



INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

FIRE STATION #49 PROJECT
Community of Lake Tamarisk,
Riverside County, California



April 2022

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SUMMARY OF MITIGATION MEASURES

Biological Resources

- BIO-1** To maintain compliance with the Migratory Bird Treaty Act and California Fish and Game Code, if ground-disturbing and/or vegetation clearance activities are scheduled to occur during the avian nesting season (typically February 15 through August 31), a qualified biologist shall conduct a preconstruction nesting bird survey within the Project impact footprint and a 500-foot buffer where legal access is granted around the disturbance footprint. Surveys shall be conducted within 3 days prior to initiation of ground-disturbing activities. If an active nest is detected during the nesting bird survey, avoidance buffers shall be implemented as determined by a qualified biologist (typically 300 feet for passerines and 500 feet for raptors and special-status species). The buffer shall be of a distance to ensure avoidance of adverse effects to the nesting bird by accounting for buffering topography and buildings, ambient conditions, species, nest location, and activity type. All nests shall be monitored as determined by the qualified biologist until nestlings have fledged and dispersed or it is confirmed that the nest has been unsuccessful or abandoned. The qualified biologist shall halt all construction activities within proximity to an active nest if it is determined that the activities are harassing the nest and may result in nest abandonment or take. The qualified biologist shall also have the authority to require implementation of avoidance measures related to noise, vibration, or light pollution if indirect impacts are resulting in harassment of the nest.
- BIO-2** A qualified biologist (someone with at least 5 years of conducting surveys for the species) will conduct a desert tortoise survey one week prior to the start of construction. The survey will consist of 10-meter-wide belt transects that covers the Project site and an adequate buffer (up to 500- feet) to ensure 100% coverage of the site and adjacent areas of influence. Any individuals, burrows constructed by the species, scat, and carcasses will be recorded and mapped using ESRI ArcGIS mobile application with submeter accuracy. Any desert tortoise burrows found within 100-feet of the Project will be flagged for avoidance. The survey will then be repeated 72 hours prior to the start of construction.

Cultural Resources

- CR-1** Prior to the seeking and/or issuance of a grading permit, the County and consulting Tribes will co-create a Tribal Monitoring Agreement (Agreement) that (1) assures a Tribal Monitor will be present during all grading, excavation, and ground-disturbing activities within the Project Area of Potential Effect and (2) discusses and delineates subjects including, but not limited to, (a) the monitors' scheduling; (b) the monitors' duties and/or SOW; (c) monitors' compensation by the applicant (Riverside County Facilities Management); (d) safety requirements; and (e) the protocols and stipulations that the County contractor, and Tribal Monitor, will follow in the event of inadvertent cultural resources discoveries. Stipulations for treatment and final disposition of any cultural resources, with the exception of human remains, funerary objects, and sacred objects are addressed in Mitigation Measure **CR-4**.
- CR-2:** The Tribal Monitor shall have the authority to stop and redirect grading in order to identify and preliminarily evaluate any cultural resource(s) discovered on the property. If the resource(s) is determined to hold potential significance, a 25-foot buffer shall be established and the relevant Tribes shall be immediately contacted by the Project supervisor to come to the Project site. The Tribal Monitor shall, in consultation with the consulting Tribes, determine the significance of the resource(s) and whether additional monitoring by an archaeologist or a tribal monitor needs to occur.
- CR-3:** In the event that Native American cultural resources are inadvertently discovered during the course of ground-disturbing activity for this Project, the following procedures will be carried out for treatment and disposition of the discoveries:
- Temporary Curation and Storage:** During the course of construction, all discovered resources shall be temporarily curated in a secure location onsite or at the offices of the Project Archaeologist. The removal of any

artifacts from the Project site will need to be thoroughly documented via inventory and conducted with Tribal Monitor(s) oversight of the process.

Treatment and Final Disposition: The County/applicant/contractor shall relinquish ownership of all cultural resources, including sacred items, unassociated funerary objects/burial goods, all archaeological artifacts, and non-human remains as part of the required mitigation for impacts to cultural resources. The County/applicant/contractor shall relinquish the artifacts through one or more of the following methods and provide the County with evidence of same:

- a. Accommodate the process for onsite reburial of the discovered items with the consulting Tribes. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing and basic recordation have been completed. A reburial site shall be documented as a new site and recorded with the Eastern Information Center;
- b. A curation agreement with an appropriately qualified repository within Riverside County that meets federal standards per 36 CFR Part 79 whereby the collections and associated records shall be transferred, including title, and accompanied by payment from the County/applicant of the fees necessary for permanent curation;
- c. On request by the consulting Tribe for repatriation of the discovered items, the County shall relinquish ownership and shall deliver the items to the custody of the consulting Tribe. For purposes of conflict resolution, if the consulting Tribes cannot come to an agreement as to the disposition of cultural materials, they shall be curated at the Western Science Center or Riverside Metropolitan Museum by default; and
- d. At the completion of any and all ground disturbing activities on the Project site, a Phase IV Monitoring Report shall be written by the Project Archaeologist and submitted to the County within 120 days of the completion of ground-disturbing activities related to the Project. This report shall (1) document monitoring activities conducted by the Project Archaeologist and Tribal Monitors; (2) document the impacts to the known resources on the property, if any; (3) describe how each mitigation measure was fulfilled; (4) document the type of cultural resources discovered during Project implementation, the treatment of those resources, and their disposition; (5) provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and (6) in a confidential appendix, include the daily/weekly monitoring notes from the Project Archaeologist. All reports produced will be submitted to the County, Eastern Information Center and consulting Tribes.

CR-4: If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then immediately identify the “most likely descendant(s)” of receiving notification of the discovery. The most likely descendant(s) shall then make recommendations within 48 hours, and engage in consultations concerning the treatment of the remains.

CR-5: If inadvertent discoveries of subsurface archaeological/cultural resources are discovered during grading, Riverside County, and the monitoring Tribe shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. Pursuant to California Public Resources Code § 21083.2(b) and 21084.3(b) avoidance is the preferred method of preservation for archaeological resources and tribal cultural resources. If the County and the monitoring Tribe cannot agree on the significance or the mitigation for such resources, these issues will be presented to the Riverside County Archaeologist. The County Archaeologist shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources and tribal cultural resources and shall take into account the religious beliefs, customs, and practices of the consulting Tribes.

Geology and Soils

GEO-1 In the event that any paleontological resources are unintentionally discovered during proposed Project construction, construction activities in the vicinity of the resource shall immediately halt and/or be moved to other parts of the Project site. A Riverside County-qualified paleontologist shall be retained by the County or their designee to determine the significance of the resource, if any. If the find is determined to be significant, avoidance or other appropriate measures including extraction and relocation, as recommended by the paleontologist, shall be implemented.

Noise and Vibration

NOI-1 A construction noise coordinator shall be established prior to construction and signage will be provided on site that will identify the designated person and contact number. The coordinator shall be responsible for receiving calls from residents regarding specific construction noise-related complaints. The coordinator would then be responsible for taking appropriate measures to reduce or eliminate noise levels as appropriate.

NOI-2 During construction, all staging areas and equipment shall be located and directed as far to the south as possible to avoid any disruptions to the sensitive receptors located north of the Project site.

NOI-3 Construction activity shall be prohibited during the hours of 6:00 p.m. and 7:00 a.m. and on weekends and County-designated holidays.

NOI-4 Construction equipment shall be properly maintained and equipped with mufflers and other State-required noise-attenuation devices.

INITIAL STUDY

INTRODUCTION

Environmental Assessment Determination

In accordance with Title 14 of the California Code of Regulations, Chapter 3 Guidelines for Implementation of the California Environmental Quality Act (CEQA) (State CEQA Guidelines) Section 15060 (Authority cited: Sections 21083 and 21087, Public Resources Code; Reference: Section 65944, Government Code; Section 21080.2, Public Resources Code), the determination of the type of environmental assessment documentation for compliance with CEQA, begins with a preliminary review of whether a proposed action is a Project under CEQA, and if the action is determined to be a Project under CEQA, a determination of whether the Project is exempt from CEQA. If the Lead Agency determines the Project is not subject to or is exempt under CEQA, the agency may prepare a Notice of Exemption as the appropriate form of environmental assessment. If the preliminary review conducted by the Lead Agency determines that the Project is subject to CEQA, and does not qualify under an exemption, the Agency shall prepare an Initial Study as the appropriate environmental assessment documentation. The Initial Study will determine whether a more detailed environmental assessment in the form of an Environmental Impact Report is required for the proposed Project or if a Negative Declaration or Mitigated Negative Declaration may be adopted to complete the CEQA review process under *State CEQA Guidelines* Section 15063(b), (c).

Subsequent to the preliminary review conducted by the County of Riverside (County) as the Lead Agency, the County has determined that the preparation of an Initial Study was required as the appropriate environmental assessment under CEQA for the proposed Riverside County Fire Station #49 North Shore Project (Project).

Purpose of the Initial Study

In accordance with *State CEQA Guidelines* Section 15063 (a) (Authority cited: Section 21083, Public Resources Code; Reference: Sections 21080(c), 21080.1, 21080.3, 21082.1, 21100 and 21151), the County has prepared an Initial Study to analyze the proposed Project to determine any potential significant impacts upon the environment that would result from construction and implementation of the proposed Project. This Initial Study is a preliminary analysis prepared by the County as Lead Agency, in consultation with other jurisdictional agencies, to inform the County decision makers, affected agencies, and the public of potential environmental impacts associated with the implementation of the Project.

Incorporation by Reference

Pertinent documents relating to this Initial Study have been cited and incorporated, in accordance with Sections 15148 and 15150 of the State CEQA Guidelines, to eliminate the need for inclusion of large planning documents within the Initial Study. Of particular relevance are those previous studies that present information regarding description of the environmental setting, future development-related growth, and cumulative impacts. The following documents are hereby identified as being incorporated by reference:

Riverside County General Plan, June 2003 and December 2015.

Desert Center Area Plan, December, 2015.

2015 Long Range Facilities Master Plan and Building Program Standards

Organization

The Initial Study is organized as follows:

Introduction: Provides the purpose for the Initial Study and applicable citations pursuant to CEQA and the *State CEQA Guidelines*.

County of Riverside Environmental Assessment Form/Initial Study Checklist: Provides the Project Description; existing environmental setting; the relationship of the Project to the County General Plan; and an environmental impact assessment for each impact area within the environmental checklist. After the assessment of each impact area, the source of information, a finding of fact, applicable mitigation measures, and monitoring responsibility are provided.

References: List of references used for the environmental analyses.

Environmental Process

The Initial Study for the proposed Project is being circulated to the public, responsible agencies, and trustee agencies for a 20-day public review period that begins on April 30, 2022 with the issuance of a Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) and a close of May 18, 2022. The NOI was sent via certified mail to property owners/residents within 1,000 feet of the Project; a notice was posted in the Desert Sun newspaper; and was posted at the Riverside County Clerk office. The Mitigated Negative Declaration and supporting documentation (Initial Study) were available for public review at Riverside County Facilities Management (FM), the FM website, and also at the Lake Tamarisk Public Library. The Mitigation Monitoring and Reporting Program (MMRP) is contained herein under Appendix A. Comments received during the public review period will be considered as part of the Project's environmental review and will be included for consideration by the Board of Supervisors. The Board of Supervisors may choose to adopt the Mitigated Negative Declaration should it be determined that the Project will have no significant, unmitigatable environmental effects.

