attainment[d]
Lead	Unclassifiable/attainment	Attainment
Hydrogen sulfide	No federal standard	Unclassified[e]
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 Exhibit 4.2-1 and Exhibit 4.2-2, for O_3 and PM_{10}, respectively.

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

Regarding 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 2015). 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. 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 10.5 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	Maximum 1-hour concentration	State	0.18	0.056	0.059	0.056	0	0	0
			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

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
Sulfur Dioxide (SO2)										
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 2022; 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/m^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]
	8 hours	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)[f]	Same as primary standard[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	—	
$PM2.5$[i]	24 hours	—	35 µg/m³	Same as primary standard
	Annual arithmetic mean	12 µg/m³	12.0 µg/m³	15.0 µg/m³
Lead[j,k]	30-day average	1.5 µg/m³	—	—
	Calendar quarter	—	1.5 µg/m³ (for certain areas)[k]	Same as primary standard
	Rolling 3-month average	—	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	—	—
Sulfates	24 hours	25 µg/m³	—	—
Visibility reducing particles	8 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

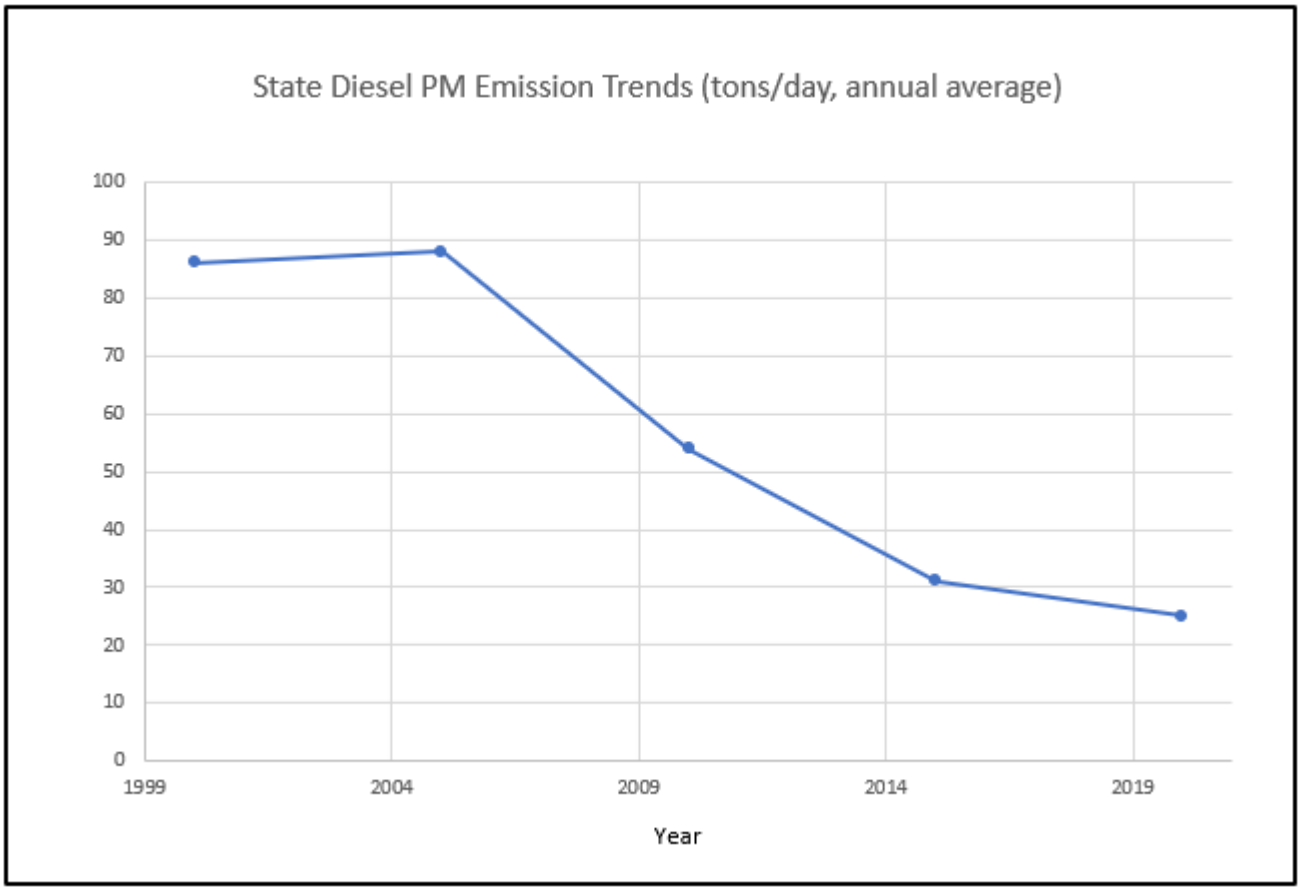
The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 200 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. 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% since 1990 (CARB 2022).

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply

to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment Program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

In 2013 CARB published the California Almanac of Emissions and Air Quality. The Almanac contains 20-year trend summaries of air quality and emissions data for five criteria pollutants: ozone, PM_{10}, CO, NO_2, and SO_2. Data are summarized for the State as a whole and for the five most populated air basins (South Coast, San Francisco Bay Area, San Joaquin Valley, San Diego, and Sacramento Valley). In addition to information on criteria pollutants, the Almanac provides information on air quality and emissions for DPM. Exhibit 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.

Exhibit 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 PM_{10} will not be exceeded due to anthropogenic sources of fugitive dust within the Mojave Desert Planning Area and implements the control measures contained in the Mojave Desert Planning Area Federal PM_{10} Attainment Plan. Rule 403 includes requirements for a Dust Control Plan, signage and fencing requirements, as well as surface watering and stabilization with chemicals, gravel and asphaltic pavement to eliminate visible fugitive dust from vehicular travel and wind erosion.
- **Rule 431 – Sulfur Content of Liquid Fuels:** The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of reducing the formation of SO_x and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the MDAQMD. The rule also affects diesel fuel supplied for mobile sources.
- **Rule 442 – Usage of Solvents:** The purpose of this rule is to reduce VOC emissions from VOC-containing materials or equipment that is not subject to limits of any rule found in District Regulation XI – Source Specific Standards.

- **Rule 1113 – Architectural Coatings.** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (MDAQMD 2020a).

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 2003) 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 2022.1.[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.

Project Design Features

The following project design features (PDFs) would be included as part of the Project:

PDF-AQ-1 (Construction)

- **Heavy-Duty Off-Road Construction Equipment Requirements/Restrictions.** During Project construction, all internal combustion engines/construction equipment greater than 150 horsepower operating on the Project site shall meet U.S. Environmental Protection Agency-certified Tier 4 Interim emissions standards. The Project Applicant or successor in interest shall include this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities. An exemption from these requirements may be granted by the Town of Apple Valley in the event that the Project Applicant or successor in interest 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.[5] Before an exemption may be considered by the Town of Apple Valley, the Project Applicant or successor in interest shall be required to demonstrate that at least two construction fleet owners/operators in the High Desert and San Bernardino Region were contacted and that those owners/operators confirmed Tier 4 Interim or better equipment could not be located within the High Desert and San Bernardino Region.

[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] For example, if a Tier 4 Interim piece of equipment is not reasonably available at the time of construction and a lower tier equipment is used instead (e.g., Tier 3), another piece of equipment could be upgraded from a lower tier to a higher tier (i.e., Tier 4) 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 Interim standards.

- **Provision of Electrical Infrastructure for Construction and Use of Electric Construction Equipment.** After the grading phase of Project construction, the Project Applicant or successor in interest shall provide temporary electrical hook ups to the power grid, rather than diesel-fueled generators, for contractors' electric construction tools, such as saws, drills and compressors. The use of diesel-fueled generators for on-site construction activities shall be prohibited unless electrical infrastructure is not yet available on the Project site. Diesel-fueled generators may be used for off-site construction work. All off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used on site during Project construction must be electric-powered. The Project Applicant or successor in interest shall include these requirements in applicable bid documents, purchase orders, and contracts with successful contractors.
- **Construction Equipment Idling Restrictions.** The idling of heavy construction equipment for more than 5 minutes shall be prohibited. Signage shall be posted throughout the construction site informing construction personnel of the idling time limit. Idling time limits shall be noted in construction specifications. Subject to all other idling restrictions, heavy construction equipment shall not be left in the "on position" for more than 10 hours per day.
- **Construction Haul Truck Requirements.** All haul trucks entering the Project construction site during the grading and building construction phases shall meet California Air Resources Board model year 2014 engine emission standards. All heavy-duty haul trucks should also meet CARB's lowest optional NO_x standard.
- **Dust Control Measures.** In compliance with all applicable Rules and Regulations of the Mojave Desert Air Quality Management District (MDAQMD), including, but not limited to Rules 401 (Visibile Emissions), 402 (Nuisance), and 403 (Fugitive Dust). To ensure compliance with these Rules and Regulations, the Project Applicant or successor in interest shall prepare and submit a Dust Control Plan to the MDAQMD for approval. The Dust Control Plan shall document the best management practices (BMPs) that will be implemented during Project construction to prevent, to the maximum extent practicable, wind and soil erosion. BMPs that will be included in the Dust Control Plan shall include, but are not limited to, covering soil stockpiles when not in use and watering soils during earth-moving activities. On days when the hourly average wind speed for north 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.
- **Construction Waste Recycling and Management.** Consistent with Section 5.408.1 of the California Green Building Standards Code Part 11, a minimum of 65% of the nonhazardous construction and demolition waste shall be recycled and/or salvage for reuse.
- **Architectural Coating Requirements.** Architectural and industrial maintenance coatings (e.g., paints) applied on the Project site shall have volatile organic compound levels of less than 10 grams per liter (g/L).
- **Construction Logs.** The Project's construction manager shall maintain on the construction site construction logs detailing the following:
  - An inventory of construction equipment, maintenance records, and datasheets, including design specifications and emission control tier classifications
  - Verification that construction equipment operators have been advised of idling time limits and photographic evidence that signage with idling time limits have been posted around the construction site
  - Evidence that construction contractors have been provided with transit and ridesharing information for construction workers
  - Construction logs shall be made available in the event that local, regional, or state officials (e.g., officials from the Town of Apple Valley, MDAQMD, or CARB) conduct an inspection at the Project site.

PDF-AQ-2 (Site Design)

- **Sustainable Design/LEED Measures.** The Project shall be designed so that it is able to achieve Leadership in Energy and Environmental Design (LEED) certification at the time of building permit application. Documentation shall be provided to the Town of Apple Valley demonstrating that the Project meets this requirement prior to the issuance of building permits.
- **Design of Ingress/Egress Points.** Entry gates into the loading dock/truck court areas shall be sufficiently positioned to ensure that all truck and other vehicles are contained onsite and inside the property line. Queuing, or circling of vehicles, on public streets immediately pre- or post-entry to the Project shall be strictly prohibited unless queuing occurs in a deceleration lane or right turn lane exclusively serving the Project site.
- **Measures to Reduce the Urban Heat Island Effect.** The following measures shall be implemented to reduce the urban heat island effect:
  - The Project's roof structures shall be designed to include "cool roof" materials with a minimum aged reflectance and thermal emittance values that are equal to or greater than those specified in the current edition of the California Green Building Standards (CALGreen), Table A5.106.11.2.3 for Tier 1 standards.
  - Sufficient shade trees shall be provided throughout the Project site so that at least 30% of the automobile parking areas will be shaded within 15 years after Project construction is complete (excluding the truck courts where trees cannot be planted due to interference with truck maneuvering).

PDF-AQ-3 (Operation)

- **Truck Routing Plan.** The Project Applicant or successor in interest shall establish and submit for approval to the Town of Apple Valley a Truck Routing Plan that provides for routes between the Project site and the State Highway System. The Truck Routing Plan shall include measures, such as signage, pavement markings, and enforcement, for preventing truck queuing, circling, stopping, and parking on public streets. The Truck Routing Plan shall make every effort to avoid passing sensitive receptors, to the greatest extent possible, unless otherwise superseded by an applicable truck routing ordinance adopted by the Town of Apple Valley. The tenant/operator of the Project shall be responsible for enforcement of the Truck Routing Plan. A revised plan shall be submitted to the Town of Apple Valley prior to a business license being issued by the Town of Apple Valley for any new tenant/operator of the Project site. The revised plan shall expand upon the original Truck Routing Plan and describe the operational characteristics of the use of the tenant/operator, including, but not limited to, hours of operations, types of items to be stored within the building, and whether any modifications to the Project's designated truck routes are necessary. The Town of Apple Valley shall have discretion to determine if changes to the Truck Routing Plan are necessary including any additional measures to alleviate truck routing and parking issues that may arise during the life of the Project. Signs and drive aisle pavement markings shall clearly identify the onsite circulation pattern to minimize unnecessary on-site vehicular travel.
- **Yard Sweeping to Reduce Fugitive Dust.** The following measure shall be implemented during all ongoing business operations and shall be included as part of contractual lease agreement language to ensure that tenants and operators of the Project are informed of the following operational responsibility:
  - Yard and parking area sweeping shall be periodically conducted to minimize dust generation from the Project site. The building manager or their designee shall be responsible for enforcing this requirement.

- **Restriction on Cold and/or Refrigerated Space.** Operations involving cold or refrigerated storage shall be prohibited unless additional environmental review, including a Health Risk Assessment, is conducted and certified pursuant to the California Environmental Quality Act.
- **Provision of Information Regarding Programs to Reduce Emissions from Trucks.** 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 informational documentation regarding:
  - Funding opportunities that provide incentives for using cleaner-than-required engines and equipment, such as the Carl Moyer Program and Voucher Incentive Program
  - The U.S. EPA SmartWay Program, which assists freight shippers, carriers, logistics companies, and other stakeholder partner with the U.S. EPA to measure, benchmark, and improve logistics operations and reduce air pollutant emissions from the transport of cargo.

Construction

For the purpose of estimating Project emissions, construction was modeled beginning in December 2023 and concluding in toward the end of October 2025,[6] lasting approximately 22 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):

- Site preparation: December 2023 -- January 2024
- Grading: January 2024 – March 2024
- Pipeline installation: March 2024 – August 2024
- Building construction: September 2024 – May 2025
- Paving: May 2025 – July 2025
- Architectural coating: July 2025 – October 2025

Construction modeling assumptions for equipment and vehicles are provided in Table 4.2-5. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site 5 days per week. For on-site and off-site development, it was assumed that approximately 152,288 cubic yards of soil would be exported. After the modeling was completed, a new grading plan was released that stated the project would result in a net import of 13,400 cubic yards of material. Because the new grading plan results in the transport of significantly less material, and therefore fewer haul trucks, the modeling is conservative and has not been changed for this analysis.

Table 4.2-5. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Daily Usage Hours
	18	4	0	Rubber Tired Dozers	3	8

[6] The analysis assumes a construction start date of December 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.

Table 4.2-5. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Daily Usage Hours
Site Preparation				Tractors/Loaders/ Backhoes	4	8
Grading	20	4	418	Excavators	2	8
				Graders	1	8
				Rubber Tired Dozers	1	8
				Scrapers	2	8
				Tractors/Loaders/ Backhoes	2	8
Pipeline Installation	24	4	2	Air Compressors	1	8
				Concrete/Industrial Saws	1	8
				Excavators	1	8
				Forklifts	1	8
				Pavers	1	8
				Paving Equipment	1	8
				Pumps	1	8
				Rollers	1	8
				Tractors/Loaders/ Backhoes	1	8
Building Construction	454	178	0	Cranes	1	7
				Forklifts	3	8
				Generator Sets	1	8
				Tractors/Loaders/ Backhoes	3	7
				Welders	1	8
Paving	16	4	0	Pavers	2	8
				Paving Equipment	2	8
				Rollers	2	8
Architectural Coating	92	4	0	Air Compressors	10	6

Source: Appendix B-1.

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 J).

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 2022). 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 (MDAQMD 2020a), 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. Based on the limits in Rule 1113 of 50 g/L VOC content for flat and nonflat coatings, 50 g/L VOC content was assumed for all coatings used in the Project. CalEEMod default values were assumed for the surface area to be painted 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 J), were 1,955 total non-PCE trips per day, of which 1,417 trips would be passenger vehicles and 538 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 34 miles for commercial-work trips (i.e., trips made by someone who is employed by the warehouse land use) and assumed to be 100% of primary trips.

To identify an appropriate trip length assumption for heavy-duty truck trips, two different methods of estimation were evaluated: (1) Project-specific EMFAC-based estimate, and (2) SCAQMD recommendations. For method 1, to determine an average operational truck trip distance, EMFAC data and the distance to the Port of Long Beach was examined. EMFAC data was queried for San Bernardino County for operational year 2025 for light-heavy duty (LHDT1

and LHDT2), 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.

Table 4.2-6. Operational Truck Trip Distance

Vehicle	Percent of Trucks Trips (%)[1]	EMFAC Data			Trip Distance
		EMFAC Truck Classification	Countywide VMT	Countywide Vehicle Trips	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: VMT = vehicle miles traveled; LHDT = light-heavy duty; MHDT = medium-heavy duty; HHDT = heavy-heavy duty.

1 Based on Project traffic impact analysis, Appendix J.

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 countywide 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.

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 "Draft Truck Emission Rate 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] 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.

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.

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 are reflective of the 2019 Title 24 standards to the extent CEC accounted for them in the underlying Commercial Forecast assumed in CalEEMod. Using CalEEMod default values are conservative as the Project would be required to comply with the more stringent 2022 Title 24 standards, which became effective January 1, 2023.

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 130 forklifts (forklifts and pallet jacks, with a mix of 25% diesel and 75% Compressed Natural Gas [CNG]) and 3 diesel-fueled yard trucks 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 operate one diesel-fueled 300-horsepower (hp) fire pump for a maximum of 50 hours per 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 2020b). 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 11.2.0. The HRA followed the Office of Environmental Health Hazard Assessment (OEHHA) 2015 guidelines (OEHHA 2015) and MDAQMD guidance to calculate the health risk impacts at all proximate receptors as further discussed below. The dispersion modeling included the use of standard regulatory default options. AERMOD parameters were selected consistent with the MDAQMD and EPA guidance and identified as representative of the Project site and Project activities. Principal parameters of this modeling are presented in Table 4.2-7.

Table 4.2-7. 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 and diesel trucks were 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 10 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; CARB = California Air Resources Board; 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. Notably, there is no reference exposure level for acute health impacts from DPM, and, thus, acute risk was not evaluated.

Operational Heath Risk Assessment

Emissions from the operation of the Project include truck trips, truck idling emissions, off-road diesel- and CNG-fueled equipment, and routine testing and maintenance of the diesel fire pump. 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.[8] 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 and gaseous TACs from CNG were 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 (65%), north (15%), and south (20%) of the Project with a release height of 3.4 meters, a plume height of 6.8 meters, and plume width of 9.7 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 3.7 meters. ▪ Cargo handling equipment 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 9.7 meters. ▪ The fire pump was modeled as a point source at the southeast corner of the building. The 300-hp fire pump was assumed to have a vertical stack with a height of 2.50 meters, inside stack diameter of 12.19 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 to the Project site and haul routes.

Source: See Appendix B-2.
Note: AERMOD = American Meteorological Society/Environmental Protection Agency Regulatory Model; MDAQMD = Mojave Desert Air Quality Management District; CARB = California Air Resources Board.

[8] 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.

4.2.4 Impacts Analysis

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

Potentially Significant Impact Before Mitigation. 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 and zoning for the Project site is Specific Plan (SP), referring to its presence within the boundaries of the North Apple Valley Industrial Specific Plan. 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. However, Project operational-source air pollutant emissions would result in exceedances of regional thresholds for emissions of NO_x (304 pounds per day above threshold) and CO (2,374 pounds per day above threshold). As such, NO_x and CO operational emissions are considered significant 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 and in depth in Appendix B-3.

Based on the preceding considerations, the Project would conform to local land use plans and would comply with all applicable 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 potentitally significant before mitigation. However, as identified under Threshold B below, implementation of MM-AQ-1 would reduce Project-related criteria air pollutant emissions to a less than significant level. As such, the Project would not conflict with or obstruct implementation of the applicable air quality plan after mitigation.

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?

Potentially Significant Impact Before Mitigation. 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	--	--	--	--	--	--
2024	3.68	17.45	57.76	0.07	7.88	2.21
2025	20.52	16.53	54.28	0.07	7.82	2.16
Winter						
2023	1.06	15.37	29.10	0.05	8.26	4.31
2024	3.38	55.00	44.37	0.26	12.63	4.43
2025	20.42	17.07	41.93	0.07	7.82	2.16
Maximum Daily Emissions	**20.52**	**55.00**	**57.76**	**0.26**	**12.63**	**4.43**
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.
Includes compliance with the construction measures specified in PDF AQ-1.

As depicted in Table 4.2-9, regional construction emissions would not exceed the applicable MDAQMD thresholds of significance for any criteria pollutant. Therefore, 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 (forklifts and yard trucks), and stationary sources (emergency diesel generator testing and maintenance). Table 4.2-10 summarizes the unmitigated maximum daily operational emissions associated with the Project. Detailed operational model outputs are presented in Appendix B-1.

Table 4.2-10. 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						
Mobile	6.72	67.41	152.10	0.95	53.40	14.68
Area	31.18	0.40	46.97	0.00	0.08	0.06
Energy	0.30	5.52	4.63	0.03	0.42	0.42
Offroad Equipment	9.06	342.44	2698.56	0.18	4.21	3.87
Stationary	7.88	22.02	20.08	0.04	1.16	1.16
Total Daily Summer Emissions	**55.14**	**437.78**	**2,922.35**	**1.20**	**59.27**	**20.19**
Winter						
Mobile	6.13	71.41	104.06	0.91	53.40	14.68
Area	23.48	--	--	--	--	--
Energy	0.30	5.52	4.63	0.03	0.42	0.42
Offroad Equipment	9.06	342.44	2,698.56	0.18	4.21	3.87
Stationary	7.88	22.02	20.08	0.04	1.16	1.16
Total Daily Winter Emissions	**46.85**	**441.38**	**2827.33**	**1.16**	**59.19**	**20.13**
Maximum Daily Emissions	**55.14**	**441.38**	**2,922.35**	**1.20**	**59.27**	**20.19**
MDAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**No**	**Yes**	**Yes**	**No**	**No**	**No**

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

As shown in Table 4.2-10, the Project would exceed the numerical thresholds of significance established by the MDAQMD for emissions of NO_x and CO. This impact would be potentially significant without mitigation.

Mitigation measures are required to minimize operational-related air quality impacts. As depicted in Table 4.2-10 above, most criteria air pollutants associated with the Project are generated by off-road cargo handling equipment

(diesel and CNG fueled) and on-road vehicles. MM-AQ-1 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. Other site design requirements of MM-AQ-1 were not quantified, however, including the provision of infrastructure to support on-road electric vehicles (EVs) and electric landscaping equipment. In addition, neither the Project Applicant nor the Town of Apple Valley can substantively or materially affect reductions in Project on-road mobile source emissions beyond what is already required by regulation. Table 4.2-11 summarizes the mitigated 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 - Mitigated

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
Mobile	6.72	67.41	152.10	0.95	53.40	14.68
Area	31.18	0.40	46.97	0.00	0.08	0.06
Energy	0.30	5.52	4.63	0.03	0.42	0.42
Offroad Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Stationary	7.88	22.02	20.08	0.04	1.16	1.16
Total Daily Summer Emissions	**46.08**	**95.34**	**223.79**	**1.02**	**55.06**	**16.32**
Winter						
Mobile	6.13	71.41	104.06	0.91	53.40	14.68
Area	23.48	--	--	--	--	--
Energy	0.30	5.52	4.63	0.03	0.42	0.42
Offroad Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Stationary	7.88	22.02	20.08	0.04	1.16	1.16
Total Daily Winter Emissions	**37.78**	**98.94**	**128.78**	**0.98**	**54.98**	**16.25**
Maximum Daily Emissions	**46.08**	**98.94**	**223.79**	**1.02**	**55.06**	**16.32**
MDAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: See Appendix B-1 for complete results.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; MDAQMD = Mojave Desert Air Quality Management District;.
Includes implementation of Mitigation Measure (MM)-AQ-1.

After implementation of MM-AQ-1, the Project would not exceed the MDAQMD thresholds for NO_x and CO. Therefore, 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 less than significant.

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. Operation of the Project, however, would result in emissions that would exceed the MDAQMD thresholds for criteria air pollutants without mitigation, including NO_x (304 pounds per day above threshold) and CO (2,374 pounds per day above threshold). However, as described above, incorporation of MM-AQ-1 would substantially reduce long-term emissions to below thresholds.

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. As the Project would not exceed the MDAQMD threshold for NO_x after implementation of MM-AQ-1, the Project is not anticipated to 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). Since the mitigated Project would not result in NO_x emissions that would exceed the MDAQMD mass daily thresholds and 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,[9] 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.

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.

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 not exceed the MDAQMD threshold for PM_{10}. Because the Project does not emit substantial particulate matter during operation, the Project would not result in associated health effects.

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

In connection with the judicial proceedings culminating in issuance of the Friant Ranch decision, the SCAQMD and the San Joaquin Valley Air Pollution Control District (SJVAPCD) filed amicus briefs attesting to the extreme difficulty of correlating an individual project's criteria air pollutant emissions to specific health impacts. Both the SJVAPCD and the

[9] 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.

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,[10] 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 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

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

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)[11] and the EPA Benefits Mapping and Analysis Program (BenMAP or BenMAP–Community Edition [CE]).[12] 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 $PM_{2.5}$.[13] To date, the five publicly available HIAs reviewed (and discussed in detail in Appendix B-3) 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 of writing, no HIA has concluded that health effects estimated using the PGM and BenMAP approach are substantial

11 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).

12 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 $PM_{2.5}$.

13 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).

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.

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 (see Appendix B-3). However, based on the preceding considerations, because construction and operation of the Project would not result in the emissions of criteria air pollutants that would exceed the applicable MDAQMD significance thresholds, and because the MDAQMD thresholds are based on levels that the MDAB can accommodate without affecting the attainment date for the NAAQS and CAAQS, and the NAAQS and CAAQS are established to protect public health and welfare, it is anticipated that the Project would not result in health effects associated with criteria air pollutants and the impact would be less than significant after implementation of MM-AQ-1.

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

Potentially Significant Impact Before Mitigation. 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. The nearest sensitive receptor to the Project site is a fire center approximately 600 feet to the south, as it could potentially contain sleeping quarters.

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 CO, the Project would potentially result in health effects associated with those pollutants. However, with implementation of MM-AQ-1, NO_x and CO emissions would be reduced below the respective MDAQMD significance thresholds. Because construction of the Project would not exceed any MDAQMD thresholds, and operation of the Project would not exceed the MDAQMD thresholds after implementation of mitigation, 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 any criteria air pollutant.

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 2003). 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 J), 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. Results of the construction HRA are presented in Table 4.2-12. Detailed operational model outputs are presented in Appendix B-2.

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

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	3.65	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0023	1.0	Less than Significant

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

As shown in Table 4.2-12, Project construction activities would result in a Maximum Individual Cancer Risk of 3.65 in 1 million at the nearest residence, which is below the significance threshold of 10 in 1 million. Project construction would result in a Chronic Hazard Index of 0.0023, which is below the 1.0 significance threshold. The Project construction TAC health risk impacts would be less than significant without mitigation.

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 4.2-13. Detailed operational model outputs are presented in Appendix B-2.

Table 4.2-13. Operational Health Risk Assessment Results - Unmitigated

Impact Parameter	Units	Impact Level	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	293.74	10	**Potentially Significant**
Chronic Hazard Index – Residential	Index Value	1.05	1.0	**Potentially Significant**

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

As shown in Table 4.2-12, the TAC emissions from operation of the Project would result in a Maximum Individual Cancer Risk of 293.74 in 1 million and a Chronic Hazard Index of 1.05, which would exceed the respective thresholds of significance and would result in a potentially significant impact without mitigation.

Mitigation measures are required to minimize operational-related air quality impacts (MM-AQ-1). MM-AQ-1 would require all off-road cargo handling and landscaping equipment to be zero-emission. MM-AQ-1 results in such drastic reductions in cancer risk and Chronic Hazard risk because it completely removes the largest contributors to localized health risk (e.g., diesel and CNG cargo handling equipment) and replaces them with zero-emission equipment. This results in the elimination of all DPM, as well as TACs produced through CNG combustion, such as benzene and formaldehyde, associated with cargo handling equipment. Table 4.2-14 summarizes the mitigated operational health risk levels associated with the Project.

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

Impact Parameter	Units	Impact Level	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	2.95	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0008	1.0	Less than Significant

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

As shown in Table 4.2-14, mitigated Project operational activities would result in a Maximum Individual Cancer Risk of 2.95 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 0.0008, 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).

Notably, the Project would implement PDF-AQ-1, which includes dust control measures in accordance with the MDAQMD Rules 401 and 403.2, which that would 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?

Potentially Significant Impact Before Mitigation. 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 4.2-9, daily construction emissions associated with the Project would not exceed the MDAQMD significance thresholds. Project operational-source air pollutant emissions, however, would result in exceedances of regional thresholds for emissions of NO_X and CO and would be potentially significant before mitigation. With implementation of MM-AQ-1,

long-term emissions of NO_x and CO would be reduced to a less than significant level, and, therefore, the Project would not result in a cumulatively considerable air quality impact.

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 would reduce the Project's impacts to less than significant.

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

- **Solar Power.** At a minimum, the roofs of the warehouse building shall be designed to provide the structural capacity to accommodate roof-top solar panels. The Project shall be designed to include rooftop solar panels that generate sufficient power to meet at least 50% of the Project's total operational base energy requirements from within the Project's building envelope. The Town of Apple Valley shall verify the size and scope of the solar energy system based upon the analysis of the projected power requirements and generating capacity as well as the available solar panel installation space. In the event sufficient space is not available on the Project site to accommodate the needed number of solar panels to produce the operation's base power use, the Project Applicant or success or interest shall demonstrate how all available space has been maximized (e.g., roof, parking areas) for solar energy system use. Areas that provide for truck movement may be excluded from these calculations unless otherwise deemed acceptable by the supplied reports and applicable building standards. The Project Applicant or successor in interest, or as contractually delegated by the Project Applicant or successor in interest, shall install the solar energy system when the Town of Apple Valley has approved building permits and the necessary equipment has arrived. The operation of the system shall commence only when it has received permission to operate from the applicable utility. The solar energy system owner shall be responsible for maintaining the system at not less than 80% of the rated power for 20 years. At the end of the 20-year period, the owners, operators or tenants shall install a new photovoltaic system meeting the capacity and operational requirements of this measure, or continue to maintain the existing system, for the life of the Project. As the Project's demand for solar power increases, additional solar panels may be added to the Project.
- **Electrical Infrastructure for Electric Equipment and Vehicles.** The Project shall be designed to include electrical infrastructure to accommodate the required number of electric vehicle charging stations, the anticipated number charging stations for electric cargo handling equipment, and the potential installation of additional automobile and truck electric vehicle charging stations. Electrical conduit shall be installed within reasonable locations (e.g., parking areas, at or near dock doors) at the time of building construction to satisfy this requirement. The Project's electrical rooms shall be of sufficient size to accommodate the upsizing of electrical equipment to accommodate potential future electrical loads.

- **Electric Vehicle Charging Stations.** Prior to issuance of a Certificate of Occupancy, Level 2 (or faster) electric vehicle charging stations shall be installed 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 January 1, 2030, Level 2 (or faster) electric vehicle charging stations shall be installed for 25% of the employee parking spaces required (i.e., 316 charging stations).
- **Sustainable Energy, Waste, and Water Design Measures.** The Project Applicant or successor in interest shall implement the following measures:
  - The Project's landscape plan shall emphasize drought-tolerant plants and use water-efficient irrigation techniques
  - All heating, cooling, lighting, and appliance fixtures shall be Energy Star-rated
  - All fixtures installed in restrooms and employee break areas would be U.S. Environmental Protection Agency WaterSense Certified or equivalent
  - 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
  - Provide storage areas for recyclables and green waste, as well as food waste storage if a pick-up service is available
  - Buildings shall include high efficiency particulate air (HEPA) filtration systems within in all warehouse facilities
- **Zero-Emission or Near-Zero-Emission Equipment.** The following measure shall be implemented during all ongoing business operations and shall be included as part of contractual lease agreement language to ensure that tenants and operators of the Project are informed of the following operational responsibility:
  - All equipment and appliances operating on the Project site shall be zero-emission or near-zero-emission equipment. This requirement shall apply to indoor and outdoor equipment such as forklifts, handheld landscaping equipment, yard equipment, office appliances, etc. The building manager or their designee shall be responsible for enforcing these requirements.
- **Truck Requirements and Restrictions.** The following measure shall be implemented during all ongoing business operations and shall be included as part of contractual lease agreement language to ensure that tenants and operators of the Project are informed of the following operational responsibility:
  - 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. In addition, tenants shall 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, and the Statewide Truck and Bus Regulation. The building manager or their designee shall be responsible for enforcing these requirements.
- **Idling Time Restriction.** The following measure shall be implemented during all ongoing business operations and shall be included as part of contractual lease agreement language to ensure that tenants and operators of the Project are informed of the following operational responsibility:

- Upon commencement of operations, the tenant/operator of the Project shall be required to restrict truck idling onsite to a maximum of 3 minutes, subject to exceptions defined by the California Air Resources Board's commercial vehicle idling requirements. The building manager or their designee shall be responsible for enforcing this requirement.

- **Anti-Idling Implementation Measures.** The following measures shall be implemented to reduce air pollutant emissions from idling:
  - **Signage.** Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify the Project's 3-minute idling restriction. 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 3 minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; (3) telephone numbers of the building facilities manager and California Air Resources Board (CARB) to report violations; and (4) that penalties apply for 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.
  - **Efficient Load Management.** The facility operator(s) shall be required to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
  - **Anti-Idling Training.** Tenants and operators on the Project site shall ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at CARB-approved courses (such as the free, 1-day Course No. 512).
- **Transportation Demand Management Plan.** For occupants with more than 250 employees, a Transportation Demand management Program to reduce employee commute vehicle emissions shall be established, subject to review and approval by the Town of Apple Valley. The Transportation Demand Management Plan shall apply to Project tenants through tenant leases. The TDM plan shall discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. Examples of trip reduction measures may include, but are not limited to:
  - Transit passes
  - Car-sharing programs
  - Telecommuting and alternative work schedules
  - Ride sharing programs

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

Short-Term Construction Impacts

Construction of the Project would result in a less than significant cumulatively considerable net increase of criteria pollutants.

Long-Term Operational Impacts

Operation of the Project would result in a potentially significant cumulatively considerable net increase of criteria pollutants (i.e., NO_X and CO). Implementation of MM-AQ-1 would result in the Project's impacts becoming less than significant.

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-1 would be implemented, and Project health risk impacts would be less than significant with mitigation incorporated. After the inclusion of mitigation, the potential health effects associated with criteria air pollutants are considered 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?

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?

Construction and operation of the Project would result in a less than significant cumulative air quality impact with implementation of MM-AQ-1, and thus, not cumulatively considerable overall.

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4.3 Biological Resources

This section describes the existing biological resources conditions of the 1M Warehouse 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]), this analysis is based, in part, on the following sources:

- Biological Resources Technical Report, prepared by Dudek in September 2023 (Appendix C)
- 1M Warehouse Project Aquatic Resources Delineation Report (Appendix A of Appendix C) prepared by Dudek in September 2023

The Biological Resources Technical Report and Aquatic Resources Delineation Report analyze the biological resources present within the approximately 92.0-acre Project, specifically the 67.3-acre Project site, 24.7-acre off-site improvement areas, and a 100-foot buffer totaling 57.6 acres, resulting in the Biological Study Area (BSA), which encompasses 149.6 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 construction and operation of a 1,080,125-square-foot industrial/warehouse building and associated improvements.

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 Aquatic Resources Delineation Report analyzed the entire BSA (149.6 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 (67.3-acre Project site and 24.7-acre off-site improvement areas) for direct impacts. The entire BSA was evaluated for indirect impacts.

4.3.1.1 Topography and Soils

The BSA is within the Mojave Desert. The Town of Apple Valley (Town) is primarily on alluvial slopes of the Mojave River floodplain, at the southern edge of the Mojave Desert. The topography gradually inclines toward 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 of Apple Valley. Turtle and Black Mountains are to the north, Fairview Mountain is to the northeast, and the Granite Mountains are to the southeast.

The on-site BSA is composed of undeveloped vacant lands. The off-site improvement areas include dirt and paved roadways (specifically Johnson Road, Central Road, and Lafayette Street), as well as undeveloped vacant lands immediately adjacent to these roadways. Topography within the BSA is a flat plane, with areas to the southwest containing hills that border the northwest corner of the Town of Apple Valley. Elevation ranges from approximately

3,130 feet above mean sea level (amsl) in the southeastern portion of the BSA to 3,170 feet amsl in the northwestern portion of the BSA. Adjacent land uses include undeveloped land and a small existing structure to the north, undeveloped land and a small existing residential to the west, Apple Valley Fire Center to the south, and undeveloped land to the east.

According to the U.S. Department of Agriculture's Natural Resource Conservation Service's Web Soil Survey (USDA 2023), the BSA consists of two soil complexes: Cajon-Arizo complex (2% to 15% slopes) and Helendale-Bryman loamy sands (2% to 5% slopes). These soil types are described in more detail below and are presented in Figure 4.3-1, Soils.

4.3.1.2 Vegetation Communities and Land Covers

The BSA supports five vegetation communities or land cover types, as identified in Table 4.3-1 and Figure 4.3-2. Vegetation communities and land uses mapped within the BSA include creosote bush scrub, creosote bush-white bursage scrub, as well as disturbed habitat and urban/developed areas.

Vegetation communities within the BSA were mapped following California Department of Fish and Wildlife's (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018) and California Natural Community List (CDFW 2023a), 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 Biological Survey Area

Floristic Alliance	Association	Vegetation Community[1]	Project Site (acres)	Off-Site Areas (acres)	100-Foot Buffer (acres)	Total BSA (acres)[2]
Larrea tridentata	*Larrea tridentata*	Creosote bush scrub	65.0	14.3	48.2	127.5
Larrea tridentata – Ambrosia dumosa	N/A	Creosote bush – white bursage scrub	—	0.1	1.0	1.1
Ericameria nauseosa	*Ericameria nauseosa*	Rubber rabbitbrush scrub	—	—	—	0.4
N/A	N/A	Unvegetated wash and river bottom	0.5	0.1	0.3	0.9
N/A	N/A	Disturbed habitat	1.9	6.3	3.6	11.8

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

Floristic Alliance	Association	Vegetation Community[1]	Project Site (acres)	Off-Site Areas (acres)	100-Foot Buffer (acres)	Total BSA (acres)[2]
N/A	N/A	Urban/developed	—	3.9	4.0	7.8
		Total[2]	**67.3**	**24.7**	**57.6**	**149.6**

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

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. Creosote bush scrub occurs on alluvial fans, bajadas, upland slopes, and minor intermittent washes in soils that are well drained and sometimes with desert pavement (CNPS 2022).

Creosote bush scrub composes the majority of the BSA. Creosote is the dominant shrub species, with a lower cover of white bursage (*Ambrosia dumosa*), cheesebush (*Ambrosia salsola*), rubber rabbitbrush (*Ericameria nauseosa*), Wiggins' cholla (*Cylindropuntia echinocarpa*), branched pencil cholla (*Cylindropuntia ramosissima*), and allscale (*Atriplex polycarpa*). Areas surrounding ephemeral, unvegetated channels consisted of a higher diversity of species that included a low cover of creosote bush and also a mix of Mojave indigobush (*Psorothamnus arborescens*), Mexican bladdersage (*Scutellaria mexicana*), Thurber's sandpaper plant (*Petalonyx thurberi*), desert almond (*Prunus fasciculata*), and turpentinebroom (*Thamnosma montana*). Additionally, western Joshua trees were scattered throughout the creosote bush scrub community within the BSA; however, western Joshua trees made up less than 1% absolute cover and therefore did not warrant its own community.

Creosote bush scrub is ranked as S5 and is therefore not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023a).

Creosote Bush

Creosote bush-white bursage scrub, or *Larrea tridentata-Ambrosia dumosa* alliance, is recognized by the Natural Communities List as an alliance in which white bursage (*Ambrosia dumosa*) and creosote bush are co-dominant in the shrub canopy, exceeding all other shrubs in cover with the exception of the following species: *Acamptopappus sphaerocephalus*, *Bebbia juncea*, *Cylindropuntia acanthocarpa*, *Ephedra nevadensis*, *Ericameria teretifolia*, or *Krameria spp*. These species may have higher cover than white bursage or creosote bush, but by no more than three times. This alliance occurs in washes and rills, on alluvial fans, bajadas, valleys, basins, upland slopes, mesas, and erosional highlands in soils that are well drained, alluvial, and sometimes underlain by hardpan, or covered with desert pavement (CNPS 2022).

Creosote bush-white bursage scrub composes a small portion of the BSA along the western portion of Lafayette Street. Creosote and white bursage are the dominant shrub species, with a lower cover of cheesebush, Mexican bladdersage, and Thurber's sandpaper plant.

Creosote bush-white bursage alliance is ranked as S5 and is therefore not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023a).

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 Central Road, south of Lafayette Street, within the off-site BSA and is dominated by rubber rabbitbrush, with a herbaceous cover comprised of bromes (*Bromus* sp.).

The rubber rabbitbrush scrub alliance is ranked as S5 and therefore is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023a).

Unvegetated Wash and River Bottom

Unvegetated wash and river bottom is not recognized by CDFW (2022d); however, unvegetated wash and river bottom may be jurisdictional by U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the CWA, RWQCB pursuant to Section 401 of the Clean Water Act (CWA) or Porter–Cologne Act, or CDFW pursuant to Section 1602 of the California Fish and Game Code. Thus, unvegetated wash and river bottom may be considered a sensitive vegetation community under CEQA.

Unvegetated wash and river bottom within the BSA contained ephemeral, unvegetated channels.

Disturbed Habitat

Although not recognized by the Natural Communities List (CDFW 2023a), 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 2023a).

Within the BSA, disturbed habitat includes the existing dirt roads found within the site that generally bisect the site east/west and north/south.