COUNTY OF RIVERSIDE

ENVIRONMENTAL ASSESSMENT FORM/ INITIAL STUDY CHECKLIST

Environmental Assessment (EA) Number: 202202I

Project Name: Riverside County Fire Station #49 Project

Lead Agency Name: County of Riverside

Address: 3133 Mission Inn Avenue, Riverside, CA. 92507

Contact Person: Mike Sullivan

Telephone Number: 951.955.8009

Applicant's Name: County of Riverside Facilities Management

Applicant's Address: 3133 Mission Inn Avenue, Riverside, CA. 92507

I. PROJECT INFORMATION

A. Project Description:

The Riverside County Fire Department (RCFD) is one of the largest regional fire service organizations in California and serves an area of 7,206 square miles. This service area consists of the unincorporated county areas; 20 cities, and one CSD. The Fire Department operates 97 fire stations in 15 battalions, providing fire suppression, emergency medical, rescue, and fire prevention services. Prior to the establishment of the RCFD, the County of Riverside has maintained a contractual relationship with CAL FIRE (formerly the California Department of Forestry and Fire Protection) since 1921. County Fire was officially established in 1946 and continues to coordinate with CAL FIRE to respond to fires throughout Riverside County. The RCFD operates an integrated regionalized fire protection system, which strives for seamless operations between fire stations with a goal to locate fire stations such that there is some degree of overlap in the response loops. The RCFD is organized into geographic battalions with the Project site being within the geographic area of Battalion 6. In addition to providing fire protection and response services, The RCFD also provides hazardous materials incident response, emergency medical services, training for paid and volunteer emergency personnel, and other safety planning and emergency response services.

The Project consists of the construction of a new 8,896 square-foot fire station to replace the existing station. The Project site area, including parking and building footprint is on Assessor's Parcel Number (APN) 808-170-034 which comprises 1.5 acres of County-owned property. APN 808-170-029 is also County owned and contains the existing 2,073 square foot Lake Tamarisk Fire Station. The existing station has three garage bays and a covered structure to house the existing engines and access from the front and rear of the property. The existing fire station is an aged structure that was constructed in 1970 and is limited in both size and function. The replacement fire station would have two egress/ingress driveways from Tamarisk Drive, 24 parking spaces, with 12 reserved for staff, a 418 square foot hose house, an emergency generator, a fueling station, and trash enclosure. The new apparatus bay would be 24 feet in height, with three doors, and a circular driveway allowing equipment to enter and exit without needed to backup.

The County Fire 2009 Building Program Standards and 2015 Long Range Facilities Master Plan identified design requirements to accommodate the development and maintenance of fire stations that could effectively and efficiently serve the surrounding populations and provide adequate fire protection services. These documents identified the need for an apparatus bay that houses all the fire-fighting equipment, sufficient storage areas, as well as living and office space. The Project site is currently vacant and located in the community of Lake Tamarisk which is a 55-plus 150-space mobile home and RV resort.

Figure 1 shows the regional location and the Project site, **Figure 2** shows the overall site plan, and **Figure 3** shows the site plan for the building. The topography of the site is flat, but gradually slopes in a northeastern direction. The Project site is at an elevation of approximately 725 feet above mean sea level. The proposed Project would entail the replacement of the existing fire station with the construction of a new fire station to improve local infrastructure and help ensure the safety and welfare of the community of Lake Tamarisk, and surrounding vicinity. Additional staffing would not be required for the replacement fire station. The Project would also involve utility alterations, including stormwater drainage improvements, electrical, water and sewer connections upgrades to provide service to the new building. Construction is anticipated to start in 2022 and would be completed by the end of 2022/beginning of 2023. The participating County agencies in this Project are RCFD and Facilities Management.

B. Type of Project: Site Specific Countywide Community Policy

C. Total Project Area: 1.5 acres

| | | | |
|-------------------------------|----------------|------------------------------|---------------------------------|
| Residential Acres: N/A | Lots: N/A | Units: N/A | projected No. of Residents: N/A |
| Commercial Acres: N/A | Lots: N/A | Sq. Ft. of Bldg. Area: N/A | Est. No. of Employees: N/A |
| Industrial Acres: N/A | Lots: N/A | Sq. Ft. of Bldg. Area: N/A | Est. No. of Employees: N/A |
| Other: Public Facility | Lots: 1.5 Acre | Sq. Ft. of Bldg. Area: 7,000 | Est. No. of New Employees: 0 |

D. Assessor's Parcel No(s): 808-170-034

E. Street References: The proposed Project is located at 49937 Lake Tamarisk Drive in the unincorporated community of Lake Tamarisk, which is northwest of Desert Center off of Interstate 10 and Highway 177

F. Section, Township & Range Description or reference/attach a Legal Description: The Project site is located within Township 5 South, Range 15 East, Section 14 Northwest, San Bernardino Baseline and Meridian, and is identified on the Desert Center 7.5-minute series United States Geologic Survey (USGS) Topographic Quadrangle map.

G. Brief description of the existing environmental setting of the Project site and its surroundings: The Project site is currently vacant and located in the community of Lake Tamarisk which is a 55-plus 150-space mobile home and RV resort. A substation is adjacent to the west and the existing fire station/library is located across Tamarisk Drive to the southwest. Lake Tamarisk, Lake Tamarisk Golf Course and clubhouse are located to the west and southwest respectively. There is additional vacant land adjacent to the north and east and low-density residences extending beyond to the east, south, north, and northwest. The land use designation under the General Plan for the site is Multiple Family Dwellings (MHDR). The Project site is zoned (R 2-5000). **Figure 1** illustrates the regional and local Project vicinity of the Project site and **Figure 2** shows the Project site and the location of the proposed improvements.

H. Public Agency Approvals: The proposed Project will require the approval by the County of Riverside Board of Supervisors. No other discretionary actions would be required by the Project. A grading and building permit will also be issued by Riverside County Facilities Management. The proposed improvements will be reviewed by Facilities Management prior to construction to ensure they meet all applicable standards.

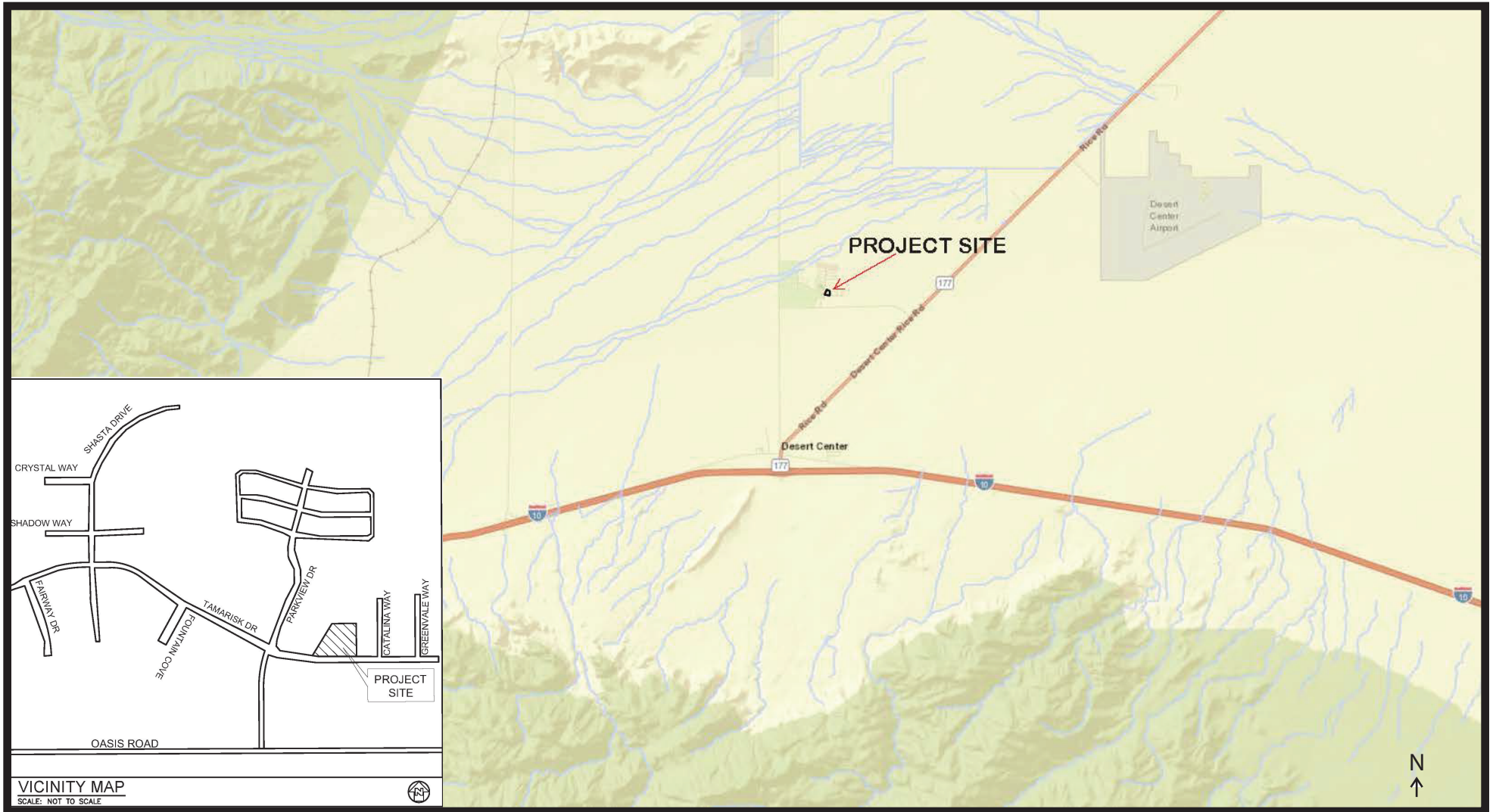


FIGURE 1
 Fire Station #49
 Regional and Project Location

II. APPLICABLE GENERAL PLAN AND ZONING REGULATIONS

A. General Plan Elements/Policies:

The proposed Project site is located within the unincorporated community of Lake Tamarisk within the Desert Center Area Plan of the County of Riverside General Plan. The Project site is located on County-owned land and relevant policies are identified.

- 1) **Land Use:** The Project site is designated as community development foundation with a medium high density residential land use under the Desert Center Area Plan. This area has been identified as having the potential to accommodate limited future expansion of the communities identified, provided that all potential environmental and community services and land use compatibility issues are satisfactorily addressed. Within the County's land use ordinance (Ordinance No. 348), there is no zoning classification for public facilities, as they are allowed within all zoning designations (except for Open Space) provided they are compatible with the surrounding land uses (LU 7.2). Fire Station #49 is an existing public facility that provides fire services to the community. The construction and operation of the proposed Project would not result in any changes or incompatibility with the County General Plan's land use designation of the Project site or adjacent uses.

County of Riverside General Plan

LU-4.1: Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding area through consideration of the following concepts:

- a. *Compliance with the design standards of the appropriate area plan land use category.*
- b. *Require that structures be constructed in accordance with the requirements of the County's zoning, building, and other pertinent codes and regulations.*
- c. *Require that an appropriate landscape plan be submitted and implemented for development Projects subject to discretionary review.*
- d. *Require that new development utilize drought tolerant landscaping and incorporate adequate drought-conscious irrigation systems.*
- e. *Pursue energy efficiency through street configuration, building orientation, and landscaping to capitalize on shading and facilitate solar energy, as provided for in Title 24 of the California Administrative Code.*
- f. *Incorporate water conservation techniques, such as groundwater recharge basins, use of porous pavement, drought tolerant landscaping, and water recycling, as appropriate.*
- g. *Encourage innovative and creative design concepts.*
- h. *Encourage the provision of public art.*
- i. *Include consistent and well-designed signage that is integrated with the building's architectural character.*
- j. *Provide safe and convenient vehicular access and reciprocal access between adjacent commercial uses.*
- k. *Locate site entries and storage bays to minimize conflicts with adjacent residential neighborhoods.*
- l. *Mitigate noise, odor, lighting, and other impacts on surrounding properties.*
- m. *Provide and maintain landscaping in open spaces and parking lots.*
- n. *Include extensive landscaping.*
- o. *Preserve natural features, such as unique natural terrain, drainage ways, and native vegetation, wherever possible, particularly where they provide continuity with more extensive regional systems.*

- p. *Require that new development be designed to provide adequate space for pedestrian connectivity and access, recreational trails, vehicular access and parking, supporting functions, open space, and other pertinent elements.*
 - q. *Design parking lots and structures to be functionally and visually integrated and connected.*
 - r. *Site buildings access points along sidewalks, pedestrian areas, and bicycle routes, and include amenities that encourage pedestrian activity.*
 - s. *Establish safe and frequent pedestrian crossings.*
 - t. *Create a human-scale ground floor environment that includes public open areas that separate pedestrian space from auto traffic or where mixed, it does so with special regard to pedestrian safety.*
- LU-5.1: *Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, transportation systems, and fire/police/medical services.*
- LU-5.3: *Review all Projects for consistency with individual urban water management plans.*
- LU-8.2: *Require that development protect environmental resources by compliance with the Multipurpose Open Space Element of the General Plan and Federal and State regulations such as CEQA, NEPA, the Clean Air Act, and the Clean Water Act.*
- LU 10.1 *Provide sufficient commercial and industrial development opportunities in order to increase local employment levels and thereby minimize long-distance commuting.*
- LU 12.2 *Locate employment and service uses in areas that are easily accessible to existing or planned transportation facilities.*

Additional Land Use Policies Unique to the 2015 County of Riverside General Plan

- LU 7.2 *Notwithstanding the Public Facilities designation, public facilities shall also be allowed in any other land use designation except for the Open Space-Conservation and Open Space-Conservation Habitat land use designations. For purposes of this policy, a public facility shall include all facilities operated by the federal government, the State of California, the County of Riverside, any special district governed by or operating within the County of Riverside or any city, and all facilities operated by any combination of these agencies.*
- LU 11.5 *Ensure that all new developments reduce Greenhouse Gas emissions as prescribed in the Air Quality Element and Climate Action Plan.*
- LU 18.1 ***Ensure compliance with Riverside County’s water-efficient landscape policies.*** *Ensure that projects seeking discretionary permits and/or approvals develop and implement landscaping plans prepared in accordance with the Water-Efficient Landscape Ordinance (Ordinance No. 859), the County of Riverside Guide to California Friendly Landscaping and Riverside County’s Friendly Plant List. Ensure that irrigation plans for all new development incorporate weather-based controllers and utilize state-of-the-art water-efficient irrigation components.*
- LU 18.2 ***Minimize use of turf.*** *Minimize the use of turf in landscape medians, front-yard typical designs, parkways, other common areas, etc. and use drought tolerant planting options, mulch, or a combination thereof as a substitute. Limit the use of natural turf to those areas that serve a functional recreational element. Incorporate other aesthetic design elements, such as boulders, stamped concrete, pavers, flagstone, decomposed granite, manufactured rock products to enhance visual interest and impact.*

LU 18.3 Design and field check irrigation plans to reduce run-off. Emphasize the use of subsurface irrigation techniques for landscape areas adjoining non-permeable hardscape. Utilize subsurface irrigation or other low volume irrigation technology in association with long, narrow, or irregularly shaped turf areas. Minimize use of irregularly shaped turf areas.

- 2) **Circulation:** The proposed Project consists of the construction and operation of a replacement fire station. The Project would add staff and equipment but would not substantially increase the capacity of the existing station. There would be no substantial increase in vehicle trips associated with the Project and no effects would occur to the transportation network. The following General Plan Circulation policies and Facilities Master Plan and Building Standards would be relevant to the Project.

County of Riverside General Plan

- C 1.4: Utilize existing infrastructure and utilities to the maximum extent practicable and provide for the logical, timely, and economically efficient extension of infrastructure and services.*
- C 2.1: Maintain the following countywide target Levels of Service: LOS "C" along all County-maintained roads and conventional state highways. As an exception, LOS "D" may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Arterials, Urban Arterials, Expressways, conventional state highways or freeway ramp intersections.*
- C 2.3: Traffic studies prepared for development entitlements (tracts, plot plans, public use permits, conditional use permits, etc.) shall identify Project-related traffic impacts and determine the significance of such impacts in compliance with CEQA.*
- C 2.4: The direct Project-related traffic impacts of new development proposals shall be mitigated via conditions of approval requiring the construction of any improvements identified as necessary to meet level of service standards.*
- C 3.10: Require private and public land developments to provide all on-site auxiliary facility improvements necessary to mitigate any development-generated circulation impacts. A review of each proposed land development Project shall be undertaken to identify Project impacts to the circulation system and its auxiliary facilities. The Transportation Department may require developers and/or subdividers to provide traffic impact studies prepared by qualified professionals to identify the impacts of a development.*
- C 3.26: Plan off-street parking facilities to support and enhance the concept of walkable and transit-oriented communities.*
- C 4.1: Provide facilities for the safe movement of pedestrians within developments, as specified in the County Ordinances Regulating the Division of Land of the County of Riverside.*

2015 Long Range Facilities Master Plan and Building Program Standards

Parking Lot with 4 visitor spaces and adequate accessible spaces varies Rear parking lot with 10 employee parking spaces varies Consider photovoltaic covered parking

The front drive in front of the apparatus bay should be long enough to park an engine. Drive aisle and landscape design should accommodate an outside turning radius of 65'-0" for fire apparatus.

Traffic signal in front of station driveway with optical emergency sensor

- 3) **Biological and Multipurpose Open Space:** The proposed Project includes site preparation and construction-related activities which would build a replacement fire station. The Project would implement Best Management Practices (BMPs), including catch basins, new storm drain lines, cleanouts, and riprap to manage stormwater during operation and would require a Stormwater Pollution Prevention Plan (SWPPP) to manage runoff during construction. The Project site is undeveloped desert scrub land. There is no landscaping/vegetation immediately adjacent to the Project site that would be affected by the new Project elements. The following Multipurpose Open Space policies would be relevant to the Project.

County of Riverside General Plan

- OS-2.2: *Where feasible, decrease stormwater runoff by reducing pavement in development areas, and by design practices such as permeable parking bays and porous parking lots with bermed storage areas for rainwater detention.*
- OS-3.3: *Minimize pollutant discharge into storm drainage systems and natural drainage and aquifers.*
- OS-16.1: *Continue to implement Title 24 of the State Building Code. Establish mechanisms and incentives to encourage architects and builders to exceed the energy efficiency standards of Title 24.*
- OS-16.14 *Coordinate energy conservation activities with the County Climate Action Plan (CAP) as decreasing energy usage also helps reduce carbon emissions.*
- OS-18.1: *Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCP's, if adopted.*
- OS-19.2: *Review all proposed development for the possibility of archaeological sensitivity.*

Additional Open Space Policies Unique to the 2015 County of Riverside General Plan

- OS-3.4 *Review proposed projects to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) Permits and require them to prepare the necessary Stormwater Pollution Prevention Program (SWPPP).*
- OS-3.6 *Design the necessary stormwater detention basins, recharge basins, water quality basins, or similar water capture facilities to protect water quality. Such facilities should capture and/or treat water before it enters a watercourse. In general, these facilities should not be placed in watercourses, unless no other feasible options are available.*
- OS-16.14 *Coordinate energy conservation activities with the County Climate Action Plan (CAP) as decreasing energy usage also helps reduce carbon emissions.*

2015 Long Range Facilities Master Plan and Building Program Standards

Drought tolerant landscaping (no lawns) varies Trash enclosure- masonry walls large enough for two dumpsters.

Bioswales in perimeter landscape areas

- 4) **Safety:** The proposed Project is not located in any Airport Influence Area nor is it located in an Airport Compatibility Zone. The Project is not located within a designated wildfire area, fault zone or within ½ mile of any known fault. The Project would follow design considerations for critical facilities which would elevate the finished floor of the fire station three feet above the highest adjacent grade to address potential flooding issues. The Project site is, however, in an area susceptible to subsidence and has a high liquefaction potential and would be designed for these circumstances. The following General Plan Safety policies and Facilities Master Plan and Building Standards would be relevant to the Project.

County of Riverside General Plan

S-2.2: Require geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landsliding or settlement as part of the environmental and development review process, for any structure proposed for human occupancy, and any structure whose damage would cause harm.

2015 Long Range Facilities Master Plan and Building Program Standards

Exterior lighting to be controlled by photocell and timer and switches sufficient to light perimeter areas, such as hose wash rack, fuel island, trash and parking areas

Ornamental metal slide automatic gate Adequate exterior building, parking and landscape lighting

- 5) **Noise:** Implementation of the proposed Project would generate noise during the demolition and construction phase of the Project, but during operation, would not increase noise beyond what currently exists at the existing station. The following General Plan Noise policies would be relevant to the Project.

County of Riverside General Plan

N-4.1: Prohibit facility-related noise, received by any sensitive use, from exceeding the following worst-case noise levels:

a. 45 dBA-10-minute Leq between 10:00 p.m. and 7:00

a.m. b. 65 dBA-10-minute Leq between 7:00 a.m. and

10:00 p.m.

N-12.2: Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse noise impacts on surrounding areas.

N-15.2: Consider the following land uses sensitive to vibration: Hospitals; Residential Areas; Concert Halls; Libraries; Sensitive Research Operations; Schools; and Offices

- 6) **Air Quality:** Implementation of the proposed Project would potentially generate air emissions during the demolition and construction phase of the Project, but during operation, would not increase noise beyond what currently exists at the station. The following General Plan Air Quality policy would be relevant to the Project.

2015 County of Riverside General Plan

- AQ-19.4** *All discretionary project proposals shall analyze their project-specific GHG reduction targets in comparison to the “business as usual” (BAU) scenario for the development’s operational life and the “operational life” of a new development shall be defined as a 30-year span. Other methods for calculating BAU and showing GHG emissions reductions may be used provided such methods are both scientifically defensible and show actual emission reduction measures incorporated into project design, mitigation or alternative selection. Alternatively, a project may use the CAP Screening Tables to show the attainment of the applicable number of points needed to ensure adequate GHG reductions and CAP compliance.*
- AQ-20.28** *Increase the energy efficiency of all existing and new County buildings and infrastructure operation (roads, water, waste disposal and treatment, buildings, etc.). Also, decrease energy use through incorporating renewable energy facilities (such as, solar array installations, individual wind energy generators, geothermal heat sources) on County facilities where feasible and appropriate.*

- B. County General Plan Area Plan(s):** County of Riverside General Plan, Desert Center Area Plan
- C. Foundation Component(s):** Community Development
- D. Land Use Designation(s):** Medium High Density Residential
- E. Overlay(s), if any:** None
- F. Policy Area(s), if any:** N/A
- G. Adjacent and Surrounding Area Plan(s), Foundation Component(s), Land Use Designation(s), and Overlay(s) and Policy Area(s), if any:** Surrounding land uses include Medium High-Density Residential, Open Space Recreation, Medium Density Residential, High-Density residential, Commercial Retail, Water and Rural Desert.
- H. Adopted Specific Plan Information**
- 1) **Name and Number of Specific Plan, if any:** N/A
 - 2) **Specific Plan Planning Area, and Policies, if any:** N/A
- I. Existing Zoning:** R-2-5000.
- J. Proposed Zoning, if any:** No Change.
- K. Adjacent and Surrounding Zoning:** Adjacent parcels are zoned R 2-5000; parcels extending further include C-1/C-P, R-3, R-1, R-1-10, R-1-20 and W-2.