Urban/Developed Land

Although not recognized by the Natural Communities List (CDFW 2023a), 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 one paved road, Central Road running north/south along the western boundary of the BSA, and one structure located northwest of Central Road and Johnson Road that includes associated ornamental landscaping composed of oleander (*Nerium oleander*).

Urban/developed land is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023a).

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 June 2022 through August 2023. All plant and wildlife species observed during the surveys were recorded.

Plants

A total of 102 species of native or naturalized plants, 84 native (88%) and 12 non-native (12%), were recorded within the BSA. Dudek biologists recorded 96 species and Dipodomys Ecological Consulting biologists observed an additional 6 species of native or naturalized plants.[1] A list of plant species observed is provided in Appendix E, Plant Compendium, of Appendix C (Biological Resources Technical Report).

Wildlife

A total of 38 wildlife species, consisting of 35 native species (92%) and 3 non-native species (8%), were recorded within the BSA or vicinity during surveys (Appendix F of Appendix C).

Dudek biologists recorded 21 wildlife species. Birds detected on or in the immediate vicinity of the BSA were house finch (*Haemorhous mexicanus*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), verdin (*Auriparus flaviceps*), black-throated sparrow (*Amphispiza bilineata*), mountain bluebird (*Sialia currucoides*), rock wren (*Salpinctes obsoletus*), yellow-rumped warbler (*Setophaga coronata*), and burrowing owl (*Athene cunicularia*). Mammals detected consisted of white-tailed antelope squirrel (*Ammospermophilus leucurus*) and California ground squirrel (*Otospermophilus beecheyi*). Reptiles detected were common side-blotched lizard (*Uta stansburiana*), tiger whiptail (*Aspidoscelis tigris*), desert iguana (*Dipsosaurus dorsalis*), and Mojave shovel-nosed snake (*Chionactis occipitalis*). Invertebrates detected consisted of anise swallowtail (*Papilio zelicaon*).

Dipodomys Ecological Consulting biologists observed 17 additional species consisting of 8 birds: ash-throated flycatcher (*Myiarchus cinerascens*), barn swallow (*Hirundo rustica*), black-tailed gnatcatcher (*Polioptila melanura*), European starling (*Sturnus vulgaris*), horned lark (*Eremophila alpestris*), house sparrow (*Passer domesticus*), LeConte's thrasher (*Toxostoma lecontei*), and red-tailed hawk (*Buteo jamaicensis*); 6 mammals: black-tailed jackrabbit (*Lepus californicus*), coyote (*Lepus californicus*), desert kit fox (*Vulpes macrotis arsipus*), little pocket mouse (*Perognathus longimembris*), kangaroo rat (*Dipodomys* sp.), and domestic dog (*Canis familiaris*); and 3 reptiles: long-nosed leopard lizard (*Gambelia wislizenii)*, Mohave rattlesnake (*Crotalus scutulatus*), and desert horned lizard (*Phrynosoma platyrhinos*) (Appendix F of Appendix C).

[1] Dipodomys Ecological Consulting observed Mojave yucca (Yucca schidigera); however, this conspicuous succulent was not observed by Dudek during the 2022 desert native plant mapping. It is assumed that this species was observed during the Mohave ground squirrel trapping conducted in the northern parcel and located outside of the project site.

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, three special-status plant species were identified as potentially occurring within the region of the BSA: Mojave monkeyflower (*Diplacus mohavensis*), beaver dam breadroot (*Pediomelum castoreum*), and western Joshua tree. Therefore, focused surveys were conducted for these target species on April 19 and 21, 2023[2]. In addition, desert native plants, in accordance with the California Desert Native Plants Act and Chapter 9.76 of the Apple Valley Municipal Code (Town of Apple Valley 2022), were also considered target species.

Before conducting the surveys, Dudek botanists conducted a literature search on reference population checks to ensure the focal special-status plant species were in bloom and identifiable. Mojave monkeyflower and beaver dam breadroot were observed in San Bernardino County in April 2023 (iNaturalist 2023). Furthermore, the average annual precipitation for Apple Valley is 5.17 inches (WRCC 2022b) and Apple Valley received approximately 5.20 inches of precipitation from September 2022 to February 2023 (AgACIS 2023); therefore, the area received average to above average precipitation totals for the rain year thus far.

One special-status plant species, western Joshua tree, was observed within the BSA. Western Joshua tree is further discussed below. No other listed species or non-listed CRPR 1 or CRPR 2 plants were observed during the focused surveys. Due to focused surveys being conducted during the appropriate blooming period, all other special-status plants are not expected to occur. In addition, there is no USFWS-designated critical habitat for listed plant species overlapping the BSA (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 2022). This species typically blooms in April and May.

Eight western Joshua tree individuals were observed within the Joshua tree inventory survey area (Project site, off-site improvement areas, and associated 186-foot buffer) (Figure 4.3-2). Of the eight trees found within the Joshua tree inventory survey area, only one western Joshua tree individual is within the Project site, with the remaining seven western Joshua tree individuals within the associated 186-foot Joshua tree inventory survey area buffer.

[2] Focused surveys were not conducted for the Off-Site Improvements Area southeast of the Lafayette Street and Central Road intersection. A habitat assessment was conducted for this Off-Site Improvements Area on August 25, 2023, and the three special-status plant species were determined to have a low potential to occur; therefore, focused surveys were not warranted.

Further details on phenological data of the seven western Joshua tree individuals observed is provided in Appendix B of Appendix C.

Desert Native Plants

In addition to western Joshua tree, two desert native plant species were observed within the BSA during the focused desert native plant survey (Figure 4.3-2). Specifically, seven Wiggins' cholla (*Cylindropuntia echinocarpa*) and 16 branched pencil cholla (*Cylindropuntia ramosissima*), were observed throughout the BSA.

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, 28 special-status wildlife species were reported in the CNDDB and USFWS databases as occurring in the vicinity of the BSA. Of these, four special status 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 2023b) and USFWS Information for Planning and Conservation database (USFWS 2022): Based on the results of the literature review, database searches, and biological reconnaissance survey, three special-status wildlife species were determined to have at least a moderate or high potential to occur within the BSA: loggerhead shrike (*Lanius ludovicianus*), Bendire's thrasher (*Toxostoma bendirei*), and American badger (*Taxidea taxus*).

Finally, three non-listed special-status wildlife species were observed within the BSA: burrowing owl (*Athene cunicularia*), LeConte's thrasher (*Toxostoma lecontei*) and desert kit fox[3] (*Vulpes macrotis arsipus*). Although Mojave desert tortoise (*Gopherus agassizii*) is not expected to occur within the BSA based on negative survey results from the 2022 and 2023 protocol surveys, in the abundance of caution and due to more recent nearby CNDDB occurrences, this species is included and analyzed.

Protocol surveys for desert tortoise and Mojave ground squirrel were negative. All of the above listed species are detailed in the following discussion.

Mojave 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).

Typical habitat for desert tortoise in the Mojave Desert is creosote bush scrub where precipitation ranges from 2 to 8 inches, with relatively high diversity of perennial plants and high productivity of ephemeral plants. Throughout most of the Mojave Desert, desert tortoises occur most commonly on gently sloping terrain with sandy gravel soils and where there is sparse cover of low-growing shrubs, which allows for the establishment of herbaceous plants.

[3] Although this species does not have any federal or state designation, Section 4000 of the California Fish and Game Code defines "kit fox" as a fur-bearing animal, and it is therefore considered "special-status" for purposes of this report.

Soils must be friable enough for digging 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).

Desert tortoise was not observed during 2022 or 2023 focused protocol surveys. However, the BSA contains suitable sandy soils, ephemeral washes, and creosote scrub to support this species. In addition, the nearest CNDDB occurrence was from 2004 and is mapped approximately 3.3 miles northwest of the BSA (CDFW 2023b), and the BSA is within a high probability predicted habitat for the species (CDFW 2023c). Therefore, based on the discussion above, and because Mojave desert tortoise is a mobile species that could enter the BSA, this species was determined to have a moderate potential to occur.

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; Green and Anthony 1989; Haug et al. 1993; Martin 1973). In California, western burrowing owls most commonly live in burrows created by California ground squirrels (*Otospermophilus 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 proximity (Gervais et al. 2008). Debris piles, riprap, culverts, and pipes can be used for nesting and roosting.

This species was incidentally observed during 2023 rare plant surveys from a burrow previously mapped in 2022 as active. The active burrow (i.e., feathers, whitewash, casts, and fresh prey remains) was observed during the June 3, 2022, survey effort within the Project site (Figure 4.3-2); however, there were no direct observations of burrowing owls at that time. This burrow complex was inspected by Dudek biologists again on August 31, 2022, during an aquatic resources delineation; this time, the burrow complex no longer appeared to be actively occupied due to the lack of fresh sign. Dudek biologists inspected the burrow complex a third time during a desert tortoise protocol presence/absence survey on October 4, 2022. This third inspection resulted in similar results as the second inspection of the burrow complex; burrowing owl sign was present, but the complex did not appear to be actively occupied (i.e., whitewash, feathers, and pellets were present, but cobwebs were found across most of the burrow entrances). Finally, on April 19, 2023, during rare plant surveys, Dudek biologists incidentally observed an individual burrowing owl that flushed from this burrow location.

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 in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008).

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

Loggerhead shrike has moderate potential to occur within the BSA. This species inhabits open areas with short vegetation, similar to what can be found on the BSA. The closest known occurrence was documented approximately 2 miles north of the BSA (CDFW 2023b).

Bendire's Thrasher

Bendire's thrasher is a USFWS Bird of Conservation Concern and a California Species of Special Concern. Bendire's thrasher is found from sea level up to 5,900 feet amsl (England and Laudenslayer Jr. 1993). In general, this species is found in the southwestern United States deserts ranging from southeastern California, southernmost Nevada, southernmost Utah, southern Colorado south through New Mexico, and throughout the Sonora Desert. In Mexico, species distribution is believed to be in Sonora, with wintering in Tiburon Island and northern Sinaloa (Blake 1953). The species appears to be mostly confined to the Mojave Desert (Unitt 2004) and northwestern Mexico deserts (England and Laudenslayer Jr. 1993).

Preferred breeding habitat for Bendire's thrasher is typically in open grasslands, shrubland, or woodland with scatters trees and shrubs (England and Laudenslayer Jr. 1993). At lower elevations Bendire's thrasher is associated with deserts and grasslands, such as the Mojave desert scrub. Characteristic plant species within areas where it occurs include western Joshua tree, Mojave yucca (*Yucca schidigera*), cholla cactus (*Opuntia* spp.) and other succulents, palo verde (*Cercidium* spp.), mesquite (*Prosopis* spp.), catclaw (*Acacia* spp.), desert-thorn (*Lycium* spp.), and agave (*Agave* spp.) (England and Laudenslayer Jr. 1989a, 1989b, 1993).

Bendire's thrasher has a moderate potential to occur. This species is known to nest in yucca, cholla, and other desert shrubs, which are present within the BSA. The nearest known occurrence is approximately 5 miles east of the BSA (CDFW 2023b).

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 open desert wash, 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). These conditions are generally found on bajadas or alluvial fans where the slopes are bisected by dry washes (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).

This species was incidentally observed during 2022 protocol Mohave ground squirrel trapping surveys; however, the location of the observation was not documented. The BSA supports suitable foraging habitat (desert scrub) and nesting habitat (spiny shrubs and cactus).

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.

Mohave ground squirrel was not observed during 2022 focused protocol surveys within the on-site BSA. The Mohave ground squirrel habitat assessment for the off-site improvement areas conducted in January and August 2023 determined that while Mohave ground squirrel habitat occurs within the off-site improvement areas, this area was unlikely to contain Mohave ground squirrel due to the high levels of disturbance along the roadways, as well as a lack of connectivity between this area and known population areas (see Appendix D of Appendix C). Therefore, focused protocol surveys were not warranted. This species' known occurrences in the southeastern portion of its range have historically been rare and population densities low. A query of the CNDDB for the Apple Valley North quadrangle and the surrounding eight quadrangles showed that the closest occurrence to the BSA was recorded in 1977 approximately 6.9 miles southwest of the BSA, and on the west side of I-15 (CDFW 2023b). The most recent occurrence was recorded in 2007 approximately 11.3 miles west of the BSA; however, this occurrence was on the west side of I-15 (CDFW 2023b). No occurrences have been recorded in the southeastern extent of the species' range to the east of I-15 since the establishment of I-15 in its current alignment. Additionally, the BSA is outside of known Mohave ground squirrel core population areas, peripheral population areas, and/or linkage areas, making colonization from adjacent populations unlikely. Therefore, this species is not expected to occur within the BSA and is not further analyzed in this report.

American Badger

American badger is a California Species of Special Concern. American badgers prefer open scrub or grassy areas (USGS 2020). The BSA includes Joshua tree woodland but lacks creosote bush flats, sand dunes, or larger areas of open scrub or grassy areas with friable soils that could support this species.

American badger has a moderate potential to occur within the BSA. The BSA contains suitable open creosote flats with friable soils, and potentially suitable burrows were observed and mapped within the BSA.

Desert Kit Fox

Desert kit fox is considered a "fur-bearing mammal," protected from take under the California Fish and Game Commission's Mammal Hunting Regulations (Subdivision 2, Chapter 5), which effectively protects it from hunting pressure. Desert kit fox is not listed by USFWS or CDFW under any special-status designation. Desert kit fox lives in the open desert, on creosote bush flats, and among sand dunes (NPS 2015).

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

4.3.1.6 Jurisdictional Resources

The jurisdictional aquatic resources delineation identified numerous ephemeral drainages within the BSA (Appendix A of Appendix C). The results of the jurisdictional delineation concluded that there are approximately 0.909 acres of jurisdictional aquatic resources within the BSA (Figure 4.3-3, Jurisdictional Aquatic Resources). Of that total, 0.881 acres (8,504 linear feet) are non-wetland waters of the state under RWQCB jurisdiction and jurisdictional streambed under CDFW. An additional 0.028 acres are solely jurisdictional streambed under CDFW. The ephemeral drainages present are not likely subject to USACE jurisdiction because these features are isolated and do not meet the relatively permanent standard as a water of the United States.

It is important to note that the ultimate decision on the amount and location of jurisdictional resources is made by the resource agencies (i.e., USACE, CDFW, and RWQCB), and, therefore, impacts to potential aquatic resources may increase or decrease. See Appendix A of Appendix C for further descriptions of these resources.

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, natural landscape block, or linkage for the California Desert Linkage Network; however, it is approximately 2.5 miles south and approximately 5.2 miles west of an area mapped as a linkage for the California Desert Linkage Network. Additionally, the BSA is mapped as an Area of Conservation Emphasis, Rank 3 (CDFW 2023b).

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

FESA allows for the issuance of Incidental Take Permits for listed species under Section 7, which is generally available for Projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of Habitat Conservation Plans on private property without any other federal agency involvement.

Migratory Bird Treaty Act

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

Clean Water Act

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

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

Wetlands and Other Waters of the United States

The definition of "waters of the United States" establishes the geographic scope for authority under Section 404 of the CWA; however, the CWA does not specifically define waters of the United States, leaving the definition open to statutory interpretation and agency rulemaking. The definition of what constitutes "waters of the United States" (provided in 33 CFR Section 328.3(a)) has changed multiple times over the past few decades starting with the *United States v. Riverside Bayview Homes, Inc*. court ruling in 1985. Subsequent court proceedings, rule makings, and congressional acts in 2001 (*Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*), 2006 (*Rapanos v. United States*), 2015 (Clean Water Rule), 2018 (suspension of the Clean Water Rule), 2019 (formal repeal of the Clean Water Rule), 2020 (Navigable Waters Protection Rule), and 2021 (*Pasqua Tribe et al v. United States Environmental Protection Agency* resulting in remand and vacatur of the Navigable Waters Protection Rule and a return to "the pre-2015 regulatory regime") have attempted to provide greater clarity to the term and its regulatory implementation. On December 30, 2022, the agencies announced the final Revised Definition of "Waters of the United States" rule (Rule) (88 CFR 3004–3144). The Rule was published in the Federal Register on January 18, 2023, and became effective on March 20, 2023, restoring federal jurisdiction over waters that were protected prior to 2015 under the CWA for traditional navigable waters, the territorial seas, interstate waters, and upstream water resources that significantly affect those waters. The Rule represents a re-expansion of federal jurisdiction over certain water bodies and wetlands previously exempt pursuant to the 2020 Navigable Waters Protection Rule. The Rule also considers various subsequent court decisions including two notable Supreme Court decisions.

There are two key changes that the Rule incorporates. Firstly, the Rule reinstates the "Significant Nexus" test. The "Significant Nexus" test refers to waters that either alone, or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas (86 FR 69372-69450). The "Significant Nexus" test attempts to establish a scientific connection between smaller water bodies (such as ephemeral or intermittent tributaries) and larger, more traditional navigable waters (such as rivers). Significant nexus evaluations take into consideration hydrologic and ecologic factors including, but not limited to, volume, duration, and the frequency of surface water flow in the resource and its proximity to a traditional navigable water, and the functions performed by the resource on adjacent wetlands. Second, the Rule adopts the "Relatively Permanent Standard" test. To meet the "Relatively Permanent Standard," water bodies must be relatively permanent, standing, or continuously flowing and have a continuous surface connection to such waters.

On May 25, 2023, the Supreme Court issued its long-anticipated decision in *Sackett v. EPA*, in which it rejected the EPA's claim that "waters of the United States," as defined in the CWA, include wetlands with an ecologically significant nexus to traditional navigable waters. The Supreme Court held that only those wetlands with a continuous surface water connection to traditional navigable waterways would be afforded federal protection under the CWA. Specifically, to assert jurisdiction over an adjacent wetland under the CWA, a party must establish that (1) the adjacent body of water constitutes water(s) of the United States (i.e., a relatively permanent body of water connected to traditional interstate navigable waters) and (2) the wetland has a continuous surface connection with that water, making it difficult to determine where the water ends and the wetland begins. The Rule will need to be modified by the Biden administration in light of this decision.

The term "wetlands" (a subset of waters of the United States) is defined in 33 CFR, Section 328.3(c)(16), as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the "ordinary high water mark," which is defined in 33 CFR 328.3(c)(7) as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

On August 30, 2023, the EPA released guidance further clarifying the definition of waters of the U.S. based on the Sackett v EPA ruling.

State

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Chapter 1.5) provides protection and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike FESA, under CESA, state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to FESA and is prohibited for both listed and candidate species. Take authorization may be obtained by a Project applicant from the California Department of Fish and Wildlife (CDFW) under CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of mitigation implementation, and monitoring of mitigation measures.

On October 21, 2019, the California Fish and Game Commission received a petition from the Center for Biological Diversity to list western Joshua tree (*Yucca brevifolia*) (Center for Biological Diversity 2019).[4] On November 1, 2019, the California Fish and Game Commission referred the petition to CDFW for evaluation. CDFW evaluated the scientific information presented in the petition and other relevant information possessed by CDFW at the time of review and prepared a report for submittal to the California Fish and Game Commission. The report states that CDFW recommended that the California Fish and Game Commission accept the petition for further consideration of western Joshua tree under CESA. On September 22, 2020, the California Fish and Game Commission approved the petition to accept the candidacy proposal for western Joshua tree, effective October 9, 2020 (CDFW 2020a). 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 permitted 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

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

not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the "take" of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of CDFW to maintain viable populations of all native species. Toward that end, CDFW has designated certain vertebrate species as Species of Special Concern, because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

Section 1600–1616

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of definable bed and banks, and existing fish or wildlife resources. CDFW takes jurisdiction to the top of bank of the stream or the limit of the adjacent riparian vegetation, which may include oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an ordinary high-water mark (OHWM) to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

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

California Native Plant Protection Act

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

Nesting Birds

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

California Environmental Quality Act

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

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

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

Porter–Cologne Water Quality Control Act

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

1. Natural wetlands.
2. Wetlands created by modification of a surface water of the state.
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration.
    b. Specifically identified in a water quality control plan as a wetland or other water of the state.
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape.

d. Greater than or equal to 1 acre in size unless the artificial wetland was constructed and is currently used and maintained, primarily for one or more of the following purposes: industrial or municipal wastewater treatment or disposal; settling of sediment; detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial permitting program; treatment of surface waters; agricultural crop irrigation or stock watering; fire suppression; industrial processing or cooling water; active surface mining – even if the site is managed for interim wetlands functions and values; log storage; treatment, storage, or distribution of recycled water; maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or fields flooded for rice growing.

Wetlands that may not meet all of USACE's wetland delineation criteria are considered wetland waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2019). Additionally, aquatic resources that USACE determines to not be waters of the United States because they lack a significant nexus to a traditional navigable water or are above the OHWM limit of federal jurisdiction, may also be considered waters of the state. If a CWA Section 404 permit is not required for a Project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act.

California 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.

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) and the Countywide Plan (County Policy Plan) was adopted in 2020 (County of San Bernardino 2020). 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

The Town's Biological Resources Element (Town of Apple Valley 2009) contain goals and policies that address biological resources. The following goals and policies pertain to biological resources and are relevant to the Project:

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. This chapter establishes policies governing the removal of protected plants, including the following:

1. The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:
   a. *Dalea spinosa* (smoketree);
   b. All species of the family *Agavaceae* (century plants, nolinas, yuccas). Including the following known to Apple Valley:
      i. Mohave Yucca (*Yucca schidigera*)
      ii. Lords candle (*Yucca whipplei*)
      iii. Barrel cactus (*Ferocactus acanthodes*)

c. All species of the genus *Prosopis* (mesquites).

2. Creosote rings, ten feet or greater in diameter.
3. All Joshua trees (mature and immature).
4. All plants protected or regulated by the California Desert Native Plants Act.

Additionally, Section 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:
>
> 1. 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.
> 2. 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.
> 3. 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:

> 1. A Joshua Tree that is known, by historic record, including pictures or written description, to be at least forty (40) years old.

2. 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).
3. 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.
4. 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

Non-Listed Special Status Plant Species and Western Joshua Tree

No non-listed special-status plant species were observed during the focused survey conducted on April 19 and 21, 2023; therefore, the Project would have no direct impacts to non-listed special-status plant species within the BSA.

One listed special-status plant species, western Joshua tree, was observed within the BSA, and this species is further discussed below.

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 one western Joshua tree individual. 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 6.9 acres of direct 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 direct impacts to one western Joshua tree.

As required by MM-BIO-1 (Conservation of Western Joshua Tree Lands), direct impacts to 6.9 acres of western Joshua trees (which includes the associated 186-foot buffer applied to each individual western Joshua tree) shall be mitigated through payment to a CDFW-approved mitigation bank; alternatively direct impacts to one individual would be through payment through The Western Joshua Tree Conservation Act. 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 6.3.1.1, Impacts to Special-Status Plants Section 6.3.2, Impacts to Sensitive Vegetation Communities). As such, a Joshua Tree Preservation, Protection, and Relocation Plan, and California Desert Native Plant Relocation Plan (Appendix B 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.

In summary, implementation of 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 Programs), and MM-BIO-6 (Construction Monitoring Notebook) would reduce potential direct impacts to western Joshua trees, Mojave monkeyflower, and beaver dam breadroot 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

Non-Listed Special Status Plant Species and Western Joshua Tree

The Project would have no indirect impacts to non-listed special-status plant species within the BSA.

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). Thus, the Project would result in 8.6 acres of indirect impacts to western Joshua trees and would be considered significant absent mitigation.

It is possible that western Joshua trees may be indirectly impacted over the short-term or long-term indirect impacts; therefore, short-term construction related indirect impacts and long-term operational indirect impacts to western Joshua tree are further discussed below.

Short-Term Construction Impacts

Construction-related, short-term indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on western Joshua tree, 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-7 (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-7 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-8 (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-8 would help to avoid and minimize impacts to western Joshua tree from any construction-related chemical spills.

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

Construction of the Project would introduce potential ignition sources to the Project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the Project would be required to comply with 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 long-term impacts to western Joshua tree are considered significant absent mitigation.

Implementation of MM-BIO-9 (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-7 (Delineation of Property Boundaries), MM-BIO-8 (Hazardous Waste), and MM-BIO-9 (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, direct impacts to four special-status wildlife species that have a moderate to high potential to occur within the BSA (Mojave desert tortoise, loggerhead shrike, Bendire's thrasher, and American badger), and three special-status wildlife species that were observed within the BSA (burrowing owl, LeConte's thrasher and desert kit fox[5]). Focused surveys conducted for Mohave ground squirrel were negative; therefore, this species is not expected to occur and will not be analyzed further. These species are detailed in the following discussion.

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.

Mojave Desert Tortoise

Protocol surveys completed on October 4, 2022, and January 17, 2023, resulted in no observations of active desert tortoise burrows, active desert tortoise sign (e.g., scat, drink basins, footprints), or individual desert tortoises. However, the BSA contains suitable sandy soils, ephemeral washes, and creosote scrub to support this species. In addition, the nearest CNDDB occurrence was from 2004 and is mapped approximately 3.3 miles northwest of the BSA (CDFW 2023b), and the BSA is within a high probability predicted habitat for the species (CDFW 2023c). Therefore, based on the discussion above, and because Mojave desert is a mobile species that could enter the BSA prior to construction, this species was determined to have a moderate potential to occur, and potential direct and indirect impacts to Mojave desert tortoise would be significant absent mitigation under CEQA.

A pre-construction Mojave desert tortoise clearance survey in compliance with current USFWS protocol would be necessary to reevaluate the locations of potential Mojave desert tortoise burrows within the Project limits so take of Mojave desert tortoise can be avoided. Consistent with MM-BIO-10 (Pre-construction Clearance Surveys for Mojave Desert Tortoise and Avoidance), a pre-construction clearance survey for Mojave desert tortoise would be conducted in areas supporting potentially suitable habitat 14 to 21 days prior to the start of construction activities; or, alternatively, pre-construction clearance surveys may be conducted following construction of a desert-tortoise-proof fence encompassing the Project site that would ensure that tortoises cannot enter the Project after clearance

[5] Although this species does not have any federal or state designation, Section 4000 of the California Fish and Game Code defines "kit fox" as a fur-bearing animal, and it is therefore considered "special-status" for purposes of this report.

surveys are completed. Should Mojave desert tortoises be located during the clearance survey, additional measures in compliance with current USFWS protocol would be required, as described further in MM-BIO-10 (Pre-construction Clearance Surveys for Mojave Desert Tortoise and Avoidance). In addition, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Programs), and MM-BIO-6 (Construction Monitoring Notebook) would reduce potential direct impacts to less than significant.

Should Mojave desert tortoise be located during the clearance survey, the Project would result in the permanent loss of 75.1 acres of suitable habitat for Mojave desert tortoise, including impacts to creosote bush scrub, unvegetated wash and river bottom, and disturbed habitat. These direct permanent impacts would be significant absent mitigation. As required by MM-BIO-10 (Pre-construction Clearance Surveys for Mojave Desert Tortoise and Avoidance), mitigation for direct impacts to 75.1 acres, should Mojave desert tortoise be found during pre-construction clearance surveys, would be fulfilled through conservation of suitable Mojave desert tortoise habitat through the purchase of credits at a minimum of 1:1 in-kind habitat replacement.

The Project would also result in the temporary loss of 13.1 acres of suitable habitat for Mojave desert tortoise, specifically 8.5 acres of creosote bush scrub, 0.1 acres of creosote bush white bursage scrub, 0.03 acres of unvegetated wash and river bottom, and 4.5 acres of disturbed habitat. These direct temporary impacts would be significant absent mitigation. As required by MM-BIO-11 (Restoration of Temporary Impacts), temporarily disturbed areas would be recontoured to natural grade (if the grade was modified during the temporary disturbance activity). The Project does not include revegetation or restoration of temporary impacts after Project completion. However, natural vegetation will be allowed to regenerate in temporary disturbed areas. Furthermore, if topsoil is removed during construction, the segregated topsoil will be replaced, and the native seed will be allowed to regenerate naturally.

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 Clearance Surveys for Mojave Desert Tortoise and Avoidance), and MM-BIO-11 (Restoration of Temporary Impacts) would reduce potential direct impacts (permanent and temporary) to Mojave desert tortoise to less than significant.

Burrowing Owl

Focused surveys for burrowing owl were not conducted; however, an individual burrowing owl was incidentally observed flushing from a previously mapped active burrow during the April 2023 surveys. Therefore, suitable habitat exists on site, and the species could occupy the BSA prior to construction. Potential direct and indirect impacts to burrowing owl would be 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 (CDFW 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-12 (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 (Appendix I 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 75.1 acres of suitable habitat for burrowing owl, including impacts to creosote bush scrub, unvegetated wash and river bottom, and disturbed habitat. These direct permanent impacts would be significant absent mitigation. As required by MM-BIO-12 (Pre-construction Surveys for Burrowing Owl Avoidance), mitigation for direct impacts to 75.1 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 minimum of 1:1 in-kind habitat replacement.

The Project would also result in the temporary loss of 13.1 acres of suitable habitat for burrowing owl, specifically 8.5 acres of creosote bush scrub, 0.1 acres of creosote bush white bursage scrub, 0.03 acres of unvegetated wash and river bottom, and 4.5 acres of disturbed habitat. These direct temporary impacts would be significant absent mitigation. As required by MM-BIO-11 (Restoration of Temporary Impacts), temporarily disturbed areas would be recontoured to natural grade (if the grade was modified during the temporary disturbance activity). The Project would not include revegetation or restoration of temporary impacts after Project completion. However, natural vegetation would be allowed to regenerate in temporary disturbed areas. Furthermore, if topsoil were to be removed during construction, the segregated topsoil would be replaced and the native seed allowed to regenerate naturally.

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), MM-BIO-11 (Restoration of Temporary Impacts), and MM-BIO-12 (Pre-construction Surveys for Burrowing Owl and Avoidance) would reduce potential direct impacts (permanent and temporary) to burrowing owl to less than significant.

Loggerhead Shrike

Loggerhead shrike was not observed during any of the survey efforts conducted in 2022 and 2023; however, this species has a moderate potential to occur within the BSA. Suitable nesting habitat, particularly western Joshua trees, is present within the BSA.

The Project would result in the permanent loss of 70.9 acres of suitable habitat for loggerhead shrike (i.e., impacts to creosote bush scrub). However, due to the surrounding vacant lands available with comparable suitable habitat, the loss 70.9 acres of suitable habitat for loggerhead shrike would be considered less than significant.

The Project would also result in the temporary loss of 8.6 acres of suitable habitat for loggerhead shrike, specifically 8.5 acres of creosote bush scrub and 0.1 acres of creosote bush white bursage scrub. However, due to the surrounding vacant lands available with comparable suitable habitat, the temporary loss of 8.6 acres of suitable habitat for loggerhead shrike would be considered less than significant. Nonetheless, as required MM-BIO-11 (Restoration of Temporary Impacts), would require that temporarily disturbed areas be recontoured to natural grade (if the grade was modified during the temporary disturbance activity). The Project does not include revegetation or restoration of temporary impacts after Project completion. However, natural vegetation will be allowed to regenerate in temporary disturbed areas. Furthermore, if topsoil is removed during construction, the segregated topsoil will be replaced, and the native seed will be allowed to regenerate naturally. To avoid potential impacts to nesting loggerhead shrike, vegetation removal activities would 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-13 (Pre-construction Nesting Bird Surveys and Avoidance).

Implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands), MM-BIO-11 (Restoration of Temporary Impacts), and MM-BIO-13 (Pre-construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to loggerhead shrike to less than significant.

Bendire's Thrasher

Bendire's thrasher was not observed during any of the survey efforts conducted in 2022 and 2023; however, this species has a moderate potential to occur within the BSA. Suitable nesting habitat, particularly western Joshua trees, yucca, cholla, and other desert shrubs, are present within the BSA.

The Project would result in the loss of 70.9 acres of suitable habitat for Bendire's thrasher (i.e., impacts to creosote bush scrub). However, due to the surrounding vacant lands available with comparable suitable habitat, the loss of 70.9 acres of suitable habitat for Bendire's thrasher would be considered less than significant.

The Project would also result in the temporary loss of 8.6 acres of suitable habitat for Bendire's thrasher, specifically 8.5 acres of creosote bush scrub and 0.1 acres of creosote bush white bursage scrub. However, due to the surrounding vacant lands available with comparable suitable habitat, the temporary loss of 8.6 acres of suitable habitat for Bendire's thrasher would be considered less than significant. Nonetheless, as required MM-BIO-11 (Restoration of Temporary Impacts), would require that temporarily disturbed areas be recontoured to natural grade (if the grade was modified during the temporary disturbance activity). The Project does not include revegetation or restoration of temporary impacts after Project completion. However, natural vegetation will be allowed to regenerate in temporary disturbed areas. Furthermore, if topsoil is removed during construction, the segregated topsoil will be replaced, and the native seed will be allowed to regenerate naturally.

To avoid potential impacts to nesting Bendire's thrasher, vegetation removal activities would 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-13 (Pre-construction Nesting Bird Surveys and Avoidance).

Implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands), MM-BIO-11 (Restoration of Temporary Impacts), and MM-BIO-13 (Pre-construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to Bendire's thrasher to less than significant.

LeConte's Thrasher

LeConte's thrasher was incidentally observed during 2022 protocol Mohave ground squirrel trapping surveys. The BSA supports suitable foraging habitat (desert scrub) and nesting habitat (spiny shrubs and cactus) for LeConte's thrasher.

The Project would result in the loss of approximately 70.9 acres of suitable habitat for LeConte's thrasher (i.e., impacts to creosote bush scrub). However, due to the surrounding vacant lands available with comparable suitable habitat, the loss 70.9 acres of suitable habitat for LeConte's thrasher would be considered less than significant.

The Project would also result in the temporary loss of 8.6 acres of suitable habitat for LeConte's thrasher, specifically 8.5 acres of creosote bush scrub and 0.1 acres of creosote bush white bursage scrub. However, due to the surrounding vacant lands available with comparable suitable habitat, the temporary loss of 8.6 acres of suitable habitat for LeConte's thrasher would be considered less than significant. Nonetheless, as required MM-BIO-11 (Restoration of Temporary Impacts), would require that temporarily disturbed areas be recontoured to natural grade

(if the grade was modified during the temporary disturbance activity). The Project does not include revegetation or restoration of temporary impacts after Project completion. However, natural vegetation will be allowed to regenerate in temporary disturbed areas. Furthermore, if topsoil is removed during construction, the segregated topsoil will be replaced, and the native seed will be allowed to regenerate naturally.

To avoid potential impacts to nesting LeConte's thrasher, vegetation removal activities would 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-13 (Pre-construction Nesting Bird Surveys and Avoidance).

Implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands), MM-BIO-11 (Restoration of Temporary Impacts), and MM-BIO-13 (Pre-construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to LeConte's thrasher to less than significant.

American Badger

The BSA contains open creosote flats with friable soils, which is suitable habitat for American badger. In addition, 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 75.1 acres of suitable habitat for American badger, including impacts to creosote bush scrub, unvegetated wash and river bottom, and disturbed habitat. However, due to the surrounding vacant lands available with comparable suitable habitat, the loss 75.1 acres of suitable habitat for American badger would be considered less than significant.

The Project would also result in the temporary loss of 13.1 acres of suitable habitat for American badger, specifically 8.5 acres of creosote bush scrub, 0.1 acres of creosote bush white bursage scrub, 0.03 acres of unvegetated wash and river bottom, and 4.5 acres of disturbed habitat. However, due to the surrounding vacant lands available with comparable suitable habitat, the temporary loss of 13.1 acres of suitable habitat for American badger would be considered less than significant. Nonetheless, as required MM-BIO-11 (Restoration of Temporary Impacts), would require that temporarily disturbed areas be recontoured to natural grade (if the grade was modified during the temporary disturbance activity). The Project does not include revegetation or restoration of temporary impacts after Project completion. However, natural vegetation will be allowed to regenerate in temporary disturbed areas. Furthermore, if topsoil is removed during construction, the segregated topsoil will be replaced, and the native seed will be allowed to regenerate naturally.

To avoid potential direct impacts to American badger, a pre-construction survey for American badger would 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 would 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-14 (Pre-construction Survey for American Badger and Avoidance). With the incorporation of mitigation, 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 less than significant.

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), MM-BIO-11 (Restoration of Temporary Impacts), and MM-BIO-14 (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–focused 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 75.1 acres of suitable habitat for desert kit fox, including impacts to creosote bush scrub, unvegetated wash and river bottom, and disturbed habitat. However, due to the surrounding vacant lands available with comparable suitable habitat, the loss 75.1 acres of suitable habitat for desert kit fox is considered less than significant.

The Project would also result in the temporary loss of 13.1 acres of suitable habitat for desert kit fox, specifically 8.5 acres of creosote bush scrub, 0.1 acres of creosote bush white bursage scrub, 0.03 acres of unvegetated wash and river bottom, and 4.5 acres of disturbed habitat. However, due to the surrounding vacant lands available with comparable suitable habitat, the temporary loss of 13.1 acres of suitable habitat for desert kit fox would be considered less than significant. Nonetheless, as required MM-BIO-11 (Restoration of Temporary Impacts), would require that temporarily disturbed areas be recontoured to natural grade (if the grade was modified during the temporary disturbance activity). The Project does not include revegetation or restoration of temporary impacts after Project completion. However, natural vegetation will be allowed to regenerate in temporary disturbed areas. Furthermore, if topsoil is removed during construction, the segregated topsoil will be replaced, and the native seed will be allowed to regenerate naturally.

To avoid potential direct impacts to desert kit fox, a pre-construction survey for desert kit fox would be conducted within 10 days prior to the start of construction to determine the presence/absence of desert kit fox, pursuant to MM-BIO-15 (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 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 less than significant.

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), MM-BIO-11 (Restoration of Temporary Impacts), and MM-BIO-15 (Pre-construction Survey for Desert Kit Fox and Avoidance) would reduce potential direct impacts to desert kit fox to less than significant.

Nesting Migratory Birds and Raptors

The BSA contains trees, shrubs, and other vegetation that provides 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). 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-13 (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-13 (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, 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; nighttime 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 seven special-status wildlife: Mohave desert tortoise, burrowing owl, loggerhead shrike, Bendire's thrasher, LeConte's thrasher, American badger, and desert kit fox. Therefore, these species are further discussed below.

Mojave Desert Tortoise

Mojave desert tortoise is not expected to occur within the BSA due to the negative survey results; however, this species may enter the site, albeit there is a low potential, before construction begins. Therefore, a pre-construction protocol clearance survey is needed to confirm Mojave desert tortoise absence prior to construction. Should Mojave desert tortoise occur on site, construction activities have the potential to result in significant indirect impacts to Mojave desert tortoise and their habitat. Those impacts could include dust, noise, and vibration; trash and debris; increased human presence; vehicle collisions; and chemical spills. These potential short-term or temporary indirect impacts to Mojave desert tortoise would be significant absent mitigation under CEQA.

MM-BIO-10 (Pre-construction Clearance Surveys for Mojave Desert Tortoise and Avoidance) would require pre-construction protocol clearance surveys for Mojave desert tortoise to limit 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 Worker Environmental Awareness Program (WEAP) training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste 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 would limit the amount of fugitive dust generated during construction. MM-BIO-16 (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.

Potential long-term indirect impacts that could result from development within or adjacent to Mojave desert tortoise habitat include increased invasive plant species that may degrade habitat. MM-BIO-17 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the California Invasive Plant Council's (Cal-IPC) California Invasive Plant Inventory (Cal-IPC 2006).

As discussed above, 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 (Hazardous Waste), MM-BIO-10 (Pre-construction Clearance Surveys for Mojave Desert Tortoise and Avoidance), MM-BIO-16 (Trash and Debris), and MM-BIO-17 (Invasive Plant Management) would reduce potential indirect (short-term and long-term) impacts to Mojave desert tortoise to less than significant

Burrowing Owl

Short-Term Construction Impacts

Should burrowing owls occur on site, 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-12 (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 WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation. MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste 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 would limit the amount of fugitive dust generated during construction. MM-BIO-16 (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-18 (Lighting) would require nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Long-Term Operational Impacts

Potential long-term indirect impacts that could result from development within or adjacent to burrowing owl habitat include nighttime lighting and increased invasive plant species that may degrade habitat. MM-BIO-17 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of Cal-IPC's California Invasive Plant Inventory (Cal-IPC 2006). MM-BIO-18 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward.

As discussed above, 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 (Hazardous Waste), MM-BIO-12 (Pre-construction Surveys for Burrowing Owl and Avoidance), MM-BIO-16 (Trash and Debris), MM-BIO-17 (Invasive Plant Management), and MM-BIO-18 (Lighting) 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-13 (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 WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation. MM-BIO-8 (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 would limit the amount of fugitive dust generated during construction. MM-BIO-18 (Lighting) would require nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Long-Term Operational Impacts

Potential long-term indirect impacts that could result from development within or adjacent to loggerhead shrike habitat include nighttime lighting and increased invasive plant species that may degrade habitat. MM-BIO-17 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of Cal-IPC's Inventory of Invasive Plants (Cal-IPC 2006). MM-BIO-18 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward.

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 (Hazardous Waste), MM-BIO-13 (Pre-construction Nesting Bird Surveys and Avoidance), MM-BIO-17 (Invasive Plant Management), and MM-BIO-18 (Lighting) would reduce potential indirect (short-term and long-term) impacts to loggerhead shrike to less than significant.

Bendire's Thrasher

Short-Term Construction Impacts

Construction (short-term) activities have the potential to result in indirect impacts to Bendire'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 Bendire's thrasher would be significant absent mitigation under CEQA.

MM-BIO-13 (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 WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation. MM-BIO-8 (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 occur. To reduce fugitive dust resulting from construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction. MM-BIO-18 (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 Bendire's thrasher and their habitat. Long-term impacts that could result from development within or adjacent to Bendire's thrasher habitat include nighttime lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to Bendire's thrasher would be significant absent mitigation under CEQA.

MM-BIO-13 (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 WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation. MM-BIO-8 (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 occur. To reduce fugitive dust resulting from construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction. MM-BIO-18 (Lighting) would require nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Potential long-term indirect impacts that could result from development within or adjacent to Bendire's thrasher habitat include nighttime lighting and increased invasive plant species that may degrade habitat. MM-BIO-17 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of Cal-IPC's Inventory of Invasive Plants (Cal-IPC 2006). MM-BIO-

18 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward.

As discussed above, 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 (Hazardous Waste), MM-BIO-13 (Pre-construction Nesting Bird Surveys and Avoidance), MM-BIO-17 (Invasive Plant Management), and MM-BIO-18 (Lighting) would reduce potential indirect (short-term and long-term) impacts to Bendire's thrasher to less than significant.

LeConte's Thrasher

Short-Term Construction Impacts

LeConte's thrasher was incidentally observed during 2022 protocol Mohave ground squirrel trapping surveys. The BSA supports suitable foraging habitat (desert scrub) and nesting habitat (spiny shrubs and cactus); therefore, construction (short-term) activities have the potential to result in indirect impacts to LeConte's thrasher and its habitat. Those impacts could include dust, noise, 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-13 (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 WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-8 (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 would limit the amount of fugitive dust generated during construction. MM-BIO-18 (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.

Potential long-term indirect 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. MM-BIO-17 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of Cal-IPC's Inventory of Invasive Plants (Cal-IPC 2006). MM-BIO-18 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward.

As discussed above, 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 (Hazardous Waste), MM-BIO-13 (Pre-construction Nesting Bird Surveys and Avoidance), MM-BIO-17 (Invasive Plant Management), and MM-BIO-18 (Lighting) would reduce potential indirect (short-term and long-term) impacts to LeConte's thrasher to less than significant.

American Badger

Short-Term Construction Impacts

Although no American badger individuals (or sign of individuals) were observed within the BSA, the Project site does provide suitable habitat for this species. 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-14 (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 would 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 WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation. MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste 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 would 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.

Potential long-term indirect impacts that could result from development within or adjacent to the BSA include trash and debris, increased human presence, chemical spills, nighttime lighting, and increased invasive plant species that may degrade habitat. MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste occurs. MM-BIO-16 (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-17 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of Cal-IPC's California Invasive Plant Inventory (Cal-IPC 2006). MM-BIO-18 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward.

As discussed above, 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 (Hazardous Waste), MM-BIO-14 (Pre-construction Survey for American Badger and Avoidance), MM-BIO-16 (Trash and Debris), MM-BIO-17 (Invasive Plant Management), and MM-BIO-18 (Lighting) would reduce potential indirect (short-term and long-term) impacts to American badger to less than significant.

Desert Kit Fox

Short-Term Construction Impacts

Desert kit fox was observed within the BSA through camera trapping as part of the Mohave ground squirrel focused surveys. Therefore, construction (short-term) 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 would be significant absent mitigation under CEQA.

MM-BIO-15 (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 Relocation and Mitigation Plan (Appendix J 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 WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation. MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste occurs. MM-BIO-18 (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 would 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.

Potential long-term indirect impacts that could result from development within or adjacent to the BSA include trash and debris, increased human presence, chemical spills, nighttime lighting, and increased invasive plant species that may degrade habitat. MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste occurs. MM-BIO-16 (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-17 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of Cal-IPC's California Invasive Plant Inventory (Cal-IPC 2006). MM-BIO-18 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward.

As discussed above, 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 (Hazardous Waste), MM-BIO-15 (Pre-construction Survey for Desert Kit Fox and Avoidance), MM-BIO-16 (Trash and Debris), MM-BIO-17 (Invasive Plant Management), and MM-BIO-18 (Lighting) would reduce potential (short-term and long-term) indirect 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.

To ensure compliance with the California Fish and Game Code and MBTA, and to avoid potential indirect impacts to nesting birds, vegetation removal activities would be conducted outside of the general bird nesting season (February 1 through August 31, depending on the species), and if vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey (MM-BIO-13) by a qualified biologist would be required prior to vegetation removal. Indirect impacts, including increased dust, noise, and vibration; increased human presence; and nighttime lighting, would be offset through implementation of MM-BIO-18 (Lighting), which would require nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward. 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 WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. 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 would 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 migratory birds and raptors and their habitat. Those long-term impacts could result from development within or adjacent to suitable habitat, including nighttime lighting. These potential long-term indirect impacts to migratory birds and raptors are considered significant absent mitigation under CEQA.

MM-BIO-18 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward.

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-13 (Pre-construction Nesting Bird Surveys and Avoidance), and MM-BIO-18 (Lighting) would reduce potential indirect (short-term and long-term) impacts 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?

No Direct Impacts would occur. No sensitive vegetation communities are found within the Project site.

Direct Impacts

A total of 92.0 acres would be directly impacted from the Project, including 67.3 acres of permanent impacts within the Project site, 10.6.6 acres of permanent impacts within the off-site improvement areas, and 14.0 acres of temporary impacts within the off-site improvement areas (Figure 4.3-4, Impacts to Biological Resources). As stated in Appendix C, Section 5.1, Vegetation Communities and Land Covers, and Appendix C Section 6.3, Impacts Analysis, CDFW state rankings of 1, 2, and 3 are considered high priority for inventory or special-status and impacts to these communities typically require mitigation. The Project site does not contain any sensitive vegetation communities; therefore, direct impacts to sensitive vegetation communities are not anticipated to occur, and no additional measures are recommended. No direct impacts would occur.

Indirect Impacts

Short-Term Construction Impacts

No sensitive vegetation communities occur within the 100-foot buffer of the Project site, as stated in Appendix C, Section 5.1 and Table 2. Therefore, implementation of the Project would likely not result in any indirect impacts to sensitive vegetation communities.

However, 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 sensitive vegetation communities that could potentially occur adjacent to the impact footprint (e.g., Joshua tree woodland that may be present outside of the Project's 100-foot buffer). MM-BIO-6 (Construction Monitoring Notebook) provides for documentation that the education program was administered to applicable personnel. MM-BIO-7 (Delineation of Property Boundaries) requires that impacts occur within the fenced, staked, or flagged area that is clearly delineated within the Project impact footprint. Thus, implementation of MM-BIO-3 through MM-BIO-7 would enable the Project to avoid and minimize inadvertent spillover impacts outside of the approved impact footprint.

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

MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste occurs. Thus, implementation of MM-BIO-8 (Hazardous Waste) would help to avoid and minimize indirect impacts to sensitive vegetation communities that could potentially occur adjacent to the impact footprint (e.g., Joshua tree woodland that may be present outside of the Project's 100-foot buffer) from any construction-related chemical spills.

A SWPPP would be prepared and implemented to prevent all construction pollutants from contacting stormwater during construction activities, with the intent of keeping sediment and any other pollutants from moving off site and

into receiving waters. BMP categories employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a SWPPP would help to avoid and minimize the potential effects of stormwater erosion during construction.

Construction of the Project would introduce potential ignition sources to the Project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the Project would be required to comply with 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 off-site adjacent areas may be considered significant absent mitigation.

MM-BIO-9 (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 adjacent areas that may potentially contain sensitive vegetation communities.

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 sensitive vegetation communities that could potentially occur on and or adjacent to the impact footprint (e.g., Joshua tree woodland that may be present outside of the Project's 100-foot buffer) 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 sensitive vegetation communities that could potentially occur adjacent to the impact footprint (e.g., Joshua tree woodland that may be present outside of the Project's 100-foot buffer) 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-7 (Delineation of Property Boundaries), MM-BIO-8 (Hazardous Waste), and MM-BIO-9 (Herbicides) would reduce potential indirect impacts (short-term and long-term) to sensitive vegetation communities that could potentially occur adjacent to the impact footprint to less than significant.

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

Less-than-Significant Impact with Mitigation Incorporated. The BSA supports 0.9 (specifically 0.909) acres of ephemeral drainages consisting of 0.9 (specifically 0.881) acres of non-wetland waters of the state under RWQCB, and 0.9 (specifically 0.909) acres of jurisdictional streambed under CDFW.

Direct Impacts

The Project would result in direct impacts to 0.580 acres of potential non-wetland waters of the state under RWQCB jurisdiction, and streambed under CDFW jurisdiction, specifically 0.464 acres of on-site permanent impacts, 0.083 acres of permanent impacts within off-site improvement areas, and 0.033 acres of temporary impacts within off-site improvement areas (Figure 4.3-5, Impacts to Jurisdictional Aquatic Resources). The ephemeral drainages present are not likely subject to USACE jurisdiction because these features are isolated and do not meet the relatively permanent or significant nexus standard as a water of the United States. However, it is important to note that the ultimate decisions on the amount and location of jurisdictional resources is made by the resource agencies (i.e., USACE, CDFW, and RWQCB). These potential direct impacts to jurisdictional waters would be significant absent mitigation under CEQA.

There would be direct permanent impacts to 0.580 acres of jurisdictional aquatic resources with Project implementation. While the Project would result in direct temporary impacts to 0.033 acres of jurisdictional aquatic resources, due to the minimal temporary impact acreage and for purposes of this analysis, the 0.033 acre of temporary impacts to jurisdictional aquatic resources is being considered a permanent impact. Therefore, direct permanent impacts to 0.580 acres of non-wetland waters and streams that are regulated under the California Porter–Cologne Act and California Fish and Game Code, permits would be required from each of the regulatory agencies and typically entail providing mitigation to offset the impacts and loss of beneficial uses, functions, and values to the jurisdictional waters and habitats. 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-19 (Aquatic Resources Mitigation) would require obtaining permits from each of the regulatory agencies (RWQCB and CDFW). Based on the Project design, it is assumed that the Project would require a waste discharge requirement; therefore, an application must be submitted to RWQCB. A Streambed Alteration Agreement would be required for impacts to jurisdictional streambed under CDFW. Permits would be required prior to issuance of a grading permit and would be included in the Project's Conditions of Approval

In addition, 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 WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-7 (Delineation of Property Boundaries) requires that impacts occur within the fenced, staked, or flagged area that is clearly delineated within the Project impact footprint. The construction crew would be responsible for unauthorized impacts from construction activities to waters of the state that are outside the

permitted Project footprint, if applicable. MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste 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.

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 (Delineation of Property Boundaries), MM-BIO-8 (Hazardous Waste), and MM-BIO-19 (Aquatic Resources Mitigation) would reduce potential direct impacts to jurisdictional 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.

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 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-7 (Delineation of Property Boundaries) requires that impacts occur within the fenced, staked, or flagged area that is clearly delineated within the Project impact footprint. The construction crew would be responsible for unauthorized impacts from construction activities to waters of the state that are outside the permitted Project footprint, if applicable. Thus, implementation of MM-BIO-3 through MM-BIO-7 would enable the Project to avoid and minimize inadvertent spillover impacts outside of the approved impact footprint.

MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste occurs. Thus, implementation of MM-BIO-8 (Hazardous Waste) would help to avoid and minimize impacts to waters of the state from any construction-related chemical spills.

A SWPPP would be prepared and implemented to prevent 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 SWPPP 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.

Potential long-term (post-construction) indirect impacts from operations and maintenance activities may include changes in water quality and accidental chemical spills. Implementation of low-impact-development features and BMPs would, to the maximum extent practicable, reduce the discharge of pollutants into receiving waters, including inadvertent release of pollutants (e.g., hydraulic fluids and petroleum); the improper management of hazardous materials; trash and debris; and the improper management of portable restroom facilities (e.g., regular service) in accordance with all relevant local and state development standards. In addition, in accordance with CALGreen 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 jurisdictional aquatic resources due to changes in water quality would be avoided and minimized through implementation of low-impact-development features and BMPs.

MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste occurs. Thus, implementation of MM-BIO-8 (Hazardous Waste) would help to avoid and minimize impacts to jurisdictional aquatic resources 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-7 (Delineation of Property Boundaries), and MM-BIO-8 (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. The BSA is not located within an essential connectivity area, natural landscape block, or linkage for the California Desert Linkage Network. It is approximately 2.5 miles south and 5.2 miles west of an area mapped as a linkage for the California Desert Linkage Network. Additionally, the BSA is mapped as an Area of Conservation Emphasis, Rank 3, which means “Connections with implementation flexibility” (CDFW 2023b), and no further actions required.

Direct Impacts

No significant direct permanent impacts would occur on wildlife movement or use of native wildlife nursery sites associated with Project activities. Existing nearby habitat linkages and wildlife corridor functions would remain intact while construction activities are conducted and following Project completion. Wildlife movement may be temporarily disrupted during the construction phase of the Project, although this effect would be both localized and short-term. Nearby corridors that could support wildlife movement in the region, such as the Mojave River, which is approximately 8 miles southeast of the BSA, would not be impacted by the Project. Further, the Project site does not contain nursery sites, such as bat colony roosting sites or colonial bird nesting areas. Therefore, impacts associated with wildlife movement, wildlife corridors, and wildlife nursery sites would be less than significant under CEQA.

Indirect Impacts

Short-Term Construction Impacts

Construction-related short-term noise and work in the vicinity 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. Temporary disturbance to local species may occur but would not substantially degrade the quality or use of the vegetation communities in the vicinity. 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 or migratory routes.

Long-Term Operational Impacts

Potential long-term (post-construction) indirect impacts from operations and maintenance activities could disrupt wildlife movement around the Project site due to increased lighting from buildings. MM-BIO-18 (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-18 (Lighting) would reduce potential indirect impacts to wildlife movement to less than significant.

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

Less-than-Significant Impact with Mitigation Incorporated. The 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 and Western Joshua Tree

Eight western Joshua trees were documented within the BSA; however, only one individual was documented within the Project site and would be directly removed by the Project. In addition to western Joshua tree, two desert native plant species were recorded within the BSA during the focused desert native plant survey: Wiggins' cholla and branched pencil cholla. Specifically, six Wiggins' cholla and 12 branched pencil cholla would be directly removed by the Project (Figure 4.3-4).

Therefore, because the focused desert native plant survey was positive for western Joshua tree, Wiggins' cholla, and branched pencil cholla, 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. These impacts are addressed in the Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan (Appendix B 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 will submit an application and applicable fee paid to the Town for removal or relocation of protected native desert plants under Town of Apple Valley Municipal Code Chapter 9.76. The application will include certification from a qualified Joshua tree and native desert plant expert 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's Municipal Code. The application will include the Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan (Appendix B of Appendix C). The plan was prepared by a qualified Joshua tree and native desert plant expert. 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. With the incorporation of mitigation, and with adherence to both the CDNPA and the Town of Apple Valley's Municipal Code, impacts associated with western Joshua tree and desert native plants would be less than significant.

The Project could result in potentially significant impacts to native desert plants and western Joshua trees protected 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 as the Project is not located on BLM lands and is not a renewable energy project. 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. 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. As required by MM-BIO-1 (Conservation of Western Joshua Tree Lands), mitigation for direct impacts to 6.9 acres of western Joshua trees at

a 2:1 habitat replacement would be fulfilled through purchase of credits at a CDFW-approved mitigation bank or other conservation mechanism approved by the Town of Apple Valley and CDFW, for a total of 13.9 acres. 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 Mojave desert tortoise, burrowing owl, loggerhead shrike, LeConte's thrasher, Bendire's thrasher, American badger, desert kit fox, and nesting birds and raptors would be reduced to less than significant through Project implementation of MM-BIO-3 through MM-BIO-18. 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 United States and 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-8 (Hazardous Waste), and MM-BIO-19 (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 United States and state. Therefore, there would not be a cumulatively considerable impact to waters of the United States.

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. Three special-status wildlife species, burrowing owl, LeConte's thrasher and desert kit fox, were observed and would potentially be directly impacted by the Project. An additional four wildlife species were determined to have a moderate potential to occur within the BSA and could occur during construction of the Project: Mojave desert tortoise, loggerhead shrike, Bendire's thrasher, and American badger. Suitable habitat for Mojave desert tortoise, burrowing owl, loggerhead shrike, Bendire's thrasher, LeConte's thrasher, and 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-18 is required to reduce impacts to a less-than-significant level.

MM-BIO-1 Conservation of Western Joshua Tree Lands. Mitigation for direct impacts to one western Joshua trees will be fulfilled through a 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 for the species.

The application shall include a detailed plan for removal of all protected plants on the Project site. The plan shall be prepared by a qualified western Joshua tree and native desert plant expert(s). The plan shall include the following measures:

- Salvaged plants shall be transplanted expeditiously to either their final on-site location or to an approved off-site area. If the plants cannot be expeditiously taken to their permanent relocation area at the time of excavation, they may be transplanted in a temporary area (stockpiled) prior to being moved to their permanent relocation site(s).
- Western Joshua trees shall be marked on their north-facing side prior to excavation. Transplanted western Joshua trees shall be planted in the same orientation as they currently occur on the Project site, with the marking on the north side of the trees facing north at the relocation site(s).
- Transplanted plants shall be watered prior to and at the time of transplantation. The schedule of watering shall be determined by the qualified tree expert and desert native plant expert(s) to maintain plant health. Watering of the transplanted plants shall continue under the guidance of a 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 and 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 performing impacts. The WEAP shall consist of a presentation from the designated biologist that includes a discussion of the biology and status of western Joshua trees, burrowing owls, and loggerhead shrikes, 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 all 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 that 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 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 Project 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-8 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-9 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-10 Pre-construction Clearance Surveys for Mojave Desert Tortoise and Avoidance. One pre-construction clearance survey in accordance with current U.S. Fish and Wildlife Service (USFWS) protocol shall be conducted to reevaluate locations of potential Mojave desert tortoise burrows within the Project limits so take of Mojave desert tortoise can be avoided. The first pre-construction clearance survey shall be conducted in areas supporting potentially suitable habitat 14 to 21 days prior to the start of construction activities; or alternatively, pre-construction clearance surveys may be conducted at any time following construction of a desert tortoise–proof fence encompassing the Project site that would ensure that tortoises cannot enter the Project after clearance surveys

are completed. If no Mojave desert tortoises are found during the surveys, no further mitigation would be required; however, desert tortoise–proof fence encompassing the Project site shall remain in place until Project construction is completed and shall be monitored by a qualified biologist in compliance with current USFWS protocol.

Should Mojave desert tortoise be located during the clearance survey, all methods used for handling desert tortoises during the clearance surveys must be in accordance with the USFWS Desert Tortoise Field Manual or Project-specific guidance contained in a biological opinion or Incidental Take Permit. No take of Mojave desert tortoise shall occur without authorization in the form of an Incidental Take Permit pursuant to California Fish and Game Code Section 2081 and a biological opinion or Habitat Conservation Plan. The Project applicant shall adhere to measures and conditions set forth within the Incidental Take Permit. Anyone who handles desert tortoises during clearance activities must have the appropriate authorizations from USFWS. The area cleared and number of Mojave desert tortoises found within that area shall be reported to the local USFWS and appropriate state wildlife agency. Notification shall be made in accordance with the conditions of the biological opinion or Incidental Take Permit.

Should Mojave desert tortoise be located during the clearance survey, the Project would result in the loss of 75.1 acres of suitable habitat for Mojave desert tortoise. Mitigation for direct impacts to 75.1 acres shall be fulfilled through conservation of suitable Mojave desert tortoise 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 75.1 acres or as otherwise determined through coordination with the USFWS and/or California Department of Fish and Wildlife.

MM-BIO-11 Restoration of Temporary Impacts. Site construction areas subjected to temporary ground disturbance from the off-site utility improvement areas (e.g., trenching for installation of associated off-site utilities including sewer and gas), shall be recontoured to natural grade (if the grade was modified during the temporary disturbance activity), The Project does not include revegetation or restoration of temporary impacts after Project completion. However, natural vegetation will be allowed to regenerate in temporary disturbed areas. Furthermore, if topsoil is removed during construction, the segregated topsoil will be replaced, and the native seed will be allowed to regenerate naturally. This measure does not apply to situations that are urban/developed that are temporarily impacted and will be returned to an urban/developed land use.

MM-BIO-12 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 and off-site improvement areas shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the California Department of Fish and Wildlife's 2012 (or most recent version) Staff Report on Burrowing Owl Mitigation.

If burrowing owls are detected, the Burrowing Owl Relocation Plan shall be implemented in consultation with the California Department of Fish and Wildlife (CDFW). As required by the Burrowing Owl Relocation Plan, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers shall be established around occupied burrows in

accordance with guidance provided in CDFW's Staff Report on Burrowing Owl Mitigation. No Project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed.

Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate Project area and within a buffer zone by installing one-way doors in burrow entrances. These doors shall be placed at least 48 hours prior to ground-disturbing activities. The Project site shall be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat shall be provided following the guidance in CDFW's Staff Report on Burrowing Owl Mitigation.

Where possible, burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow.

Should burrowing owl be located during the clearance survey, the Project would result in the loss of 75.1 acres of suitable habitat for burrowing owl. Mitigation for direct impacts to 75.1 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 75.1 acres.

MM-BIO-13 Pre-construction Nesting Bird Surveys and Avoidance. Special-status bird species that were observed within the Project include burrowing owl and LeConte's thrasher, and two additional special-status bird species have a moderate to high potential to occur: Bendire's thrasher and loggerhead shrike. The Project also contains trees, shrubs, and other vegetation that provide opportunities for other non-sensitive birds and raptors to nest on site. Construction activities shall avoid the migratory bird nesting season (typically February 1 through August 31) to reduce any potential significant impact to birds that may be nesting in the survey area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the Project site and within 500 feet of all impact areas must be conducted to determine the presence/absence of protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans, along with an appropriate buffer established around the nest, which shall be determined by 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 be conducted when construction occurs in close proximately to an active nest buffer. No Project activities shall encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until is determined that the nestlings have fledged and the nest is no longer active.

MM-BIO-14 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 shall be developed in consultation with the California Department of Fish and Wildlife. At a minimum, the plan shall do the following:

- 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-15 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 shall be established around the active den, unless otherwise authorized by the California Department of Fish and Wildlife (CDFW). Where required buffering will not be feasible, passive relocation, as outlined in the desert kit fox relocation and mitigation plan, shall be allowed with concurrence from the County of San Bernardino, CDFW, and U.S. Fish and Wildlife Service. If an active natal desert kit fox den is detected, an initial 200 foot no disturbance buffer shall be established around the natal den, and this buffer shall be maintained until the den can be verified to not host pups. Construction activities shall 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, shall be provided (including a comprehensive summary, tables, maps, and other necessary materials) at the end of the construction period. Data shall be readily available to the CDFW upon request. If an injured, sick, or dead desert kit fox is detected on any area associated with the Project, the designated CDFW personnel at both the Ontario office and the Wildlife Investigation Lab shall be notified as described within the desert kit fox relocation and mitigation plan.

MM-BIO-16 Trash and Debris. The following avoidance and minimization measures shall be implemented during Project construction:

- Fully covered trash receptacles that are animal-proof shall be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles shall be removed at least once a week from the Project site.

- 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-17 Invasive Plant Management. To reduce the spread of invasive plant species, landscape plants within 200 feet of native vegetation communities shall not be on the most recent version of the California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php). Post-construction, the Project applicant shall continually remove invasive plant species on site by hand or mechanical methods, as feasible.

MM-BIO-18 Lighting. Lighting for construction activities and operations within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife shall be directed away from natural areas.

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

The Project site does not contain any sensitive vegetation communities; therefore, direct impacts to sensitive vegetation communities are not anticipated to occur, and no additional measures are recommended. No direct impacts would occur. Implementation of MM-BIO-3, MM-BIO-4, MM-BIO-5, MM-BIO-6, MM-BIO-7, MM-BIO-8, and MM-BIO-9 are required to reduce indirect impacts to adjacent sensitive vegetation communities that may occur outside of the Project footprint to a less-than-significant level.

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

The Project could result in potentially significant impacts to non-wetland waters of the United States and 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-7, MM-BIO-8, and MM-BIO-19 is required to reduce direct and indirect impacts to a less-than-significant level.

MM-BIO-19 Aquatic Resources Mitigation. The Project site supports aquatic resources that are considered jurisdictional under 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) to ensure conformance with the requirements of the Porter–Cologne Water Quality Control Act (waste discharge requirement). Prior to activity within CDFW jurisdictional streambed or associated riparian habitat, the applicant shall coordinate with CDFW (Inland Deserts Region 6) relative to conformance to the Lake and Streambed Alteration permit requirements.

The Project shall mitigate to ensure no-net-loss of waters at a minimum of 1:1 with purchase of credits (0.580 acres RWQCB/CDFW) for impacts to aquatic resources as part of an overall strategy to ensure no net loss. 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 RWQCB and/or CDFW based on agency evaluation of current resource functions and values and through each agency's respective permitting process.

Should applicant-sponsored mitigation be implemented, a Habitat Mitigation and Monitoring Plan (HMMP) shall be prepared in accordance with State Water Resources Control Board guidelines and approved by the agencies in accordance with the proposed program permits. The HMMP shall include a conceptual planting plan including planting zones, grading, and irrigation, as applicable; a conceptual planting plant palette; a long-term maintenance and monitoring plan; annual reporting requirements; and proposed success criteria. Any off-site applicant-sponsored mitigation shall be conserved and managed in perpetuity.

Best management practices shall be implemented to avoid any indirect impacts on jurisdictional waters, including the following:

- Vehicles and equipment shall not be operated in ponded or flowing water except as described in permits.
- Water containing mud, silt, or other pollutants from grading or other activities shall not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.
- Spoil sites shall not be located within 30 feet from the boundaries of jurisdictional waters or in locations that may be subject to high storm flows, where spoils might be washed back into drainages.
- Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from contaminating the soil and/or entering avoided jurisdictional waters.
- No equipment maintenance shall be performed within 100 feet of jurisdictional waters, including wetlands and riparian areas, where petroleum products or other pollutants from the equipment may enter these areas. Fueling of equipment shall not occur on the Project site.

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

No significant direct permanent impacts or construction-related short-term impacts would occur on wildlife movement or use of native wildlife nursery sites associated with Project activities. However, the Project could result in potentially significant long-term indirect impacts from operations and maintenance activities that could disrupt wildlife movement around the Project site due to increased lighting from buildings. Implementation of MM-BIO-18 is required to reduce long-term indirect impacts to a less-than-significant level.

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

Implementation of MM-BIO-1 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.

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, Mojave desert tortoise, burrowing owl, loggerhead shrike, LeConte's thrasher, Bendire's thrasher, desert kit fox, American badger, 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-19 is required to reduce impacts to less than significant.

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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 1M Warehouse 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:

- Archaeological Resources Assessment for the 1M Warehouse Project, prepared by Dudek in March 2023 (Appendix D)

4.4.1 Existing Conditions

Cultural Context

Prehistoric Setting

Evidence for continuous human occupation in Southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad period have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. However, given the direction of research and differential timing of archaeological study following intensive development in Riverside County, chronology building in the Inland Empire must rely on data from neighboring regions to fill the gaps. To be more inclusive, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (before 7500 BP)[1], Archaic (10,000–1500 BP), Late Prehistoric (1500 BP–AD 1769), and Ethnohistoric (after AD 1769).

Paleoindian Period

Evidence for Paleoindian occupation in the region is tenuous. Our knowledge of associated cultural pattern(s) is informed by a relatively sparse body of data that has been collected from within an area extending from coastal San Diego, through the Mojave Desert, and beyond. A very unique technology defined by fluted projectile points and a highly formal lithic tool kit with almost no processing equipment is often considered to be the earliest evidence of human adaptation to North America. Widely known as "Clovis," regional manifestations of this toolkit show important variability both in projectile point style and tool kit composition. Importantly, the attributes of "Clovis" are uncommon in California, with very few examples of the diagnostic, "fluted" Clovis point. There is, however, a notable exception from Crystal Cove State Park in southern Orange County (Fitzgerald and Rondeau 2012). This, along with other potential attributes of Clovis culture along the California Coast remain undated, and most of the earliest well-dated sites from the region contain rather different archaeological assemblages (Erlandson et al. 2007).

[1] "BP" indicates calibrated, calendar years before present (specifically, prior to AD 1950). Ages presented herein have been calibrated from the original age estimates wherever possible; ranges of general phenomena (e.g., cultural periods are approximate).

While the earliest evidence for human activity in California comes from the Channel Islands, ca. 13,000 BP, it does not exhibit obvious cultural similarity with the Clovis phenomenon. However, in the southern Central Valley fluted Clovis points date from ca. 11,000–10,500 BP (Rogers and Yohe 2020). One of the earliest dated archaeological assemblages in coastal Southern California (excluding the Channel Islands) comes from SDI-4669/W-12 in La Jolla, with human remains dating to ca. 9900–9050 BP (Bada et al. 1984). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of ground stone, battered cobbles, and expedient flake tools) (Kennedy 1983). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of ground stone tools. Prime examples of this pattern come from Naval Air Weapons Station China Lake near Ridgecrest (Davis 1978). These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Fluted points from SBR-2355 and SBR-2356, also in the Mojave Desert, are considered quite ancient (on the thickness of obsidian hydration rinds) and co-occur with a diverse assemblage that also contains stemmed points, typically attributed to the Lake Mojave archaeological culture. Other typical Paleoindian sites in the desert include the Komodo site (MNO-679)—a multi-component fluted point site, and MNO-680—a single component Great Basined Stemmed point site (Basgall 1987, 1988; Basgall et al. 2002). At MNO-679 and -680, ground stone tools were rare while finely made projectile points were common.

Turning back to coastal Southern California, the fact that some of the earliest dated assemblages are dominated by processing tools runs counter to traditional image of Paleoindians as highly mobile big-game hunters. Evidence for the latter—that is, typical Paleoindian assemblages—may have been located along the coastal margin at one time, prior to glacial desiccation and a rapid rise in sea level during the early Holocene (before 7500 BP) that submerged as much as 16 kilometers of the San Diego coastline since people first arrived in California, ca. 13,000 years ago (ICF 2013). If this were true, however, it would also be expected that such sites would be located on older landforms near the current coastline. Some sites, such as SDI-210 along Agua Hedionda Lagoon, contain stemmed points similar in form and age to Silver Lake and Lake Mojave projectile points from the high desert (Basgall and Hall 1990; Warren et al. 2004). However, sites of this nature are extremely rare; more typical are sites that contain large numbers of milling tools intermingled with older projectile point forms. Separating cultural components on the basis of artifact form and frequency is therefore difficult.

San Dieguito sites are rare in the inland valleys, with one possible candidate, RIV-2798/H, located on the shore of Lake Elsinore. Excavations at Locus B at RIV-2798/H produced a toolkit consisting predominately of flaked stone tools, including crescents, points, and bifaces, and lesser amounts of ground stone tools, among other items (Grenda 1997). A calibrated and reservoir-corrected radiocarbon date on a shell from this site points to an early occupation, ca. 8880–8525 BP. Grenda suggested this site represents seasonal exploitation of lacustrine resources and small game and resembles coastal San Dieguito assemblages and spatial patterning.

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

Archaic Period

The more than 2,500-year overlap between the presumed age of Paleoindian occupations and the Archaic period highlights the difficulty in defining a cultural chronology in Southern California. If San Dieguito is the only recognized Paleoindian component in the coastal Southern California, then the dominance of hunting tools implies that it

derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong desert connections with San Dieguito. Thus, the Archaic pattern is the earliest local socioeconomic adaptation in the region (see Hale 2001, 2009).

The Archaic pattern, which has also been termed the Millingstone Horizon (among other things), is relatively easy to define with assemblages that consist primarily of processing tools, such as milling stones, hand stones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the region with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (Basgall and Hall 1990; Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurred until the bow and arrow, and then ceramics, were adopted after 1500 BP (Griset 1996; Hale 2009; Schaefer 2012). Even then, assemblage formality remained low. After the bow was adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped milling stones and hand stones decreased in proportion relative to expedient, unshaped ground stone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complemented only by the addition of the bow and ceramics.

Late Prehistoric Period

The period of time following the Archaic and before Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (McDonald and Eighmey 2004; Rogers 1945; Wallace 1955); however, several other subdivisions continue to be used to describe various shifts in assemblage composition. In general, this period is defined by the addition of arrow points and ceramics, as well as the widespread use of bedrock mortars. The fundamental Late Prehistoric assemblage is very similar to the Archaic pattern but includes arrow points and large quantities of fine debitage from producing arrow points, as well as ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces. Some argue that the Ethnohistoric intensive acorn economy extends as far back as 1500 BP (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred before 600 BP. In Riverside County and the surrounding region, milling stones and hand stones persisted in higher frequencies than mortars and pestles until the last 500 years (Basgall and Hall 1990); even then, weighing the economic significance of milling stone-hand stone versus mortar-pestle technology is tenuous due to incomplete information on archaeological assemblages.

The history of the Native American communities prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the region come predominantly from European merchants, missionaries, military personnel, and explorers. These briefs, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of the newly encountered cultural groups. The establishment of the missions in the region brought more extensive documentation of Native American communities, though these groups did not become the focus of formal and in-depth ethnographic study until the early twentieth century (Bean and Shipek 1978; Boscana 1846; Harrington 1934; Laylander 2000; Sparkman 1908; White 1963). The principal intent of these researchers was to record the precontact and culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as “salvage ethnography,” was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his

"memory culture" approach (Lightfoot 2005, p. 32) by recording languages and oral histories within the region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities.

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

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

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

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

Serrano

Traditionally, the Serrano lived in an area east of the Gabrielino and north of the Cahuilla, near present-day western San Bernardino County and northeastern Los Angeles County (Laylander 2010). The Serrano occupied an area in and around the San Bernardino Mountains between approximately 1,500 and 11,000 feet amsl. Their territory extended west along the northern slope of the San Gabriel Mountains, east as far as Twentynine Palms, north along the Mojave River, and south to the San Jacinto area. Kroeber (1925) divided the Serrano into four distinct groups within the western Mojave Desert: the Kitanemuk, Tataviam, Serrano, and Vanyume. Each group held a distinct territory within the region (Kroeber 1925). According to Bean and Smith (1978, p. 570), "the Serrano resided in an area that extended east of the Cajon Pass, located in the San Bernardino Mountains, to Twenty-nine Palms, the north foothills of the San Bernardino Mountains and south to include portions of the Yucaipa Valley."

Serrano social organization was based on patrilineal and patrilocal lineages. Exogamy rules required that a man could not marry a woman related to them within five generations. Women moved to their husband's village but kept their identity as a member of their natal lineage.

The Serrano were mainly hunters and gatherers who occasionally fished. Game hunted included mountain sheep, deer, antelope, rabbits, small rodents, and various birds, particularly quail. Vegetable staples consisted of acorns, piñon nuts, bulbs and tubers, shoots and roots, berries, mesquite, barrel cacti, and Joshua tree (Bean and Smith 1978). A variety of materials was used for hunting, gathering, and processing food, as well as for shelter, clothing, and luxury items. Shells, wood, bone, stone, plant materials, and animal skins and feathers were used for making baskets, pottery, blankets, mats, nets, bags and pouches, cordage, awls, bows, arrows, drills, stone pipes, musical instruments, and clothing (Bean and Smith 1978).

The majority of the Serrano lived in small villages, close to sources of fresh water (Benedict 1924). Houses and ramadas were round, dome-shaped, and constructed of poles covered with bark and tule mats (Benedict 1924; Kroeber 1925). The Serrano also had sweat houses and ceremonial houses for religious activities. Further, according to Benedict (1924), a typical Serrano settlement was a village with multiple small satellite camps surrounding it. Most Serrano villages also had a ceremonial house used as a religious center. Other structures within the village might include granaries and sweathouses (Bean and Smith 1978). According to DeBarros (2004), one of the more prominent Serrano villages was called Guapiabit, and it was located in Summit Valley.

Historic Setting

Post-Contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1821), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, signals the beginning of the American Period when California became a territory of the United States.

Spanish Period (1769-1821)

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

More than 200 years passed before Spain began the colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonial matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July of 1769, while Portolá was exploring southern California, Franciscan Friar

Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

The Portolá expedition first reached the present-day boundaries of Los Angeles in August 1769, thereby becoming the first Europeans to visit the area. Friar Juan Crespí named the campsite by the river "Nuestra Señora la Reina de los Angeles de la Porciúncula" or "Our Lady the Queen of the Angeles of the Porciúncula." Two years later, Friar Junípero Serra returned to the valley to establish a Catholic mission, the Mission San Gabriel Arcángel, on September 8, 1771 (Kyle 2002).

Mexican Period (1821–1848)

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

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. Fourteen ranchos were granted between 1819 and 1846 in the future Riverside County. Ranchos deeded near the Project area were Rancho San Jacinto Nuevo y Potrero and Rancho San Jacinto Sobrante, granted by Governor Pio Pico in 1846, Rancho San Jacinto Viejo, granted by acting Governor Manuel Jimeno in 1842, and Rancho San Jacinto y San Gorgonio, granted by Governor Manuel Micheltorena in 1843. The secularization of the missions following Mexico's independence from Spain resulted in the subdivision of former mission lands and the establishment of many additional ranchos (Hallan-Gibson 1986; Middlebrook 2005).

During the heyday of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of non-native inhabitants increased during this period with the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who did not possess immunities to them (Dallas 1955).

American Period (1848–Present)

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

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. Territories. Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the southern California economy through 1850s. The Gold Rush began in 1848, and with the influx of gold seekers, the ranching economy began to produce meat and dairy, in addition to hides and tallow. During the cattle boom of the 1850s, rancho vaqueros drove large herds from southern to northern California to feed that region's burgeoning mining and commercial boom. Cattle were at first

driven along major trails or roads such as the Gila Trail or Southern Overland Trail, then were transported by trains when available. The cattle boom ended for southern California as neighbor states and territories drove herds to northern California at reduced prices. Operation of the huge ranchos became increasingly difficult, and droughts severely reduced their productivity (Cleland 2005; Waugh 2003).

Background Research

Cultural Resources Records Search

On October 13, 2022, and December 6, 2022, Dudek conducted CHRIS records searches at the SCCIC, located at the California State University, Fullerton. The searches included any previously recorded cultural resources and investigations within a 0.5-mile radius of the proposed 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, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list.

Dudek reviewed the available SCCIC records to determine whether the implementation of the proposed Project would have the potential to impact any known and unknown cultural resources. The confidential records search results are provided in a confidential appendix of the Archaeological Resources Assessment (Appendix D).

Results of the CHRIS database records search indicate that six previous cultural resource studies have been conducted within the records search area between 1991 and 2011. Of these studies, two studies are mapped as adjacent to the proposed Project site and four are mapped as overlapping the proposed off-site improvements. The CHRIS records search results indicate that although some studies address portions of the proposed offsite improvements for the Project, the Project site has not been subjected to any previous archaeological investigations. Table 4.4-1, below, summarizes all previous cultural resources studies and is followed by a brief summary of reports that address the proposed Project site and/or the proposed off-site improvements.

Table 4.4-1. Previously Conducted Cultural Resources Studies Within a 0.5-Mile of the Proposed Project Site and Off-Site Improvements

SCCIC Report Number (SB-)	Authors	Year	Title	Proximity to/ Percentage Addressing Proposed Project Site	Proximity to/ Percentage Addressing Proposed Off-site Improvements
02778	Lerch, Michael K.	1993	Class III Cultural Resources Inventory of Proposed Drill Site Access Roads, Castle Mountain Venture, San Bernardino County, CA	Outside; 0 %	**Overlaps; ~10 %**
03677	White, Robert and Laurie	2001	A Cultural Resource Assessment of the 300 Acre Pluto Development, Inc Property, SE corner of Johnson Road and Dale Evans Pkwy, Town of Apple Valley, San Bernadino County, CA. 15PP.	Outside; 0 %	Outside; 0 %

Table 4.4-1. Previously Conducted Cultural Resources Studies Within a 0.5-Mile of the Proposed Project Site and Off-Site Improvements

SCCIC Report Number (SB-)	Authors	Year	Title	Proximity to/ Percentage Addressing Proposed Project Site	Proximity to/ Percentage Addressing Proposed Off-site Improvements
04557	Dice, Michael	2002	An Archaeological & Paleontological Resources Assessment of 13,700' Navajo Road Sewer Project, Town of Apple Valley, CA. 39PP.	Outside; 0 %	**Overlaps; ~5 %**
04808	Smallwood, Josh	2007	Cultural Resources Technical Report: North Apple Valley Specific Plan and EIR, Town of Apple Valley, San Bernardino County, California.	**Adjacent to the west; 0 %**	**Overlaps; ~10 %**
05401	Jordan, Stacey C.	2007	Archaeological Survey Report for the Southern California Edison Company, Standing Rock 12kV Circuit Project, San Bernardino County, California.	**Adjacent to the east; 0 %**	Outside; 0 %
07116	Cisneros, Charles W.	2011	Cultural Resources Survey for the Apple Valley Airport Master Plan Project, San Bernardino County, California	Outside; 0 %	**Overlaps; ~20 %**

Notes: ~ = approximate; SCCIC = South Central Coastal Information Center.

Previously Recorded Cultural Resources

The CHRIS records indicate that ten (10) cultural resources have been previously recorded within 0.5-mile of the proposed Project. Of these, one is a prehistoric site, one is a prehistoric isolate, five are historic-period archaeological resources, two are historic-period archaeological isolates, and one is a multi-component resource, which consists of both historic-period and prehistoric archaeological components. The resource nearest the proposed Project site is a historic-period archaeological site (P-36-013314) located adjacent to the eastern portion of the proposed Project site. The remaining resources identified through the CHRIS records search are located to the north and southwest of the proposed Project site. Table 4.4-2, below, summarizes all previously recorded cultural resources identified within the records research radius followed by summaries of each.