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (x) would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Agriculture & Forest Resources | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Transportation / Traffic |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Utilities / Service Systems |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Other: |
| <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Other: |
| <input checked="" type="checkbox"/> Geology / Soils | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Mandatory Findings of Significance |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Public Services | |

IV. DETERMINATION

On the basis of this initial evaluation:

| |
|--|
| A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS NOT PREPARED |
| <input checked="" type="checkbox"/> I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project, described in this document, have been made or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION has been prepared. |



Mike Sullivan
Senior Environmental Planner
County of Riverside Facilities Management

4-22-2022

Date

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact;
 AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

SI LTS NI AP M-DP

I AESTHETICS

Would the Project

1. Scenic Resources

| | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a) <i>Have a substantial adverse effect on a scenic vista?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) <i>Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state-scenic highway?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) <i>In non-urbanized area, substantially degrade views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) <i>Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: County of Riverside General Plan; County of Riverside General Plan Figure C-8; Eastern Coachella Valley Area Plan, Figure 10; California Department of Transportation Scenic Highway Guidelines.

Findings of Fact:

- a-c) The Project site offers foreground views of the Chuckwalla and Orocopia Mountains to the south and southeast and background views of the Eagle Mountains to the north and the San Jacinto/Santa Rosa Mountains to the west. The views surrounding the Project site consist of vacant land and spattered residential development. The Project site does not contain any unique or landmark features, and the placement of the new station would be located within the middle of the property set back approximately 50 feet from both Parkview Drive and Tamarisk Drive. Although the Project would introduce a new structure to the previously undeveloped site, the building and Project elements would be compatible in scale and size with the surrounding residential structures and would not result in an aesthetically objectionable views to the public. The new building and Project elements would not create any additional significant blockage or obstruction of views from surrounding roadways or viewpoints. No additional visual obstruction would occur to any prominent topographic features such as rock outcroppings, or to scenic vistas of the surrounding mountains that are already disrupted by existing vegetation and development. Therefore, a less-than-significant impact to scenic resources will occur.
- d) A significant impact would occur if the proposed Project caused a substantial increase in ambient illumination levels beyond the property line or caused new lighting to spill over onto light-sensitive land uses such as residential, some commercial, institutional, and natural areas. The Project site is located in the Lake Tamarisk Community. Existing light sources from the Project site include exterior lighting associated with the parking lot and street lighting. Additional light and glare occur in the surrounding area from vehicle luminaries, residential daytime and nighttime lighting, and minimal security lighting. Operation of the Project would not expose residential property to unacceptable light levels or create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Construction activities would occur during the daytime and would be temporary. Implementation of the Project would not expose residences to unacceptable light levels or create a new source of substantial lighting or glare. Therefore, a less-than-significant significant impact related to light and glare will occur.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

2. Mt. Palomar Observatory

a) *Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?*

Source: RCIT (GIS Database); Project Description; Ord. No. 655 (Regulating Light Pollution).

Findings of Fact:

a) Light pollution occurs when too much artificial illumination enters the night sky and reflects off of airborne water droplets and dust particles causing a condition known as “sky glow.” It occurs when glare from improperly aimed and unshielded light fixtures cause uninvited illumination to cross property lines. The Mount Palomar Observatory, located in San Diego County, requires unique nighttime lighting standards so that the night sky can be viewed clearly. The Project site is located approximately 89 miles southwest of the Mt. Palomar Observatory. The Project is outside the 15-mile radius Zone A and 45-mile radius Zone B of the Observatory and is not subject to Ordinance No. 655. Construction activities associated with the Project would not occur during evening hours. Nighttime lighting would be included as part of the expansion to provide safety and security to the Fire Station. The lighting will be focused to minimize spill-over and light pollution onto adjacent properties and into the night sky. As a result, light leakage and spillage from the fire station would not obstruct or hinder the views from the Mt. Palomar Observatory. Therefore, no significant impact related to an interference with the nighttime use of the Mt. Palomar Observatory will occur.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

II AGRICULTURE & FOREST 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?*

b) *Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?*

c) *In non-urbanized area, substantially degrade views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?*

d) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?*

e) *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 Govt. Code section 51104(g))?*

f) *Result in the loss of forest land or conversion of forest land to non-forest use?*

g) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?*

Source: California Department of Conservation Farmland Mapping and Monitoring Program 2012 and Williamson Act Land Map 2012; RCIT Agricultural Preserve Contracts (GIS Database), Riverside County General Plan Figure 4.16.1 “Parks, Forests and Recreation Areas”; Riverside County Parks, 2012.

Findings of Fact:

- a-d) The Project site is in an area designated as Other Land and Urban Built-up Land, by the Farmland Mapping and Monitoring Program (FMMP) of the California Department of Conservation. The Project site is not classified as prime farmland, unique farmland, or farmland of statewide importance. The Project site is not located or located adjacent to an agricultural preserve, a Farmland Security Zone, and will not conflict with existing agricultural zoning or land subject to a Williamson Act contract. The nearest Williamson Act land is located approximately 0.75 miles to the east of the Project site. The nearest land zoned for agriculture is approximately 0.75 miles to the east, and the replacement fire station is not anticipated to result in rezoning that would result in the conversion of agricultural zoned land to develop with non-agricultural uses. In addition, the replacement fire station is the continuation of an existing use at an adjacent site and is primarily limited to the addition of infrastructure to provide more efficient fire services. Therefore, no significant impact related to agricultural effects will occur.
- e-g) The proposed Project site is not located in an area near forest land or near any timber resources. There is no forest land and timber resources in the vicinity of the Project site and the construction and operation of the park would not have an effect on forest land or result in the potential conversion of forest land to non-forest land. Therefore, no significant impact related to forest land will occur.

Mitigation: None

Monitoring: None

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| | SI | LTS | NI | AP | M-DP |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| III AIR QUALITY | | | | | |
| <i>Would the Project</i> | | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: SCAQMD Attainment Status, South Coast Air Quality Management District CEQA Air Quality Handbook Table 6-2; CalEEMod 2020.4.0; and SCAQMD Rules

Findings of Fact:

The Air Quality section addresses the impacts of the proposed Project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations. Air pollutants of concern include ozone (O₃), carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM_{2.5}), oxides of nitrogen (NO_x), sulfur dioxide (SO₂), and lead (Pb). This section analyzes the type and quantity of emissions that would be generated by the construction and operation of the Project. Geographic areas are classified as either in attainment or nonattainment for each criteria pollutant based on whether the Ambient Air Quality Standards (AAQS) have been achieved under the state and federal Clean Air Acts (CAA). The Mojave Desert Air Basin, which is managed by the South Coast Air Quality Management District (SCAQMD), is designated as nonattainment for O₃ and PM₁₀ under the California AAQS. A background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the Project site, methodology, and air quality modeling data are included in Appendix B to this Initial Study.

- a) Air quality in the United States is governed by the Federal CAA, administered by the United States Environmental Protection Agency (EPA). In addition to being subject to the requirements of the federal

CAA, air quality in California is also governed by more stringent regulations under the California CAA, administered by the California Air Resources Board (CARB) at the state level and by the Air Quality Management Districts at the regional and local levels. The Project site is located within the Mojave Desert Air Basin (Basin) and is within the jurisdiction of the SCAQMD. The boundaries of the Basin range from the Pacific Ocean on the west to the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. It includes portions of Los Angeles County, all of Orange County, and the non-desert areas of Riverside and San Bernardino counties. The 2016 Air Quality Management Plan (AQMP) was adopted by the SCAQMD Governing Board in March of 2017 and provides updated emission inventory methodologies for various source categories, the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. The Basin is a federal and state non-attainment area for O₃ and PM_{2.5}, and a state non-attainment area for PM₁₀ and Pb (Los Angeles County only). An area is considered to be in non-attainment status when air pollution persistently exceeds the national ambient air standards. The 2016 AQMP establishes a comprehensive program to lead the Basin into compliance with all federal and state air quality standards. The AQMP is derived from General Plan assumptions, land use, population, and employment characteristics defined in consultation with local governments. As such, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections. A 2022 AQMP is underway with a focus on meeting these standards.

The proposed Project would construct and operate replacement fire station with a new building and associated equipment, and additional on-site improvements to circulation and parking. The on-site improvements would provide more efficient operation and provision of fire services. The Project will not require changes to the designated land use and zoning by the County General Plan and Zoning Ordinance. The General Plans of cities and counties within the Basin were used as the basis for the emissions inventory within the AQMP. Individual projects and long-term programs within the region are required to be consistent with the AQMP. To demonstrate consistency with the AQMP, the population projections used to assess the need for the Project must be approved by the Southern California Association of Governments (SCAG). The Project will not substantially alter the present or planned land use of this area as the services offered by the existing Fire Station would not result in new trips as no increase in staff or capacity would occur as part of the expansion. Therefore, the Project would be consistent with the land use designation that was incorporated within the General Plan and consequently the AQMP. In addition, the Project would not emit either short- or long-term quantities of criteria pollutants which exceed the SCAQMD's significance thresholds as discussed in 6b) below. The SCAQMD does not consider projects which result in emissions which are below the SCAQMD significance thresholds to interfere with the goals established in the AQMP. Therefore, a less-than-significant impact related to consistency with the AQMP will occur.

- b) According to the SCAQMD methodology, any Project that does not exceed, or can be mitigated to less than the daily threshold values will not add significantly to the cumulative impact. Construction and operational activities would not result in emissions in excess of SCAQMD's daily threshold values. See the discussion related to regional air quality emissions in the analysis below within subsection c. Therefore, a less-than-significant impact related to a cumulatively considerable net increase in criteria pollutants will occur.
- c) Air quality impacts can be described in potential short and long-term impacts. Short-term impacts occur during Project construction. Long-term air quality impacts occur once the Project is complete and operational. These long-term impacts would occur as a result of increased vehicle traffic to the Project site due to periodic maintenance activity. The following analysis will address whether Project generated emissions will significantly contribute toward an exceedance of the ambient air quality standards or a substantial contribution to an existing or projected air quality violation.

Short-term Air Quality Impacts

Construction activities would result in the generation of air pollutants. These emissions would primarily be 1) exhaust emissions from powered construction equipment; 2) fugitive dust generated from demolition, earthmoving, excavation and other construction activities; 3) motor vehicle emissions associated with vehicle trips; 4) emissions generated from paving activity; and (5) reactive organic gases generated from architectural coating activities. The analysis assumes compliance with SCAQMD Rule 403 (Fugitive Dust). Construction activities are estimated to begin in 2022, while build-out of the proposed Project is scheduled for the Spring of 2023. Air pollutant emissions associated with the Project could occur over the short-term from site preparation to support the proposed land use. The included analysis is based on the CalEEMod computer model. To determine whether a significant regional air quality impact would occur, Project emissions are evaluated against SCAQMD regional significance thresholds for construction activities. The Project is required to comply with SCAQMD Rule 403, which establishes control measures for fugitive dust. Compliance with this rule will reduce short-term particulate pollutant emissions and is included as part of the air quality modeling assumptions. As shown in **Table AQ-1**, the Project's construction emissions are not anticipated to result in a substantial contribution to regional emissions. Project emissions are less than the SCAQMD CEQA significance threshold values. The output for the model run is included in Appendix B. Therefore, a less-than-significant impact related to violation of air quality standards will occur.