Table 4.4-2. Previously Recorded Cultural Resources Within a 0.5-Mile of the Proposed Project Site and Off-Site Improvements

Primary (P-36-)	Trinomial (CA-SBR-)	Resource Age and Type	Resource Description	NRHP/CRHR Eligibility	Recording Events	Proximity to Proposed Project Site/Off-Site Improvements (~)
006838	006838H	Archaeological site: Historic period	Rock feature	7R: Not evaluated	1990 (Sundberg and Des'Autels)	**Project Site:** 0.25 miles south **Off-Site Improvements:** Outside
006842	006842H	Archaeological site: Historic period	Domestic refuse scatter, dating 1907+	7R: Not evaluated	1990 (Sundberg and Des'Autels)	**Project Site:** 0.25 miles south **Off-Site Improvements:** Outside
012856	N/A	Archaeological isolate: Historic Period	Baking powder can, dating 1925-1950	7R: Not evaluated	2006 (Sanka)	**Project Site:** 0.5 miles southwest **Off-Site Improvements:** Outside
012857	N/A	Archaeological isolate: Historic Period	Hole-in-top can, likely dating 1900+	7R: Not evaluated	2006 (Sanka)	**Project Site:** 0.1 miles southwest **Off-Site Improvements:** Outside
013314	N/A	Archaeological site: Historic Period	Two concrete foundations and domestic refuse scatter	7R: Not evaluated	2006 (Tsunoda)	**Project Site:** Immediately adjacent to east **Off-Site Improvements:** Outside
020978	013512	Archaeological site: Prehistoric	Lithic scatter	7R: Not evaluated	2009 (Fulton)	**Project Site:** 0.15 miles north **Off-Site Improvements:** Outside

Table 4.4-2. Previously Recorded Cultural Resources Within a 0.5-Mile of the Proposed Project Site and Off-Site Improvements

Primary (P-36-)	Trinomial (CA-SBR-)	Resource Age and Type	Resource Description	NRHP/CRHR Eligibility	Recording Events	Proximity to Proposed Project Site/Off-Site Improvements (~)
020982	013516H	Archaeological site: Multi-Component (Historic-period and Prehistoric)	Remnants of residential structures and features; refuse; two basalt flakes.	7R: Not evaluated	2009 (Fulton)	**Project Site:** 0.15 miles north **Off-Site Improvements:** Outside
020983	N/A	Archaeological site: Historic Period	Concrete footing and well head	7R: Not evaluated	2009 (Fulton)	**Project Site:** 0.05 miles north **Off-Site Improvements:** Outside
020984	N/A	Archaeological site: Historic Period	Concrete footing	7R: Not evaluated	2009 (Fulton)	**Project Site:** Immediately north **Off-Site Improvements:** Outside
061206	N/A	Archaeological isolate: Prehistoric	Chert flake	7R: Not evaluated	1990 (Sundberg and Des'Autels)	**Project Site:** 0.3 miles southwest **Off-Site Improvements:** Outside

Notes: NRHP = National Register of Historic Places; CRHR = California Register of Historical Resources; ~ denotes approximate; N/A = not applicable.

Review of Historical Topographic Maps and Aerial Photographs

Historical topographic maps and aerial photographs were consulted to better understand the natural or human-made changes to the proposed Project site and surrounding properties over time. Dudek reviewed topographic maps from 1932 to 2018 and aerial photographs from 1952 to 2020 as part of the archival research effort.

Historical Topographic Maps

A review of available topographic maps was conducted and included the following years: 1932, 1934, 1953, 1957, 1960, 1968, 1974, 1980, 1987, 1993, 2012, 2015 and 2018 (Appendix D) Topographic maps depict not only elevation of the study area as well as the areas surrounding it, but they also illustrate the location of roads and some buildings. Although topographic maps are not comprehensive, they are another tool in determining whether

a study area has been disturbed and sometimes to what approximate depth. Table 4.4-3, below, describes the changes of the proposed Project site and off-site improvements through the years.

Table 4.4-3. Historical Topographic Maps Review

Year	Description of Proposed Project Site	Description of Proposed Off-Site Improvements
1932	The earliest topographical map shows the proposed Project site as undeveloped, with a light road running east to west across the northern boundary (matching current day Johnson Road) and a trail running north to south along the western boundary (matching current day Central Road), and an unimproved road running north to southwest across the southeast corner (matching current day Sycamore Lane). There is a structure indicated outside of the proposed Project site, to the east.	Johnson Road is indicated, running east to west through the northern section of the off-site improvements. The unimproved road along the eastern boundary of the proposed Project site crossed the southeastern section of the off-site improvements. The remainder is undeveloped.
1934	There are no significant changes.	There are no significant changes.
1953	There are no significant changes within the proposed Project site. There is no longer a structure indicated to the east.	There are no significant changes.
1957	This map appears to show Central Road as a light duty road. Johnson Road and Sycamore Lane are indicated as unimproved roads. There is a structure in the northwest corner of the proposed Project site. There are two structures just outside the proposed Project site, to the southeast of where Sycamore Lane angles to the southwest across the proposed Project site.	There are no significant changes to the north area of the off-site improvements. Lafayette Street is indicated as an unimproved road to the west of Central Road.
1960	There are no significant changes.	There are no significant changes.
1968	There are no significant changes.	There are no significant changes.
1974	This topographical map no longer indicates structures. Johnson and Central Roads are indicated as light duty roads. Sycamore Lane is indicated trending north to south, as an unimproved road. A dry well is labelled, just outside the proposed Project site, to the east of where Sycamore Lane meanders to the southwest. The wash is indicated crossing the proposed Project site in the northwest corner.	Johnson Road and Lafayette Street are indicated as unimproved roads to the west of Central Road. A wash crosses Johnson Road in the north section of the off-site improvements. The wash that crosses the proposed Project site also crosses Lafayette Street within the off-site improvements to the south.
1980	There are no significant changes.	There are no significant changes.
1987	There are no significant changes.	There are no significant changes.
1993	This map shows Central Road as a secondary highway. Johnson Road is noted as light duty to the east of Central Road, and unimproved to the west. Sycamore Lane no longer appears. The dry well to the east of the proposed Project site is still noted, and the wash is indicated across the northwest corner.	Johnson Road to the north and Lafayette Street to the south are both indicated as unimproved roads, west of Central Road. There are no significant changes.
2012	This topographical map no longer indicates structures. Johnson and Central Roads are indicated as light duty roads, as is Lafayette	Only the roads are indicated on this map, all as light duty roads. There are no significant changes.

Table 4.4-3. Historical Topographic Maps Review

Year	Description of Proposed Project Site	Description of Proposed Off-Site Improvements
	Street. Sycamore Lane is indicated trending north to south, as a light duty road.	
2015	There are no significant changes.	There are no significant changes.
2018	There are no significant changes.	There are no significant changes.

Historical Aerial Photographs

A review of all available historical aerial photographs was conducted and included the following years: 1952, 1968, 1969, 1984, 1995, 2005, 2009, 2010, 2012, 2014, 2016, 2018, and 2020 (Appendix D). Through careful comparative review of historical aerials, changes to the landscape of a study area may be revealed. Disturbance to the study area is specifically important as it helps determine if soils within the study area are capable of sustaining intact archaeological deposits. Additionally, historical aerials have the potential to reveal whether a study area was subjected to alluvial deposits by way of alluvial erosion, flooding, debris flows or mudslides, as well as placement of artificial or foreign fill soils that may have buried intact archaeological deposits. Table 4.4-4, below, describes the changes of the proposed Project site and off-site improvements through the years.

Table 4.4-4. Historical Aerial Photographs Review

Year	Description of Proposed Project Site	Description of Proposed Off-Site Improvements
1952	The proposed Project site is a mostly undeveloped desert landscape with low lying shrubs and a wash crossing southwest to northeast. There is a structure in the northwest corner, near the intersection of Central Road and Johnson Road, marking the western and northern boundaries. There is another unimproved dirt road on the east boundary, that cuts to the southwest across the corner of the proposed Project site. The north half of the road is in alignment with current day Sycamore Lane.	The proposed off-site improvement areas are depicted as undeveloped desert land. The north section of the proposed off-site improvement area depicts Johnson Road. The southern section is undeveloped desert. The wash visible in the proposed Project site is visible in both areas of off-site improvements. There are washes trending southwest to northeast across the west sides of both off-site improvement alignments.
1968	Central Road and Johnson Road have been widened and improved. There appears to be a structure in the adjacent lot to the east, but no significant changes to the proposed Project site.	The north section of the proposed off-site improvement area has no significant changes. The south section now has a road running east to west, which matches the alignment for current day Lafayette Street.
1969	The structure in the northwest corner of the proposed Project site appears different, possibly damaged.	There are no significant changes.
1984	The unimproved road along the eastern boundary is now configured into a north-south alignment, matching current day Sycamore Lane; the meander to the southwest is now an offshoot. It appears that the structure in the northwest corner of the proposed Project site has been demolished; only the foundation is visible.	There are no significant changes.

Table 4.4-4. Historical Aerial Photographs Review

Year	Description of Proposed Project Site	Description of Proposed Off-Site Improvements
1995	There is a small structure mid-site, just west and adjacent to Sycamore Lane.	There are no significant changes.
2005	There are no significant changes.	The north section of the proposed off-site improvement area now has a paved parking lot on the northwest corner of Center Road and Johnson Road. There are multiple trails leading away from the parking to a cluster of buildings just north of the off-site improvement buffer. There is a small structure north of Lafayette Street, at the west end of the off-site improvement. There are no other significant changes.
2009	There is now an unimproved road bisecting the southern half of the proposed Project site. It appears to be Llanto Road, and leads to a new structure, outside of the proposed Project site, to the east. There are no other significant changes.	In the north section of the proposed off-site improvements, there appears to be a fence line running along the north side of Johnson Road, east of Central Road. In the south section of the proposed Project site, there is now a large warehouse located on the northeast corner of Navajo Road and Lafayette Street. A portion of Lafayette appears to be paved near the structure.
2010	There are no significant changes.	There are no significant changes.
2012	There are no significant changes.	There are no significant changes.
2014	The small structure adjacent to Sycamore Lane appears to have collapsed.	There are no significant changes in the north section of the proposed off-site improvements. There is an additional warehouse or addition to the previous structure noted in 2009, doubling its size to the east. There are associated paved areas around the structures.
2016	There are no significant changes.	There are no significant changes.
2018	There are no significant changes.	There are no significant changes.
2020	There are no significant changes.	There are no significant changes.

Project Site Setting – Cultural Context

The currently vacant and undeveloped proposed 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 proposed Project site is within Victor Valley in the western Mojave Desert. Water sources near the proposed Project site include the Oro Grande Wash, a tributary of the Mojave River, approximately 10 miles to the west; the Mojave River proper, approximately 9.5 miles to the southwest; the California Aqueduct, approximately 16 miles to the southwest; and Spring Valley Lake, an anthropogenic lake created for a country club, approximately 8 miles to the southwest. The proposed Project site is relatively flat with elevation ranges between approximately 3,130 and 3,170 feet above mean sea level (amsl) and slopes gently toward the southwest. There are no substantial topographical features in the proposed Project site; however, smaller ephemeral desert washes that drain toward the southwest are present.

Ground surface cover consists of moderate native brush and desert shrub growth with some Joshua trees. The proposed Project site has been subject to disturbance as a result of several dirt roads that intersect it and unpermitted off-road vehicle usage.

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2023a), two (2) primary types of soils have been identified within the proposed Project site and off-site improvements primarily; these soils consist of Helendale-Bryman loamy sands, with 2% to 5% slopes, and include Cajon-Arizo Complex with 2% to 15% slopes. All available official soil descriptions are summarized below:

- **Helendale Series** (USDA 2023a): The Helendale series consists of very deep, well drained soils that formed in alluvium from granitoid rocks. These soils are found on fan piedmonts, fan remnants, alluvial fans, and terraces with 0% to 15% slopes. A typical Helendale pedon extends from 0 to 106 inches below the ground surface (bgs).
- **Cajon Series** (USDA 2023b): The Cajon series consists of very deep, somewhat excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. These soils are found on alluvial fans, fan aprons, fan skirts, inset fans and river terraces with 0% to 15%. A typical Cajon pedon extends from 0 to 60 inches bgs.

A review of the United States Geological Society (USGS) mineral resources (USGS 2023) online spatial data for geology revealed that native soils within the proposed Project site and off-site improvements 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.

Geotechnical Report Review

GEOCON West, Inc. completed a geotechnical study for a large area, including the proposed Project site (completed March 29, 2022; Appendix E). The report, Preliminary Geotechnical Investigation Proposed Industrial Development 565 Acres Apple Valley, California, documents the subsurface geological conditions of parcels located in Apple Valley including the proposed Project site (Appendix E). The report details the results of nine (9) subsurface exploratory borings (B1 through B9) on February 18. 2022, using a truck-mounted drill-rig equipped with an 8-inch diameter hollow stem auger, followed by 20 test pits excavated by backhoe on March 2 and 3, 2022. Of the nine (9) borings and 20 test pits, one (1) boring (B7) and three (3) test pits (TP-9, TP-14, and TP-15) addressed the proposed Project Site.

These subsurface exploratory investigations were placed at accessible locations within the proposed Project site. The subsurface exploratory excavations were advanced to depths between approximately 6 to 20 feet below ground surface (bgs) to determine subsurface geological conditions within the proposed Project site. According to the boring logs, wash deposits were encountered throughout all depths at location B7, described as layers of light brown, fine to coarse grained sand, silty sand, and sand with gravel. Sediments encountered in at location T-9 is consists of wash deposits characterized as sand that is well-graded, light brown to brown, and fine to coarse-grained with some gravel. At locations T-14 and 15, sediments were described as alluvial deposits of poorly graded sand, silty sand, and silt. Some of the sands had fine gravel.

The geological boring and trench investigations were terminated at each location based on subsurface refusal at varying depths, between approximately 6 to 20 feet bgs; however, no bedrock was encountered at any of the three (3) locations investigated. A summary of the subsurface investigative results is provided in Table 4.4-5, below.

Table 4.4-5. Summary of Subsurface Investigations – GEOCON West Inc. 2022

Boring/ Test Pit No.	Location of Investigation	Depths of Fill Soils	Depths of Native Soils	Terminated/ Refusal Depth
B-7	Southwest area of proposed Project site	N/A	0±20 feet bgs	~20 feet bgs
TP-9	Northwest area of proposed Project site	N/A	0±6 feet bgs	~6 feet bgs
TP-15	Southeast area of proposed Project site	N/A	0±5 feet bgs	~5 feet bgs

Notes: N/A = not applicable; bgs = below ground surface; ~ denotes approximate.

Assembly Bill 52 Consultation

The Project is subject to compliance with AB 52, which requires consideration of impacts to tribal cultural resources (TCRs) as part of the CEQA process, and that the lead agency notify California Native American Tribal representatives that have requested notification who are traditionally or culturally affiliated with the geographic area of the Project site. The following tribes were notified as part of the AB 52 process for the proposed Project:

- Cabazon Band of Mission Indians
- A. Brierty - Cahuilla (Morongo) Band of Mission Indians
- R. Martin - Cahuilla (Morongo) Band of Mission Indians
- A. Madrigal - 29 Palms Band of Mission Indians
- D. Mike - 29 Palms Band of Mission Indians
- R. Nordness - San Manuel Band of Mission Indians

All records of correspondence related to AB 52 and SB 18 notification and any subsequent consultation are on file with the Town. To date, the Town has not received any requests for consultation from the four tribes it invited to AB 52 consultation.

Cultural Resources Pedestrian Survey

Dudek archaeologists conducted an intensive pedestrian level survey of the Project site. 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 67.3-acre proposed Project site and the off-site improvement areas. The intensive-level survey methods consisted of a pedestrian survey conducted in parallel transects, spaced no more than 15 meters apart (approximately 50 feet), where feasible. With respect to the off-site improvements along Lafayette Street and Johnson Road, each side of these roads were surveyed, within the limits of the proposed off-site improvements. The ground surface was inspected for prehistoric artifacts (e.g., flaked stone tools, tool-making debris, ground stone tools, ceramics, fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, features indicative of structures and/or buildings (e.g., standing exterior walls, post holes, foundations), and historical artifacts (e.g., metal, glass, ceramics, building materials). In reference to metal cans, these resources 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, terraces, trails and drainages were also visually inspected for exposed subsurface materials.

The proposed Project site consists of open desert landscape, with a series of washes running generally northeast to southwest and low-lying desert scrubland vegetation, including occasional Joshua trees. At the time the pedestrian survey was conducted, the ground surface visibility ranged from good to excellent (90% to 100%). The parcel has been subjected to consistent disturbance due to opportunistic dumping, evidenced by the presence of modern refuse and structural debris piles and scatters across the proposed Project site, consisting of toys, household items, and other consumables. Other disturbances observed include recreational activities as evidenced by of several off-road vehicular tracks that traverse the proposed Project site in various directions. Also observed were widely dispersed historic-period refuse that appeared to have been deposited/distributed across the site through aeolian and/or alluvial forces.

The proposed off-site improvements include areas that straddle Johnson Road and Lafayette Street. There is evidence of a metal, barbed-wire fence that was removed that parallels Johnson Road on the north side; cut metal poles are still embedded in a line along Johnson Road. There are off-roading trails and a dry drainage on the south side of Johnson Road. No cultural resources other than modern trash were encountered on either side of Johnson Road, west of Central Road. Structural remnants consisting of a concrete foundation pad was observed at the southeast corner of the intersection of Central Road and Johnson Road, within the additional offsite improvements area; however, of note, the foundation is outside the proposed Project site.

The western end of Lafayette Street is developed with an existing warehouse building that is part of a distribution center. That section of Lafayette Street was paved, and there is a parking lot associated with the building, on the northeast corner of the intersection of Lafayette Street and Navajo Road. The remainder of Lafayette Street is an unimproved, dirt road. Like the proposed Project site, there are multiple washes crossing this area, and evidence of continual use for off-roading. Isolated modern and historic-period trash were noted in this area, found in washes that cross north to south. Portions of the south side of Lafayette Street were inaccessible due to fencing. In this case, transects were shifted north and surveyed with a smaller distance between lines. Occasional, isolated rusted metal cans were noted, but not thoroughly documented as they were not observed in discrete deposits or primary depositional locations. Modern trash, often found close to Lafayette Street, was found mixed with fragmentary historic-period glass. Locations of the scatters seemed to indicate dumping along the roadside, as well as post depositional movement due aeolian and/or alluvial forces.

Overall, all soils observed within all areas surveyed are consistent with the USDA's characterization of alluvial soils from the Helendale-Bryman Loamy Sands (loamy sands and sandy loams) and Cajon-Arizo Complex (gravelly sands) (USDA 2023a).

No historical resources or unique archaeological resources were identified within the proposed Project site or off-site improvement areas.

Paleontological Setting

The Project area is located within the Mojave Desert Geomorphic Province, which is characterized by rugged mountain ranges with intervening alluvial fans, bajadas, and valleys that have no drainage to the ocean (CGS 2002). According to surficial geological mapping by Dibblee (1960) 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). Holocene alluvial deposits are typically an unconsolidated mixture of clay, silt, sand, and gravel.

The geotechnical report prepared for the larger industrial development area indicated portions of the Project site are immediately underlain or very shallowly underlain by Pleistocene (older) alluvial deposits (Appendix E). Test Pits

TP-9, TP-14, and TP-15 and Boring B-7 where excavated/drilled within the Project site boundaries. In general, TP-9, which was excavated to a depth of 6 feet below the ground surface (bgs), encountered unconsolidated Holocene sands that were fine to coarse-grained with some gravel on the bottom 3 feet of the TP. TP-14 (east-central portion of the Project site) and TP-15 (southeast portion of the Project site) encountered Pleistocene alluvial deposits at 1 foot bgs, whereas B-7, located in the southwestern portion of the Project site, indicated Pleistocene alluvial deposits are present on the surface (Appendix E).

Dudek requested a paleontological records search from the Natural History Museum of Los Angeles County (NHMLA) on October 10, 2022, and the results were received on October 16, 2022. The NHMLA reported no fossil localities from within the Project site; however, they have nearby localities from older sediments that lie within the 1-mile buffer on the surface and are likely at depth beneath the Project site (Pleistocene older 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, 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 6125, produced unspecified invertebrate fossils from an unknown depth bgs in an unknown formation at the east end of Rabbit Lake.

According to the Society of Vertebrate Paleontology (SVP 2010) guidelines significant paleontological resources (i.e., fossils) are defined as identifiable vertebrate fossils, uncommonly recovered invertebrate, trace, and plant fossils and accompanying data. In general, to be significant, Holocene fossils should be greater than approximately 5,000 years old, which approximately corresponds with the middle Holocene (SVP 2010). The surficial Holocene alluvial deposits, aged less than 11,700 years ago, have not been shown to produce any fossil resources and therefore has low paleontological sensitivity on the surface that increases with depth where they can become old enough to preserve significant paleontological resources.

Additionally, 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.

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 – Cultural Context

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.

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 analysis satisfies project requirements in accordance with CEQA (13 PRC, 21000 et seq.) and Public Resources Code Section 5097.5 (Stats 1965, c 1136, p. 2792). This analysis also complies with guidelines and significance criteria specified by SVP (2010).

Paleontological resources are explicitly afforded protection by CEQA, specifically in Section VII(f) of CEQA Guidelines Appendix G, the "Environmental Checklist Form," which addresses the potential for adverse impacts to "unique paleontological resource[s] or site[s] or … unique geological feature[s]." This provision covers fossils of signal importance – remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group – as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth. Further, CEQA provides that generally, a resource shall be considered "historically significant" if it has yielded or may be likely to yield information important in prehistory (PRC 15064.5 [a][3][D]). Paleontological resources would fall within this category.

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.

California Environmental Quality Act – Paleontological Context

CEQA does not define "a unique paleontological resource or site." However, the Society of Vertebrate Paleontology (SVP) has provided guidance specifically designed to support state and Federal environmental review. The SVP broadly defines significant paleontological resources as follows (SVP 2010:11):

> "Fossils and fossiliferous deposits consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years)."

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, paleophylogeography, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiometric dating is possible. As such, common fossils (especially vertebrates) may be scientifically important and therefore considered significant.

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.

Assembly Bill 52

The legislature added the requirements regarding tribal cultural resources through AB 52. By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process (AB 52 Section 1[b][7]).

Section 1 of the bill states the legislature's intent as follows (AB 52 Section 1[b]):

> In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, and respecting the interests and roles of project proponents, it is the intent of the Legislature, in enacting this act, to accomplish all of the following: (1) Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities. (2) Establish a new category of resources in CEQA called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation. (3) Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible. (4) Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because CEQA calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources. (5) In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, at the earliest possible point in the CEQA environmental review process.

To accomplish those goals, the legislature added or amended the following sections in the PRC: 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94.

Native American Historic Cultural Sites

The Native American Historic Resources Protection Act (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.

PRC Section 5097.5 and 30244

Section 5097.5 of the Public Resources Code (PRC) states:

> "No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this PRC section, 'public lands' means lands owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof."

Consequently, public agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

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

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. Notwithstanding, the Town of Apple Valley General Plan (Town of Apple Valley 2009), Chapter III: Environmental Resources, states the following:

> "The potential for geological formations to produce fossils is evaluated based on what fossil resources have been produced in the past at other nearby locations of similar geologic composition. There are substantial exposures of Mesozoic-age (65,000,000 to 245,000,000 years ago) rocks in more elevated portions of the Town that may contain no fossils. Shallow grading of younger Quaternary alluvium that occurs throughout most of the area is not likely to reveal significant fossil remains. Potential for the presence of significant non-renewable paleontological resources exists where surface or subsurface Pleistocene-age (1,808,000 to 11,550 years ago) soils occur in the planning area. High priority is also given to older sediments along the Mojave River and at unknown depth below the surface. Based on research of surface deposits, the soils in the planning area, which are relatively young, have a low potential for containing significant fossil remains. Surface deposits may in some areas constitute only a "veneer cover" that directly overlays older sediments; however, research indicates that no fossils have been reported in Town. Reports have, however, identified localities with fossil resources of an age that is similar soil deposits to those that occur in the Town and Sphere of Influence. In the overall, research indicates that there is a range of likelihood from low to high of encountering paleontological resources during future development projects; as discussed above, the potential depends on the location and sediments encountered."

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. A cultural resources records search, review of literature and archival resources (historic maps, aerial photographs, topographic maps), and a field survey were conducted for the Project site. No cultural resources were identified as a result of a review of the CHRIS database and pedestrian survey, which was conducted under reliable conditions. As such, the Project is not anticipated to cause a substantial adverse change in the significance of a historical resources. Impacts associated with substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5 would be less than significant.

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. As discussed under Threshold A above, a cultural resources records search, review of literature and archival resources (historic maps, aerial photographs, topographic maps), and a field survey were conducted for the Project site. No cultural resources were identified as a result of a review of the CHRIS database and pedestrian survey, which was conducted under reliable conditions. Based on geotechnical testing results, soils present within the proposed Project site are native and not overlain with fill; however, evidence of ground disturbance to unknown depths is evidenced by both contemporary conditions observed during the pedestrian survey and through a review of the historic aerials. Additionally, evidence of natural modification through wind and water erosion and depositional event was observed. Proposed depths of ground disturbance are anticipated to extend between 4 to 14 feet across the proposed Project site and to a maximum depth of 22 feet along the east side of the proposed Project site for installation of a storm drain. In consideration of the Archaeological Resource Assessment's findings relative to the proposed Project's depths of ground disturbance, the potential to find unknown cultural resources within the proposed Project site and off-site improvements, particularly within subsurface soils, is possible during Project implementation. Therefore, implementation of MM-CUL-1 through MM-CUL-4 is required. These mitigation measures would ensure the inadvertent discovery of archaeological resources will be treated appropriately and in accordance with the CEQA regulations via: preparation of a Cultural Resources Monitoring and Inadvertent Discovery Plan (MM-CUL-1), Workers Environmental Awareness Program (WEAP) training (MM-CUL-2), retention of an on-call archaeologist to address inadvertent discoveries (MM-CUL-3), and an inadvertent discovery clause of archaeological resources implemented and included on all construction plans (MM-CUL-4). These measures would ensure that potential Project impacts to archaeological resources would be less than significant.

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

Less-than-Significant Impact with Mitigation. As discussed under Threshold A and B above, no cultural resources were identified as a result of a review of the CHRIS database and pedestrian survey. Given these findings, the potential to encounter unanticipated human remains on the Project site is low. However, in consideration of the Archaeological Resource Assessment's findings that the Project site is underlain by native soils relative to the proposed Project's depths of ground disturbance, the potential to find unknown cultural resources, including human remains, within the proposed Project site and off-site improvements, is possible during Project implementation. Implementation of MM-CUL-1 through MM-CUL-4, as well as MM-CUL-5, is required. In addition to the measures outlined in MM-CUL-1 through MM-CUL-4, MM-CUL-5 would require compliance with Section 7050.5 of the California Health and Safety Code, which requires that 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. to a level of less than significant with mitigation incorporated.

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. The Project is subject to compliance with AB 52 (PRC Section 21074), which requires consideration of impacts to "tribal cultural resources" as a part of the CEQA process, and requires the Town, as the CEQA lead agency, to notify any groups who have requested notification of proposed projects that are subject to AB 52 compliance and are under the jurisdiction of the agency. The Town requested tribal consultation from its four requesting tribes: the Cabazon Band of Mission Indians, the Cahuilla Band of Indians, the San Manuel Band of Mission Indians, and the Twenty-Nine Palms Band of Mission Indians. To date, no responses have been received by the Tribe pursuant to AB 52 Tribal Consultation. The Project site has been thoroughly researched, surveyed, and analyzed to identify the level of potential for archaeological and tribal cultural resources. No archaeological and tribal cultural resources were identified as a result of these efforts. Notwithstanding, MM-CUL-1 through MM-CUL-5 are required to help ensure the integrity of archaeological resources and human remains during ground-disturbing activities. With the incorporation of MM-CUL-1 through MM-CUL-5, impacts associated with tribal cultural resources 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 (CGS 2002). According to surficial geological mapping by Dibblee (1960) 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). Holocene alluvial deposits are typically an unconsolidated mixture of clay, silt, sand, and gravel.

The geotechnical report prepared for the larger industrial development area indicated portions of the Project site are immediately underlain or very shallowly underlain by Pleistocene (older) alluvial deposits (Appendix E). Test Pits TP-9, TP-14, and TP-15 and Boring B-7 where excavated/drilled within the Project site boundaries. In general, TP-9, which was excavated to a depth of 6 feet below the ground surface (bgs), encountered unconsolidated Holocene sands that were fine to coarse-grained with some gravel on the bottom 3 feet of the TP. TP-14 (east-central portion of the Project site) and TP-15 (southeast portion of the Project site) encountered Pleistocene alluvial deposits at 1 foot bgs, whereas B-7, located in the southwestern portion of the Project site, indicated Pleistocene alluvial deposits are present on the surface (Appendix E).

Dudek requested a paleontological records search from the Natural History Museum of Los Angeles County (NHMLA) on October 10, 2022, and the results were received on October 16, 2022. The NHMLA reported no fossil localities from within the Project site; however, they have nearby localities from older sediments that lie within the 1-mile buffer on the surface and are likely at depth beneath the Project site (Pleistocene older 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, 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 6125, produced unspecified invertebrate fossils from an unknown depth bgs in an unknown formation at the east end of Rabbit Lake.

According to the Society of Vertebrate Paleontology (SVP 2010) guidelines significant paleontological resources (i.e., fossils) are defined as identifiable vertebrate fossils, uncommonly recovered invertebrate, trace, and plant fossils and accompanying data. In general, to be significant, Holocene fossils should be greater than approximately 5,000 years old, which approximately corresponds with the middle Holocene (SVP 2010). The surficial Holocene alluvial deposits, aged less than 11,700 years ago, have not been shown to produce any fossil resources and therefore has low paleontological sensitivity on the surface that increases with depth where they can become old enough to preserve significant paleontological resources.

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 have low paleontological sensitivity increasing to moderate or high with depth as middle Holocene to Pleistocene older alluvial deposits are encountered, as anticipated by the fossil locality records search (NHMLA 2022) and the geotechnical report

(Appendix E). If intact paleontological resources are located onsite, ground-disturbing activities associated with construction of the proposed 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 at depth, and without mitigation, the potential damage to paleontological resources during construction associated with the Project 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 recent alluvial deposits. However, upon implementation of MM-GEO-1, impacts would be reduced to below a level of significance. Impacts of the proposed 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?

Cultural and Tribal Cultural Resources

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 or tribal cultural resources. However, as discussed above, the individual, Project-level impacts associated with cultural and tribal cultural resources were found to be less than significant with incorporation of mitigation measures (MM-CUL-1 through MM-CUL-5). The Project would be required by law to comply with all applicable federal, state, and local requirements related to historical, archaeological, 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. In consideration of these requirements, cumulative impacts would be **less than significant**.

Paleontological Resources

Potential cumulative impacts to paleontological resources would result from projects that combine to create an environment where fossils, exposed on the surface, are vulnerable to destruction by earthmoving equipment, looting by the public, and natural causes such as weathering and erosion. The majority of impacts to paleontological resources are site-specific and are therefore generally mitigated on a project-by-project basis. Cumulative projects would be required to assess impacts to paleontological resources. Additionally, as needed, projects would incorporate individual mitigation for site-specific geological units present on each individual project site. Furthermore, the Project does not propose construction (including grading/excavation) or design features that could directly or indirectly contribute to an increase in a cumulative impact to paleontological resources, as the mitigation measure provided in this analysis ensures any significant paleontological resources uncovered during Project excavations would be properly analyzed and salvaged by the on-site paleontological monitor. Therefore, the Project, in combination with the past, present, and reasonably foreseeable future projects in the Project vicinity, would result in less-than-significant cumulative impacts to paleontological resources, and no further mitigation measures are required. Moreover, impacts to paleontological resources would be avoided and/or mitigated with implementation of a paleontological mitigation program during excavations into paleontologically sensitive geological units. Therefore, the Project's contribution to cumulative impacts would not be cumulatively considerable. As such, cumulative impacts on paleontological resources would be **less than significant.**

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 not have the potential to cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5 and impacts would be less than significant.

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-4, impacts associated with archaeological resources would be less than significant with mitigation incorporated.

MM-CUL-1 **Cultural Resource Monitoring and Inadvertent Discovery Plan.** Prior to ground disturbance activities, the Applicant and/or subsequent responsible parties shall retain a Principal Investigator/Archaeologist, meeting the Secretary of the Interior's Standards, and with experience in California prehistoric and historic resources (including experience within San Bernardino County preferred), to compose a Cultural Resource Monitoring and Inadvertent Discovery Plan (Plan). The purpose of the Plan is to outline cultural monitoring protocols and a program of treatment and mitigation in the case of an inadvertent discovery of cultural resources during ground-disturbing phases and to provide for the proper identification, evaluation, treatment, and protection of any cultural resources in accordance with CEQA throughout the duration of the Project. Existence and importance of adherence to this Plan should be stated on all Project site plans intended for use by those conducting the ground disturbing activities.

MM-CUL-2 **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 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-3 **On-Call and Periodic Archaeological Construction Monitoring.** In consideration of the general sensitivity of the proposed Project site for cultural resources, a qualified archaeologist shall be retained to conduct periodic 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-4 **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 C: Would the Project disturb any human remains, including those interred outside of formal cemeteries?

The Project would result in potentially significant impacts associated with the disturbance of human remains, including those interred outside of formal cemeteries. With incorporation of MM-CUL-5, impacts associated with human remains would be less than significant with mitigation incorporated.

MM-CUL-5 **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.

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 tribal cultural resource. With the incorporation of MM-CUL-1 through MM-CUL-5, impacts associated with tribal cultural resources would be less than significant with mitigation incorporated.

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-GEO-1, impacts associated with unique paleontological resources would be less than significant.

MM-GEO-1 Prior to commencement of any grading activity on-site, the applicant shall retain a qualified paleontologist per the 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 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 not result in cumulatively considerable impacts to cultural, tribal cultural, or paleontological resources and impacts would be **less than significant**.

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4.5 Energy

This section describes the existing energy conditions of the 1M Warehouse Project (Project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the Project.

In addition to the documents incorporated by reference, the following analysis is based, in part, on the following source:

- Air Quality, Greenhouse Gas Emissions, and Energy Modeling Inputs and Outputs, prepared by Dudek in May 2023 (Appendix B-1).

4.5.1 Existing Conditions

Electricity

According to the U.S. Energy Information Administration (EIA), California used approximately 250,175 gigawatt hours of electricity in 2020 (EIA 2022). 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.

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. SCE receives electric power from a variety of sources. According to the 2021 SCE Power Content Label, renewable energy accounts for 31.4% of the overall energy resources, with geothermal resources at 5.7%, wind power at 10.2%, large hydroelectric sources at 0.5% and solar energy is at 14.9% (SCE 2022). The County of San Bernardino used approximately 16,180 gigawatt hours of electricity in 2021.

Natural Gas

According to the EIA, California used approximately 2,151.1 trillion BTU of natural gas in 2020 (EIA 2023). California is the nation's second-largest natural gas consuming state. In 2020 (the most recent year for which data is available), by sector, industrial uses utilized 34% of the state's natural gas, followed by 30% from electric power, 23% from residential, 12% from commercial, and 1% from transportation uses (EIA 2023).

Natural gas service for the Town of Apple Valley (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 CEC, The County of San Bernadino used approximately 561.4 million therms in 2021 (CEC 2022) and 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 524 million barrels of petroleum in 2020, with the majority (433 million barrels) used for the transportation sector (EIA 2021). There are 42 U.S. gallons in a barrel, so this equates to a total daily use of approximately 60 million gallons of petroleum among all sectors and 50 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. The Town of Apply Valley's Climate Action Plan estimated that the Town's total VMT was approximately 923.8 million VMT annually.

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 2 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 toward 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) The 2022 IEPR Update was adopted in February 2023, and includes chapters on equity and environmental justice, making information readily available via the California Energy Planning Library, updating California's energy demand forecast, and covering emerging topics (CEC 2023).

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 2022 Title 24 standards are the currently applicable building energy efficiency standards, which became effective on January 3, 2023.

The 2022 Title 24 standards 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 2022 Energy Code went 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.

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 2022 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 secure bicycle parking for 5 percent of the tenant vehicular parking spaces, with a minimum of one bicycle parking facility.
- Construction to provide electric vehicle infrastructure and facilitate electric vehicle charging shall comply with specifications and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code.
- 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.
- Installations of heating, ventilation, 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 toward 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 General Plan 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.A.1 While considering the future development of more stringent local energy performance standards, the Town shall continue to rigorously enforce all mandated energy-conserving development and building code/regulations.

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).

4.5.3 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 SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the California Emissions Estimator Model (CalEEMod) 2022. At the time of project analysis, the latest version of CalEEMod 2022 is version 2022.1.1.5. 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 2022). 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, and for the conveyance of water for dust control 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 electronics, equipment, and machinery. CalEEMod version 2022.1.0. 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 2022). 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 130 forklifts and 4 yard trucks operating at 24 hours a day for 365 days of the year. Before the inclusion of mitigation, the 130 forklifts were assumed to be 75% natural gas powered and 25% diesel powered and the 4 yard trucks were assumed to be diesel powered; however, after the inclusion of **MM-AQ-2**, 100% of forklifts and yard trucks are planned to be electrically powered. The unmitigated energy calculations assume the unmitigated scenario of 98 CNG forklifts, 32 diesel forklifts, and 4 diesel yard trucks. 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. Regarding natural gas-fueled off-road equipment, on-site modeled operational equipment includes a total of 98 CNG-fueled forklifts (i.e., 75% of total lifts) operating at 24 hours a day for 365 days of the year 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 impact analysis (Appendix J), were 1,955 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, the Project would generate an estimated 17,591,602 annual VMT along area roadways for all worker vehicles and 7,849,420 annual VMT for trucks. In total, the Project is anticipated to generate 25,441,022 annual VMT at final buildout. Regarding diesel-fueled off-road equipment, on-site modeled operational equipment includes a total of 32 diesel-fueled forklifts (i.e., 25% of total lifts) and 4 diesel-fueled yard tractors operating at 24 hours a day for 365 days of the year. Finally, the Project would potentially operate one diesel-fueled 300-horsepower (hp) fire pump. This fire pump was assumed to operate for up to 50 hours per 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, and conveyance of water for dust control 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 Building Total	5,884,925
Waste/Wastewater	3,263,193
Total Project Electricity Demand	**9,148,118**

Source: Appendix B-1.
Note: kWh = kilowatt hour.

As shown in Table 4.5-1, the Project is anticipated to consume approximately 9,148,118 kWh of electricity per year. According to the Town's CAP, the Town of Apple Valley used 329,848,695 kWh in 2019. Comparatively, the Project would represent an approximately 3% increase in the Town's energy demand in 2019. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project electricity demands in total would be comparable to other projects of similar scale and configuration. 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-AQ-1, whereby the Project would commit to on-site solar generation sufficient to meet at least 50% 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 and the operation of CNG forklifts. 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	20,533,910
Total Project Natural Gas Demand	**20,533,910**

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 20,533,910 kBTUs per year. The Town's CAP estimated the Town used approximately 15,256,732 therms or 1,525,309,007 kBTUs in 2019 (Town of Apple Valley 2021). For comparison, the Project represents 1% of the Town's total natural gas consumption in 2019. 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

[1] Although electrification of all off-road equipment during operations would increase electricity demand, this would be more than off-set by the solar and energy efficiency requirements of MM-AQ-1.

plan review process. Thus, the natural gas consumption of the Project would not be considered inefficient or wasteful, and impacts would be less than significant.

Petroleum

Construction Petroleum Usage

Petroleum would be consumed throughout construction of the Project. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction activities and 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			
2023	4.706	0	116	235
2024	34,022	58,896	23,587	30,753
2025	15,867	0	22,592	31,283
Project Construction Total	**54,595**	**58,896**	**46,295**	**62,270**
			Total Petroleum	**222,055**

Source: Appendix B-1.

In summary, construction of the Project is conservatively anticipated to consume approximately 222,055 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 be unusual as compared to overall local and regional demand for energy resources. For example, the County of San Bernadino is projected to consume 1.1 billion gallons of petroleum in 2025 from the use of on-road vehicles alone (CARB 2023). Additionally, 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, forklift and yard truck operation, and stationary sources (i.e., routine testing and maintenance of the fire pump). Fuel demand estimates for the Project are provided in Table 4.5-4.

Table 4.5-4. Operational Petroleum Demand

Project	Vehicle MT CO_2	Kg CO_2/Gallon	Gallons	
Gasoline	10,222	8.78	1,158,899	
Diesel	5,566	10.21	585,296	
			Total Petroleum	**1,746,213**

Source: Appendix B-1.
Note: MT = metric tons per year; CO_2 = carbon dioxide; Kg = kilograms.

As summarized on Table 4.5-4, the unmitigated Project would result in an estimated annual fuel demand of approximately 1,746,213 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 MM-AQ-1 that would further reduce petroleum demand; MM-AQ-1 would require all cargo handling equipment to be electrically powered, establish anti-idling measures, and specify 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 on site.

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-AQ-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 on-site renewable energy source (i.e., solar) that was determined to be feasible for the site and does not include the on-site 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. Additionally, energy consumed by the Project's operation would be comparable to energy consumed by other industrial uses of similar scale and intensity that are constructed and operating in California. On this basis, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be less than significant.

Threshold C: Would the Project result in a cumulatively considerable energy impact?

Less-than-Significant Impact. Cumulative projects that could exacerbate the Project's 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. However, MM-AQ-1 would reduce energy demand of the Project as a result of the solar photovoltaics provision.

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 1M Warehouse 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, Greenhouse Gas Emissions, and Energy Modeling Inputs and Outputs, prepared by Dudek in May 2023 (Appendix B-1)
- Transportation Impact Analysis, prepared by Dudek in January 2023 (Appendix J)

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 have stable

[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).

molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.

- **Sulfur Hexafluoride:** SF_6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, is used in semiconductor manufacturing and the magnesium industry, and is used as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF_3 is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere) and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric ozone (O_3).

Hydrochlorofluorocarbons. HCFCs are a large group of compounds, whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but 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 draft 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 2022.1) assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC'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 of Apple Valley (Town) has an adopted Climate Action Plan (CAP), which was approved in July 2010. The Town adopted a 2019 CAP Update in 2021, which includes the following 2019 GHG emissions inventory as showin in Table 4.6.3 (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

Federal

Massachusetts v. EPA

In Massachusetts v. EPA (April 2007), the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."
- The administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, includes the following, which aids in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

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 (2030 Scoping Plan) (CARB 2017). The 2030 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new, technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' known commitments include implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the LCFS, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the cap-and-trade program and a measure to reduce GHGs from refineries by 20%.

CARB released the *Final 2022 Scoping Plan Update* in December 2022, which outlines the state's plan to reach carbon neutrality by 2045 or earlier, while also assessing the progress the state is making toward reducing GHG emissions by at least 40% below 1990 levels by 2030, as is required by SB 32 and laid out in the Second Update.

The carbon neutrality goal requires CARB to expand proposed actions from only the reduction of anthropogenic sources of GHG emissions to also include those that capture and store carbon (e.g., through natural and working lands, or mechanical technologies). The carbon reduction programs build on and accelerate those currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines); and scaling up new options such as green hydrogen[3] (CARB 2022).