Table AQ-1: Summary of Peak Construction Emissions (Pounds per Day)

| Activity | VOC | NOX | CO | SO2 | PM10 | PM2.5 |
|---|-----------|-----------|-----------|--------------|-----------|-----------|
| Site Preparation | 1 | 7 | 4 | <1 | <1 | <1 |
| Grading | 1 | 12 | 7 | <1 | 3 | 2 |
| Building Construction | 1 | 7 | 7 | <1 | <1 | <1 |
| Paving | 1 | 6 | 9 | <1 | <1 | <1 |
| Architectural Coating | 13 | 1 | 2 | <1 | <1 | <1 |
| Maximum Daily Construction Emissions | 13 | 12 | 9 | <1 | 3 | 2 |
| SCAQMD Threshold | 75 | 100 | 550 | 150 | 150 | 55 |
| Exceeds Significance Thresholds? | NO | NO | NO | NO | NO | NO |

Source: CalEEMod Version 2020.4.0.

Long-Term Air Quality Impacts

Long-term air quality impacts associated with the proposed Project would be generated from primarily area sources. Operation of Fire Station #49 would not result in additional stationary source emissions from on-site equipment. Area sources of emissions are those associated with landscaping maintenance and energy use. The Project is not adding staff or capacity and would not generate additional trips that would result in mobile emissions. As a conservative estimate, emissions based on the new building square footage were calculated from the CalEEMod computer model. The Project's emissions were evaluated against the SCAQMD significance thresholds as shown in **Table AQ-2**. The Project's emissions were found to be below the SCAQMD operational phase emissions thresholds. Therefore, a less-than-significant impact related to long term air quality impacts will occur.

Table AQ-2: Summary of Peak Regional Operational Emissions (Pounds per Day)

| Operational Activity | ROG | NO _x | CO | SO _x | PM ₁₀ | PM _{2.5} |
|---|--------------|-----------------|--------------|-----------------|------------------|-------------------|
| Area | <1 | <1 | <1 | <1 | <1 | <1 |
| Energy | <1 | <1 | <1 | <1 | <1 | <1 |
| Vehicles | <1 | <1 | <1 | <1 | <1 | <1 |
| Operational Emissions | <1 | <1 | <1 | <1 | <1 | <1 |
| SCAQMD Significance Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| Exceeds Significance Thresholds? | NO | NO | NO | NO | NO | NO |

Source: CalEEMod 2020.4.0

The localized air pollution is evaluated against the localized significance thresholds (LST) which are based on the ambient concentrations of a pollutant within the Project Source Receptor Area, the size of the Project site and distance to the nearest sensitive receptor. The LSTs represent the maximum emissions from the Project site that are not expected to cause or contribute to an exceedance of the most stringent national or state AAQS. The LSTs are based on the California AAQS, which are the most stringent AAQS established to provide a margin of safety in the protection of the public health and welfare. They are designed to protect those sensitive receptors most susceptible to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The SCAQMD has established guidance for the use of the results of the CalEEMod model to be applied to the LST methodology. In order to compare CalEEMod emissions against the LST thresholds, Project design features or mitigation measures should be established that describe the off-road equipment list and hours of operation assumed with maximum daily emissions; the maximum number of acres disturbed on the peak day using the equipment list; emission control devices added to off-road equipment; and dust suppression techniques used.

Construction LSTs

Emissions generated by construction activities would temporarily increase pollutant concentrations from onsite equipment (primarily mobile emissions) and fugitive dust (PM₁₀ and PM_{2.5}). **Table AQ-3** shows the localized maximum daily construction emissions. As the new Fire Station is located within a residential area with residential property lines within 100 feet, the most conservative receptor distance of 25 meters was used for the LST methodology. As shown in **Table AQ-3**, maximum daily emissions from construction activities would not exceed the SCAQMD LSTs; therefore, construction emissions would not exceed the California AAQS and the Project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, a less-than-significant impact related to construction LSTs will occur.

Operational LSTs

Operational activities would generate air pollutant emissions from mobile and area emissions. **Table AQ-4** shows localized maximum daily operational emissions. As shown in **Table AQ-4**, maximum daily operational emissions would not exceed the SCAQMD LSTs and would not expose sensitive receptors to substantial pollutant concentrations. Therefore, a less-than-significant impact related to operational LSTs will occur.

Table AQ-3: Localized Significance Threshold Summary – Construction

| Construction | Pounds per Day | | | |
|---|----------------|-----------|-----------|-----------|
| | CO | NO2 | PM10 | PM2.5 |
| Peak Construction Emissions | 7 | 12 | 3 | 1 |
| Localized Significance Thresholds | 1,299 | 191 | 7 | 5 |
| Significant Impact Without Mitigation? | NO | NO | NO | NO |

Source: CalEEMod Version 2020.4.0: Based on SCAQMD LST methodology on a 2-acre site that uses one grader, one dozer, and two tractors for eight hours a day during grading, which is equivalent to a disturbed acreage of 1 acre and compared against the 1-acre LST lookup table within SRA 31 and adjacent sensitive receptors (25m).

Table AQ-4: Localized Significance Threshold Summary – Operation

| Construction | Pounds per Day | | | |
|-----------------------------------|----------------|-----------|-----------|-----------|
| | CO | NO2 | PM10 | PM2.5 |
| Peak Operational Emissions | <1 | 1 | <1 | <1 |
| Localized Significance Thresholds | 878 | 132 | 1 | 1 |
| Significant Impact? | NO | NO | NO | NO |

Source: CalEEMod Version 2020.4.0: Based on SCAQMD LST methodology for operational emissions which does not include off-site mobile emissions. The localized emissions were compared against the most stringent LST threshold for SRA 30 with a 25-meter receptor distance.

Carbon Monoxide Hotspots

An air quality impact would be considered significant if the generated CO emission levels exceed the state or federal AAQS, which would expose receptors to substantial pollutant concentrations. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized concentrations. Vehicle congestion has the potential to create elevated concentrations of CO called “hot spots.” Localized CO concentrations hot spots are caused by vehicular emissions, primarily when idling at congested intersections. Due to the implementation of strict vehicle emissions standards over the last 20 years, the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentrations have steadily declined. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams per mile for passenger cars. A CO “hot spot” would occur if an exceedance of the state one-hour standard of 20 ppm or the 8-hour standard of 9 ppm were to occur. A CO hot spot analysis was conducted in 2003 for four high volume intersections in the City of Los Angeles in the peak-hour periods to establish a better threshold for the volume of vehicles necessary to generate a violation of CO standards to better reflect the effect of the increasing proportion of cleaner burning vehicles. The hot spot analysis for the 2003 analysis did not predict any violation of CO standards. The busiest intersection (Wilshire Boulevard/Veteran Avenue) had a daily traffic volume of 100,000 vehicles today and the estimated one-hour concentration was 4.6 ppm.¹ The 20 ppm standard would not have been exceeded until the intersection exceeded more than 400,000 vehicles per day. The Bay Area Air Quality Management District has also looked at the effect of cleaner burning vehicles and concluded that under existing and future vehicle emissions rates, a given project would have to increase traffic volumes at a single intersection by 24,000 vehicles per hour where vertical and/or horizontal air does not mix (worst case condition) to generate a significant CO impact.² Based on these factors, and that the Project would not generate peak-hour trips as there would not be an increase in existing staffing, there is no potential for the Project to generate CO concentrations higher than the state and federal standards. As a result, sensitive receptors in the area would not be substantially affected by CO concentrations generated by operation of the Project. Therefore, a less-than-significant impact related to CO hot spots will occur.

Toxic Air Contaminants

The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a toxic air contaminant (TAC); thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. The Project site is not located within 500 feet of a freeway or major roadway, near any rail yards, stationary diesel engines, or facilities attracting heavy and constant diesel vehicle traffic such as warehouse distribution centers. The surrounding Project area consists primarily of vacant land and residences, and the majority of vacant land surrounding the Fire Station #49 is zoned for residential uses.

Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Operational-related emissions of TACs are typically associated with stationary diesel engines or land uses that involve heavy truck traffic or idling. The fire station is located within a residential area, which is presumed to have sensitive receptors. However, the Fire Station would not result in additional diesel

¹South Coast Air Quality Management District, *Carbon Monoxide Redesignation Request and Maintenance Plan*, Hot Spot Analysis, February 2005.

²Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, Section 3.3 Carbon Monoxide Screening Criteria, May 2011

equipment or other heavy truck uses, so there would not be any additional long- exposure to TACs. The CARB Air Quality and Land Use Handbook: A Community Health Perspective Handbook includes facilities with associated diesel truck trips of more than 100 trucks per day as a source of substantial TAC emissions. The Project is not anticipated to receive frequent truck deliveries and would not involve a substantial source of TAC emissions. Therefore, the operation of the Project would not expose any existing sensitive receptors to any new permanent or substantial TAC emissions.

During construction, diesel particulate emissions associated with heavy-duty equipment operations would occur. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Based on the construction schedule, limited amount of imported/exported material, and equipment mix as described in Appendix A, the construction of the Project is not anticipated to result in more than 20 truck trips per day and would not be a substantial source of TAC emissions. Given the short-term construction schedule of approximately 9 months, the proposed Project would not result in a long-term (i.e., 70 years) source of TACs. No significant emissions and corresponding individual cancer risk are anticipated after construction. Because of the short-term exposure period during construction and low level of truck activity during construction and operation of Fire Station #49, a less-than-significant impact related to TACs will occur.

- d) The proposed Project would not emit objectionable odors that would affect a substantial number of people. The threshold for odor is if a Project creates an odor nuisance pursuant to SCAQMD Rule 402, Nuisance, which states:

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. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The proposed Project would be consistent and compatible with existing land uses surrounding the Project site. The proposed Project will not introduce a new stationary source of air pollution into the proposed Project vicinity that may cause objectionable odors. Therefore, no significant impact related to the creation of objectionable odors will occur.

During construction activities, construction equipment exhaust would temporarily generate odors. Any construction-related odor emissions would be temporary, intermittent in nature, and would not constitute a public nuisance. Therefore, a less-than-significant impacts related to objectionable odors during construction will occur.

Mitigation: None

Monitoring: None

IV BIOLOGICAL RESOURCES

Would the Project

| | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| a) <i>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. Wildlife Service?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) <i>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?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) <i>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?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) <i>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) <i>Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: RCIT (GIS Database); Project Description; Dudek Biological Resources Report, 2021.

Findings of Fact:

- a) No federally or state-listed plant species have a potential to occur within the Project site. There are no special-status plant species with a moderate or high potential to occur. Therefore, the Project would not result in direct or indirect impacts to special-status plant species. As such, impacts to special-status plant species would be less than significant.