The *Final 2022 Scoping Plan Update* also emphasizes that there is no realistic path to carbon neutrality without carbon removal and sequestration, and to achieve the state's carbon neutrality goal, carbon reduction programs must be supplemented by strategies to remove and sequester carbon. Strategies for carbon removal and sequestration include carbon capture and storage (CCS) from anthropogenic point sources, where CO_2 is captured as it leaves a facility's smokestack and is injected into geologic formations or used in industrial materials (e.g., concrete); and carbon dioxide removal (CDR) from ambient air, through mechanical (e.g., direct air capture with sequestration [DACS]) or nature-based (e.g., management of natural and working lands) applications.

In July 2021, Governor Gavin Newsom directed CARB to accelerate efforts to achieve the state's climate stabilization and GHG reduction goals, including to "identify a pathway for achieving carbon neutrality a full decade earlier than the existing target of 2045."

CARB's Regulations for the Mandatory Reporting of Greenhouse Gas Emissions. CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that EPA promulgated in its Final Rule on Mandatory Reporting of Greenhouse Gases (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.

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

[3] Green hydrogen refers to hydrogen that is generated by renewable energy or from low-carbon power, and has significantly lower associated carbon emissions than grey hydrogen, which is produced using natural gas and makes up the majority of hydrogen production. For the purposes of the *Draft 2022 Scoping Plan*, the term "green hydrogen" is not limited to only electrolytic hydrogen produced from renewables.

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% 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.

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 toward 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 toward 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).

Community Operational - Transportation Measures

Measure CO-1. Encourage replacement of personal vehicles with hybrid or alternative fuel vehicles

Measure CO-2. Establish and enforce idling time limits for delivery vehicles. Idling shall not be permitted for more than 5 minutes.

Measure CO-3. Encourage the replacement of gasoline or diesel fleet vehicles with hybrid or alternative fuel vehicles, if available for intended use.

Measure CO-4. Establish an employee carpooling program, including incentives (preferred parking, flex time incentives, etc.) for participating employees.

Measure CO-5. (Encourage) Provide employees with free or discounted public transit passes.

Community Operational - Energy Efficiency Measures

Measure CO-6. Replace failing or failed fixtures and appliances with energy efficient fixtures and appliances. Light bulbs shall be replaced with CFL or LED blubs. Appliances shall be Energy Star rated.

Measure CO-7. Replace traditional water hears with an instant water heating system.

Measure CO-8. Replace traditional roofing with Cool Roofs.

Measure CO-9. Increase insulation in walls and roofs to a minimum R-30

Measure CO-10. Install weather stripping on all doors and windows.

Measure CO-11. Replace grass/turf areas with drought tolerant or native plants or with decorative rock or gravel.

Measure CO-12. Replace Water fixtures with high efficiency fixtures.

Renewable Energy Measures

Measure CO-13. Replace water heater and/or pool heater with a solar water heating system.

Measure CO-14. Install solar panels or photovoltaic system.

Community Operational - Solid Waste Management Measures

Measure CO-17. Increase recycling by 20%.

Measure CO-18. For Businesses, encourage two-sided printing and electronic document submittals to reduce paper waste.

New Development - General Measures

Measure ND-6. For projects, within the North Apple Valley Industrial Specific Plan, develop employee housing within one mile of the industrial project.

Measure ND-7. Preserve trees occurring on-site either through in situ protection during and after construction, or through transplant and relocation within landscaped areas.

New Development - Transportation Measures

Measure ND-9. During construction, encourage on-site and off-road construction equipment to utilize biodiesel fuel (a minimum of B20), expect for equipment where use of biodiesel fuel would void the equipment warranty.

Measure ND-10. Install bus stop(s) and secure scheduled transit service from Vitor Valley Transit Authority.

Measure ND-11. Install pedestrian, bicycle and/or equestrian trails connecting project to school(s), commercial project(s), or transit.

New Development – Energy Efficiency Measures

Measure ND-12. Building and site plan designs shall ensure that the project energy efficiency meet the applicable California Title 24 Efficiency Standards. Verification of increased energy efficiencies shall be documented in Title 24 Compliance Reports provided by the applicant and reviewed and approved by the Town prior to the issuance of the first building permit.

Measure ND-14. Use passive solar design by orienting buildings and incorporating landscaping to maximize passive solar heating during the winter and minimize solar heating during the summer.

Measure ND-15. To reduce energy demand associated with potable water conveyance.

Measure ND-16. Install Energy Star appliances and energy efficient fixtures.

Measure ND-17 Install all CFL or LED blubs.

ND-18. Install common area electric vehicle charging station(s) and secure bicycle racks.

New Development - Renewable Energy Measures

Measure ND-19. To reduce the project's energy use from the grid:

- Install solar panels/photovoltaic systems sufficient to provide electric power and heat water within the project, and/or
- Install other clean energy system sufficient to provide electric power and heat within the project, and/or

Measure ND-20. Install Solar or photovoltaic systems on new roofs whether on residential, commercial, or industrial buildings.

Measure ND-21. Use on-site generated biogas in appropriate applications.

Measure ND-22. Install combined heat and power facilities in appropriate applications.

Measure ND-23. Specify rubberized and/or recycled asphalt for roads and driveways to the extent economically viable.

New Development - Solid Waste Management Measures

Measure ND-24. Recycle and/or salvage non-hazardous construction and demolition waste and develop and implement a construction waste management plan quantifying the reduction in the waste system.

Measure ND-25. Reuse construction waste in project features.

Measure ND-26. Facilitate the reduction waste generated by building occupants that is hauled to and disposed of in landfills by providing easily accessible areas that serve each building and are dedicated to the collection and storage of paper, cardboard, glass, plastics, and metals.

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 CO_2e per year threshold for industrial uses and stationary projects would be recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e per year), commercial projects (1,400 MT CO_2e per year), and mixed-use projects (3,000 MT CO_2e per year). Under option 2, a single numerical screening threshold of 3,000 MT CO_2e per year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.

Tier 4 Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment). The efficiency targets were established based on the goal of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. The 2020 efficiency targets are 4.8 MT CO_2e per service population for project level

analyses and 6.6 MT CO_2e per service population for plan level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.

Tier 5 Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.

Based on the supporting analysis outlined in SCAQMD's draft GHG guidance and meeting notes, this 3,000 MT CO_2e per year level would capture 90% 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% of the GHG emissions form the above-described uses, consistent with EO S-3-05 target of reducing GHGs to 80% below 1990 levels by 2050.

Methodology

Emissions from construction and operation of the Project and existing land uses were estimated using the California Emissions Estimator Model (CalEEMod) Version 2022.1 (CAPCOA 2022).[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

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

[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.

- 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 CO2 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 (unmitigated) operational equipment includes a total of 130 forklifts (forklifts and pallet jacks, with a mix of 25% diesel and 75% CNG) and 3 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 operate one diesel-fueled 300-horsepower (hp) fire pump for a maximum of 50 hours per year for routine testing and maintenance. CalEEMod defaults were used to estimate its emissions.

CalEEMod was utilized to estimate fugitive GHG emissions from refrigerants used for air conditioning (A/C) and refrigeration equipment. Different types of refrigeration equipment are used by different types of land uses and CalEEMod generates default refrigerant values based on land use subtype and industry data from the US EPA.

CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and then derives average annual emissions from the lifetime estimate but does not quantify emissions from the disposal of refrigeration and A/C equipment at the end of its lifetime.

Most of the refrigerants used today are HFCs or blends thereof, which can have high GWP values. However, California is required to reduce HFC emissions 40% below 2013 levels by 2030 under SB 1383. To help meet the HFC reduction goal, California adopted the same prohibitions that were previously in place at the federal level through the California Cooling Act (SB 1013) and through a regulation approved by CARB (CCR 17 Section 95371). Per CARB's regulations, new facilities with refrigeration equipment containing more than 50 pounds of refrigerant are prohibited from utilizing refrigerants with a GWP of 150 or greater as of January 1, 2022.

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. There is currently no construction related GHG emission numerical thresholds for development projects within the MDAQMD's jurisdiction. Therefore, the 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 Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2023	51.5	< 0.005	< 0.005	51.7
2024	1,460	0.03	0.05	1,503
2025	667	0.02	0.04	681
Total	2,178.5	0.05	0.09	2,235.7
			Amortized Construction Emissions	*74.52*

Notes: 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 2,236 MT CO_2e. Estimated Project-generated construction emissions amortized over 30 years would be approximately 75 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. 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 Greenhouse Gas Emissions - Unmitigated

Emissions Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Mobile	15,788	0.12	1.57	16,282
Area	15.8	< 0.005	< 0.005	15.8
Energy	2,020	0.18	0.01	2,029
Water	307	8.15	0.20	569
Waste	90.6	9.05	0.00	317
Off-Road Equipment	12,662	0.31	0.04	12,683
Stationary	11.4	< 0.005	< 0.005	11.5
Total	30,895	17.8	1.83	31,907
			Amortized Construction Emissions	*74.52*
			Operations with Amortized Construction GHG Emissions	**37,982**

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 31,907 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 prior to mitigation, and this would represent a cumulatively potentially significant impact.

Mitigation measures are required to minimize operational-related GHG impacts. Implementation of MM-AQ-1 (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-AQ-1 would restrict the Project from including refrigerated storage space without additional CEQA review. MM-AQ-1 would also reduce the emission of GHGs through the inclusion of solar power, electrical infrastructure for equipment and vehicles, and sustainable design measures. 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 Greenhouse Gas Emissions – Mitigated

Emissions Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Mobile	15,788	0.12	1.57	16,282

Table 4.6-6. Estimated Annual Operation Greenhouse Gas Emissions – Mitigated

Emissions Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area	15.8	< 0.005	< 0.005	15.8
Energy	3,993	0.37	0.04	4,013
Water	246	6.52	0.16	455
Waste	90.9	9.05	0.00	317
Refrigerants	0.00	0.00	0.00	0.00
Off-Road Equipment	0.00	0.00	0.00	0.00
Stationary	11.4	< 0.005	< 0.005	11.5
Total	20,145	16.10	1.77	21,095
Amortized Construction Emissions				*74.5*
Operations with Amortized Construction GHG Emissions				**21,169.5**

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-1.

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 by approximately 18,170 MT CO_2e. No feasible mitigation measures beyond those already identified 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.

Summary

The Project ultimately exceeds the SCAQMD GHG threshold of 3,000 MT CO_2e per year and would represent a cumulatively potentially significant impact.

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 Incorporated. 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 (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. It should also be noted that the Project's consistency with the 2022 Scoping Plan also satisfies consistency with AB 32 since the 2022 Scoping Plan is based on the overall targets established by AB 32.

Project Consistency with State Reduction Targets and CARB's Scoping Plan

The California State Legislature passed the Global Warming Solutions Act of 2006 (Assembly Bill 32 [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. For the proposed Project, the relevant GHG emissions reduction targets include those established by Senate Bill 32 (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.

As defined by AB 32, the California Air Resources Board (CARB) is required to develop The Scoping Plan, which provides the framework for actions to achieve the State's GHG emission targets. The Scoping Plan is required to be updated every five years and requires CARB and other state agencies to adopt regulations and initiatives that will reduce GHG emissions statewide. The first Scoping Plan was adopted in 2008, and was updated in 2014, 2017, and most recently in 2022. While the Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations,[5] 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.

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 proposed Project.

The 2017 Climate Change Scoping Plan Update (Second Update) included measures to promote renewable energy and energy efficiency (including the mandates of SB 350), increase stringency of the Low Carbon Fuel Standard (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 for Achieving Carbon Neutrality (Third Update) 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). Given that the proposed Project is also not anticipated to result in substantial increase in mobile trips (see Section 3.17, Transportation), the Project would also not conflict with the Second Update's goal of reducing GHG emissions through reductions in VMT statewide.

The 2045 carbon neutrality goal required CARB to expand proposed actions in the Third Update to include those that capture and store carbon in addition to those that reduce only anthropogenic sources of GHG emissions. The proposed Project would support the state's carbon neutrality goals, as implementation includes addition of urban-tree and native plantings throughout the Project site, which represent opportunities for potential carbon removal and

[5] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009a).

sequestration over the Project lifetime. However, the Third Update emphasizes that reliance on carbon sequestration in the state's natural and working lands will not be sufficient to address residual GHG emissions, and achieving carbon neutrality will require research, development, and deployment of additional methods to capture atmospheric GHG emissions (e.g., mechanical direct air capture). Given that the specific path to neutrality will require development of technologies and programs that are not currently known or available, the Project's role in supporting the statewide goal would be speculative and cannot be wholly identified at this time.

Table 4.6-7 highlights the measures from the 2022 Scoping Plan that are relevant to the Project.

Table 4.6-7. 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.
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 light-duty vehicle sales within California and 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 EV chargers (MM-AQ-1).
Truck ZEVs	100% of medium-duty vehicle (MDV)/ heavy-duty vehicle (HDV) sales are ZEV by 2040	*No Conflict*. As this action pertains to medium-duty vehicle and heavy-duty vehicle sales within California and the Project would not obstruct or interfere with its implementation. Furthermore, the Project would support the transition from fossil fuel medium-duty vehicle and heavy-duty vehicle to zero-emission vehicles through its installation of electrical infrastructure to support future truck charging stations (MM-AQ-1).
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]	*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

Table 4.6-7. Project Potential to Conflict with 2022 Scoping Plan

Sector	Action	Potential to Conflict
	20 gigawatts (GW) of offshore wind by 2045 Meet increased demand for electrification without new fossil gas-fired resources	renewable electricity through the installation of on-site solar panels sufficient to meet at least 50% of the Project's total operational energy requirements from within the building envelope (MM-AQ-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 be zero-emission (MM-AQ-2).
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.
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: GHG = greenhouse gas; SB = Senate Bill; VMT = vehicle miles traveled; SCAG = Southern California Association of Governments; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; EV = electric vehicle; MM = mitigation measure; GWP = global warming potential.
[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, the Project would be consistent with the applicable strategies and measures in the 2022 Scoping Plan.

Consistency 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 provides, 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-1 and MM-AQ-2, 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-1 would require installation of EV chargers and infrastructure for electric equipment and vehicles. In addition, MM-AQ-2 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-2 would also substantially reduce GHG emissions.
- **Energy Efficiency Measures**. The Project would require measures that would support energy efficiency, as specified in MM-AQ-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.
- **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 50% of the Project's total operational energy requirements from within the building envelope, as described in MM-AQ-1.
- **Solid Waste Management Measures**. The Project would be consistent with the Solid Waste Management Measures of the 2019 CAP Update due to PDF-AQ-1, which requires that 65% of the nonhazardous construction and demolition waste shall be recycled and/or salvaged for reuse.

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, all cargo handling equipment will be powered by electricity.
- **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. The Project will feature rooftop solar panels in order to comply with this strategy.

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, Title 24 an SB 32. 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-1.

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-1 would reduce operational GHG emissions, to the extent feasible; however, impacts would remain significant and unavoidable.

Threshold B: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Project would not conflict with applicable plans, policies or regulations related to GHGs. With implementation of MM-AQ-1, 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-1 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 and hazardous materials conditions of the 1M Warehouse 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:

- Phase I Environmental Site Assessment, 565 Acres Vacant Land Apple Valley, California, prepared by Citadel EHS, in March 2022 (Appendix F)

4.7.1 Existing Conditions

Project Site Conditions

The approximately 67.3-acre Project site consists of vacant, undeveloped land. The Project site is relatively flat land characterized by desert landscape, and has been disturbed by illegal dumping, resulting in several debris piles throughout the site. The Project site is bordered to the south by the Apple Valley Fire Center and to the east by another parcel that consists primarily of vacant land with a few scattered residential uses.

Ground surface cover consists of moderate native brush and shrub growth, with occasional juniper and Joshua trees located throughout the site. Surface elevation within the Project site is relatively flat, ranging between approximately 3,130 and 3,170 feet above mean sea level. The local topographic gradient is approximately 2% downward toward the west.

The Project site is underlain by older alluvial fan deposits, generally composed of light brown to brown, reddish brown or light gray to grayish brown poorly graded to well-graded sand and silty sand with varying amounts of gravel and cobbles (up to 10 inches in diameter). On-site exploratory drilling did not encounter groundwater within 24.5 feet below ground surface (Appendix E). In addition, the Town of Apple Valley's General Plan indicates that groundwater beneath the site and in the immediate area has historically been greater than 50 feet beneath the ground surface (Town of Apple Valley 2009).

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, Citadel EHS searched both state and federal hazardous materials as a result of existing or past uses. A regulatory database review for the Project site is included as Section 6.1 of the Phase I ESA (Appendix F). In addition to the database review, Citadel EHS 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) Building and Safety Division, California Environmental Protection Agency's Regulated Site Portal, South Coast Air Quality Management District's Facility Information Detail database, and SWRCB's GeoTracker Database (Appendix F).

Project Site

The Project site was not identified on government databases (i.e., HAZNET, Historic CORTESE List, State/Tribal Voluntary Cleanup Sites, etc.) pertaining to the storage and disposal of petroleum products and hazardous materials/hazardous waste. Based on a review of historical and present records, a site reconnaissance, the Phase I ESA determined that no evidence for designating the site as a historical recognized environmental condition, controlled recognized environmental condition, recognized environmental condition, or vapor encroachment condition from review of historical documents and present site conditions was found (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:** Sycamore Lane and primarily vacant land with a few residential uses
- **South:** Lafayette Street and the Apple Valley Fire Center
- **West:** Central Road and vacant land

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 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 City of Hesperia, the SBCFD is the CUPA. The program consolidates, coordinates, and makes consistent the following hazardous materials and hazardous waste programs (program elements):

- Hazardous waste generation (including on-site treatment under Tiered Permitting)
- Aboveground petroleum storage tanks (only the spill prevention, control, and countermeasure plan)
- Underground storage tanks
- Hazardous material release response plans and inventories
- California Accidental Release Prevention Program
- Uniform Fire Code HMBPs and inventories

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 (Town of Apple Valley 2014).

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 (Town of Apple Valley 2017).

Apple Valley Municipal Code Section 6.20.150

Hazardous waste prohibited; unauthorized disposal of waste prohibited.

(a) Depositing hazardous waste or household hazardous waste in any container to be collected for disposal by the Town's contractor is prohibited.

(b) It is unlawful and a misdemeanor for any person to burn, bury, or dump solid waste, recyclables, and organic materials within the Town at any time unless a special permit for such burning, burial, or dumping has been issued pursuant to authority conferred by the Town Council or the agency providing fire protection services within the Town.

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, F and G 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 Impact. 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.

Furthermore, adherence to all emergency response plan requirements set forth by the SBCFD would be required throughout the duration of Project construction. Therefore, based on compliance with existing, 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 less-than-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.

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 Impact. 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 vapor encroachment conditions were identified. Therefore, based on compliance with applicable regulations, 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.

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 less-than-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.

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.

The State of California requires all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials, to submit an HMBP to its local CUPA. The HMBP must include an inventory of the hazardous materials used in the facility, and emergency response plans and procedures to be used in the event of a significant or threatened significant release of a hazardous material. The HMBP must also include the Material Safety Data Sheet for each hazardous and potentially hazardous substance used, which summarizes the physical and chemical properties of the substances and their health impacts. In the event of an accidental release of hazardous materials, the HMBP requires immediate notification to all appropriate agencies and personnel of a release, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information of all company emergency coordinators of the business, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel. 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 less-than-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.

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 less-than-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.

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

Town of Apple Valley. 2009. *General Plan*. Adopted August 11, 2009. Accessed August 30, 2023. https://www.applevalley.org/services/planning-division/2009-general-plan.

Town of Apple Valley. 2014. Emergency Operations Plan: Part I Basic Plan. November 1, 2014. Accessed August 30, 2023. https://www.applevalley.org/home/showpublisheddocument/16896/636048021804930000.

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4.8 Hydrology and Water Quality

This section describes the existing hydrology and water quality conditions of the 1M Warehouse (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:

- Priority Project Water Quality Management Plan, prepared by Merrell-Johnson Companies in August 2023 (Appendix H).
- On-Site Hydrology Study, prepared by Merrell-Johnson Companies in February 2023 (Appendix G).

4.8.1 Existing Conditions

Regional Watershed

The proposed Project site is located entirely within the Mojave River Watershed which covers approximately 4,500 square miles within San Bernardino County. The primary surface water of the watershed is the Mojave River which originates in the San Bernardino Mountains. Elevations within the watershed range from 8,500 feet above mean sea level (amsl) at Butler Peak down to approximately 1,400 feet amsl near Afton Canyon (County of San Bernardino 2003). The primary geographic and surface hydrologic feature of the watershed is the Mojave River, 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 8.5 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 proposed Project site is located within 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) pursuant to the Sustainable Groundwater Management Act 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 consisting of a dirt road, Llanto Road, that crosses the site in an east-west direction. Native vegetation consists of Desert Scrubs with poor cover. The site's surface elevation ranges between approximately 3,130 and 3,170 feet above mean sea level. The local topographic gradient is approximately 1% to 3% downward toward the southwest.

Drainage at the Project site occurs as sheet flow with upgradient flows originating from numerous dry desert washes with several established drainages that cut across the northwest corner of the site. These watercourses are ephemeral, and rarely contain surface water flow with poorly defined meandering banks.

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 (Town) 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 2020).

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 2020).

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 K):

> "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, ethylbenzene, 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).

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.

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.

Section 303 of the Clean Water Act (Beneficial Uses and Total Maximum Daily Loads)

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.

State

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.

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 covered by the Liberty Utilities 2020 UWMP released in June 2021 (Liberty Utilities 2021).

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.

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.

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.

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 Erosion and Sediment Control Plan (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 required 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. 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 a 1,080,125-square-foot industrial/warehouse building on approximately a 67.3-acre site (Figure 3-2). The Project would involve associated improvements, including loading docks, truck and vehicle parking, landscaped areas, and pedestrian improvements. Construction of the Project would introduce new impervious surfaces that could contribute pollutants to stormwater runoff in the long term from vehicle use in uncovered parking areas (through small fuel and/or fluid leaks), uncovered refuse storage/management areas, landscape/open space areas (if pesticides/herbicides and fertilizers are improperly applied), and general litter/debris (e.g., generated during facility loading/unloading activities). During storm events, the first few hours of moderate to heavy rainfall could wash potential pollutants on site 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 existing drainages 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 required Project-specific Preliminary Water Quality Management Plan for the proposed Project would demonstrate how runoff from the site would be treated, through the four proposed detention basins sized to sufficiently retain or detain on-site storm flows such that stormwater water quality-related issues are addressed consistent with permit requirements (Appendix H). The Project would also include landscaped areas which can serve to capture increases in stormwater runoff. Together the landscape areas and retention or detention basin would serve to meet the Design Capture Volume consistent with the Mojave River Watershed Technical Guidance Document for Water Quality Management Plans.

The proposed Project would also be designed and graded to mimic existing drainage patterns including a drainage channel to allow upstream flows from the existing drainage to cross the site along the northwest corner similar to existing conditions.

In accordance with the San Bernardino County Hydrology Manual, the detention basin system would be designed to treat water quality for a 2-year, 24-hour storm event, and sized to accommodate the volumes and flow rates of a 100-year, 24-hour storm event. 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. The combination of the landscaped areas and 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 as required.

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 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. Water supply for the proposed Project would be provided by Liberty Utilities which 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. 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.

The 2020 UWMP has already accounted for increased development and as part of the water system reliability assessment concluded that the future demands out to 2045 can be met under normal, single-dry-year, and multiple-dry-year scenarios (Liberty Utilities 2021). The 2020 UWMP 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 detention basins to retain and infiltrate water on site 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 on-site infiltration through the remaining landscaped pervious areas as well as the 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 proposed Project improvements would be required to include in the Project design plans stormwater drainage system basins that are 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 pursuant to the San Bernardino County Hydrology Manual. 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. As a result, 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 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 on-site

drainage patterns would be altered as a result of Project development, the Project would maintain adequate stormwater conveyance and storage on site in the detention basins 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 is 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 2020 UWMP for Apple Valley determined that demands for the City including projected growth such as the proposed Project can be met in normal, single-year-dry, and multiple-dry-year scenarios (Liberty Utilities 2021). 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 2 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.

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 San Bernardino 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 off site 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 1M Warehouse Project (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
- North Apple Valley Industrial Specific Plan

Impacts associated with the potential to divide an established community were determined not to be significant in the initial study (Appendix A). A brief discussion is included in Chapter 5, Effects Found not to be Significant and no further discussion is provided herein.

4.9.1 Existing Conditions

Existing Project Site Conditions

The approximately 67.3-acre Project site consists of vacant, undeveloped land. The Project site is bordered to the south by the Apple Valley Fire Center and to the east by another parcel that consists primarily of vacant land with a few scattered residential uses. The Project site is 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 within the North Apple Valley Industrial Specific Plan and is zoned exclusively for Specific Plan Industrial (I-SP) and General Industrial (I-G) land uses. Land use immediately adjacent to the facility consists of primarily vacant land with few residential uses to the east, vacant land followed by a paintball facility to the west, the Apple Valley Fire Center to the south, two existing structures to the northwest, and completely vacant land to the north. The nearest populated areas are the southern parts of the Town of Apple Valley, located approximately 1.8 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 4.11, 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 City of Hesperia 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.

SCAQMD 2022 Air Quality Management Plan

An Air Quality Management Plan (AQMP) is a plan for the regional improvement of air quality. The SCAQMD 2022 AQMP is the applicable AQMP for the South Coast Air Basin and was approved by the SCAQMD Governing Board in December 2, 2022 (SCAQMD 2022). The Project's consistency with the 2022 AQMP was analyzed in detail in Section 4.1, 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 4.9, *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 (Town of Apple Valley 2009).

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.

North Apple Valley Industrial Specific Plan

The North Apple Valley Industrial Specific Plan (NAVISP) is a tool for implementing the goals of the Town's General Plan related to the 6,221-acre area that includes and surrounds the Apple Valley Airport. The NAVISP establishes development standards and guidelines and provides the zoning ordinance for the Specific Plan area. Where a development standard is different in the Development Code than in the Specific Plan, the provisions in the Specific Plan shall apply. Where a standard is not provided in the Specific Plan, the standards of the Development Code shall apply. The NAVISP has a unique Sie Plan Review (SPR) permit process that allows for

administrative review and approval of projects that propose permitted uses and conform to the requirements and development standards of the NAVISP.

4.9.3 Thresholds of Significance

The September 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

Pursuant to state law, general plans establish land use regulations for those areas covered by the General Plan. As depicted in Figure 3-6, Specific Plan Land Use Designations, found in Chapter 3, Project Description, the General Plan designates the Project site as within the North Apple Valley Industrial Specific Plan. As such, the Project would be subject to the goals and policies as outlined in the General Plan. The Project's consistency with the General Plan is provided in Table 4.9-3, General Plan Consistency Table, located at the end of this section. As detailed in Table 4.9-3, the Project is consistent with the Town of Apple Valley General Plan and impacts would be less than significant.

North Apple Valley Industrial Specific Plan

Cities may adopt specific plans to focus more specifically on the unique characteristics of a certain area within a city. As previously mentioned, the Project is located within the area of the Town covered under the North Apple Valley Industrial Specific Plan (Specific Plan). As depicted on Figure 3-6, Specific Plan Land Use Designations, found in Chapter 3, Project Description. The Specific Plan governs land use for 6,221 acres in the northern portion of the Town and it seeks to promote industrial land use within its area. According to the Specific Plan, the Project site is

zoned as Specific Plan Industrial. This zoning designation allows for a broad range of clean manufacturing and warehousing uses, including warehouse distribution facilities. As such, the proposed Project is an allowed use under the current zoning designation and would not introduce an incompatible land use in the Town. Additionally, the Project plans would be reviewed by Town staff to ensure consistency with all applicable development standards and regulations. Therefore, impacts related to consistency with the Specific Plan would be less than significant. Table 4.9-1 below summarizes the Project's consistency with the development standards in the NAVISP.

Table 4.9-1. Project Consistency with North Apple Valley Industrial Specific Plan Development Standards

	Development Standards in Industrial Specific Plan Zone		Project	
Lot Size	Minimum lot size	2 acres	Project site 67.3 acres	
	Minimum lot width Minimum lot depth	100 ft 100 ft	Project site exceeds 100 ft in width Project site exceeds 100 ft in depth	
	Maximum building coverage Maximum height	45% 50 ft	Project building coverage 36.9% Project building height 50 ft	
Setbacks	Landscape setback – Central Rd. Landscape setback – Johnson Rd./Lafayette St.	25 ft 50 ft	Project setback exceeds Project setback exceeds	25 ft 50 ft
	Building setback – Central Rd. Building setback – Johnson Rd./Lafayette St.	50 ft 75 ft	Project setback exceeds Project setback exceeds	50 ft 75 ft
Landscape Requirement	5% coverage of parking lot (12,939 sq ft)		Project provides 17% coverage of parking lot (43,998 sq ft)	
Parking	1 space per 500 sf for 1st 10,000 sf and 1 space per 1,000 sf additional		Parking required – 1,105 stalls Parking provided – 1,262 stalls	

Note: ft = feet; sq ft = square feet.

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 4.9-2 demonstrates how the Project promotes consistency with the guiding principles and policies of the RTP/SCS.

Table 4.9-2. Consistency with 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy Goals

RTP/SCS Goal	Project Applicable Component(s)	Consistency
Goal 1	The Project would involve construction of an industrial warehouse building. Thus, the Project would generate jobs	**Consistent**

Table 4.9-2. Consistency with 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy Goals

RTP/SCS Goal	Project Applicable Component(s)	Consistency
Encourage regional economic prosperity and global competitiveness.	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 904 workers, helping the Town better meet its jobs/housing balance.	
Goal 2 Improve mobility, accessibility, reliability, and travel safety for people and goods.	The Project would include construction and operation of an industrial warehouse building 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 is being 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 identified in the Town's General Plan Circulation Element. 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 an industrial warehouse building that would be easily and efficiently accessible to I-15, which would help to facilitate regional goods movement throughout Southern California.	**Consistent**
Goal 5 Reduce greenhouse gas emissions and improve air quality.	The Project would involve development of an industrial use that inherently involves the emission of GHG and emissions of criteria air pollutants and other contaminants. However, the Project would 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 help 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 that could result in additional air pollutant and GHG emissions to the extent feasible.	**Consistent**

Table 4.9-2. Consistency with 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy Goals

RTP/SCS Goal	Project Applicable Component(s)	Consistency
	Additionally, the Project would employ approximately 904 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 to the extent feasible. The Project is located within the boundaries of the North Apple Valley Industrial Specific Plan, not near many sensitive receptors or vacant property zoned for the development of sensitive receptors in the future. 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 help 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 that could result in additional air pollutant and GHG emissions. Additionally, the location of 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 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.	**Consistent**
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.	**Consistent**

Table 4.9-2. Consistency with 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy Goals

RTP/SCS Goal	Project Applicable Component(s)	Consistency
	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 help 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 that could result in additional GHG emissions.	
Goal 8 Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	The location of 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 that 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 specific plan industrial within the North Apple Valley Industrial Specific Plan. Thus, this goal is not applicable.	**Not Applicable**
Goal 10 Promote conservation of natural and agricultural lands and restoration of habitats.	The Project would be located in an area zoned for specific plan industrial within the North Apple Valley Industrial Specific Plan. The Project site does not support agriculture. The Project site does support suitable habitat for sensitive plant and wildlife species. Mitigation measures have been outlined in this EIR to offset potentially significant impacts to suitable on-site habitat and sensitive plant and wildlife species. See Section 4.3, Biological Resources, for further detail.	**Consistent**

As described above and in Table 4.9-2, the Project would be consistent with the applicable goals and policies set forth by the General Plan and North Apple Valley Industrial Specific Plan, as well as by SCAG in the RTP/SCS and RCP. 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 loss of open space. 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 throughout this Draft EIR, the proposed Project would not conflict with the goals and policies of the Apple Valley General Plan or North Apple Valley Industrial Specific 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, as proposed the Project would be consistent with the goals and policies of the Apple Valley General Plan and the North Apple Valley Industrial Specific Plan, and the Project 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?

Impacts are less than significant, and no mitigation measures are required.

Threshold C: Would the Project result in cumulatively considerable impacts with regard to land use?

Impacts are less than significant, and no mitigation measures are required.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
San Bernadino County			
Land Use Element			
Policy 1.A: Community Values Objective	The Town will require low water use through drought tolerant and native desert plants for landscaping.	***Consistent.*** The Project implements mitigation measures that reduces overall water usage. The conservation of Joshua trees and other desert native plants can mitigate water usage due to their drought tolerance. Watering of transplanted native plants shall continue under the guidance of a qualified tree expert and desert native plant expert(s) until it has been determined that the transplants have becomes established in	The Project would be in conformance with this objective.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
		the permanent relocation site(s) and no longer require supplemental watering.	
Program 1.A.1	The Development Code shall maintain a plant palette of native plants and acceptable non-native drought tolerant plant materials and minimize the use of natural turf except in public and private parks, and public facilities.	***Consistent.*** The Project includes a mitigation measure (MM-BIO-1) that plans to conserve Western Joshua Trees. This policy would conserve habitat replacement of equal or better functions and values to those impacted by the Project. In addition, should endangered, threatened, and sensitive species be determined present during pre-construction surveys, impacts to habitat would be mitigated and fulfilled through purchase of credits at a minimum of 1:1 in-kind habitat replacement.	The Project would be in conformance with this policy.
Program 1.A.2	Development proposals shall be subject to the requirements of the Town's Native Plant Protection Ordinance.	***Consistent.*** The Project requires an application to include a detailed plan for removal of all protected plants on the Project site. The plan shall be prepared by a qualified western Joshua tree and native desert plant expert(s). Salvaged plants shall be transplanted expeditiously to either their final on-site location or to an approved off-site area. Salvaged plants shall be transplanted expeditiously to either their final on-site location or to an approved off-site area. 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.	The Project would be in conformance with this policy.
Policy 1.B: Community Values Objective	New development shall be designed to minimize grading and avoid mass grading to the greatest extent possible.	***Consistent.*** The Project would stay consistent with the grading plan and mitigate all impacts. Permits would be required prior to issuance of a grading permit and would be included in the Project's Conditions of Approval.	The Project would be in conformance with this policy.
Program 1.B.1	The Municipal Code shall maintain grading standards and requirements that clearly dictate the scope of grading allowed on any development project.	***Consistent.*** The Project would be in accordance with the grading standards from the Municipal Code of Apple Valley. The Project will be grading parts of the area to successfully relocate the desert native plants. Prior to the issuance of the grading permits, an application and fee will be paid to the Town of Apple Valley for removal or relocation of protected native desert plans.	The Project would be in conformance with this objective.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
Program 1.B.2	The Town shall confer and coordinate with the Apple Valley Ranchos Water Company, Golden State Water Company, and other water purveyors serving the Town and its Sphere of Influence, to strengthen and expand programs that educate the public about the importance of water conservation and water-efficient landscaping.	***Consistent.*** The Project would not need to coordinate a water education program with community water companies. The Project size is small enough to not be considered a city-sized project. City-sized projects are generally larger and contain small communities.	The Project would be in conformance with this policy.
Policy 1.C Community Values Objective	Natural drainage channels shall be designed with soft bottoms whenever possible.	***Consistent.*** Natural drainage channels with unvegetated wash and river bottom within the Project site will have a direct impact. Only a small acreage of unvegetated wash and river bottom will be affected, but with mitigation, the impacts would be held absent. Natural drainage channels located within the Project site are prioritized and are protected with implemented mitigation measures.	The Project would be in conformance with this policy.
Policy 1.D Community Values Objective	Areas of biological or aesthetic significance shall be protected from development.	***Consistent.*** The Project's biological impacts would have less-than-significant impact with mitigation, and aesthetic impacts would have less then significant impact. Due to less-than-significant impacts, development would not affect biological and aesthetic resources.	The Project would be in conformance with this policy.
Program 1.D.1	The knolls, rock outcroppings and the Mojave River shall be designated Open Space on the Land Use Map.	***Consistent.*** The town of Apple Valley's current General Plan Land Use Map designates the Mojave River as an Open Space. The project site is not located in the Mojave River.	The Project would be in conformance with this objective.
Policy 2.A Community Values Objective	The Town shall maintain a land use map that assures a balance of residential, commercial, industrial, open space and public lands.	***Consistent.*** The Town provided a land use map that contains a balance of residential, commercial, industrial, open space, and public lands. The project applicant will assure to follow the Town's land use designations in relation to the project.	The Project would be in conformance with this policy.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
Program 2.A.1	The use of land shall not create negative visual impacts to surrounding land uses.	***Consistent.*** The land use of the Project site would have less-than-significant visual impacts. The area's topography is relatively flat with the views of Turtle Mountain, Black Mountain, Fairview Mountain, Sidewinder Mountain and San Gabriel and San Bernardino Mountains. Development of the Project's proposed buildings would result in some obstruction of these views for people living in the vicinity of the area, but the presence of existing development and major roadways lowers the viewers expectations of the mountain views. These scenic views would remain intact from areas within the town and surrounding unincorporated areas.	The Project would be in conformance with this policy.
Program 2.A.2	The Zoning Map shall directly correspond to General Plan land use designations, and shall be kept consistent with the General Plan.	***Consistent.*** The Project site is located within the area of the town covered under the North Apple Valley Industrial Specific Plan. According to the Apple Valley Specific Plan, the Project site is zoned as Specific Industrial. The zoning designation allows for projects such as clean manufacturing, warehouse uses, and warehouse distribution facilities. Given these zoning ordinances, the proposed Project is an allowed use under the current zoning ordinance of Apple Valley and would not introduce incompatible land use for the town.	The Project would be in conformance with this policy.
Policy 2.B Community Values Objective	All new development and redevelopment proposals shall be required to install all required infrastructure, including roadways and utilities, and shall have complied with requirements for public services prior to occupancy of the project.	The Project includes an approximately 1.75-mile off-site utilities alignment within developed roadways for proposed water and sewer lines. Installation of roadways will provide sufficient site access for both passenger vehicles and trucks, and to ensure efficient off-site circulation on nearby roadway facilities. The Project applicant complied with public services such as fire and police management to ensure the Project would not affect the circulation of public services.	The Project would be in conformance with this objective.
Policy 2.C Community Values Objective	The Town shall require quality design in all development and redevelopment proposals and shall encourage the	***Consistent.*** The Project's design in development and redevelopment is consistent with North Apple Valley's Design Standards and Guidelines pertaining to architecture, landscaping, lighting, walls and fences, signage. It has been designed in a	The Project would be in conformance with this policy.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
	enhancement of existing development.	way that such building colors mimic the colors and tones found in the natural desert landscape, including a color palate with soft beiges, white, and greys. Incorporation of these colors would soften the contrast of the proposed buildings with the surrounding desert terrain. The Project's landscaping would also have a similar effect by providing natural elements throughout the Project site, including a variety of box trees, shrubs, and drought tolerant plants with varying heights to break up the overall massing of the building. The Project's architecture features a contemporary building landscape and streetscape improvements that would achieve the development goals set forth in the General Plan and NAVISP.	
Program 2.C.1	The Development Code shall include design standards and guidelines for all land use types that clearly enumerate the Town's minimum requirements.	***Consistent***. Chapter III, Development Standards and Guidelines, of the North Apple Valley Industrial Specific Plan (NAVISP) serves as the NAVISP Development code. The NAVISP establishes land use districts to encourage the development of well-planned projects that are consistent with the goals and objectives of the Town's General Plan. The Project site is located within the Industrial – General Land Use District, which allows more intense industrial activities, including manufacturing, warehousing, wholesale distribution, storage, and outdoor manufacturing activities.	The Project would be in conformance with this policy.
Policy 2.D Community Values Objective	The Town will support and pursue annexation that will mutually benefit the Town and the property annexed in the form of quality development and an improved economic base.	***Consistent***. The Project's region has been identified as an area having a low-job housing ratio area that has more potential workers living in a community than there are jobs for them, 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. 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	The Project would be in conformance with this objective.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
		centers, which can provide hundreds of jobs per million square feet of development. Due to the available land and infrastructure for large logistics facilities, many companies are locating their regional operations to the High Desert Area.	
Policy 2.E Community Values Objective	The Town shall protect right of way for the High Desert Corridor as determined by Caltrans.	***Consistent***. The High Desert Corridor Project is a proposed multipurpose route connecting Antelope Valley to Victor Valley. The Town will continue to protect the right of way for the proposed transportation route, but the Project will have no direct or indirect influence.	The Project would be in conformance with this policy.
Policy 3.A Community Values Objective	The Town will support measures that buffer both new and established residences from commercial, industrial, and agricultural uses.	***Consistent***. The Project would be in a location zoned for specific plan industrial within the North Apple Valley Industrial Specific Plan. Given the Project location's zoning ordinance, the Project does not support agricultural uses. The location of the Project would not affect new or established housing but would provide quick and efficient access to the I-15, thereby eliminating the need for truck traffic to take longer routes through residential or commercial/retail areas.	The Project would be in conformance with this objective.
Program 3.A.1	The Development Code shall include standards for increased setbacks, walls, berms, landscaping, incremental lot sizes, buffering guidelines and recommendations for projects adjoining different or less intense land use designations.	***Consistent***. As part of the Project's Development Code, 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 frontage's setback area along Lafayette Street and Central Road. Landscaping along the site's frontages would include a mixture of trees, shrubs, and groundcover. All proposed trees are 24-inch box trees and include blue palo verde, desert willow, Afghan pine, Chinese pistache, London plane, Chilean mesquite, scrub oak, African sumac, California pepper, and Brisbane box.	The Project would be in conformance with this policy.
Program 3.A.2	The Development Code will include incentives for creative design, including but not limited to varied setbacks, lot patterns, building massing and non-motorized	***Consistent***. 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) and the NAVISP include design standards related to building size, height, floor area ratio, and setbacks, as well as landscaping, signage, and other visual	The Project would be in conformance with this policy.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
	transportation paths and trails.	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. 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) and the NAVISP include 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.	
Policy 3.B Community Values Objective	Specific Plans shall be required for development proposals that include one or more of the following: a. A combination of residential, recreational, commercial and/or industrial land use designation (except in the Mixed-Use land use designation). b. Variations from development standards in the applicable Zone.	***Consistent***. The Project site falls under the North Apple Valley Industrial Specific Plan, and a development proposal was created by the Project applicant. The Project site is designated as industrial use and no variations from development standards are required.	The Project would be in conformance with this policy.
Policy 6.A Community Values Objective	Commercial development shall be permitted only in areas with provisions for adequate circulation, utilities, infrastructure, and public services.	***Consistent***. The Project location contains a rural community with a broad mix of land uses, including housing, commercial, office, industrial, agriculture, and public-serving uses. The Project's commercial development includes adequate plans for utility alignment and on-site circulation for vehicles/trucks. Public services like police and fire protection	The Project would be in conformance with this policy.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
		will not be affected by the Project, so no further action of a plan needs to be done.	
Program 6.A.1	Commercial development shall be focused on major roadways, the State Route 18 corridor, the High Desert Corridor, and I-15 as shown on the Land Use Map.	***Consistent***. The Project location follows Highway 18, Bear Valley Road, and areas along 1-15. Industrial uses are in the northern portion of the Town and 1-15. Two highways provide direct access to the Town: 1-15 runs north-south on the west side of town; and Highway 18 runs east-west through the center of town.	The Project would be in conformance with this objective.
Program 6.A.2	Commercial development projects will be required to extend adequate infrastructure, utilities, and public services prior to occupancy.	***Consistent***. The Project includes an approximately 1.75-mile off-site utilities alignment within developed roadways for proposed water and sewer lines. This alignment is located within portions of Johnson Road, Central Road, and Lafayette Street. Access to the Project site would be provided by four driveways. Two driveways would be located on Lafayette Street, one driveway would be located on Central Road, and one driveway would be located on Johnson Road. All driveways would be 40 feet wide and would provide full access for passenger vehicles and trucks. The Project's driveways have been designed to accommodate the turning radii of large trucks with trailers, fire trucks, and garbage trucks. To facilitate adequate on-site circulation, sufficient site access for both passenger vehicles and trucks, and to ensure efficient off-site circulation on nearby roadway facilities, the Project would involve off-street improvements near Central Road, Johnson Road, and Lafayette Street. Public services within the area like Fire and Police protection, would not be affected by this Project. The Project's impact on public services would result in less-than-significant cumulative substantial adverse physical impact, so commercial development of the Project can be permitted.	The Project would be in conformance with this policy.
Policy 6.B Community Values Objective	The Town shall promote commercial and industrial development that can	***Consistent***. Community officials and leaders of Apple Valley have been eager to stimulate economic development within the High Desert region and provide residents with	The Project would be in conformance with this policy.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
	strengthen the local economy and enhancing the quality of life of Town residents.	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. The addition of this warehouse 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.	
Program 6.B.1	The Development Code will maintain development standards and guidelines that encourage creative, high-quality design of commercial projects.	***Consistent***. The Project's infrastructure is consistent with the development standards of the General Land Use District of the NAVISP. Due to the scale and size of this building, the Project infrastructure ensures compatibility with other parts of the community. In accordance with the Development Code and NAVISP design guidelines, all setback areas would be landscaped, and building orientation, siting and entrances have been designed to minimize conflicts with the surrounding visual environment. The proposed building would incorporate a variety of 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.	The Project would be in conformance with this policy.
Policy 7.A Community Values Objective	Industrial development shall be permitted only in areas with provisions for adequate circulation, utilities, infrastructure, and public services.	***Consistent***. The Project location contains a rural community with a broad mix of land uses, including housing, commercial, office, industrial, agriculture, and public-serving uses. The Project's commercial development includes adequate plans for utility alignment and on-site circulation for vehicles/trucks. Public services like police and fire protection will not be affected by the Project, so no further action of a plan needs to be done.	The Project would be in conformance with this policy.
Program 7.A.1	Industrial development projects will be required to extend adequate infrastructure, utilities, and public services prior to occupancy.	***Consistent***. The Project would include construction and operation of an industrial warehouse building that would be easily and efficiently accessible to I-15, which would help to facilitate regional goods movement throughout Southern California. Improvements to adjacent roadway facilities that are identified in the	The Project would be in conformance with this objective.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
		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. Public services within the area like Fire and Police protection, would not be affected from this Project. The Projects impact on public services would result in less-than-significant cumulative substantial adverse physical impact, so commercial development of the Project can be permitted.	
Program 7.A.2	Capital improvements required for the North Apple Valley Industrial Specific Plan area shall be given high priority	***Consistent***. The Project would involve construction of an industrial warehouse building. 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 904 workers, helping the Town better meet its jobs/housing balance.	The Project would be in conformance with this policy.
Policy 7.C Community Values Objective	The long-term economic growth of the Apple Valley Airport shall be protected.	***Consistent***. The location of the Project is an area identified as having a low job rate. The introduction of this industrial warehouse would bring economic opportunity for residents in proximity to the Project. This Project would not interfere with the long-term economic growth of the Apple Valley Airport, and it will be continued to be protected.	The Project would be in conformance with this policy.
Program 7.C.1	Development proposals within the influence area of the Apple Valley Airport shall be required to comply with FAA and San Bernadino County standards.	***Consistent***. The Project would include an on-site stormwater drainage system that would capture and attenuate stormwater. When water from storms reach their full capacity through the infiltration basins, the excess water would cross through Central Road, flowing further southwest, and become undefined near the Apple Valley Airport. The drainage system would be in the broader Project proximity near Apple Valley Airport staying consistent with the Town and County stormwater requirements, including requirements in the San Bernardino County Hydrology Manual and Mojave Watershed Technical Guidance.	The Project would be in conformance with this objective.
Program 7.D.1	The Town shall establish a formal	***Consistent***. The Project involves the building of a 1M Warehouse Project that's	The Project would be in