No listed or non-listed special-status wildlife species were incidentally observed during the site survey in October of 2021. One state-listed species, elf owl, has a moderate potential to nest in the study area buffer. In addition, one federally and state-listed species, Mojave desert tortoise, has a low potential to occur within the study area buffer, but is not expected to occur within the Project footprint. Additionally, three non-listed species have a moderate potential to occur within the study area. Burrowing owl has a moderate potential to occur in the study area buffer, but is not expected to occur within the Project footprint. Loggerhead shrike has a moderate potential to occur in the study area, including the Project footprint. LeConte’s thrasher has a moderate potential to occur within the study area buffer, but a low potential to occur within the Project footprint.

One state listed special-status species, elf owl, has a moderate potential to nest within the study area buffer, but is not expected within the Project footprint. One non-listed special-status species, loggerhead shrike, has a moderate potential to occur within the study area (including the Project footprint). However, the burrowing owl is not expected to occur within the Project footprint due to the absence of suitable habitat within the Project footprint (i.e., site contains highly compacted soils and lacks burrows at least four inches in diameter. Two non-listed species, burrowing owl and LeConte’s thrasher, both have a moderate potential to occur within the study area buffer. While the proposed Project could result in the permanent impacts to 0.1 acres of suitable nesting habitat within the Project footprint for these species (i.e., two palo verde trees in the eastern portion of the Project footprint), this impact would be less than significant due to the remaining 3.9 acres of unimpacted suitable habitat (i.e., palo verde and ironwood trees within the palo verde–ironwood woodland) and other lands beyond that. Additionally, these species are protected under the Migratory Bird Treaty Act and California Fish and Game Code Section 3516,

which protect nesting birds. Implementation of Mitigation Measure **BIO-1**, Nesting Birds, would reduce potential direct and indirect impacts to these species to less than significant.

One federally and state-listed special-status species, Mojave desert tortoise, has a low potential to occur within study area buffer, but is not expected within the Project footprint. The Mojave desert tortoise is a federally threatened and state endangered species. Typical habitat for this species within the Mojave Desert is creosote bush scrub with a relatively high diversity of perennial plants. This species typically occurs on gently sloping terrain with sandy gravel soils in locations with sparse cover of low-growing shrubs. Soils must be friable enough for the digging of burrows but firm enough to prevent burrow collapse. The study area buffer contains suitable desert wash habitat and some creosote flats habitat, and the study area buffer connects to open lands in the north, east and west. There are two nearby documented occurrences from 2008 approximately 2.1 and 3.3 miles southeast of the study area. In addition, there are two nearby documented occurrences from 2010 approximately 3.6 and 4.8 miles southeast of the study area. Finally, the study area is within USFWS-designated Colorado Desert Recovery Unit for desert tortoise. Due to the Project being located within the range of desert tortoise and the presence of suitable habitat within the study area buffer, there is low potential for Mojave desert tortoise to occur within the study area buffer. The proposed Project and study area buffer are not located in designated Critical Habitat for desert tortoise; however, there is Critical Habitat within 5 miles of the Project, though the Project is not expected to cause indirect impacts to this species. The Project footprint lacks suitable habitat (i.e., sandy or gravelly locations along riverbanks, washes, sandy dunes, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides) and no burrows were observed during the October 2021 survey (i.e., site contained highly compactable soils); therefore, implementation of the proposed Project would not result in any direct impacts to this species. No indirect impacts to Mojave desert tortoise within the study area buffer are expected, given the low probability of occurrence of the species within the study area buffer. However, because the proposed Project is located within the United States Fish and Wildlife (USFWS)-designated Colorado Desert Recovery Unit, a pre-Project focused desert tortoise protocol-level survey is required. Therefore, with implementation of Mitigation Measure **BIO-2**, the proposed Project would not result in significant impacts to Mojave desert tortoise.

- b) The proposed Project footprint does not contain any riparian habitat; however, it does contain 0.1 acres of sensitive natural community (i.e., palo verde woodland) identified by the California Department of Fish and Wildlife (CDFW) or USFWS. Implementation of the proposed Project would result in permanent impacts to 0.1 acres of palo verde woodland. Due to the small size of the habitat loss as compared to the remaining 3.9 acres of palo verde woodland that will remain unimpacted, along with similar suitable habitat within the vicinity of the Project site, this impact would be less than significant. As a result, implementation of the Project would not result in significant impacts to riparian and special-status vegetation communities.
- c) The Project site does not contain any jurisdictional water features. As a result, implementation of the Project would not result in significant impacts to jurisdictional waters.
- d) Project construction could result in direct and indirect impacts to nesting birds, including the loss of nests, eggs, and fledglings if ground-disturbing activities occur during the nesting season (generally February 15 through August 31). Construction activities during this time may result in reduced reproductive success and may violate the federal Migratory Bird Treaty Act and California Fish and Game Code. If construction (including any ground disturbing activities) occurs during the nesting season, a nesting bird survey must be conducted by a qualified biologist prior to grading activities and impacts to nests must be avoided. The Project site does not function as a wildlife corridor and does not support any wildlife nursery sites. With implementation of Mitigation Measure **BIO-1**, a less-than significant impacts to nesting birds and wildlife corridors would occur.
- e) There are no existing local tree preservation ordinances or other policies protecting biological resources for the community of Lake Tamarisk. Therefore, no significant impact related to conflict with local biological protection policies will occur.

- f) The Project site is not located within a Multispecies Habitat Conservation Plan. Therefore, no significant impact related to habitat conservation plans would occur.

Mitigation

BIO-1 To maintain compliance with the Migratory Bird Treaty Act and California Fish and Game Code, if ground-disturbing and/or vegetation clearance activities are scheduled to occur during the avian nesting season (typically February 15 through August 31), a qualified biologist shall conduct a preconstruction nesting bird survey within the Project impact footprint and a 500-foot buffer where legal access is granted around the disturbance footprint. Surveys shall be conducted within 3 days prior to initiation of ground-disturbing activities. If an active nest is detected during the nesting bird survey, avoidance buffers shall be implemented as determined by a qualified biologist (typically 300 feet for passerines and 500 feet for raptors and special-status species). The buffer shall be of a distance to ensure avoidance of adverse effects to the nesting bird by accounting for buffering topography and buildings, ambient conditions, species, nest location, and activity type. All nests shall be monitored as determined by the qualified biologist until nestlings have fledged and dispersed or it is confirmed that the nest has been unsuccessful or abandoned. The qualified biologist shall halt all construction activities within proximity to an active nest if it is determined that the activities are harassing the nest and may result in nest abandonment or take. The qualified biologist shall also have the authority to require implementation of avoidance measures related to noise, vibration, or light pollution if indirect impacts are resulting in harassment of the nest.

BIO-2 A qualified biologist (someone with at least 5 years of conducting surveys for the species) will conduct a desert tortoise survey one week prior to the start of construction. The survey will consist of 10-meter-wide belt transects that covers the Project site and an adequate buffer (up to 500- feet) to ensure 100% coverage of the site and adjacent areas of influence. Any individuals, burrows constructed by the species, scat, and carcasses will be recorded and mapped using ESRI ArcGIS mobile application with submeter accuracy. Any desert tortoise burrows found within 100-feet of the Project will be flagged for avoidance. The survey will then be repeated 72 hours prior to the start of construction.

Monitoring: Riverside County Facilities Management, Project Construction Manager(s); Qualified Biologist.

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact; AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

SI LTS NI AP M-DP

V CULTURAL RESOURCES

Would the Project

| | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: RCIT (GIS Database); Project Description; Riverside County General Plan; Riverside County General Plan Final Environmental Impact Report; Public Resource Code §5024.1, Title 14 CCR, Section 4850 et seq. Riverside County General Plan Figure OS-7 “Historical Resources”.

Findings of Fact:

a-b) The Final Program EIR for the Riverside County General Plan identifies 138 historical resources in Riverside County (Table 4.7.A). These historical resources are identified due to their inclusion of one of more of the following: National Register of Historic Places, California Registered Historic Landmarks Architecture, California Points of Historical Interest, and/or Riverside County Historical Landmarks.

Public Resource Code section 5024.1(c) defines guidelines to being considered a historic resource within the state of California as stated below:

A resource may be listed as an historical resource in the California Register if it meets any of the following National Register of Historic Places criteria:

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

A cultural resources literature and records search conducted at the Eastern Information Center and Historic Property Survey Report (HPSR) which analyzed the proposed Project site was completed in September of 2021. This search included the Project site with a half-mile radius buffer. The objective of assessments was to determine whether any prehistoric or historical resources have been recorded previously within the Project area or within a mile radius of it. Additional sources consulted during the cultural resource literature review and records search and preparation of the HPSR include the Native American Heritage Commissions, Office of Historic Preservation Archaeological Determinations of Eligibility and the Office of Historic Preservation Directory of Properties in the Historic Property Data File, local Native American tribes and local historic preservation groups.

The records search revealed no cultural resources on the Project site or within one-half mile of the Area of Potential Effect (APE). A pedestrian survey was also conducted at the Project site. No resources were discovered within the Project Area of Potential Effect (APE) and the construction and operation of a fire station would not have a significant effect on any nearby resources as the operation of the fire station would not directly or indirectly alter or impact these resources. The Project site has been undeveloped since at least 1947. The new fire station will result in the installation of a new building that will not require substantial excavation for installation. Mitigation Measures **CR-1** through **CR-5** will be implemented which will require archaeological and tribal monitoring and sampling for any excavation depth with the

potential to disturb native soil and encounter potential archaeological resources. Therefore, with implementation of Mitigation Measures **CR-1** through **CR-5**, the Project will result in less-than-significant impacts to a historical or archaeological site.

- c) The proposed Project site is not located on a known formal or informal cemetery. No discovery of human remains, including those interred outside of formal cemeteries is anticipated. Furthermore, there are several established regulations that protect against the disturbance of interred human remains, defined in California Health and Safety (HSC) Sections 7050.5 through and 7054, which mandate that in the event of an accidental discovery of human remains, the County Coroner must be contacted within 24 hours. If the County Coroner determines that the remains are Native American, the County is required to contact the Native American Heritage Commission (NAHC) and any applicable Tribes. Adherence to the regulatory requirements and Mitigation Measure **CR-4** will provide a redundancy mechanism to ensure that potential impacts from inadvertent discoveries of human remains do not occur and remain less than significant. Therefore, a less-than-significant impact to human remains will occur.

Mitigation:

CR-1 Prior to the seeking and/or issuance of a grading permit, the County and consulting Tribes will co-create a Tribal Monitoring Agreement (Agreement) that (1) assures a Tribal Monitor will be present during all grading, excavation, and ground-disturbing activities within the Project Area of Potential Effect and (2) discusses and delineates subjects including, but not limited to, (a) the monitors' scheduling; (b) the monitors' duties and/or SOW; (c) monitors' compensation by the applicant (Riverside County Facilities Management); (d) safety requirements; and (e) the protocols and stipulations that the County contractor, and Tribal Monitor, will follow in the event of inadvertent cultural resources discoveries. Stipulations for treatment and final disposition of any cultural resources, with the exception of human remains, funerary objects, and sacred objects are addressed in Mitigation Measure **CR-4**.

CR-2: The Tribal Monitor shall have the authority to stop and redirect grading in order to identify and preliminarily evaluate any cultural resource(s) discovered on the property. If the resource(s) is determined to hold potential significance, a 25-foot buffer shall be established and the relevant Tribes shall be immediately contacted by the Project supervisor to come to the Project site. The Tribal Monitor shall, in consultation with the consulting Tribes, determine the significance of the resource(s) and whether additional monitoring by an archaeologist or a tribal monitor needs to occur.