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
	relationship with the San Bernadino County Geologist or other qualified agency to monitor mineral resource operations under the Surface Mining and Reclamation Act (SMARA).	approximately 67.3 acres and located in the northern part of the Town. Since the Project will not be reclaiming abandoned mine lands or using active coal mines, this goal would not be applicable to the Project.	conformance with this policy.
Policy 8.A Community Values Objective	Adequate public facilities to meet the needs of the Town's residents, businesses, and visitors.	***Consistent***. The Project is expected to have no impacts on school and parks. Police protection is expected to have less-than-significant impacts. Construction may temporarily increase traffic volumes in the Project area, but the increase, however, would be temporary and would not lead to a substantial increase in the demand for police protection services. Fire protection is expected to have less-than-significant impacts. The increase demand for fire protection services during the construction of the Project would be temporary. People working on site during construction will follow applicable regulations during construction to prevent any fires from happening on site. The Project will not create significant effects on public services. Public services throughout the town should be able to equally accommodate to the people of the Town.	The Project would be in conformance with this policy.
Program 8.A.1	The Town shall coordinate with public and private providers responsible for parks, schools, fire, water, health, sanitary sewer, storm drainage, transit, and solid waste, and transmit development plans to these providers as part of the development review process.	***Consistent***. The Project would have less-than-significant impacts to fire and police protection services. Although less than significant, fire and police protection services were made aware of the Project and its construction related activities. Wastewater utilities, sanitary sewers, hospitals, and solid waste treatments aren't applicable to the Project.	The Project would be in conformance with this policy.
Policy 9.A Community Values Objective	Public or private lands protected through conservation easements, acquired	***Consistent***. Public and private lands are dedicated as Open Space land under the Town's General Land Use plan. Open Space areas within the Project vicinity have less-	The Project would be in conformance with this policy.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
	by private or public agencies, or dedicated for open space shall be designated for the appropriate Open Space land use designation on the Land Use Map.	than-significant impacts with mitigation incorporated.	
Program 9.A.1	Review development proposals adjacent to designated open space lands and assure that land uses are compatible, and buffers and/or linkages are provided when necessary to maintain natural resource values.	***Consistent***. Habitat for endangered, threatened, and sensitive species will continue to be protected and preserved as Open Space by the Town. Some areas within the Project will have less-than-significant impact, but with mitigation incorporated. To assure natural resources will be maintained, species labeled as endangered, threatened, or sensitive species will be determined through pre-construction surveys. Impacts to any habitats would be mitigated and fulfilled through purchase of credits of 1:1 in-kind habitat replacement.	The Project would be in conformance with this policy.
Program 9.A.2	Coordinate the Land Use Map with preservation areas as may be identified by the Town Council.	***Consistent***. The Project is in coordination with the Land Use Map toward preservation areas. These preservation areas are known as Open Spaces. The Project will have direct impacts toward open space areas but will be mitigated to the farthest extent.	The Project would be in conformance with this policy.
Policy 1.A Community Values Objective (Sustainable transportation)	The street system recommended in the Town's Circulation Map shall be strictly implemented.	***Consistent***. The Project would be consistent with the applicable goals and elements of the General Plan Circulation Element including policies related to maintaining and expanding a safe and efficient circulation and transportation system. 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 be in conformance with this policy.
Program 1.A.1	Street rights of way shall be provided as follows:	***Consistent***. The Project will not be implementing or constructing any major roadways or streets, only a driveway for cars to enter the warehouse.	The Project would be in conformance with this policy.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
	• 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		
Program 1.A.2	The minimum lane width for all Town streets shall be designed at 12 feet.	***Consistent***. 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. Construction of new and existing roadways will be kept at a minimum of 12 feet.	The Project would be in conformance with this policy.
Program 1.A.4	The Town shall require that all intersections maintain a Level of Service D during both the morning and evening peak hour.	***Not Consistent***. The Project would result in the following: Intersection No. 5: I-15 NB Ramps-Outer I-15/Stoddard Wells Road – LOS F during AM and PM peak hours with and without the Project under 2025 and 2040 scenarios. Intersection No. 6: Stoddard Wells Road/Johnson Road – LOS F during AM peak hour with and without the Project under the 2040 scenario. Intersection No. 9: Dale Evans Parkway/Johnson Road – LOS D to LOS F during the PM peak hour with the Project under the 2025 scenario. LOS F during PM peak hour with and without the Project under the 2040 scenario.	The Project would not be in conformance with this program.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
Policy 1.B Community Values Objective (Sustainable transportation)	The Town shall establish and maintain a 5-Year Capital Improvement Program for streets.	***Consistent***. The town has established a 5-Year Capital Improvement Program that the Project is following.	This policy is not applicable to the Project.
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 site is in a minimally developed area of the Town, with limited pedestrian and bicycle facilities provided. Where new development has occurred, sidewalks have been typically constructed along site frontages. No pedestrian facilities, including curbs and sidewalks, are present along Johnson Road, Central Road or Lafayette Street as no development currently exists. The Project would construct pedestrian facilities (e.g., curb and gutter) along all Project frontages, including Johnson Road, Central Road, or Lafayette Street. Where new development has occurred, sidewalks have been typically constructed along site frontages (e.g., Big Lo Distribution Center located at the southwest corner of the Navajo Road and Lafayette Stret). No pedestrian facilities, including curbs and sidewalks, are present along Johnson Road, Central Road or Lafayette Street as no development currently exists. The Project would construct pedestrian facilities (e.g., curb and gutter) along all Project frontages, including Johnson Road, Central Road, or Lafayette Street.	The Project would be in conformance with this policy.
Program 1.C.1	An inventory of discontinuous sidewalks on all qualifying roadways shall be compiled by the Town Engineer and Department of Public Services, and individual improvement projects shall be funded through the Capital Improvement Program to connect these sidewalks	***Consistent***. The Project would construct pedestrian facilities (e.g., curb and gutter) along all Project frontages, including Johnson Road, Central Road, or Lafayette Street. Additionally, as the adjacent areas surrounding the Project site continue to become developed, connectivity to other areas of the Town will be realized.	The Project would be in conformance with this objective.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
Program 1.C.3	Safe routes to school shall be developed in conjunction with the School District.	***Consistent***. Potential impacts associated with schools were found not to be significant as part of the initial study. The Project applicant would not need to create a safe route plan for schools due to the Project's non-significant impacts.	The Project would be in conformance with this policy.
Policy 1.D Community Values Objective (Sustainable transportation)	Traffic calming devices shall be integrated into all Town streets to the greatest extent possible.	***Consistent***. 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 Project would involve construction of several sidewalks along main roadways. Curbs, gutters, and sidewalks will be implemented to improve water drainage and overall traffic.	The Project would be in conformance with this policy.
Program 1.D.1	Existing local roadways will be inventoried, and a master plan of potential improvements designed to improve their aesthetic appeal and safety. Enhancements, including sidewalks and traffic calming devices, shall be developed, cost engineered, and implemented.	***Consistent***. Existing local roadways within the vicinity of the Project's site is listed in the Transportation chapter. Due to the relatively flat nature of the Project site and surrounding area, the site is visible from surrounding roads and land uses, including commercial and light industrial uses. Views of the Project site from surrounding public vantage points consist of undeveloped land within a flat valley characterized as a desert landscape with disturbed soils where dirt roads and trails cross the Project site 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. Curbs, gutters, and sidewalks will be implemented to improve water drainage and overall traffic as traffic calming devices.	The Project would be in conformance with this policy.
Policy 1.F Community Values Objective (Sustainable transportation)	Local streets shall be scaled to encourage neighborhood interaction, pedestrian safety, and reduced speeds.	***Consistent***. Roads that are near the Project site would stay consistent with San Bernadino County's speed limit regulations. Sidewalks near the Project site would make a pedestrian safe area to walk on. Neighborhood interaction would not apply to the Project due to the Project being far from residential neighborhoods.	The Project would be in conformance with this objective.
Policy 1.G Community Values Objective	Roadway segments where the daily Volume to Capacity ratio analysis suggests	***Consistent***. The Project's effect on traffic volume were found to remain unchanged with the Project as compared to the No Project scenario for both the Baseline and	The Project would be in conformance with this policy.

Table 4.9-3. Town of Apple Valley General Plan Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis	Conformance/ Non-conformance
(Sustainable transportation)	that the build out traffic volume will "Potentially Exceed Capacity" range shall be monitored.	Cumulative conditions. Therefore, the Project's effect on traffic impacts were found to be less than significant. Since future building tenants are unknown at this time, implementation of trip reduction measures cannot be guaranteed to reduce Project-generated traffic volume to a level of less than significant; the Project's VMT impact is considered significant and unavoidable.	
Program 1.G.1	Traffic volumes resulting from build out of the General Plan shall be reviewed every 5 years to coordinate, program and, if necessary, revise road improvements.	***Consistent***. 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. As part of the Town's general plan, traffic volumes will be renewed, and road improvements will be implemented if necessary.	The Project would be in conformance with this policy.
Policy 1.H Community Values Objective (Sustainable transportation)	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***. Measure "I" is a one-half of one present sales tax on retail transactions for projects such as transportation, infrastructure improvements, commuter rail, and public transit that was approved by San Bernadino County. The Measure "I" extension requires that a regional traffic impact fee be created to ensure development is paying its fair share. The project applicant will pay their fair share for the improvement of streets that surround their project.	The Project would be in conformance with this policy.
Program 1.H.1	The Town shall require the payment of developer impact fees as appropriate.	***Consistent***. The project applicant will pay these fees in compliance with the Town's fees and regulations. The town will mandate the payments of the developer, which are payments that the developers are charged to mitigate their transportation impacts.	This policy is not applicable to the Project.
Policy 1.I	Pedestrian access shall be preserved and enhanced.	***Consistent***. The Project follows the Town's Apple Valley General Plan Circulation Element. The Element describes alternative means of transportation, pedestrian travel being one of them. Since the Project would not interfere or conflict with this element, pedestrian access is conserved.	The Project would be in conformance with this goal.

Source: Town of Apple Valley 2009.
Note: I-15 = Interstate Highway 15.

4.9.6 References

SCAG (Southern California Association of Governments) 2020. *Connect SoCal 2020*. Accessed September 1, 2023. https://scag.ca.gov/post/connect-socal-2020.

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4.10 Noise

This section describes the existing noise conditions of the 1M Warehouse 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 Sheets, prepared by Dudek in September 2022 (Appendix I-1)
- Construction Noise Modeling Input and Output, prepared by Dudek in February 2023 (Appendix I-2)
- Traffic Noise Calculations, prepared by Dudek in February 2023 (Appendix I-3)
- Equipment Noise Calculations, prepared by Dudek in January 2023 (Appendix I-4)
- Transportation Impact Analysis, prepared by Dudek in March 2023 (Appendix J)

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
N/A	110	Rock band
Jet flyover at 300 meters (1,000 feet)	100	N/A
Gas lawn mower at 1 meter (3 feet)	90	N/A
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)
Commercial area heavy traffic at 90 meters (300 feet)	60	Normal speech at 1 meter (3 feet)

Table 4.10-1. Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
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)
N/A	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2013.
Notes: dBA = A-weighted decibels; N/A = not applicable; 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, including 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.

Five 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–ST5 on Figure 4.10-1, Noise Measurement and Modeling Receiver 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 traffic, distant barking dogs and buzzing insects represented secondary noise sources. As shown in Table 4.10-2, the measured sound levels ranged from approximately 39 dBA L_{eq} at ST1 to 68 dBA L_{eq} at ST4. The field noise data sheets are provided in Appendix I.

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 Sycamore Lane	9/27/2022	3:24 p.m.–3:34 p.m.	39.4	53.1

Table 4.10-2. Measured Noise Levels

Receptors[1]	Location	Date	Time	L_{eq} (dBA)	L_{max} (dBA)
ST2	South of Project site, adjacent to Apple Valley Fire Center	9/27/2022	4:24 p.m.–4:34 p.m.	42.3	62.9
ST3	East of Project site, adjacent to residence at Kensington Street	9/27/2022	4:41 p.m.–4:51 p.m.	51.2	74.1
ST4	West of Project site, adjacent to residence at 19277 Stoddard Wells Road	9/27/2022	5:01 p.m.–5:11 p.m.	68	82.5
ST5	Northwest of Project site, adjacent to residence at 20984 Dale Evans Pkwy	9/27/2022	5:20 p.m.–5:30 p.m.	65.8	81.2

Source: Appendix I.
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 Receiver 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 (Town), 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

The Project site is located in the Town of Apple Valley; unincorporated County of San Bernadino lands are located to the south and southeast.

Town of Apple Valley

The 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	N/A	50–70	N/A	65–85
Sports Arenas, Outdoor Spectator Sports	N/A	50–75	N/A	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	N/A
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	75–85	N/A

Source: Town of Apple Valley 2009.
Notes: dBA = A-weighted decibels; CNEL = Community Noise Equivalent Level; N/A = Not Applicable.
1 Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
2 Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
3 Normally Unacceptable: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
4 Clearly Unacceptable: New construction or development should generally not be undertaken.

Program 1.A.1. 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 and 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.
Note: dBA = A-weighted decibels.

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 Multifamily 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 Multifamily 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.
Note: dBA = A-weighted decibels.

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 that 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.

County of San Bernardino

Operational Noise

The County of San Bernardino's Development Code (Division 3, Countywide Development Standards; Chapter 83.01, General Performance Standards, Section 83.01.080, Noise) sets exterior noise standards for specific land uses by type of noise source. Noise standards for stationary noise sources are summarized in Table 3, 83.01.080, Noise Standards for Stationary Noise Sources.

Table 3. 83.01.080. Noise Standards for Stationary Noise Sources

Affected Land Uses (Receiving Noise)	7 a.m. - 10 p.m. dBA LEQ	10 p.m. - 7 a.m. dBA LEQ
Residential	55	45
Professional Services	55	55
Other Commercial	60	60
Industrial	70	70

Note: dBA = A-weighted decibel; L_{EQ} = equivalent continuous sound pressure level.

Construction Noise

The San Bernadino County Development Code exempts noise from construction noise, provided that construction is limited to the hours between 7 a.m. and 7 p.m., except on Sundays or federal holidays, when construction is not allowed.

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 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.
Notes: L_{dn}/CNEL = day–night average noise level/Community Noise Equivalent Level; dB = decibels.

- **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 place 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

1 As discussed in Section 4.10.1, the L_{dn} and CNEL noise metrics are very similar and often used interchangeably.
2 Traffic noise and other transportation noise sources are similar to aircraft/airport noise in that all of these noise sources can and do operate throughout the daytime and nighttime hours. The FICON recommendations use a weighted 24-hour noise metric, in which noise occurring during nighttime hours has a penalty applied to account for the increased sensitivity of persons to noise at night. Additionally, the graduated levels of the FICON guidance for substantial increase account for the diminishing tolerance of 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.

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 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 4.10-7.

Table 4.10-7. Construction Equipment by Phase

Construction Phase	Equipment	
	Equipment Type	Quantity
Site Preparation	Rubber-tired dozers	3
	Tractors/loaders/backhoes	4
Grading	Excavators	2
	Graders	1
	Rubber-tired dozers	1
	Scrapers	2
	Tractors/loaders/backhoes	2
Building Construction	Cranes	1
	Forklifts	3
	Generator sets	1
	Tractors/loaders/backhoes	3
	Welders	1
Paving	Pavers	2
	Paving equipment	2
	Rollers	2
Architectural Coating	Air compressors	1

Source: Appendix I.

Construction Noise – Project Site Assessment

With the construction equipment noise sources identified in Table 4.10-7, a noise analysis was performed using the Federal Highway Administration's Roadway Construction Noise Model (RCNM) (FHWA 2008). Input variables for RCNM consist of the receiver/land use types, the equipment type (e.g., backhoe, grader, scraper), the number of equipment pieces, the duty cycle for each piece of equipment (i.e., percentage of time the equipment typically works in a given time period), and the distance from the noise-sensitive receiver to the construction zone. The RCNM has default duty cycle values for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns. Those default duty cycle values were utilized for this analysis. Refer to Appendix I for the inputs used in the RCNM model and the detailed results.

Sensitive receptors in the vicinity of the Project site include several residential uses to the east, and the Apple Valley Fire Center[3] located to the south. These sensitive receptors represent the nearest land uses with the potential to be impacted by construction and operation of the Project. Project construction would take place both near and far from existing land uses. For example, construction would take place for relatively short periods of time as near as approximately 850 feet from the nearest residential land use east of the Project boundary (represented by modeled receiver M1 as shown in Figure 4.10-1), but (because of the Project's size) construction work would also take place as far as 2,700 feet from the same residential use. Most construction activities associated with the Project would occur at an average distance of approximately 1,700 feet from the nearest residential use, which represents activities both near and far, as is typical for construction projects. Similarly, the construction noise estimates for the other modeled receptors in the Project vicinity were calculated for both the nearest construction activity/receiver distances (which would occur for a relatively short period of time) and for typical construction activity/receiver distances.

The results of the Project site construction noise analysis using the RCNM are summarized in Table 4-10-8. As shown, the noise levels from construction are predicted to range from approximately 48 dBA L_{eq} (during the architectural coating phase) to 61 dBA L_{eq} (during the grading phase) at the nearest noise-sensitive receiver (a single-family residence approximately 850 feet from the nearest construction work). These noise levels would be lower than the Town of Apple Valley's construction noise standard at single-family residences for temporary (i.e., mobile) equipment of 75 dBA L_{eq}. Typical construction noise levels would be lower, ranging from approximately 43 to 57 dBA L_{eq}. 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 lower than the Town of Apple Valley's construction noise standard at single-family residences for stationary equipment of 60 dBA L_{eq}. Therefore, noise from Project site construction would be less than significant. No noise mitigation is necessary.

Table 4.10-8. On-Site Construction Noise Analysis Summary

Off-Site Receptor Location	Land Use	Distance from Construction Activity to Noise Receptor (feet)	Estimated Construction Noise Levels (dBA Leq)				
			Site Preparation	Grading	Building Construction	Paving	Architectural Coating
M1 - East of the Project	Residential	Nearest Construction Activity/ Receiver Distance (850)	59	61	54	56	48
		Typical Construction Activity/ Receiver Distance (1,700)	55	57	53	51	43

[3] The Apple Valley Fire Center is included because it is assumed that the facility includes rest, recreation and sleeping quarters for fire department personnel.

Table 4.10-8. On-Site Construction Noise Analysis Summary

Off-Site Receptor Location	Land Use	Distance from Construction Activity to Noise Receptor (feet)	Estimated Construction Noise Levels (dBA Leq)				
			Site Preparation	Grading	Building Construction	Paving	Architectural Coating
M2 - South of the Project	Apple Valley Fire Center (Sleeping Quarters)	Nearest Construction Activity/ Receiver Distance (650)	61	63	56	58	49
		Typical Construction Activity/ Receiver Distance (1,750)	55	57	52	51	43
M3 - East of the Project	Residential	Nearest Construction Activity/ Receiver Distance (1,900)	53	55	49	49	42
		Typical Construction Activity/ Receiver Distance (2,500)	52	54	49	48	40

Source: Appendix I.
Note: dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level (time-averaged sound level).

Construction Noise – Off-Site Street and Utilities Assessment

As shown in Figure 3-11 (Overall Project Site Plan), provided in EIR Chapter 3, the Project would include off-site street and utilities construction activities. Like the noise assessment for on-site construction work as summarized above, the resulting noise from off-site construction activities was assessed using the RCNM. The nearest noise-sensitive receivers to the off-site construction activities (and thus the receivers the most affected) would be the Apple Valley Fire Center (represented by receiver M2) south of Lafayette Street, during utilities installation within the Lafayette Street alignment. Noise levels at other locations would be lower because they would be further from the construction work. Equipment that is anticipated to be used for utility installation includes a backhoe, excavators, a concrete saw, a forklift, a generator, a crane, and a welder. Because of the linear nature of the work, the amount of time that construction work would occur adjacent to any one noise-sensitive receiver would generally be relatively short (typically, one to two days for open-trench pipeline installation). The resulting noise levels are summarized in Table 4.10-9. As shown, the worst-case noise level from utilities installation is estimated to be approximately 63 dBA L_{eq} at the nearest noise-sensitive receivers (Apple Valley Fire Center approximately 680 feet

from the nearest construction work). Typically, utilities installation would take place further away (an average distance of approximately 1.500 feet) and thus construction noise levels would be lower at approximately 58 dBA L_{eq}. These noise levels would be lower than the Town of Apple Valley's construction noise standard at single-family residences for temporary (i.e., mobile) equipment of 75 dBA L_{eq}. Therefore, noise impacts from off-site construction activities would be less than significant. No noise mitigation is necessary.

Table 4.10-9. Off-Site Construction Noise Analysis Summary

Off-Site Receptor Location	Land Use	Distance from Construction Activity to Noise Receptor (feet)	Estimated Construction Noise Levels (dBA L_{eq})
			Utilities Installation
M1 - East of the Project	Residential	Nearest Construction Activity/ Receiver Distance (760)	62
		Typical Construction Activity/ Receiver Distance (1,500)	58
M2 - South of the Project	Apple Valley Fire Center (Sleeping Quarters)	Nearest Construction Activity/ Receiver Distance (680)	63
		Typical Construction Activity/ Receiver Distance (1,500)	58
M3 - East of the Project	Residential	Nearest Construction Activity/ Receiver Distance (1,850)	55
		Typical Construction Activity/ Receiver Distance (3,000)	52

Source: Appendix I.
Note: dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level (time-averaged sound level).

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 454 (i.e., 227 round trips), occurring during the building construction phase. The highest average daily number of vendor one-way trips would be 178 (89 round trips), also occurring during building construction; and the highest number of average daily haul truck one-way-trips would be 2 (1 round trip)[4], occurring during the pipeline installation (i.e., off-site utilities) 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 along the I-15 freeway, Stoddard Wells Road, and Johnson Road. 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%. 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 1%. 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, 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.

[4] Assumes a total number of 240 one-way haul truck trips over a 120 working day period.

Long-Term Operational Impacts

Traffic Noise

Less-than-Significant Impact. The Project has the potential to result in significant noise impacts from Project-related traffic at nearby noise-sensitive land uses. Based on information consistent with the assumptions in the EIR's transportation analysis (Appendix I), the Project would generate 1,955 daily trips. During the AM peak hour, implementation of the Project would result in a total of 117 passenger vehicles and 44 trucks. During the PM peak hour, implementation of the Project would result in a total of 125 passenger vehicles and 48 trucks. The majority of the passenger vehicle and truck trips would access and exit the Project site to the west, via Central Road, Johnson Road, and Stoddard Road to the I-15 on- and off-ramps. No Project-related vehicles would utilize Johnson Road or Lafayette Street 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 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 I.

As Table 4.10-9 shows, the Project would result in changes in traffic noise levels along the nearby arterial roadways. At model receiver M1 (representative of a single-family residence east of the Project site), traffic noise is predicted to decrease several decibels as a result of the Project because the proposed warehouse building would block the direct noise path between the receiver and Central Road. At model receiver M2 (representative of the Apple Valley Fire Center, located south of the Project site) traffic noise is predicted to increase by up to 4 decibels; however, the overall noise levels would remain well below the applicable noise standard of 70 dBA CNEL. Furthermore, the applicable FICON noise threshold (as shown in Table 4.10-6) for a substantial increase of 5 dB or more for noise levels of less than 60 dBA L_{dn}/CNEL would not be exceeded. At model receivers M3 through M5, traffic noise is predicted to increase by 0 to 2 dB. 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). Furthermore, the applicable FICON thresholds for a substantial increase would not be exceeded at these receivers and (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 4.10-10. 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 - East of the Project	29	27	34	29	33	29	-2	70	No
M2 - South of the Project	34	38	39	41	37	40	4	70	No
M3 - East of the Project	27	27	31	29	31	29	0	70	No
M4 - West of the Project	53	55	56	58	58	59	2	70	No
M5 - West of the Project	57	57	58	59	61	62	1	70	No

Source: Appendix I.
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. Dudek has modeled the propagation of sound from a combination of Project on-site noise sources with commercially available Datakustik CadnaA software, which 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.
- The proposed warehouse space overall would not be served by heating or air conditioning equipment. However, the floor plan includes office spaces at the southeastern, southwestern, and northeastern corners of the building (Building 1). Office space within each of the aforementioned corners would total approximately 5,000 square feet. Based on information provided by the Project Applicant, it is anticipated that the office space would be equipped with single-packaged rooftop HVAC units with air-handling capacity of 3 to 6 nominal tons. For the analysis of noise from HVAC equipment operation, a York Model ZF-048 package HVAC unit was used as a reference. Based upon the square footage of the office spaces, it was assumed that two such units would be required for each of the office areas. The York Model ZF-048 package HVAC unit has a sound power rating of 80 dBA (Johnson Controls 2015).
- 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 on-site truck traffic would occur during a typical nighttime hour of facility operation.

As shown in Table 4.10-11, 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 4.10-11. 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	35.6	29.8	50/40	No
M2 - Apple Valley Fire Center (Sleeping Quarters)	29.1	24.4	55/45	No
M3 - Existing Residential	29.1	23.4	50/40	No

Source: Appendix I.
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 (receiver M2, the Apple Valley Fire Center sleeping quarters, located within the County of San Bernardino) is situated on the south side of Building 1, approximately 850 or more feet from the sleeping quarters. At a distance of 850 feet, parking lot noise levels would be approximately 23 dBA, which would be below the daytime (7 a.m. to 10 p.m.) single-family residential noise standard of 55 dBA L_{eq} and the nighttime (10 p.m. to 7 a.m.) noise standard of 45 dBA L_{eq}. The nearest employee parking lot to noise-sensitive receivers in the Town of Apple Valley (receiver M1, residentially zoned property to the east) is situated approximately 1,100 feet from the residential property. At a distance of 1,100 feet, parking lot noise levels would be approximately 22 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. 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) to where construction activity would be occurring on the Project site (approximately 760 feet), and with the anticipated construction equipment, the PPV vibration level would be approximately 0.0005 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 with on-site Project construction would be approximately 0.0005 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 0.77 miles southwest 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 0.7 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 4.10-10 shows that the maximum noise level increase for the Year 2040 versus Year 2040 plus Project scenario would be 3 dB or less at every studied road segment. 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 comply with the Town's General Plan and Municipal Code as it relates to construction and operational noise and would result in less-than-significant impacts. No mitigation is required.

Threshold B: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

The Project would result in less-than-significant impacts with regard to groundborne vibration and groundborne noise levels. No mitigation is required.

Threshold C: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels.

The Project would result in no impact with regard to excessive airport noise levels. No mitigation is required.

Threshold D: Would the Project result in cumulatively considerable noise impacts?

The Project would result in less-than-significant cumulatively considerable noise or vibration impacts. As such, no mitigation is required.

4.10.6 References Cited

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SOURCE: DigitalGlobe 2017; San Bernadino County 2021

DUDEK

0 1,350 2,700 Feet

FIGURE 4.10-1

Noise Measurement and Modeling Receiver Locations

1M Warehouse Project

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4.11 Public Services

This section of the environmental impact report (EIR) describes the affected environment and regulatory setting pertaining to public services, which include fire and police protection, schools, parks, library, and other public facilities. This section also addresses the potential impacts on public services that would result from implementation of the proposed Project and the mitigation measures to reduce these potential impacts, where applicable. Information contained in this section is based on a review of the Town of Apple Valley (Town) General Plan, the Town of Apple Valley General Plan EIR, and publicly available online data.

Potential impacts associated with schools, parks, and other public facilities (i.e., libraries) were found not to be significant as part of the initial study (Appendix A). These issue areas are briefly discussed in Chapter 5, Effects Found not to be Significant, and are not further analyzed herein.

4.11.1 Existing Conditions

Existing Project Site Conditions

The approximately 67.3-acre Project site consists of vacant, undeveloped land. The Project site is bordered to the south by the Apple Valley Fire Center, to the east by primarily vacant land with scattered residential uses, and to the north and west by undeveloped land.

Fire Protection

The Town and its vicinity receive fire protection services from the Apple Valley Fire Protection District (AVFPD). AVFPD is an independent district, and its western boundary is the Mojave River while its eastern boundary extends as far as the dry lakes toward Lucerne Valley. The district has a total service area of approximately 206 square miles, which includes the Town and areas of San Bernardino County (Town of Apple Valley 2009). Staff at the district includes 54 full-time, five part-time, and 20 paid-call employees. There are seven fire stations in the district, including four that are staffed 24 hours per day, 7 days a week, for emergency response. One station is staffed on a 24-hour basis for approximately 4 days per week and is staffed by private ambulance company personnel for the remainder of the time. One station is staffed as needed by on-call firefighters, while the last station is staffed with private ambulance company personnel only (Town of Apple Valley 2009). AVFPD's desired response time is 6 minutes. Within the Town's corporate limits, the average response time is 6 minutes and 25 seconds (Town of Apple Valley, 2009). The nearest fire station to the Project site is Station 332 located at 18857 Highway 18, approximately 6 six miles southwest of the site.

AVFPD maintains a mutual aid agreement with Victorville, San Bernardino County Fire Department, and the Bureau of Land Management. This agreement allows for fire departments in the region actively support one another regardless of geographic or jurisdictional boundaries. A joint dispatch center that serves the mutual aid agencies is located in Victorville (Town of Apple Valley 2009).

According to the CAL FIRE Fire Hazards Severity Zone (FHSZ) Viewer, the Project is not located in a FHSZ in a State Responsibility Area (SRA) and is not located in a Very High Fire Hazard Severity Zone (VHFHSZ) in a Local Responsibility Area (LRA) (CAL FIRE 2023).

Police Protection

The Town receives police services from the San Bernardino County Sheriff's Department (SBCSD) through a contractual agreement. SBCSD assigns staff to the Apple Valley Police Department (AVPD), which offers police protection services within the approximately 72 square miles that are encompassed by the Town's corporate limits. The Sheriff's department in the Town is located at 14931 Dale Evans Parkway, approximately 5.6 miles southwest of the Project site. The station consists of 51 officers and 13 general employees (SBCSD 2023). There is also an in-staffed substation used for report writing and other administrative tasks, located at 21989 Outer State Highway 18. The Sheriff's Department also serves unincorporated areas in the vicinity of the Town, including the Town's sphere of influence (Town of Apple Valley 2009). The Sheriff's Department desires a ratio of 1 police officer for every 1,500 residents (Town of Apple Valley 2009). The Town has a population of approximately 75,867 residents, according to the U.S. Census Bureau (U.S. Census Bureau 2022). As such, the Town has approximately 1 police officer every 1,500 residents and is meeting the desired ratio. The Station responds to high priority calls within 3 to 7 minutes depending on the time of the day and traffic flow (Town of Apple Valley 2009).

Medical Facilities

There are several medical facilities that may provide medical services and personnel in the event of an emergency affecting Apple Valley or the region. These include St. Mary Hospital in Apple Valley, and Victor Valley Community Hospital and Desert Valley Hospital in Victorville. The closest medical facility to the Project site is St. Mary Hospital, located at 18300 Highway 18, approximately 6.6 miles southwest of the Project site.

St. Mary Medical Center is located on a 90-acre campus with approximately 215,000 square feet of facilities. This facility is licensed for 186 beds, and it provides general medical-surgical care, intensive care, 24-hour emergency care, obstetrics, in and outpatient surgery, and a range of ambulatory services including physical therapy and cardiac rehabilitation (Town of Apple Valley 2009). In addition, there are a number of small private clinics and local physician's offices within the Town, including one urgent care center, as well as various private psychiatric clinics, some of which are located within the Town and others in neighboring communities (Town of Apple Valley 2009).

4.11.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal regulations associated with public services that are applicable to the Project.

State

California Building Code and California Fire Code

The California Building Code (CBC) is a compilation of building standards, including fire safety standards for new buildings, which are provided in the California Fire Code (CFC). The CFC is provided in Chapter 9 of Title 24 of the California Code of Regulations (CCR). The CFC 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.

California Occupational Safety and Health Administration

In accordance with CCR, 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, but are not limited to, 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.

California Department of Forestry and Fire Protection (CAL FIRE)

Under Title 14 of the California Code of Regulations (CCR), CAL FIRE has the primary responsibility for implementing wildfire planning and protection for SRAs. CAL FIRE develops regulations and issues fire-safe clearances for land within a fire district of the SRA. More than 31 million acres of California's privately owned wildlands are under CAL FIRE's jurisdiction (CAL FIRE 2023).

CAL FIRE adopted Fire Hazard Severity Zone maps for the SRAs in November 2007. Fire hazard is a way to measure physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat the fire produces, and the burning fire brands that the fire sends ahead of the flaming front. The Project site is located within a LRA Moderate area (CAL FIRE 2007).

In addition to wildland fires, CAL FIRE's planning efforts involve responding to other types of emergencies, including medical aid, hazardous material spills, swift-water rescues, search and rescue missions, civil disturbances, train wrecks, floods, and earthquakes. Through contracts with local governments, CAL FIRE provides emergency services in 36 of California's 58 counties (CAL FIRE 2023).

Local

Town of Apple Valley General Plan

The Town's General Plan contains the following goals and policies applicable to public services and facilities.

Public Buildings and Facilities Element

Goal Provision of a full range of dependable and cost-effective public buildings, facilities and services that are designed and conveniently located so as to meet the social, economic and functional needs of the entire community.

Policy 1.B The Town shall continue to identify and assess viable mechanisms for long-term funding for construction, maintenance and operation of existing and future public buildings and facilities. This assessment shall include mechanisms that assure that new development provides its fair share of funding for these facilities.

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.M The Town shall continue to monitor the need for and provide, as needed, drug education and abuse intervention programs, which optimize the use of public and private councilors and treatment programs in public schools and community centers.

Policy I.N The Town shall encourage Neighborhood Watch Programs to promote safety and discourage crime in existing and new neighborhoods throughout the Town.

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 Town's Municipal Code allows for the collection of Fire Suppression Development Fees to finance fire suppression facilities, vehicles, and equipment necessary to continue to provide an adequate level of fire protection services in the Town. Prior to the issuance of a building permit for the construction of any commercial, office, or industrial development project within the Town, each developer must pay the necessary Fire Suppression Development Fee. As such, the Project would be required to comply with this regulation.

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

As analyzed in the initial study (Appendix A), the Project is expected to have no impacts on schools, parks, and other public facilities (under Threshold A). Therefore, these areas are not further analyzed in this Draft EIR. See Chapter 5, Effects Found Not To Be Significant, for further details.

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. As previously discussed, the Project site is within the service area of AVFPD. The closest station to the site is Fire Station 332 located at 18857 Highway 18, which is approximately 6 miles southwest of the site. AVFPD's desired response time is 6 minutes. Within the Town's corporate limits, the average response time is 6 minutes and 25 seconds (Town of Apple Valley 2009).

Construction

During the construction of the Project, construction personnel would be required to be present on the Project site. Because this would increase the number of personnel on the site when comparted to existing conditions, the construction phased of the Project may result in an increased need for fire protection services. This increased demand as a result of construction, however, would be temporary and would cease after construction activities have been completed.

To comply with California Department of Industrial Relations, Division of Occupational Safety and Health as well as California Fire and Building Code requirements, construction managers and personnel would be trained in fire prevention and emergency response, and fire suppression equipment specific to construction activities would be maintained on site. Project construction would be required to comply with all applicable state and local codes and ordinances related to the maintenance of mechanical equipment, handling and storage or flammable materials, and cleanup of spills of flammable materials. Additionally, compliance with regulatory requirements would reduce

the potential for construction activities to expose construction workers to the risk of fire explosion related to hazardous materials.

Therefore, because the increased demand for fire protection services during construction of the Project would be temporary, and because all applicable regulations would be followed during construction, impacts during the construction of the proposed Project are considered less than significant.

Operation

Every new development that creates additional square footage and has the potential to increase population of the service area creates a greater demand for existing resources. The increase in industrial space as well as an increase in workers as a result of the Project is expected to increase the demand fire and emergency calls relative to existing conditions. However, as discussed below, the development of the proposed Project would not result in substantial adverse physical impacts associated with the need for new or developed fire protection facilities.

The need for new or expanded fire protection facilities/structures/buildings is associated with a substantial increase in population, new development, and/or fire activity, such as wildfire hazards. As discussed in the initial study (Appendix A) prepared for the Project, approximately 904 employees would be required for the operation of the Project. This would not exceed the Town's projected future population established in the Town's General Plan (Town of Apple Valley 2009).

As previously mentioned, the Project would be served by existing AVFPD facilities. Should an emergency occur on site that would require resources beyond what AVFPD is able to provide, the mutual aid agreement that AVFPD maintains with Victorville, San Bernardino County Fire Department, and the Bureau of Land Management would ensure that the site receives supplemental personnel and resources.