CR-3: In the event that Native American cultural resources are inadvertently discovered during the course of ground-disturbing activity for this Project, the following procedures will be carried out for treatment and disposition of the discoveries:

Temporary Curation and Storage: During the course of construction, all discovered resources shall be temporarily curated in a secure location onsite or at the offices of the Project Archaeologist. The removal of any artifacts from the Project site will need to be thoroughly documented via inventory and conducted with Tribal Monitor(s) oversight of the process.

Treatment and Final Disposition: The County/applicant/contractor shall relinquish ownership of all cultural resources, including sacred items, unassociated funerary objects/burial goods, all archaeological artifacts, and non-human remains as part of the required mitigation for impacts to cultural resources. The County/applicant/contractor shall relinquish the artifacts through one or more of the following methods and provide the County with evidence of same:

- a. Accommodate the process for onsite reburial of the discovered items with the consulting Tribes. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing and basic recordation have been completed. A reburial site shall be documented as a new site and recorded with the Eastern Information Center;
- b. A curation agreement with an appropriately qualified repository within Riverside County that meets federal standards per 36 CFR Part 79 whereby the collections and associated records shall be transferred, including title, and accompanied by payment from the County/applicant of the fees necessary for permanent curation;

- c. On request by the consulting Tribe for repatriation of the discovered items, the County shall relinquish ownership and shall deliver the items to the custody of the consulting Tribe. For purposes of conflict resolution, if the consulting Tribes cannot come to an agreement as to the disposition of cultural materials, they shall be curated at the Western Science Center or Riverside Metropolitan Museum by default; and
- d. At the completion of any and all ground disturbing activities on the Project site, a Phase IV Monitoring Report shall be written by the Project Archaeologist and submitted to the County within 120 days of the completion of ground-disturbing activities related to the Project. This report shall (1) document monitoring activities conducted by the Project Archaeologist and Tribal Monitors; (2) document the impacts to the known resources on the property, if any; (3) describe how each mitigation measure was fulfilled; (4) document the type of cultural resources discovered during Project implementation, the treatment of those resources, and their disposition; (5) provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and (6) in a confidential appendix, include the daily/weekly monitoring notes from the Project Archaeologist. All reports produced will be submitted to the County, Eastern Information Center and consulting Tribes.

CR-4: If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then immediately identify the “most likely descendant(s)” of receiving notification of the discovery. The most likely descendant(s) shall then make recommendations within 48 hours, and engage in consultations concerning the treatment of the remains.

CR-5: If inadvertent discoveries of subsurface archaeological/cultural resources are discovered during grading, Riverside County, and the monitoring Tribe shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. Pursuant to California Public Resources Code § 21083.2(b) and 21084.3(b) avoidance is the preferred method of preservation for archaeological resources and tribal cultural resources. If the County and the monitoring Tribe cannot agree on the significance or the mitigation for such resources, these issues will be presented to the Riverside County Archaeologist. The County Archaeologist shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources and tribal cultural resources and shall take into account the religious beliefs, customs, and practices of the consulting Tribes.

Monitoring: Riverside County Facilities Management, Project Construction Manager(s), Tribal Monitor

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact;
AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

SI LTS NI AP M-DP

VI ENERGY

Would the Project

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?*

Source: GIS Database, Riverside County General Plan Figure S-2 “Earthquake Fault Study Zones”, County of Riverside General Plan.

Findings of Fact:

a-b) LED Lights will be used around the building and in areas of pedestrian and vehicular circulation. Lights will be placed on timers/motion sensors for maximum efficiency and illumination levels will be designed and placed in relation to the appropriate use. Invasive plants will not be used and drought tolerant plants and trees that are hardy and require low maintenance will be used to incorporate water conservation and biodiversity. The proposed Project would meet all requirements of Title 24 and any additional provisional requirements in order to assure that operation of the fire station would not conflict with adopted energy conservation plans. The Project would be required to maintain consistency with all Riverside County policies related to energy conservation including Policy H-4, Conservation of Energy and Policy H-29, Sustainable Building Policy. Therefore, a less-than-significant impact related to energy conservation will occur.

Mitigation: None

Monitoring: None

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact; AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

SI LTS NI AP M-DP

VII GEOLOGY AND SOILS

Would the Project

| | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| <i>a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving</i> | | | | | |
| <i>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>ii) Strong seismic ground shaking</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>iii) Seismic-related ground failure, including liquefaction?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>iv) Landslides?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>b) Result in substantial soil erosion or the loss of topsoil?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>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?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>d) Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial direct or indirect risks to life or property?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>e) Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: GIS Database, Riverside County General Plan Figure S-2 “Earthquake Fault Study Zones”, Figure S-4 “Earthquake-Induced Slope Instability Map,” and Figures S-13 through S-21 (showing General Ground Shaking Risk); Figure S-7 “Documented Subsidence Areas”; GIS Database (RCIT) County of Riverside General Plan, California Building Code.

Findings of Fact:

a) The Project site is located in the Eastern Transverse Ranges province and adjacent parts of the Mojave Desert, where highland terrains expose igneous and metamorphic crystalline basement overlain locally by Tertiary cover strata, and intervening basins are filled with Pliocene and Quaternary sedimentary deposits. The Eastern Traverse Ranges block is characterized by left-oblique, east-striking faults that extend east from the Little San Bernardino Mountains. The Project site is located in the western portion

of the Chuckwalla Valley of the southern Mojave Desert region of southern California. The Project site lies on a broad Holocene alluvial fan that slopes gently to the northeast toward Palen Lake, a dry lakebed. The State of California Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface rupture along earthquake faults. The main purpose of the Act is to prevent the construction of buildings used for human occupancy along fault lines. The Project site is not located within an Alquist-Priolo earthquake fault zone, or County Fault Hazard Zone, but is located approximately 1.3 miles north of the Chiraico Fault, which is a Pre-Quaternary fault. The nearest active fault zone is the Hot Springs Fault Zone, which is located approximately 27 miles to the southwest. The possibility of ground surface rupture exists throughout the Coachella Valley region; however, the Project site is not located within a rupture hazard zone, and given the current state of knowledge regarding seismicity of the Coachella Valley, the potential for fault rupture at the site is low. The California Building Code (CBC) establishes building standards to minimize the risk of damage from seismic activity. These design requirements of the CBC are designed to withstand strong seismic shaking and would result in a safer structure than the existing fire station which would not expose people or structures to adverse effects. Therefore, less-than-significant impacts to earthquake fault and County fault hazard zones will occur.

Being located in seismically active southern California, the Project site is expected to be subjected to moderate to strong ground shaking during the design life of the Project. The proposed Project would replace the existing fire station which was constructed in 1964 with a new building which would adhere to the most recent building code. The CBC establishes building standards to minimize the risk of damage from seismic activity. This includes the requirement for a site-specific ground motion hazard analysis be performed unless conservative values of design parameters are used to minimize effects from ground shaking. These design requirements of the CBC are designed to withstand strong seismic shaking and would result in a safer structure than the existing fire station. Therefore, less-than-significant impacts related from strong seismic ground shaking will occur.

Soil liquefaction is a phenomenon in which saturated, cohesionless soils layers, located within approximately 50 feet of the ground surface, lose strength due to cyclic pore water pressure generation from seismic shaking or other large cyclic loading. During the loss of stress, the soil acquires 'mobility' sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, saturated, and uniformly graded fine-grained sands that lie below the groundwater table within approximately 50 feet below ground surface. According to the RCIT GIS Database, the Project site has a moderate potential for liquefaction. According to the geotechnical investigation, the dense nature of the subsurface granular soil and lack of groundwater in the upper 50 feet, make the potential for liquefaction low. Based on this analysis and the dense nature of the subsurface soils at the Project site, liquefaction is not expected to occur.

Seismically-induced landslides and rock falls occur most often on steep or compromised slopes. Factors controlling the stability of slopes include: 1) slope height and steepness; 2) engineering characteristics of the earth materials comprising the slope; and 3) intensity of ground shaking. Landslides may result from heavy rain, erosion, removal of vegetation, seismic activity or combinations of these and other factors. The potential for landslides is unlikely due to the regional planar topography. No ancient landslides are shown on geologic maps, aerial photographs, or topographic maps of the region and no indications of landslides were observed during the site investigation. Based on these factors, the risk from landslides, lateral spreading, collapse or rockfall hazards would not be considered substantial. Therefore, less-than-significant impacts from landslide risk will occur.

- b) The proposed Project will not result in a substantial loss of soil due to erosion. Surface soils consist of silty sand and sand. The risk of erosion is low due to very high rates of infiltration, permeability, limiting potential runoff. The Project would be subject to SWPPP requirements for erosion control during construction and would require the fugitive dust control measures during construction. Best management practices (BMPs) would be undertaken to control runoff and erosion from earthmoving activities such as excavation, grading, and compaction. All grading and compaction activities would be performed under the observation of a qualified engineer. After completion of construction, the erosion potential will be decreased. All soils used in the Project would be properly compacted in accordance with the Geotechnical Investigation and the County of Riverside specifications. Therefore, less-than-significant impacts to soil erosion will occur.

- c) According to the RCIT GIS Database, the Project site is identified as being susceptible to ground subsidence. Subsidence is compaction of soil and other surface material with little or no horizontal motion. Causes of subsidence include earthquake and changes in groundwater tables. Subsidence may occur if the groundwater level substantially decreases. The Coachella Valley has experienced up to 12 inches of regional subsidence between 1996 and 2005 (USGS, 2007); however, the Geotechnical report found that the risk of subsidence at the Project site is considered low. The Project would be graded and constructed in accordance with the recommendations of the geotechnical investigation which would provide a stable foundation to further reduce the risk of subsidence. Therefore, less-than-significant impacts from subsidence will occur.
- d) Expansive soils are generally considered a threat because of the pressure that may be induced upon structures. In general, expansive soils include characteristics that may result in expansion or contraction when exposed to water. The extent of contraction (shrink) or expansion (swell) may be influenced by the amount and type of clay in the soil. The USDA Soil Conservation Service identifies shrink swell potential for soils as low, moderate, and high. Soils with high shrink swell potential include Altamont, Auld, Bonsall, Bosanko, Las Posas, Madera, Murrieta, Placentia, Porterville, Vallecitos, Waukena, Willows and Yokohl. The Geotechnical Report found that soils at the Project site consist of sandy silts, silty sands, and sands, which are non-expansive. As a result, the Project is not located on expansive soil and no substantial risks to life or property would occur; therefore, no significant impacts from expansive soil will occur.
- e) The proposed Project is the replacement of an existing fire station and the Project elements would not generate substantial amounts of new sewage or wastewater as no additional staff would be needed, which could increase new sewage or wastewater. The Project would tie into the existing sewer system and no septic infrastructure would be required. Nonetheless, upgrades to the sewer and drainage infrastructure (cleanouts, coupling reductions, and sand/oil interceptor) are included as part of the Project to avoid substantial effects to sewage and wastewater. Therefore, no significant impact to septic tanks or wastewater disposal systems will occur.
- f) The Project site is located within an area of low paleontological sensitivity. Due to the depth of excavation, the potential to discover and/or disturb any paleontological resource is low, and impacts would be less than significant. In the unlikely event that paleontological resources are discovered during construction, Mitigation Measure **GEO-1** shall be implemented. While not required, Mitigation Measure **GEO-1** will ensure potential impacts to paleontological resources remain less than significant. Therefore, a less-than-significant impact related to paleontological resources will occur.