Furthermore, the Project would be designed and constructed in accordance with all applicable provisions of the California Fire Code, which includes requirements for adequate fire flows, width of emergency access routes, turning radii, automatic sprinkler systems throughout, fire alarms, and floor to sky height limits along emergency access routes. Compliance with the fire code standards would be verified through the Town's plan check process prior to the issuance of building permits for the Project. Compliance with fire code standards would reduce the potential demand for fire services by decreasing the likelihood of and/or severity of fire emergency at the site. For further discussion of safety measures the Project would include to reduce the impacts of potential hazards, refer to Section 4.7, Hazards, Hazardous Materials, and Wildfire.

Per Chapter 3.32, Fire Suppression Development Fee Program, of the Town's Municipal Code, the Project would be subject to the payment of Development Impact Fees (DIFs). 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 services facilities as it relates to the level of service demanded by new development, which varies for specific land uses. The current Town fire fee for industrial development is $0.089 per square foot (Town of Apple Valley 2023).

Due to the reasons described above, the proposed Project would not require the construction of new or expansion of existing fire protection facilities resulting in substantial adverse physical impacts in order to maintain acceptable service ratios and response times. As such, impacts would be less than significant.

Police protection?

Less-than-Significant Impact. As discussed in Section 4.11.1, Existing Conditions, polices services in the Town are provided by SBCSD through a contractual agreement. SBCSD assigns staff to AVPD, which is located at 14931 Dale Evans Parkway, approximately 5.6 miles southwest of the Project site. The AVPD would provide primary law enforcement services to the Project. AVPD responds to high priority calls within 3 to 7 minutes depending on the time of the day and traffic flow (Town of Apple Valley 2009).

Construction

Construction activities may temporarily increase traffic volumes in the Project area. The added traffic associated with workers commuting to the site, haul routes, deliveries, and other Project-related activities may increase the need for law enforcement services during the construction of the Project. This increase, however, would be temporary and would not lead to a substantial increase in the demand for police protection services. Additionally, during construction, the Project would incorporate temporary security measures including security fencing, lighting, locked entrances, and private security officers. These features would reduce the need for police protection services during the Project's construction phase. Potential short-term construction impacts to police services would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, and impacts would be less than significant.

Operation

A need for new or expanded public services, such as polices facilities, is typically associated with an increase in population. The Project does not involve a residential component, however, because the site is undeveloped under existing conditions, the Project would be expected to increase the frequency of calls to AVPD. The Project, however, would incorporate operational practices and design elements to increase safety and to reduce the potential for crime to occur, including security lighting, alarms, and security cameras. Additionally, building entries, parking areas, and walkways would be sufficiently lit to facility safe pedestrian movement. These design elements would minimize spaces that are hidden from public view, which would help to prevent loitering and crime form occurring and would therefore decrease the demand for police protection services.

The Project would also be required to pay DIFs to offset the costs of increased personnel or equipment that could be required to maintain acceptable service ratios, response times, and other performance objectives. The law enforcement DIF for industrial projects is $0.001 per square foot. Furthermore, the Project would not conflict with the implementation of the Town's General Plan goals and policies pertaining to police services.

Due to the reasons described above, the Project is not anticipated to result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, and impacts would be less than significant.

Threshold B: Would the Project result in cumulatively considerable public service impacts?

Less-than-Significant Impact. A cumulatively significant impact related to public services would occur as a result of population growth and development within the Town due to the Project and cumulative projects, including past, present, and reasonably foreseeable future projects. A list of cumulative projects relevant to the proposed Project is included in Section 3.2 of Chapter 3, Project Description, of this Draft EIR. The cumulative study area is based on the service area of each public service that would serve the Project. As discussed above, Project impacts on fire and police protection services would be less than significant. The implementation of prevention measures,

compliance with applicable state and local regulations, as well as the payment of IDFs would ensure that fire and police protection would continue to be provided at an adequate level of service in the Town. Similar to the proposed Project, all cumulative projects would be subject to the same requirements, including the payment of DIFs. Cumulative Projects would also be required to undergo environmental review, in compliance of the requirements of CEQA. Should any potentially significant impacts to public services be identified, appropriate mitigation would be prescribed to reduce these impacts to a less than significant level.

In addition, as discussed in the initial study (Appendix A), the Project would not result in a significant impact to schools, parks, or other public facilities. Therefore, the Project would not have a cumulatively considerable impact associated with these public services. As such, because the Project would not create a significant impact on public services, and because cumulative projects would be subject to the same requirements, cumulatively considerable impacts associated with the Project 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 substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities. No mitigation measures are required.

Police protection?

The Project would result in less-than-significant substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities. 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 substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities No mitigation measures are required.

4.11.6 References Cited

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4.12 Transportation

This section describes the existing transportation conditions of the 1M Warehouse Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts and 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 J of this Draft EIR:

- Transportation Impact Analysis prepared by Dudek in March 2023 (Appendix J)

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 (Town) 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. Regional access to the site would be provided from Interstate (I) 15 to Stoddard Wells Road and Quarry Road and from I-15 to Dale Evans Parkway. Characteristics of the primary 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 to the east of the Project site. 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 4.12-1.
- Dale Evans Parkway is a north-south, two-lane undivided road located to the west of the Project site. It is an undivided rural road with some sections of paved and unpaved shoulders and is designated as a through truck route from Waalew Road to the I-15 interchange. Dale Evans Parkway is classified as a Major Divided Parkway per the Town's Circulation Element. There is no posted speed limit.
- 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 4.12-1. Additionally, although Quarry Road is not considered a truck route at this time, the Town's Circulation Element proposes its designation as a through truck route. Truck traffic (likely primarily associated with the Cemex – White Mountain operation to the east) currently utilizes this roadway. There is no posted speed limit.

- Central Road is a north-south, six-lane major divided highway located to the west of the Project Site. Central Road begins at Stoddard Wells Road in the north and ends past Roundup Way in the south. It is classified as a Major Road to the north of Johnson Road and as a Major Divided Arterial to the south. The posted speed limit is 55 MPH.
- Johnson Road is an east-west, two-lane undivided road. It is located to the north of the Project site. Johnson Road is classified as a Major Road.
- Lafayette Street is an east-west oriented roadway. It is a single-lane, undivided roadway located to the south of the Project. Lafayette Street is classified as a Secondary Road. There is no posted speed limit.

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 Town 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 2023). The rail and transit providers are described below.

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 8 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 southern California and Las Vegas. The Project is expected to break ground in 2023 and could begin serving passengers in 2026. Brightline West has acquired property in the newly annexed area of Apple Valley near Dale Evans Parkway for a high-speed rail station (Town of Apple Valley 2023).

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 Facilities, is the closest bus route to the Project site, with bus stops near the intersection of Dale Evans Parkway and Johnson Road, approximately 2.5 miles east of the Project site, as well as along Johnson Road across from the Walmart Distribution Center and on Navajo Road across from the Victor Valley College Regional Public Safety Training Center. 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 (VVTA 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, west and north of the site, extending from Johnson Road to 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. Additionally, Class II bike lanes are proposed along Central Road adjacent to the Project site, and along Lafayette Street from Dale Evans Parkway to Central Road.

Baseline VMT

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. Although the adopted VMT Guidelines do not specify the preferred modeling tool to be used to conduct VMT analyses within the Town of Apple Valley, the San Bernardino County Transit Authority (SBCTA) recommends the San Bernardino Transportation Analysis Model (SBTAM) for conducting VMT analysis for land use projects within the region as it considers interaction between different land uses based on socio-economic data, such as population, households, and employment. SBTAM is a travel forecasting model that represents a sub-area (San Bernardino County) of the Southern California Associate of Governments (SCAG) regional traffic model and was designed to provide a greater

level of detail and sensitivity in the San Bernardino County area as compared to the regional SCAG model. The SBTAM model was therefore chosen as the appropriate modeling tool to prepare VMT estimates for the Project.

Project generated VMT has been estimated using the Origin/Destination (O/D) method and Boundary method. Consistent with Town VMT Guidelines, VMT has been presented as total VMT and total VMT per Service Population. Total VMT represents all VMT generated in the Town of Apple Valley on a typical weekday. Total VMT per service population is an efficiency metric representing VMT generated on a typical weekday per person who lives and/or works in the Town or travels to the Town for another purpose.

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 J, 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 1% 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 (SBCTA 2020) 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 Town of Apple Valley.

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 (San Bernardino County 2016). 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 4.12-1 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 project is currently listed in the Town's Five-Year Capital Improvement Plan (CIP) (Town of Apple Valley 2020).

Table 4.12-1. 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-ft. ROW)
Stoddard Wells Road	▪ Between I-15 Freeway and Alembic Street – upgrade from Major Road (104-ft. ROW) to Major Divided Arterial (128-ft. 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-ft. ROW) to Major Divided Arterial (128-ft. ROW) ▪ Between Stoddard Wells Road and Dale Evans Road – upgrade from Secondary Road (88' ROW) to Major Divided Arterial (128-ft. ROW)
Johnson Road	▪ East of Central Road – change from Major Road to Secondary Road (88-ft. ROW)

Source: Town of Apple Valley 2009.
Notes: ROW = right-of-way; ft. = foot.

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 (July 9, 2019) 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 operational deficiency 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 San Bernardino County CMP indicates that projects with high truck percentages should convert project trips to PCE. A 1.5 PCE factor was applied to 2-axle trucks, 2.0 PCE for 3-axle trucks, and a 3.0 PCE factor was applied to 4-axle trucks per the San Bernardino County CMP. As the ITE Trip Generation Handbook does not provide a breakdown of truck traffic by axle classification, vehicle mix data and percentages are also applied to the Project trip generation estimates from the 2014 SCAQMD Warehouse Truck Trip Study Data Results and Usage (SCAQMD Study).

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 1,955 daily trips, 162 AM peak hour trips, and 173 PM peak hour trips. This is equivalent to 2,784 daily PCEs, 231 AM peak hour PCEs, and 246 PM peak hour PCEs. The ITE-based daily trip estimates used in the Project's TIA are shown in Appendix J 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 efforts in Victor Valley. 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, therefore the Project would have no impact on these roadways.

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. Therefore, the Project would be consistent with the Town's General Plan Circulation Element.

Pedestrian and Bicycle Access

The Town of Apple Valley's Recreation Trail Map and bike paths per the General Plan Circulation Element are presented in Figures 4.12-4 and 4.12-5, respectively, as discussed in Section 4.12.1, Existing Conditions.

The Project site is in a minimally developed area of the Town, with limited pedestrian and bicycle facilities provided. Where new development has occurred, sidewalks have been typically constructed along site frontages (e.g., Big Lots Distribution Center located at the southwest corner of the Navajo Road and Lafayette Stret). No pedestrian facilities, including curbs and sidewalks, are present along Johnson Road, Central Road or Lafayette Street as no development currently exists. The Project would construct pedestrian facilities (e.g., curb and gutter) along all Project frontages, including Johnson Road, Central Road or Lafayette Street. Additionally, as the adjacent areas surrounding the Project site continue to become developed, connectivity to other areas of the Town will be realized. Therefore, the Project would have a less-than-significant impact on pedestrian and bicycle access.

Threshold B: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Significant and Unavoidable Impact. CEQA Guidelines Section 15064.3(b) focuses on VMT for determining the significance of transportation impacts.

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 discussed above, the Project would generate 1,955 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 0.5 miles 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 San Bernadino County will reduce VMT per person/employee and is beneficial to the region. San Bernadino 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 4.12-2 below, the VMT per service population for the Project TAZ is 67.6, and the San Bernardino County VMT per service population is 33.3. Therefore, the TAZ would be 102.87% above San Bernadino 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 4.12-2. Summary of Project Traffic Analysis Zone Vehicle Miles Traveled

Base Year (2022)	VMT
VMT Per Service Population	
Project TAZ	67.6
Jurisdiction	33.3
% Difference (Project TAZ – Jurisdiction)	**+102.87%**
Threshold	33.3

Source: SBCTA VMT Screening Tool (Appendix J).
Notes: VMT = vehicle miles traveled; TAZ = traffic analysis zone.

As outlined above, the Project does not meet the screening criteria identified in San Bernadino County's guidelines. Therefore, the Project's potential VMT impact was conducted and is summarized below.

VMT Analysis

The VMT estimates calculated for the Project are shown in Tables 4.12-3 (VMT Per Service Population) and Table 4.12-4 (Boundary VMT). A detailed description of the methodology, calculations and model outputs are included in Appendix J.

As shown in Table 4.12-3, the development of the proposed Project is forecast to exceed the Town's VMT per Service Population impact threshold by 20.8% in the baseline conditions and 80.4% in the cumulative conditions. Therefore, the Project would have a potentially significant impact on project-generated VMT.

Table 4.12-3. Project-Generated Vehicle Miles Traveled

Scenario	Baseline	Cumulative
Service Population	904	904
Total OD VMT	36,250	54,180
OD VMT per Service Population	40.1	59.9
Town Threshold	33.2	33.2
Percent Above Threshold	20.8%	80.4%
Potential Significant?	**Yes**	**Yes**

Source: Appendix J.
Note: OD = origin destination; VMT = vehicle miles traveled.

As shown in Table 4.12-4, the boundary VMT per Service Population remains unchanged under with the proposed Project for both baseline and cumulative conditions. Therefore, the Project's cumulative effect on VMT would be less than significant.

Table 4.12-4. Boundary Vehicle Miles Traveled

Scenario	Baseline		Cumulative	
	No Project	With Project	No Project	With Project
Service Population	101,523	102,427	126,806	127,710
Boundary VMT	893,993	903,123	1,206,225	1,216,812
VMT per Service Population	8.8	8.8	9.5	9.5
Change in VMT	0.0		0.0	
Potential Significant?	**No**		**No**	

Source: Appendix J.
Note: VMT = vehicle miles traveled.

Trip reduction measures that have the potential to reduce project-generated VMT are described in the Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (CAPCOA 2021) (2021 Handbook). Locational context is a major factor relevant to the potential application and effectiveness of VMT reduction measures. The three locational contexts identified by the 2021 Handbook are suburban, urban, and rural. The locational context of the Project is characteristically suburban, which further limits the effectiveness of a particular trip reduction measure as compared to an urban/city center with high accessibility to transit and other modes of transportation beyond the single occupancy automobile. In addition to limitations related to locational context, as future building tenants are not known for the Project, the ultimate effectiveness of certain trip reduction measures cannot be guaranteed.

Potential trip reduction measures that may be relevant to the proposed Project as described within the 2021 Handbook are listed below.

- Provide pedestrian and bicycle network improvements within the development connecting to existing off-site facilities.

- Commute trip reduction (CTR) programs offered to encourage the use of vanpools, carpooling, public transit, and biking.
- CTR programs may also provide for alternative work or compressed work schedules to reduce the number of days an employee commutes to work.
- Provision of on-site facilities to provide end of trip services for bicycling such as secure bike parking and storage lockers.
- Provide reserved preferential parking spaces for car-share, carpool, and ultra-low or zero emission vehicles.

The effectiveness of some of the aforementioned measures is dependent on yet unknown tenant(s) and employee participation. Conservatively, this analysis assumes no reduction in VMT that may result from implementation of such measures and impacts remain potentially significant. Therefore, impacts would be significant and unavoidable.

Threshold C: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Significant and Unavoidable Impact. The following discussion describes the potential for increased hazards as a result of geometric design features of the Project, and/or as a result of the addition of Project traffic to adjacent roadways and Caltrans facilities.

Project Site Access

Access to the Project site would be provided from a new driveway on Johnson Road, a new driveway on Central Road, and a new driveway on Lafayette Street. A summary of the driveway access locations is provided below, as identified in Figure 4.12-6, Vehicular Circulation and Access Plan:

- No. 13: Driveway A/Johnson Road- full access; trucks/passenger vehicles
- No. 14: Central Road/Driveway B - full access; trucks
- No. 15: Driveway C/Lafayette Street- full access; trucks/passenger vehicles
- No. 16: Driveway D/Lafayette Street- full access; trucks/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. Queuing was analyzed utilizing the SimTraffic software, which calculates the 95th percentile (design) queue. All queuing analysis data and SimTraffic queuing worksheets are provided in Appendix J. Based on the analysis, the proposed Project would not result in unacceptable queueing conditions into or out of the Project site.

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. All intersections would continue to operate as under existing conditions. Improvements noted below and shown in Figure 4.12-6, Vehicular Circulation and Access Plan, including the extension and build-out of the rights-of-way (ROW) of adjacent streets are assumed in this analysis. The following improvements are proposed:

- The Project would involve the construction of Central Road from the eastern edge of the existing pavement surface to Central Road's eastern right-of-way (ROW), starting at the intersection of Johnson Road and

Central Road, extending to the southwest corner of the Project site at the intersection of Central Road and Lafayette Street. The portion of this improved roadway along the Project's frontage would include a curb, gutter, and sidewalk. The remaining undeveloped ROW on the western portion of the ROW would be completed at a future time, either by the Town or a future developer that is constructing a project fronting this ROW.

- The Project would involve the construction of Johnson Road to varying widths, starting at the intersection of Johnson Road and Central Road, extending to the southeast corner of the Project site at the intersection of Johnson Road and Sycamore Lane. A portion of this road would be protected by an approximately 500-foot by 20-foot area of rip rap within the northern portion of Johnson Road's ROW. This is to protect against flooding from a drainage referred to as the N-02 drainage in the Apple Valley Master Plan of Drainage, in the north. A portion of this improved roadway along the Project's frontage and near the Project's northeast driveway would include a curb, gutter, and sidewalk. The remaining undeveloped ROW on the northern portion of the ROW would be completed at a future time, either by the Town or a future developer that is constructing a project fronting this ROW. When this occurs, the rip rap feature may be removed to accommodate the ultimate construction of Johnson Road.
- The Project would involve the construction of Lafayette Street from its northern ROW boundary to approximately 6 feet south of its centerline, starting at the intersection of Lafayette Street and Central Road, extending to the southeast corner of the Project site at the intersection of Lafayette Street and Sycamore Lane. The portion of this improved roadway along the Project's frontage would include a curb, gutter, and sidewalk. The remaining undeveloped roadway area within the southern portion of the ROW would be completed at a future time, either by the Town or a future developer that is constructing a project fronting this ROW.

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, the northbound I-15 ramps at Stoddard Wells Road, and the I-15 north and southbound ramps at Dale Evans Parkway 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 J.

Existing (2022) Conditions

As shown in Table 4.12-5, Peak-Hour Queuing Summary for Existing Conditions, 95th percentile queuing would be satisfactory and would not extend into mainline lanes. As shown in the table, more than one vehicle may stack along Dale Evans Parkway as vehicles wait for clearance to make a left turn onto the on-ramps. As peak hour traffic volumes are low along Dale Evans Parkway, and the intersections operate at LOS B, this queuing along the through lanes would not significantly impede traffic operations. Additionally, some stacking in the de facto right-turn lanes at the off-ramps to Stoddard Wells Road may occur; however, total queuing at the off-ramp approach would not impact the freeway mainline.

Opening Year (2025) Plus Project Conditions

As shown in Table 4.12-6, 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:

- No. 5: 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 4.12-7, 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:

- No. 5: 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 Caltrans has jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy. Additionally, no programs or plans are in place to implement improvements at this interchange or collect fair-share contributions. Therefore, the Project's potential impact to increase in hazardous conditions (i.e., queuing) would be significant and unavoidable.

Table 4.12-5. 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	I-15 SB Ramps/Dale Evans Parkway	WBLT	25	10	9	Yes	Yes
		SBLTR	1,400	54	74	Yes	Yes
2	I-15 NB Ramps/Dale Evans Parkway	EBLT	25	42	59	**No**	**No**
		WBTR	25	26	0	**No**	Yes
		NBLTR	1,265	12	4	Yes	Yes
3	Quarry Road/I-15 SB Ramps	WBL	1,000	24	28	Yes	Yes
4	Quarry Road/Stoddard Wells Road	SBL[2]	1,400	36	42	Yes	Yes
		SBR[3]	25	14	26	Yes	**No**
5	I-15 NB Ramps – Outer I-15/ Stoddard Wells Road	SBLT	1,000	56	78	Yes	Yes
		SBR[3]	25	52	47	**No**	**No**

Source: Appendix J.
Notes: I-15 = Interstate 15; SB = southbound; WBLT = westbound left thru; SBLTR = southbound left thru-right; NB = northbound; EBLT = eastbound left thru; WBTR = westbound thru right; NBLTR = northbound left thru-right; WBL = westbound left; SBL = southbound left; SBR = southbound right; SBLT = southbound left thru; **Bold:** exceeds available 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 de facto right-turn pocket; queues may exceed de facto pocket of one vehicle (e.g., 25-feet), but may not exceed total approach stacking distance.

Table 4.12-6. 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	I-15 SB Ramps/ Dale Evans Parkway	WBLT	25	16	10	Yes	Yes	13	7	Yes	Yes
		SBLTR	1,400	57	73	Yes	Yes	60	76	Yes	Yes
2	I-15 NB Ramps/ Dale Evans Parkway	EBLT	25	45	54	**No**	**No**	48	61	**No**	**No**
		WBTR	25	22	8	Yes	Yes	33	8	**No**	Yes
		NBLTR	1,265	23	3	Yes	Yes	13	5	Yes	Yes
3	Quarry Road/ I-15 SB Ramps	WBL	1,000	50	533	Yes	Yes	53	134	Yes	Yes
4	Quarry Road/ Stoddard Wells Road	SBL[2]	1,400	59	128	Yes	Yes	60	92	Yes	Yes
		SBR[3]	25	22	26	Yes	**No**	21	27	Yes	**No**
5	I-15 NB Ramps – Outer I-15/Stoddard Wells Road	SBLT	1,000	1,349[4]	1,191[4]	**No**	**No**	1,238[4]	1,182[4]	**No**	**No**
		SBR[3]	25	71	48	**No**	**No**	69	43	**No**	**No**

Source: Appendix J.

Notes: I-15 = Interstate 15; SB = southbound; WBLT = westbound left thru; SBLTR = southbound left thru-right; EBLT = eastbound left thru; WBTR = westbound thru-right; NBLTR = northbound left thru-right; WBL = westbound left; SBL = southbound left; SBR = southbound right; SBLT = southbound left thru; SBR = southbound right; **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 de facto right-turn pocket; queues may exceed de facto 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 4.12-7. Peak-Hour Queuing Summary for Horizon Year (2040) Plus Project Conditions

No.	Intersection	Movement	Available Stacking Distance (Feet)	Horizon Year (2040)				Horizon Year (2040) plus Project			
				95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	I-15 SB Ramps/ Dale Evans Parkway	WBLT	25	17	15	Yes	Yes	16	16	Yes	Yes
		SBLTR	1,400	69	105	Yes	Yes	79	108	Yes	Yes
2	I-15 NB Ramps/ Dale Evans Parkway	EBLT	25	74	92	**No**	**No**	85	90	**No**	**No**
		WBTR	25	53	12	**No**	Yes	55	15	**No**	Yes
		NBLTR	1,265	31	11	Yes	Yes	39	10	Yes	Yes
3	Quarry Road/I-15 SB Ramps	WBL	1,000	60	81	Yes	Yes	63	124	Yes	Yes
4	Quarry Road/ Stoddard Wells Road	SBL[2]	1,400	74	74	Yes	Yes	73	78	Yes	Yes
		SBR[3]	25	32	31	**No**	**No**	31	33	**No**	**No**
5	I-15 NB Ramps – Outer I-15/Stoddard Wells Road	SBLT	1,000	1,180[4]	1,180[4]	**No**	**No**	1,180[4]	1,184[4]	**No**	**No**
		SBR[3]	25	70	45	**No**	**No**	68	40	**No**	**No**

Source: Appendix J.

Notes: I-15 = Interstate 15; SB = southbound; WBLT = westbound left thru; SBLTR = southbound left thru-right; EBLT = eastbound left thru; WBTR = westbound thru-right; NBLTR = northbound left thru-right; WBL = westbound left; SBL = southbound left; SBR = southbound right; SBLT = southbound left thru; SBR = southbound right; **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 de facto right-turn pocket; queues may exceed de facto 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. All roadway, intersection and Project access 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. 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 Town's 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. As such, no hazardous design features would be part of the Project's roadway improvements or site access. 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 B, the Project's effect on VMT was found to remain unchanged with the Project as compared to the No Project scenario for both the Baseline and Cumulative conditions. Since future building tenants are unknown at this time, implementation of trip reduction measures cannot be guaranteed to reduce Project generated VMT to a level of less than significant; the Project's VMT impact is considered significant and unavoidable.

As discussed above in Threshold C, the Project may increase a hazardous condition due to queuing impacts at intersection No. 5 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 impacts to VMT and increase in hazardous conditions (e.g., queuing) would be significant and unavoidable, and thus, the Project could contribute to a cumulatively considerable impacts associated with VMT and 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.

Threshold B: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

The Project's VMT analysis found the Project to exceed the Town's VMT per service population impact threshold by 20.8% in the Baseline condition and 80.4% in the Buildout condition. Therefore, the Project is determined to have a potentially significant project-generated transportation impact. The Project's effect on VMT was found to remain unchanged with the Project as compared to the No Project scenario for both the Baseline and Cumulative conditions. Therefore, the Project's effect on VMT was found to be less than significant. Since future building tenants are unknown at this time, implementation of trip reduction measures cannot be

guaranteed to reduce Project generated VMT to a level of less than significant; the Project's VMT impact is considered significant and unavoidable.

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 No. 5. 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?

As discussed above in Threshold B, the Project's effect on VMT was found to remain unchanged with the Project as compared to the No Project scenario for both the Baseline and Cumulative conditions. Therefore, the Project's effect on VMT was found to be less than significant. Since future building tenants are unknown at this time, implementation of trip reduction measures cannot be guaranteed to reduce Project generated VMT to a level of less than significant; the Project's VMT impact is considered significant and unavoidable.

As discussed above in Threshold C, the Project may increase a hazardous condition due to queuing impacts at intersection No. 5 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 impacts to VMT and increase in hazardous conditions (e.g., queuing) would be significant and unavoidable, and thus, the Project could contribute to a cumulatively considerable impacts associated with VMT and queuing and hazardous design features.

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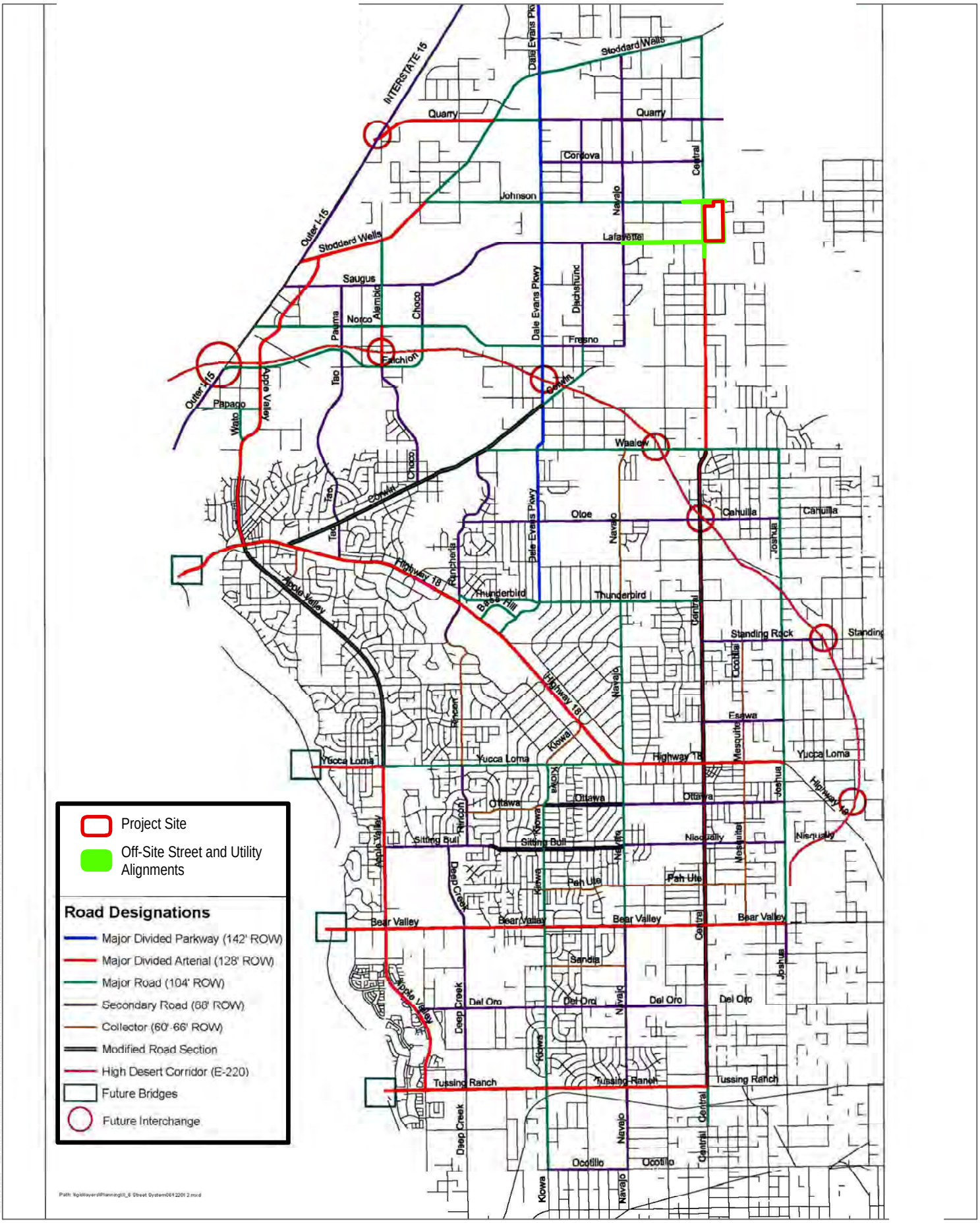

SOURCE: San Bernadino County 2021; Town of Apple Valley 2023

DUDEK

0 0.75 1.5 Miles

FIGURE 4.12-1

Circulation Element Map

1M Warehouse Project

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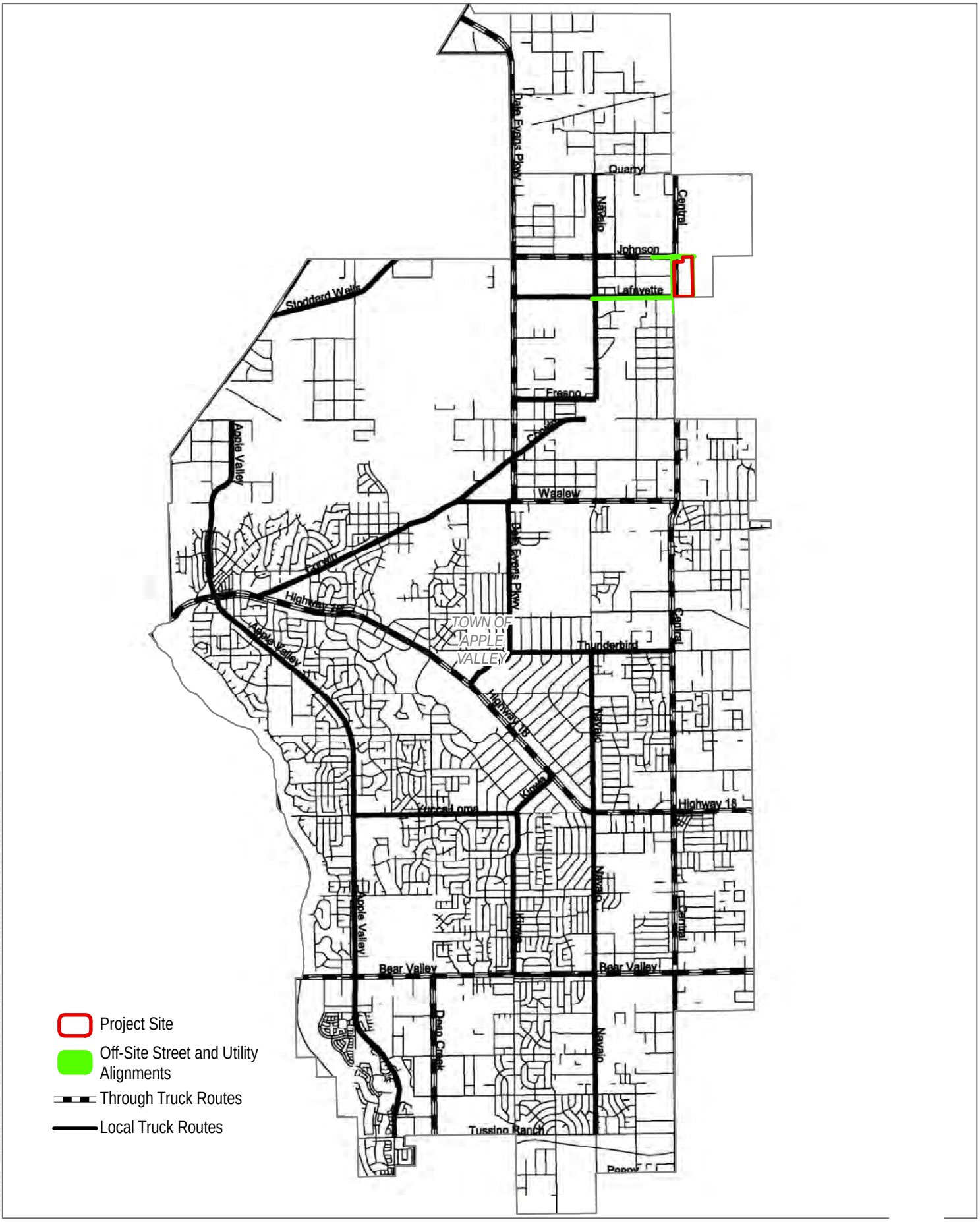

SOURCE: USGS Basemap; San Bernadino County 2021; Town of Apple Valley 2009

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0 0.75 1.5 Miles

FIGURE 4.12-2

Local Truck Routes

1M Warehouse Project

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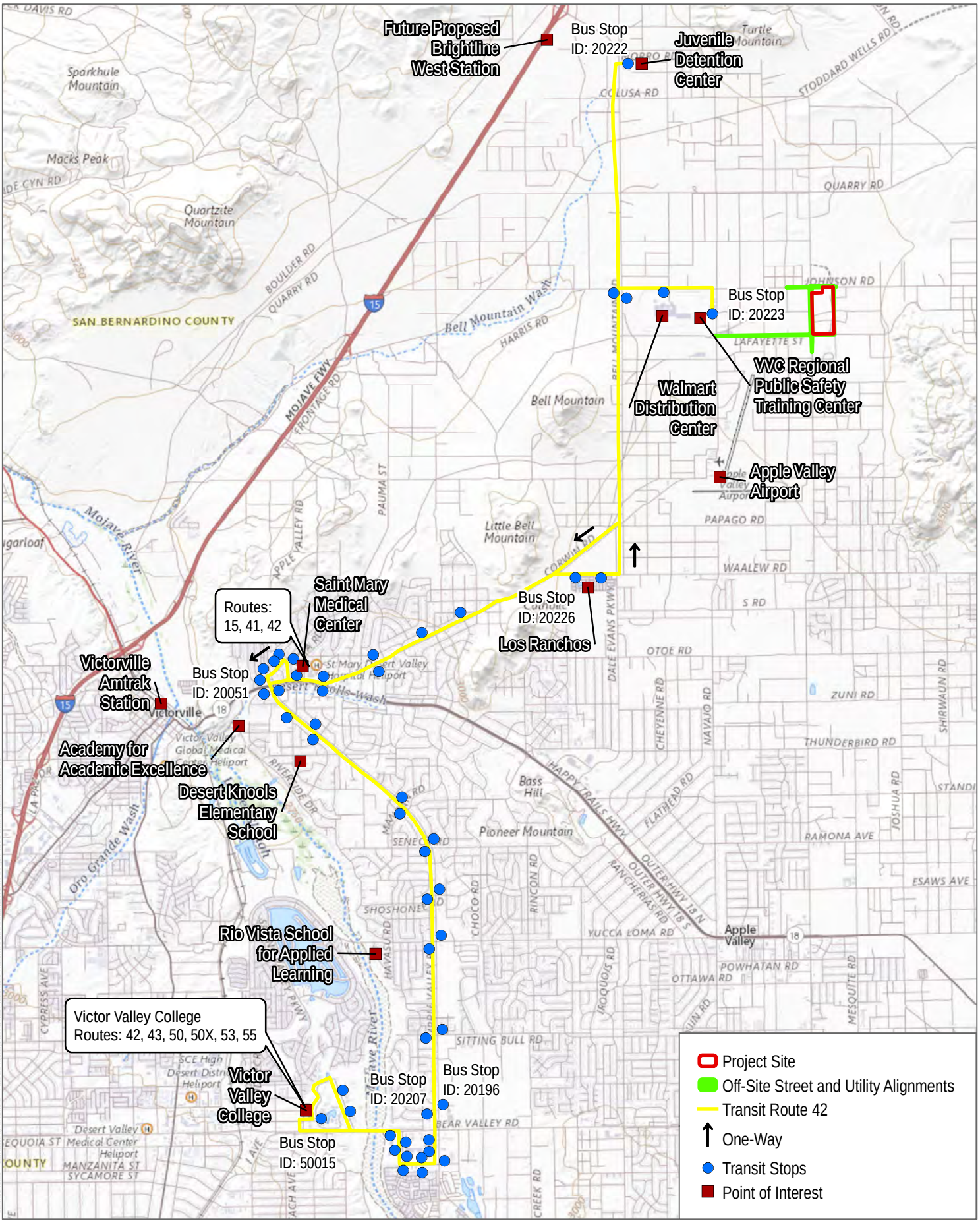

SOURCE: USGS Basemap; San Bernadino County 2021; Victor Valley Transit 2022

DUDEK

0 0.5 1 Miles

FIGURE 4.12-3

Existing Transit Facilities

1M Warehouse Project

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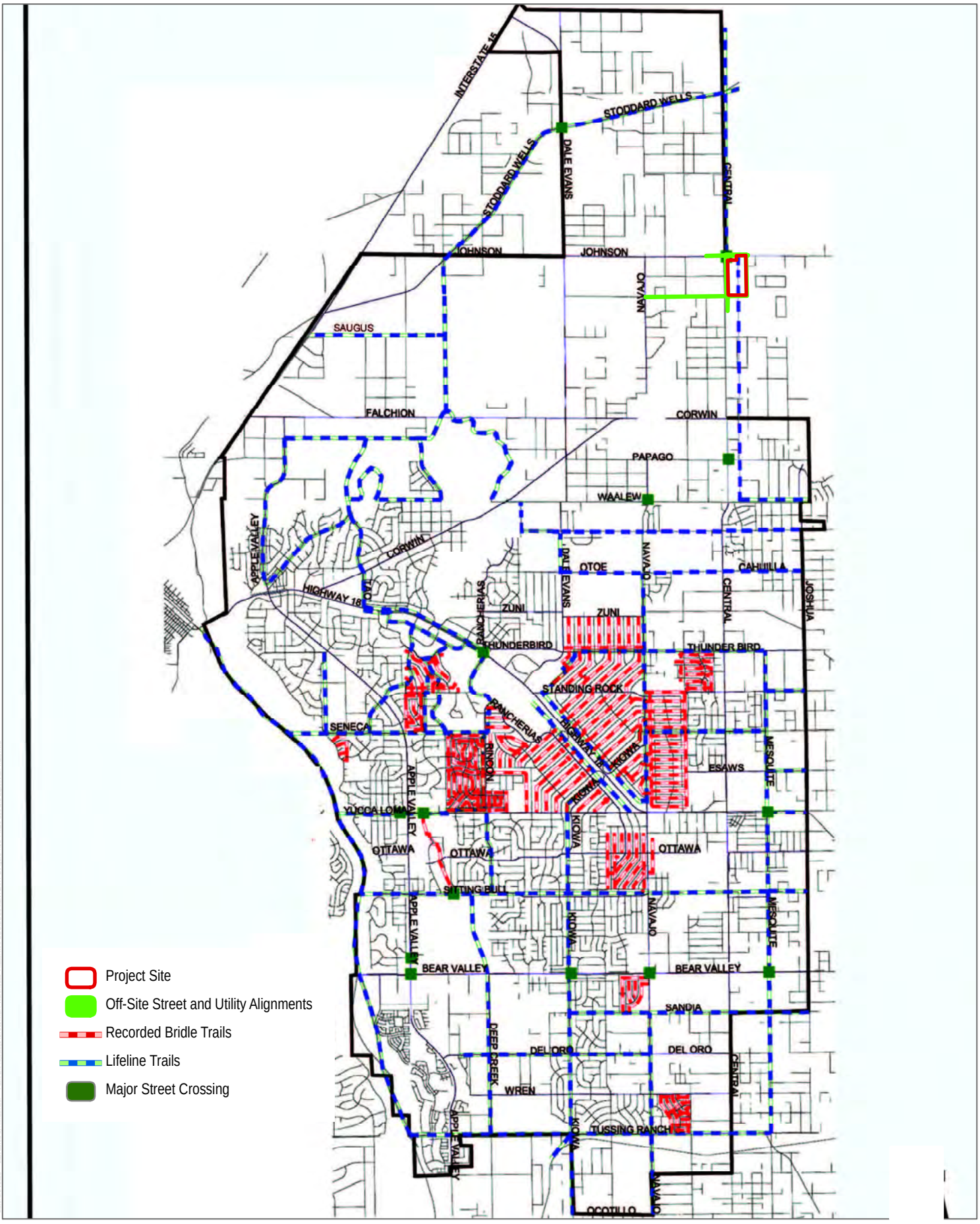

SOURCE: USGS Basemap; San Bernadino County 2021; Terra Nova 2022

DUDEK

0 0.75 1.5 Miles

FIGURE 4.12-4

Multi-Use and Equestrian Trails

1M Warehouse Project

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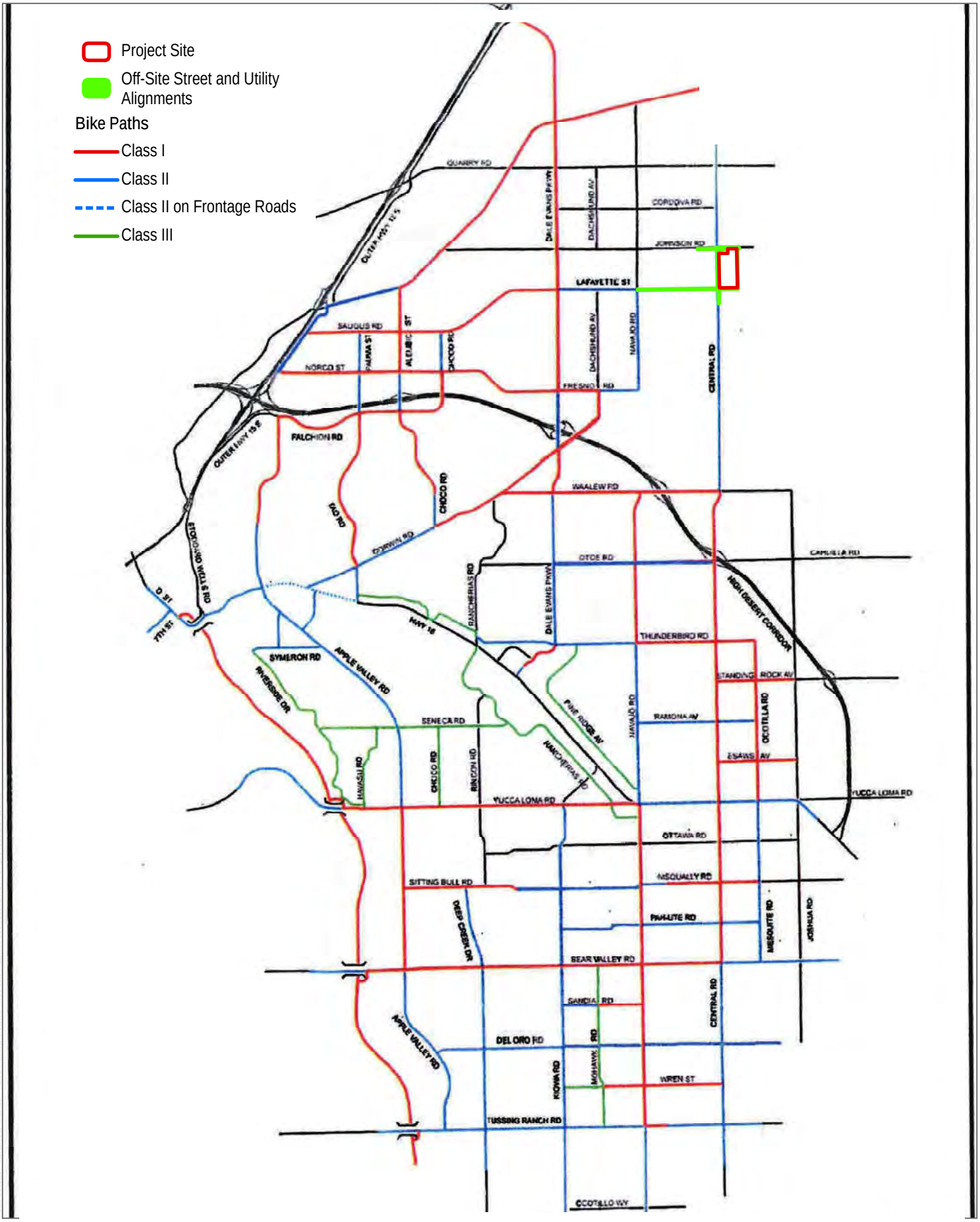

SOURCE: San Bernadino County 2021; Town of Apple Valley 2009

DUDEK

FIGURE 4.12-5

Bike Paths

1M Warehouse Project

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4.13 Utilities and Service Systems

This section describes the existing utility conditions of the 1M Warehouse 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:

- On-Site Hydrology Study, prepared by Merrell-Johnson Companies in February 2023 (Appendix G)
- Water Supply Assessment, prepared by Dudek in April 2023 (Appendix K)

4.13.1 Existing Conditions

Water

Water Supply

Liberty Utilities provides water service to the Town of Apple Valley (Town) 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 5-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 5-year increments. Demands are shown with the effects of assumed urban demand reduction (conservation) measures that would be implemented during drought conditions.

Table 4.13-1. 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. There is an existing water line approximately 1.500 feet west of the intersection of Johnson Road and Central Road that is the nearest to the project site.

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 2023). The Apple Valley Subregional Water Recycling facility located at Brewster Park was completed in 2018. It can produce 1 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.

Existing Wastewater Generation

The Project site is undeveloped and vacant. As such, no wastewater is currently generated.

Stormwater Drainage

The Project site consists of undeveloped land with no current stormwater collection facilities located on site. Central Road, along the site's western border, is a paved road with dirt shoulders and no stormwater collection facilities. Johnson Road and Lafayette Street, along the site's northern and southern borders, respectively, are graded and unpaved roads. An existing open drainage extends across the Project site's northwest corner, coming from northeast of the site, crossing Johnson Road, and flowing toward the southwest. The drainage crosses Central road, flows further southwest, and becomes undefined near the Apple Valley Airport. Other than the flows within the drainage, stormwater sheet flows from the northeast toward the southwest as sheet flows discharging across Central Road and Lafayette Street.

Under Project conditions, the Project's stormwater system involves capturing, treating, and infiltrating stormwater on site; conveying flows that exceed the capacity of the stormwater system off site onto and across Central Road; and collecting and rerouting run-on flows off site toward their historical flow areas.

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 Waste Industries Inc.'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 8 miles to

the southwest of the Project site. Waste is collected and hauled to the Victorville Sanitary Landfill, which is approximately 5.5 miles west of the Project site. Details on this landfill are provided below (CalRecycle 2023a):

> The Victorville Sanitary Landfill is located at 18600 Stoddard Wells Road in Victorville. 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 2020). 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 2023b). 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 106,552 gigawatt-hours of electricity were used in SCE's service area in 2022 (CEC 2023). Demand forecasts anticipate that approximately 111,670 gigawatt-hours of electricity will be used in SCE's service area in 2025 under a high demand forecast (CEC 2023). SCE receives electric power from a variety of sources.

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 5 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 have achieved a 20% statewide reduction in urban per capita water use by the end of 2020. The bill required 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 established 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, single-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 the Hesperia Water District UWMP.

Senate Bill 610 and Senate Bill 221: Water Supply Assessments

SB 610 and SB 221, amended into state law effective January 1, 2002, improve the linkage between certain land-use decisions made by cities and counties and water supply availability. The statutes require detailed information regarding water availability and reliability with respect to certain developments to be included in the administrative record, to serve as the evidentiary basis for an approval action by the city or county on such projects. Under Water Code Section 10912[a], projects subject to the California Environmental Quality Act (CEQA) requiring a water supply assessment (WSA) include: residential development of more than 500 dwelling units; shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; hotel, motel or both, having more than 500 rooms; industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land or having more than 650,000 square feet of floor area; mixed-use projects that include one or more of the projects specified; or a project that would demand an amount of water equivalent to or greater than the amount required by a 500 dwelling units. A fundamental source document for compliance with SB 610 is the UWMP. The UWMP can be used by the water supplier to meet the standard for SB 610. SB 221 applies to the Subdivision Map Act, conditioning a tentative map on the applicant to verify that the public water supplier has sufficient water available to serve the proposed development.

Pursuant to the requirements of SB 610, a WSA was prepared for the Project and includes a comprehensive assessment of historical demands and a projection of future demands based on forecasted development of the remaining developable lands within the Town's water service area (Appendix K).

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.

County of San Bernardino Integrated Waste Management Plan

In order to reduce our dependence upon landfilling of solid waste, and to ensure adequate disposal capacity, the Integrated Waste Management Act of 1989 (known as AB 939 or the IWM Act) was passed by the California Legislature. The IWM Act established a hierarchy of preferred waste management practices: (l) Source Reduction, to reduce the amount of waste generated at its source; (2) Recycling and Composting; and (3) Disposal. The disposal of waste must be cut by 25% by 1995, and by 50% by 2000. Percentages are based on 1990 levels and adjusted for changes in population and economic conditions.

The preparation of the Countywide Integrated Waste Management Plan (CIWMP; County of San Bernadino 2018) is one of the requirements of the IWM Act. The CIWMP consists of 4 elements and a Summary Plan. Each jurisdiction (Cities and the County) prepared the first 3 elements: (l) Source Reduction and Recycling Element (SRRE), which analyzed the local waste stream to determine where to focus diversion efforts and developed diversion programs and funding; (2) Household Hazardous Waste Element (HHWE), which provides a framework for recycling, treatment, and disposal practices; and (3) Nondisposal Facility Element (NDFE), which lists planned and existing facilities such as material recovery facilities and composting facilities that recover waste from the waste stream.

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 water line approximately 1,500 feet west of the intersection of Johnson Road and Central Road. The Project proposes to construct a 16-inch diameter water line within Central Road and connect to the proposed warehouse building laterally.

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. As concluded by the reliability assessment included as part of the UWMP, water supply for Liberty Utilities-Apple Valley 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

The proposed Project would construct new sewer lines along Central Road and Lafayette Street. 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

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. Conservatively using the estimated total water demand for the Project as a basis for the wastewater generation rate, the Project would generate approximately 0.0356 mgd of wastewater.[1] Projected wastewater from the Project would represent approximately 0.49% 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 composed 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 proposed Project would be required to adhere to local drainage control requirements in accordance with the San Bernardino County Hydrology Manual. The proposed stormwater drainage system includes retention/detention basins that 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 storm and at least 95% of the 100-year storm, with only very low flows being discharged off site.

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

[1] The total water supply demand was provided in the WSA that was prepared for the project and was based on other warehouse projects in the region (Appendix K).

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 ensure that it can provide adequate electrical service to the Project area. SoCalGas's Projections out to 2035 continue to show available capacity that is well above the existing and future anticipated natural gas demand in the area serviced by SoCalGas (California Gas and Electric Utilities 2022). There are a number of private telecommunications service providers that provide connections to their communication systems on an as-needed basis and maintain existing infrastructure in the vicinity of the Project site. Project demand for electricity, natural gas and telecommunications would be adequately served by existing infrastructure and capacity. Therefore, impacts associated with electric, natural gas, and telecommunication lateral connections would be less than significant.

Threshold B: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less-than-Significant Impact. Implementation of the proposed Project would result in the construction of a 1,080,125-square-foot industrial/warehouse building and associated improvements on 67.3 acres of vacant land.

Water demand for operation and maintenance of the Project during the anticipated operational life would require an estimated 40 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 would only be temporary. 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 then owing to the unknown plans of the future tenants, the highest demand was chosen with an extra buffer given to acknowledge the uncertainty.

Table 4.13-2. Water Usage for Example Warehouses

Business	Size (sq ft)	Gallons per day	Gal/day per sq foot
Big Lots	1,360,875	673	0.0005
Fresenius Medical Blue	150,000	378	0.003
Walmart DC	1,080,000	29,920	0.03

Source: Appendix K.
Notes: sq ft = square feet; Gal = gallons.

Table 4.13-3. Estimated Water Usage for Project

Business	Size (sq ft)	Gal/day per sq foot	Gal/day	AFY
1M Warehouse Project	1,080,125	0.0005	540	0.60
1M Warehouse Project	1,080,125	0.003	3,240	3.63
1M Warehouse Project	1,080,125	0.03	32,404	36.30

Source: Appendix K.
Notes: sq ft = square feet; Gal = gallons; AFY = acre-feet per year.

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 estimated water demand of approximately 40 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 proposed Project would be accounted for within this growth, as the Project is consistent with the underlying Town zoning designations for the Project site via the North Apple Valley Industrial Specific Plan.

The UWMP and Project specific WSA (Appendix K) identifies a sufficient and reliable water supply for Liberty Utilities-Apple Valley's service area with a history of meeting demands and acknowledgement of future projects that should increase recycled water supply going forward. As a result, it was determined that there is 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. Assuming a conservative wastewater generation rate that is equal to the total water demand as estimated in the WSA, the Project would generate approximately 0.0356 mgd of wastewater. Projected wastewater from the Project would represent approximately 0.49% 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 and based on estimations that were derived from the air quality modeling that was conducted for the air quality analysis.[2] 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)
Unrefrigerated Warehouse – No Rail	1,000 square feet	296.81	0.94 tons per 1,000 square feet per year	279
Unrefrigerated Warehouse – Rail	1,000 square feet	782.98	0.94 tons per 1,000 square feet per year	736
			Total	**1,015**

Source: Appendix A.

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 0.093% 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

[2] The CalEEMod accounted for the differences between car trips and truck trips by dividing the site and characterizing it as an unrefrigerated warehouse with rail connections and without rail connections.

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 2023c). 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 San Bernardino 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

Development of the Project would increase water demand (approximately 40 AFY) 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 is also 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 5-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.

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, single-dry, and multiple-dry years. No mitigation is required.

Threshold C: Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

The Project would result in less-than-significant impacts with regard to the capability of the Project's future wastewater treatment provider to serve the Project, in addition to the provider's existing commitments. No mitigation is required.

Threshold D: Would the Project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The Project would result in less-than-significant impacts with regard to the generation of solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. No mitigation is required.

Threshold E: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The Project would result in less-than-significant impacts to compliance with federal, state, and local management and reduction statutes and regulations related to solid waste. No mitigation is required.

Threshold F: Would the Project result in cumulatively considerable impacts related to utilities and service systems?

The Project would result in less-than-significant cumulative impacts related to utilities and service systems. No mitigation is required.

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5 Effects Found Not To Be Significant

Section 15128 of the California Environmental Quality Act (CEQA) guidelines requires that an environmental impact report (EIR) briefly describe potential environmental effects that were determined not to be significant during preparation of the initial study (Appendix A) and therefore were not discussed in detail in the EIR. The environmental issues discussed in the following sections are not considered significant for the 1M Warehouse Project (Project), and the reasons for these less-than-significant impact or no impact determinations are discussed herein.

5.1 Agricultural and Forestry Resources

Would the Project:

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

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.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Agricultural Zoning and Williamson Act Contracts

According to the Town of Apple Valley (Town) 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 Specific Plan Industrial uses (Town of Apple Valley 2012). 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.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

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.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

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.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

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

Would the Project:

a) directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving:

ii) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Fault Rupture

The Alquist–Priolo Earthquake Zoning Act requires the delineation of fault zones along active faults in California. The purpose of the Alquist–Priolo Earthquake Zoning 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.

ii) Strong seismic ground shaking?

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, no impacts associated with strong seismic ground shaking would occur.

iii) Seismic-related ground failure, including liquefaction?

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, no impacts associated with potential seismic-related ground failure, including liquefaction, would occur.

iv) Landslides?

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.

b) Result in substantial soil erosion or the loss of topsoil?

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 a building, 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, no operational impacts related to soil erosion would occur.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

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, no impacts would occur.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive Soil

Expansive soils are characterized by their potential shrink/swell behavior. Shrink/swell is the change in volume (contraction and expansion) 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, no impacts would occur.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

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

Would the Project:

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Hazardous Materials Use Near Schools

There are no schools within a 3-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.

d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

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.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Airport-Related Safety Hazards or Excessive Noise

The nearest operational public-use airport to the Project site is the Apple Valley Airport located approximately 0.65 miles to the southwest. According to the Comprehensive Airport Land Use Plan, the Project site is not located within a safety area or within an airport overlay district, which would have potential safety and noise impacts (Town of Apple Valley 1995). Therefore, no impacts would not occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impair or Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan

The Town's Emergency Operations Plan (EOP) (Town of Apple Valley 2014) guides its response to largescale emergencies and disasters. The EOP identified that the Apple Valley Police Department is the lead agency in evacuations. 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.

No permanent adverse impact to the emergency evacuation route function of Central Road would occur. The Project does not propose any changes to, nor would it interfere with, the Emergency Operations Plan. As a result, the Project would not significantly affect emergency response or evacuation activities. Therefore, no impacts would occur.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Wildland Fires

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 (CAL FIRE 2021). 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, wildfires in the immediately surrounding area are not common, and it is unlikely that Project occupants would be exposed to the uncontrolled spread of a wildfire or prolonged pollutant concentrations in the event of a wildfire. It is not anticipated that the Project, due to slope, prevailing winds, and other factors, would exacerbate wildfire risks or expose Project occupants to pollutant concentrations from a wildfire, the uncontrolled spread of a wildfire, or significant risks associated with wildfires. Therefore, no long-term operational impacts associated with exposing people or structures to a significant risk of loss, injury, or death involving wildland fires would occur.

5.4 Land Use and Planning

Would the Project:

a) Physically divide an established community?

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.

5.5 Mineral Resources

Would the Project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

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.

5.6 Population and Housing

Would the Project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Inducement Population Growth

The Project would require a temporary construction workforce and a permanent operational workforce, both of which could potentially induce population growth in the Project area. The temporary workforce would be needed to construct the warehouse building and associated improvements. The number of construction workers needed during any given period would largely depend on the specific stage of construction but would likely range from a dozen to several dozen workers on a daily basis. These short-term positions are anticipated to be filled primarily by construction workers who reside in the Project site's vicinity; therefore, construction of the Project would not generate a permanent increase in population within the Project area.

Because the future tenants are not known yet, the number of jobs that the Project would generate cannot be precisely determined; however, an estimate can be made. Thus, for purposes of analyses, employment estimates were calculated using average employment density factors reported by the Southern California Association of Governments. The Southern California Association of Governments reports that for every 1,195 square feet of warehouse space in San Bernardino County, the average numbers of jobs supported is one employee (Natelson Company Inc. 2001). The Project would include 1,080,125 square feet of industrial/warehouse space, excluding

associated improvements. As such, the estimated number of employees required for operation would be approximately 904.

According to the 2010 U.S. Census, the population of the Town was approximately 69,135 residents (Town of Apple Valley 2009b). 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 904 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, no impacts would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

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.

5.7 Public Services

Would the Project:

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:

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

[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.

50, Uncommon Developers (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.

Parks

The Project would construct one industrial/warehouse building 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.

5.8 Recreation

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Existing, Expanded, and New Recreation Facilities

The Project would construct one 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.

5.9 Wildfire

Would the Project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Impair or Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan

The Town's Emergency Operations Plan (EOP) (Town of Apple Valley 2014) guides its response to largescale emergencies and disasters. The EOP identified that the Apple Valley Police Department is the lead agency in evacuations. 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.

No permanent adverse impact to the emergency evacuation route function of Central Road would occur. The Project does not propose any changes to, nor would it interfere with, the Emergency Operations Plan. As a result, the Project would not significantly affect emergency response or evacuation activities. Therefore, no impacts would occur.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Exacerbate Wildfire Risk due to Slope, Prevailing Winds, and Other Factors

The California Department of Forestry and Fire Protection's Fire Hazard Severity maps indicate 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 (CAL FIRE 2021). 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, no impacts would occur associated with the spread of wildfire.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

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 stormwater pollution prevention plan requirements, which would reduce potential impacts associated with construction of these facilities to below a level of significance. Therefore, no impacts would occur associated with infrastructure exacerbating fire risk.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

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 in Section 5.2, Geology and Soils, 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. Implementation of the Project would result in construction and operational activities upon a currently undeveloped, vacant site. Such activities could potentially have an adverse effect on existing drainage patterns. However, due to the flat topography of the Project area, these potential changes to existing drainage patterns would not expose people or structures to significant risks. Therefore, no impacts would occur associated with runoff, post-fire slope instability, or drainage changes.

5.10 References

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6 Other CEQA Considerations

6.1 Growth-Inducing Impacts

As stated in Section 15126.2(e) of the California Environmental Quality Act (CEQA) Guidelines, an environmental impact report (EIR) is required to include a discussion of a project's growth-inducing effects. The CEQA Guidelines generally describe such effects as follows: (1) economic growth, population growth, or additional housing in the surrounding environment; (2) removal of obstacles to population growth (e.g., a major expansion of a wastewater treatment facility that allows for more construction in the service area); (3) increases in population that tax existing services requiring construction of new facilities that could cause significant environmental effects; and (4) characteristics of a project that would encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The 1M Warehouse 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 calculated using average employment density factors reported by the Southern California Association of Governments. The Southern California Association of Governments reports that for every 1,195 square feet of warehouse space in San Bernardino County, the average numbers of jobs supported is one employee (Natelson Company Inc. 2001). The Project would include 1,080,125 square feet of industrial/warehouse space, excluding associated improvements. As such, the estimated number of employees required for operation would be approximately 904.

The Town has a population of approximately 75,867 residents, according to the U.S. Census Bureau (U.S. Census Bureau 2022). 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 904 employees would represent a nominal percentage of the Town's projected future population upon General Plan build-out.[1] 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. In addition, since the surrounding Project area is already served by existing wet and dry utilities, the Project would not expand sanitary sewer or stormwater drainage infrastructure into areas not previously served by such utilities.

Further, given that the surrounding Project area is already served by existing wet and dry utilities, it is unlikely that the Project would tax existing community service facilities or require construction or expansion of new regional-

[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.

scale facilities with capacity to serve more than just the Project. Thus, the Project would not result in indirect population growth by providing vehicular access to an area presently lacking such access.

Based on the proximity of the Project site to existing facilities, the average response times in the Project area, the ability for nearby cities to respond to emergency calls, and the fact that the Project site is already located within the San Bernardino County Fire Department and San Bernardino County Sheriff's Department service areas, the Project would be adequately served by public services without the construction of new, or the expansion of existing, facilities. Although the Project could potentially result in an incremental increase in calls for service to the Project site compared to existing conditions, this increase is expected to be nominal (as opposed to new residential or commercial/retail land uses, which do result in greater increase in calls for service) and would not result in the need for new or expanded fire or police facilities. Lastly, since the Project would not directly or indirectly induce unplanned population growth in the 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 2022). 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 1,080,125 square 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 Town. According to the Town's General Plan, the Project site falls within the North Apple Valley Industrial Specific Plan land use designation (Town of Apple Valley 2009) (see Figure 3-4, Land Use Designations, and Figure 3-5, Zoning).

According to the North Apple Valley Industrial Specific Plan, the land use designation for the site is Specific Plan Industrial (Town of Apple Valley 2012) (see Figure 3-6, Specific Plan Land Use Designations). As discussed in Chapter 5, Effects Found Not To Be Significant, 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, Specific Plan, and the Town of Apple Valley Municipal Code. As such, although construction of the Project would develop a total of 1,080,125 square feet of industrial/warehouse space on the Project site, the Town has already committed the site to industrial/warehouse (and similar) uses when the Town designated and zoned the site as Specific Plan Industrial.

Land uses surrounding the Project site include light industrial, the Apple Valley Airport, and scattered residential uses. The land use proposed as part of the Project would be consistent with existing development that was implemented consistent with the Town's planning and zoning documents and would further assist the Town in implanting its land use vision for the area. Thus, the Project would not result in land use changes that would commit future generations to uses that already occur in the Project area, particularly given that this proposed use is consistent with long term planning documents and consistent with nearby uses.

6.2.2 Irreversible Damage from Environmental Accidents

Potential environmental accidents of concern include those events that would adversely affect the environment or public due to the type of quantity of materials released and the receptors exposed to that release. Construction activities associated with the Project would involve some risk of environmental accidents. However, these activities would be conducted in accordance with all applicable federal, state, and local regulations, and would follow professional industry standards for safety. Once operational, any materials associated with environmental accidents would comply with applicable federal, state, and local regulations. Use of any such materials would not adversely affect the environment or public due to the type or quantity of materials released and the receptors exposed to that release.

6.2.3 Large Commitment of Nonrenewable Resources

Commitment of nonrenewable resources includes issues related to increased energy consumption, loss of agricultural lands, and lost access to mining reserves. There would be an irretrievable commitment of labor, capital, and materials used during the construction and operation of the Project. Nonrenewable resources would primarily be committed in the form of fossil fuels such as fuel, oil, natural gas, and gasoline used by equipment associated with construction of the Project. Consumption of other nonrenewable or slowly renewable resources would also occur. These resources would include lumber and other forest products, sand and gravel, asphalt, and metals such as steel, copper, and lead.

To ensure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (California Public Resources Code Section 21100[b][3]). Energy conservation implies that a project's cost-effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, cost-effectiveness may be determined more by energy efficiency than by initial dollar costs. A lead agency may consider the extent to which an energy source serving a project has already undergone environmental review that adequately analyzed and mitigated the effects of energy production.

Consistent with California Public Resources Code Section 211009(b)(3), CEQA Guidelines Appendix G, and a ruling set forth by the court in *California Clean Energy Committee v. City of Woodland*, potentially significant energy implications of a project must be considered in an EIR to the extent relevant and appliable to that project.

Accordingly, based on the energy consumption thresholds set forth in both Appendix F and Appendix G of the CEQA Guidelines, the Project's estimated energy demands (both short-term construction and long-term operational demands) were evaluated (see Section 4.5, Energy, of this EIR). The overall purpose of the energy analysis was to evaluate whether the Project would result in the wasteful, inefficient, or unnecessary consumption of energy.

As further assessed in the energy analysis, for new development, such as that proposed by the Project, compliance with California Title 24 energy efficiency requirements is considered demonstrable evidence of efficient use of energy. The Project would provide for and promote energy efficiencies beyond those required under other applicable federal and state standards and regulations, and in doing so would meet or exceed all Title 24 standards. On this basis, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy.

6.3 Significant and Unavoidable Impacts

Pursuant to CEQA Guidelines Section 15126.2(b), an EIR must address any significant environmental impacts, including those that can be mitigated but not reduced to less than significant as a result of implementation of a project. As discussed throughout Chapter 4, Environmental Analysis, of this EIR, at the Project and cumulative levels, the Project would result in significant and unavoidable impacts related to greenhouse gas emissions and transportation. For all other environmental issue areas, the Project would result in either less-than-significant impacts or no impact.

Greenhouse Gas Significant Unavoidable Impact

After mitigation, the Project would still exceed the applied threshold of 3,000 MT CO2e per year by approximately 18,170 MT CO2e. No feasible mitigation measures beyond those already identified 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.

Transportation Significant Unavoidable Impacts

Development of the proposed Project is forecast to exceed the Town's VMT per Service Population impact threshold by 20.8% in the baseline conditions and 80.4% in the cumulative conditions. Therefore, the Project would have a potentially significant impact on project-generated VMT. The effectiveness of some of the VMT reduction measures is dependent on yet unknown tenant(s) and employee participation. Conservatively, this analysis assumes no reduction in VMT that may result from implementation of such measures and impacts remain potentially significant. Therefore, impacts would be significant and unavoidable.

Improvement measures required to mitigate the Project's LOS and queuing impacts would include fair-share contributions to intersection No. 5: I-15 NB Ramps - Outer I-15/ Stoddard Wells Road: Southbound approaches (AM and PM peak hours). Since Caltrans has jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy. Additionally, no programs or plans are in place to implement improvements at this interchange or collect fair-share contributions. Therefore, the Project's potential impact to increase in hazardous conditions (i.e., queuing) would be significant and unavoidable.

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 1M Warehouse 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.

7.1.1 Project Objectives

The Project's objectives are as follows:

- **Objective 1:** Develop an industrial building approximately 1,000,000 square feet ± in size 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.
- **Objective 5:** Implement the development patterns envisioned in the North Apple Valley Industrial Specific Plan.

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 of Apple Valley (Town) General Plan, the land use and zoning designation for the Project site is Specific Plan (SP). The Project site is located within the North Apple Valley Industrial Specific Plan and is designated as Specific Plan Industrial (I-SP). 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 Specific Plan Industrial designation. These land uses would require additional entitlements and discretionary approvals including an amendment to the Specific Plan.

Permitted uses in the I-SP designation include manufacturing facilities with showrooms and offices, regional warehousing facilities, and support services for manufacturing and warehousing. Land uses that deviate these activities, including

residential, standalone retail, mining, and residential mixed-use, are not identified in the North Apple Valley Industrial Specific Plan as being suitable within the I-SP zone (Town of Apple Valley 2006).

As such, without approval of a General Plan Amendment and Zone Change, which are discretionary approvals and are not required for the Project, residential, standalone retail, mining, 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 67.3-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., Interstate [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, mineral resources, 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 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. 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.

Project Alternative 1 Impact Conclusion

Overall, none of the mitigation measures (MMs) 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)

Under Alternative 2, the Project site would be redeveloped with other land uses, consistent with the property's I-SP designation.

Permitted uses in the I-SP designation include manufacturing facilities with showrooms and offices, regional warehousing facilities, and support services for manufacturing and warehousing. The North Apple Valley Industrial Specific Plan lists several different uses that are either specially or conditionally permitted under the I-SP designation. These include commercial storage facilities/mini-warehouses (i.e., self-storage facilities), offices, manufacturing, small and large equipment sales and rental, schools, vehicle rental and sales, minor and major vehicle repair, and vehicle wash facilities.

No zoning variances are being requested as part of the Project, and thus, the Project would be constructed consistent with the design requirements set forth for the I-SP designation in the North Apple Valley Industrial Specific Plan. 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. For purposes of this analysis, it assumed that Alternative 2 would consist of a 900,000 square-foot warehouse and 100,000 square-foot showroom (i.e., Ikea or similar). It is also assumed that this alternative would share a similar development intensity/floor-area-ratio/site coverage as the Project. Land uses that are expressly not allowed under the I-SP designation—specifically residential—would not be considered under Alternative 2.

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. Similar to the proposed Project, it is anticipated that impacts associated with air quality, greenhouse gas emissions, and transportation would still be significant and unavoidable. Thus, it is expected that environmental impacts associated with Alternative 2 would be similar to those environmental impacts resulting from implementation of the Project. This alternative would not avoid or substantially reduce the significant impacts of the Project, although it would meet all of the project objectives.

Aesthetics

Under Alternative 2, the Project would be constructed and operated as planned on the Project site. Alternative 2 would still involve the development of approximately 1,000,000 square feet of warehouse and showroom space, which would still be the primary visual feature on the Project site. For these reasons, aesthetics impacts would be similar under Alternative 2.

Air Quality

Under Alternative 2, the extent of construction activities would be the same compared to the Project. Thus, construction-related air quality emissions would not be reduced. As with the Project, Alternative 2 would require mitigation measures to reduce short-term construction emissions of VOC. With required mitigation, construction of Alternative 2, 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.

However, long-term operation of Alternative 2 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. Alternative 2 would generate an increase in average daily vehicle trips compared to the Project, and impacts due to a conflict with the regional air quality standard and the level of contribution to an existing air quality violation would remain, and would be slightly increased. As such, Alternative 2 would not reduce, or 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 2. Similar to the Project, emissions under Alternative 2 would be above the MDAQMD thresholds of significance. Therefore, air quality impacts would not be reduced to less-than-significant levels under Alternative 2, and may even be slightly increased due to the increase in trip generation.

Biological Resources

Under Alternative 2, the Project would be constructed and operated as planned on the entire Project site, and development intensity would not be reduced. Alternative 2 would develop the entirety of the Project site, resulting in a similar overall building footprint. As such, the project site and potential suitable habitat would still be disturbed as a result of development activities, which would not reduce impacts from a biological resources perspective. Therefore, biological resources impacts would be similar under Alternative 2.

Cultural, Tribal Cultural, and Paleontological Resources

Under Alternative 2, the Project would be constructed and operated as planned on the Project site, and with a similar development intensity. Similar to the Project, 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 2.

Energy

The level of construction activities would not be reduced under Alternative 2 compared to the Project. Thus, construction-related energy usage would be the same as the project. Alternative 2 would not generate fewer vehicle trips per day due and would not have a less building space than the Project as proposed; thus, on-site and mobile energy consumption would be similar to the Project. Accordingly, energy usage associated with long-term operation of Alternative 2 would be similar compared to the Project. Therefore, energy impacts would not be reduced under Alternative 2.

Greenhouse Gas Emissions

Similar to air quality, the extent of construction activities would be similar under Alternative 2 compared to the Project. Thus, construction-related GHG emissions would not be lessened. Alternative 2 would generate an increase in vehicle trips per day due to the use onsite with a 900,000 square-foot warehouse and 100,000 square-foot showroom (i.e., Ikea or similar). Accordingly, GHG emissions associated with long-term operation of Alternative 2 would be slightly increased 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 2 would not 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. Similar to the Project, impacts would still remain significant and unavoidable.

Hazards and Hazardous Materials

Under Alternative 2, the Project would be constructed and operated as planned on the site, and with a similar development intensity. Incorporation of MM-HAZ-1 would still be required under Alternative 2, 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 2, the cleanup activities required pursuit to MM-HAZ-1 would be initiated, and the Project would still help to remediate the Project site through compliance with MM-HAZ-1. Therefore, hazards and hazardous materials impacts would be similar under Alternative 2.

Hydrology and Water Quality

Under Alternative 2, 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 2, 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 2.

Land Use and Planning

Similar to the proposed Project, Alternative 2 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 2, Alternative 2 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 2.

Noise

Noise associated with Alternative 2 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 2 would generally cover the same physical area. The types of construction equipment used and the types of construction activities conducted on site would be similar under Alternative 2, and the peak daily noise levels generated during the construction phase would also be similar.

Under long-term operational conditions, noise generated by Alternative 2 would primarily be associated with vehicles traveling to and from the site, and on-site vehicle idling, maneuvering, and parking. Alternative 2 would generate an increase in daily trips compared to the Project, and, as such, would contribute to an increase in traffic-related noise to local roadways compared to the Project. The increase in traffic noise associated with Alternative 2 would continue to be noticeable to residents along the roadway segments impacted by the Project. Therefore, noise impacts would be slightly increased, but similar, under Alternative 2 due to the increase in traffic trips and associated noise.

Transportation and Traffic

In addition, the trip generation rate used to analyze the Project's estimated trip generation (refer to the Transportation Impact Analysis prepared for the Project [Appendix J]) assumed that the Project would support general light industrial and high-cube warehousing uses. Light industrial and high-cube warehousing uses often have lower trip generation rate (either daily or peak hour) than some of the other land uses that are permitted by

right or conditional permitted in the CIBP zone, including but not limited to manufacturing facilities with showrooms and offices, regional warehousing facilities, and support services for manufacturing and warehousing (higher daily and peak hour trip generation rates). Based on the trip generation rates provided by the Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition, 2021., a "discount home furnishing super store" (900,000 square-foot warehouse and 100,000 square-foot showroom (i.e., Ikea or similar)) would result in daily trips of 20.00 trips per day per 1,000 square feet (TSF) which equals 20,000 daily trips; 570 trips per day during the AM peak hour; and 1,570 trips during the PM peak hour. High-cube warehousing (non-sort), which was the land use used to analyze the proposed Project, would generate 2,784 daily trips; 231 trips during the AM peak hour; and 246 trips during the PM peak hour. As such, a 900,000 square-foot warehouse and 100,000 square-foot showroom (i.e., Ikea or similar) 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 greenhouse gas (GHG) emissions, and traffic noise under Alternative 2.

VMT is largely dependent on the specific land use type of a particular project and the location of that project. Thus, the average trip length for passenger vehicle and truck trips associated with the Project would essentially remain constant. In addition, the Project's VMT per employee would also stay relatively the same under Alternative 2 as the Project's VMT per employee. Therefore, transportation impacts with regard to VMT would be similar under Alternative 2.

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 a similar building-square footage and slight increase in trip generation, this intersection would continue to experience these issues. Improvement measures would still be required for Alternative 2; however, because the affected intersection is outside of the Town'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 2.

Utilities and Service Systems

Under Alternative 2, the Project would be constructed and operated as planned on the Project site, with a similar development intensity. All other on- and off-site improvements proposed as part of the Project are assumed to still be required under Alternative 2. 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 2.

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 trip generation may be greater than those resulting from implementation of the Project, given that a warehouse and showroom have a higher peak-hour and/or daily trip-generation rate.

As a 900,000 square-foot warehouse and 100,000 square-foot showroom (i.e., Ikea or similar) land use on the Project site, Alternative 2 would be expected to satisfy all of the Project objectives, including developing an industrial

building to meet the growing demand for large-format logistics and warehouse buildings in the region (objective 1); developing a jobs-producing and tax generating land use in north Apple Valley (Objective 2); concentrating non-residential uses near existing roadways, highways, and freeways (Objective 3); creating a project that takes advantage of and enhances existing infrastructure, including the proximity to major regional roadways such as I-15 and U.S. Highway 395, railroad service corridors, and other similar infrastructure (Objective 4); and implementing development patterns envisioned in the North Apple Valley Industrial Specific Plan (Objective 5).

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, GHG 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

As such, in an effort to reduce the Project's significant and unavoidable impacts, the Town considered a Reduced Development Intensity Alternative (Alternative 3). A Reduced Development Alternative would reduce project-related impacts associated with air quality, energy, GHG emissions, and trip generation.

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 60%, equating to an industrial/warehouse project consisting of approximately 432,050 square feet, compared to the Project's 1,080,125 square feet. Since the building footprint would be reduced by 648,075 square feet (approximately 14.8 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 60% compared to the Project. As a result, it is assumed that a similar reduction in the duration of construction activities and operational intensity 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 reduced under Alternative 3; however, impacts would not be substantially reduced or reduced below a level of significance. The environmental impacts that would have a reduction in severity include aesthetics, air quality, energy, and GHG emissions. However, because the development intensity would be reduced under Alternative 3 compared to the Project, certain environmental impacts would differ as a result of this reduction, as the following analysis demonstrates.

Aesthetics

Under Alternative 3, the Project would be constructed and operated as planned on the Project site, with the exception that the size of the proposed development would be reduced by 60%, equating to the 648,075 square feet (approximately 14.8 acres) of extra space on the Project site that would likely be left undeveloped. A reduction in building square footage would reduce the scale and massing of the buildings. Nonetheless, Alternative 3 would still involve the development of approximately 432,050 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, the undeveloped portion of the site 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. In order to reduce potentially significant impacts associated with GHG, the project would need to be reduced in size by 86%. Based on a 60% reduction in development, 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 activities required pursuit to MM-HAZ-1 would be initiated, and the Project would still help to remediate the Project site through compliance with MM-HAZ-1. Therefore, hazards and hazardous materials impacts would be similar under Alternative 3.

Hydrology and Water Quality

Under Alternative 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 60% 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 Town'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 60%. All other on- and off-site improvements proposed as part of the Project are assumed to still be required under Alternative 3. As such, the same wet and dry utilities would be required, with construction and operational characteristics of these on- and off-site improvements being similar to the Project. Therefore, utilities and service systems impacts would be similar under Alternative 3.

Alternative 3 Impact Conclusion

Based on the above, given that Alternative 3 would result in incremental reductions in both construction activity, daily operational trips on Project area roadways, and a reduction in the scale of the proposed buildings, Alternative 3 result in incremental reductions in the severity of impacts related to aesthetics, air quality, energy, and GHG emissions. Although impacts would be incrementally reduced, impacts would not be substantially reduced, or reduced below a level of significance. In the case of air quality and GHG, the reductions in Project-related trips would not be substantial enough as to reduce impacts to below a level of significance. Impacts associated with

energy and noise are less than significant under both the Project and Alternative 3 scenarios, although emissions would be lessened under Alternative 3. All of the same mitigation measures required for the Project would be necessary for Alternative 3, and no new measures would be required.

Impacts associated with agriculture and forestry resources, biological resources, cultural, tribal cultural, and paleontological resources, geology and soils, hazards, hazardous materials, and wildfire, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, noise, transportation, and utilities and service systems would generally be the same under Alternative 3 compared to the Project.

Alternative 3 would be expected to satisfy many of the Project objectives, concentrating non-residential uses near existing roadways, highways, and freeways (Objective 3); creating a project that takes advantage of and enhances existing infrastructure, including the proximity to major regional roadways such as I-15 and U.S. Highway 395, railroad service corridors, and other similar infrastructure (Objective 4); and implementing development patterns envisioned in the North Apple Valley Industrial Specific Plan (Objective 5). However, in regards to developing a jobs-producing and tax generating land use in north Apple Valley (Objective 2), Alternative 3 would create 362 jobs compared to the 904 that would be generated by the proposed project, which is a reduction of 542 jobs. In addition, Objective 1 is to develop an industrial building approximately 1,000,000 square feet in size to meet the growing demand for large-format logistics and warehousing buildings in the region. Alternative 3 would not meet this project objective.

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.

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, and significant and unavoidable impacts not avoided	Lessened, but significant and unavoidable impacts still not avoided
Biological Resources	Less-than-Significant with Mitigation	Avoided	Similar	Similar

Table 7-1. Project Alternatives Environmental Impacts Comparison

Environmental Issue	Project	No Project/No Development Alternative (Alternative 1)	Other Development Project Alternative (Alternative 2)	Reduced Development Intensity Alternative (Alternative 3)
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, and significant and unavoidable impacts not avoided	Lessened, but significant and unavoidable impacts still not avoided
Hazards, Hazardous Materials, and Wildfire	Less-than-Significant with Mitigation	Greater	Similar	Similar
Hydrology and Water Quality	Less-than-Significant	Greater	Similar	Similar
Land Use and Planning	Less-than-Significant	Similar	Similar	Similar
Noise	Less-than-Significant	Avoided	Similar	Similar
Public Services	Less-than-Significant	Avoided	Similar	Similar
Transportation and Traffic	Significant and Unavoidable	Avoided	Greater, and significant and unavoidable impacts not avoided	Lessened, but significant and unavoidable impacts still not avoided
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, 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. Although Alternative 3 would reduce impacts compared to the proposed project, it would not avoid or substantially lessen impacts to below a level of significance. Alternative 2 would result in similar impacts as the project, but with and increase in trip generation rates, and would meet all of the project objectives.

However, Alternative 3 would not meet project Objective 1 of developing an industrial building approximately 1,000,000 square feet in size. Alternative 3 would also not meet Objective 2 to the same extent as the proposed project. Alternative 3 would produce less jobs and generate less tax revenue compared to the proposed project. In addition, Alternative 3 would also not meet Objective 5 to the same extent as the proposed project. Therefore, while Alternative 3 would have reduced impacts compared to the proposed project, it would not eliminate any of the significant and unavoidable impacts and it would not meet all project objectives.

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 an industrial building approximately 1,000,000 square feet ± in size to meet the existing and growing demand for large-format logistics and warehouse buildings in the region.	Yes	No	Yes	No
Objective 2: Develop a fiscally sound, jobs-producing, and tax-generating land use in north Apple Valley.	Yes	No	Yes	Not to the same extent as the proposed project.
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.	Yes	No	Yes	Yes
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.	Yes	No	Yes	Yes
Objective 5: Implement the development patterns envisioned in the North Apple Valley Industrial Specific Plan.	Yes	No	Yes	Not to the same extent as the proposed project.

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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