Mitigation:

GEO-1 In the event that any paleontological resources are unintentionally discovered during proposed Project construction, construction activities in the vicinity of the resource shall immediately halt and/or be moved to other parts of the Project site. A Riverside County-qualified paleontologist shall be retained by the County or their designee to determine the significance of the resource, if any. If the find is determined to be significant, avoidance or other appropriate measures including extraction and relocation, as recommended by the paleontologist, shall be implemented.

Monitoring: Riverside County Facilities Management, Project Construction Manager(s), Qualified Paleontological Monitor

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact; AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

SI LTS NI AP M-DP

VIII GREENHOUSE GAS EMISSIONS

Would the Project

| | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) <i>Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) <i>Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: CalEEMod 2020.4.0.

Findings of Fact:

This section analyzes the Project's contribution to global climate change impacts by evaluating the Project's contribution of greenhouse gas (GHG) emissions. The primary GHG of concern is carbon dioxide (CO₂), which represents the majority (greater than 99 percent) of proposed Project-related emissions. According to Section 15064.4, of the State CEQA Guidelines for determining the significance of GHG emissions, a lead agency must consider the following in the assessment of potential significant impacts:

- 1) *The extent to which the 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;*
- 3) *The extent to which the Project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.*

To address the State's requirement to reduce GHG emissions, the County prepared the 2015 Climate Action Plan (CAP) with the target of reducing GHG emissions within the unincorporated County by 15 percent below 2008 levels by the year 2020. The County's target is consistent with the AB 32 target and ensures that the County is providing GHG reductions locally that will complement the State and international efforts of stabilizing climate change.

The County determined the size of development that is too small to be able to provide the level of GHG emission reductions expected from the Screening Tables or alternate emission analysis method. To do this the County determined the GHG emission amount allowed by a Project such that 90 percent of the emissions on average from all Projects would exceed that level and be "captured" by the Screening Table or alternate emission analysis method. The 3,000 MT CO₂E per year value is the low end value within that range rounded to the nearest hundred tons of emissions and is used in defining small Projects that are considered less than significant and do not need to use the Screening Tables or alternative GHG mitigation analysis used in the County CAP.³

- a) In accordance with the State CEQA Guidelines, GHG emissions were calculated for construction and operation of the Project and will be assessed against the County CAP threshold of 3,000 MTCO₂E per year. GHG emissions resulting from Project construction and operation were calculated using the CalEEMod model, and include emissions resulting from on-road and off-road diesel fuel consumption as well as worker commutes, vehicle travel, energy consumption, water consumption, and waste generation. The total operational carbon dioxide emissions generated as a result of the Project is 5 metric tons (MT) per year, including construction-related emissions amortized over a typical Project life of 30 years – Which is far below the threshold of 3,000 MTCO₂E per year. The proposed Project's operational GHG emissions are below the County CAP GHG threshold, as well as the SCAQMD threshold for most land use types, of 3,000 MT CO₂E and do not constitute a substantial contribution to global climate change. In addition, the low number of GHG emissions generated by the Project would not interfere with the goals of SB32. Therefore, a less-than-significant impact related to GHG emissions on the environment will occur.
- b) The County of Riverside has adopted policies and programs in its General Plan to promote the use of clean and renewable energy sources, facilitate alternative modes of transportation, and for the sustainable use of energy. The County CAP, described above, was adopted by the Board on December 8, 2015. The CAP provides a specific implementation tool to guide future decisions of the County and is used as the baseline for the evaluation of consistency with applicable GHG plans, policies, or regulations. The Project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The County CAP identifies three main goals which are to: provide a list of specific actions that will reduce GHG emissions, giving the highest priority to actions that provide the greatest reduction in GHG emissions and benefits to the community at the least cost; reduce emissions attributable to the County to levels consistent with the target reductions of AB 32; and establish a qualified reduction plan for which future development within the County can tier and thereby streamline the

³Riverside County Transportation and Land Management Agency, *Greenhouse Gas Emissions Screening Tables*, March 2015.

environmental analysis necessary under CEQA. The focus of the analysis is on answering the question of whether incremental contributions of GHGs are a cumulatively considerable contribution to climate change impacts. The County CAP has incorporated the measures identified in the CARB Scoping Plan as a means for reducing GHG emissions. **Table GHG-1** summarizes the CARB Scoping Plan Policies for reducing GHG emissions. As shown, the Project is consistent with the CARB Scoping Plan Policies and County CAP. Therefore, a less-than-significant impact related to consistency with plans, policies, or regulations for reducing GHG emissions will occur.

Table GHG-1 CARB Scoping Plan

| CAP Measures to Reduce Greenhouse Gas Emissions | Project Compliance with Measure |
|--|---|
| Energy Efficiency: Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policies, and implementation mechanisms. | Consistent. The Project will be designed and constructed using sustainable building practices, and will comply with the County’s Sustainable Building Policy (H-29). The Project will be compliant with all current Title 24 standards. |
| Green Building Strategy: Expand the use of green building practices to reduce the carbon footprint of California’s new and existing inventory of buildings. | Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) (“CALGreen”) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards that became mandatory in the 2010 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The 2013 edition is the most current version of the code, until the 2016 version takes effect on January 1, 2017. The Project will be subject to the mandatory standards in both versions of this Code. The Project will also incorporate LEED energy efficiency building measures. |
| Recycling and Waste: Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste. | Consistent. A regulation to reduce methane emissions from municipal solid waste landfills is currently being developed by the state. The Riverside Countywide Integrated Waste Management Plan outlines the goals, policies, and programs the County and its cities will implement to create an integrated and effective waste management system that complies with the diversion mandates in AB 939. The Project will be required to participate with County programs for recycling and waste reduction which comply with the 50 percent reduction requirement of AB 939. |
| Water: Continue efficiency programs and use cleaner energy sources to move and treat water. | Consistent. The Project will comply with all applicable County ordinances, the CALGreen Code, and the County’s Low Impact Development standards. Compliance measures include the installation of low water use fixtures (toilets, faucets), minimized outdoor water use through water efficient landscaping, and the use of alternative energy, when feasible. |

Source: CARB Scoping Plan.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

IX HAZARDS AND HAZARDOUS MATERIALS

Would the Project

| | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within 0.25-mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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 for people residing or working in the Project area? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: Google Earth™; Coachella Valley Unified School District Site Maps; DTSC, Cortese List, 2021 EEI Phase I ESA, Figure S-11 “Wildfire Susceptibility”; Figure S-19 “Airport Locations”; Figure PS-6 Airport Land Use Compatibility Zones and Influence Areas, Riverside County General Plan.

Findings of Fact:

a-b) A Phase I Environmental Site Assessment was completed for the Project site to assess the potential for hazards and hazardous materials at the Project site. No hazardous materials or conditions exist on the Project site and no demolition would occur which could encounter hazards, such as lead-based paint or asbestos-containing materials. Project construction, may involve the limited transport, storage, use, or disposal of hazardous materials from the fueling or servicing of construction equipment on-site. Construction activities could also include general commercial cleaners, solvents, lubricants, paints, industrial coatings and other substances utilized for resurfacing. These types of chemicals are not acutely hazardous and would be used in limited quantities and in adherence to the manufacturers’ guidelines. Further, these activities would be minimal, short-term, or one-time in nature. These materials are anticipated to be similar to other substances used on-site for the existing County-owned building.

During operation, the fire station would incorporate special storage requirements and other safety measures into Project design in order to minimize potential impacts. All facilities within the fire station would be equipped with adequate fire suppression equipment. Furthermore, fire stations are specially trained and equipped to handle and store hazardous materials. Any hazardous materials would be properly locked and made inaccessible to the public and/or untrained personnel in order to prevent unauthorized usage of these materials. Lastly, all hazardous materials would be used, transported, and stored in accordance with the manufacturer’s labels and with all accepted BMPs (catch basins, riprap, a sand/oil interceptor, and cleanouts), and the use of hazardous materials and substances would be subject to federal, state, and local health and safety requirements. Compliance with the applicable laws and regulations would ensure that less-than significant impacts associated with the transport, use, or disposal of hazardous materials will occur.

Construction vehicles and equipment contain substances such as gasoline, diesel, antifreeze, and lubricants that, if accidentally released to the environment, could be hazardous. Existing Spill Prevention, Control, and Countermeasure requirements would reduce potential impacts by requiring the development and implementation of hazardous substance control and health and safety measures. During operation, the proposed Project could require the use of hazardous materials including, but not limited to, industrial chemicals, oils,

flammables, glue, and paint. However, the Project would incorporate all appropriate safety measures to minimize potential impacts, including the use of fire suppression equipment and fire-retardant metal cabinets for storage. All hazardous materials utilized would be properly locked and made inaccessible to the public and/or untrained personnel in order to prevent unauthorized usage of these materials. Compliance with the applicable laws and regulations would ensure that the risks associated with the potential accidental release of hazardous materials were minimized to the greatest extent feasible. Therefore, less-than-significant impacts related to the creation of significant hazards to the public either through routine use or foreseeable accident will occur.

- c) The Project site is located within the Desert Center Unified School District. The closest school Eagle Mountain School, which is located approximately nine miles to the northwest. As there are no schools located within one-quarter mile of the Project site, there is no potential for the Project to result in a release at nearby schools. Therefore, no significant impacts related to hazards or hazardous materials within 0.25 miles of a school will occur.
- d) The proposed Project site is not identified on any list of hazardous material sites compiled pursuant to Government Code Section 65962.5. Therefore, a less-than-significant impacts related to the creation of a hazard from a list of compiled hazardous sites will occur.
- e) The proposed Project is not located within an airport influence area nor is it located in an airport compatibility zone. The Airport Land Use Commission is not required to review the Project. Therefore, no significant impacts to inconsistencies with airport planning will occur. The closest public airport to the Project site is Chiriaco Summit Airport, which is 18 miles southwest from the Project site. The Project site is not within the primary flight-path of arriving and departing aircrafts for this airport. The fire station would be a single-story structure of similar scale to the existing fire station and would not create safety hazards that would affect the operation of the Airport. Therefore, less-than-significant impacts to safety hazards in the vicinity of a public airport will occur.
- f) The proposed Project will be confined within the existing County-owned property and would not create any conditions that would impair the implementation of, or physically interfere with, an emergency response plan and/or emergency evacuation plan. The Project would adhere to the emergency response plans and emergency evacuation plans currently established at the fire station, and the County's design review process would also ensure Project conformance with these plans. Therefore, no significant impacts related to the disruption of emergency services will occur.
- g) The Project site is within a low fire area and no wildland areas within the Project vicinity would create a potential fire hazard at the Project site. There are no substantial areas of native vegetation found within the Project site that could provide a fuel source for a wildfire. The Project will be designed in accordance with all requirements of the County Fire Department. Therefore, no significant impact related to hazardous fire areas will occur.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

X HYDROLOGY AND WATER QUALITY

Would the Project

- | a) <i>Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| b) <i>Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
-

| | | | | | |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <i>c) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:</i> | | | | | |
| <i>i) Result in substantial erosion or siltation, on- or off-site?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>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?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>iv) Impede or redirect flood flows</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>d) Result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?</i> | | | | | |
| <i>e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: Riverside County Flood Control District Flood Hazard Report/Condition; Riverside County General Plan; USDA Soil Conservation Service Soil Surveys; US Geological Survey; CEQA Guidelines Section 15155.

Findings of Fact:

- a) During construction, grading and excavation activities associated with the Project would generate potential for short-term erosion and discharge of pollutants, especially during times of inclement weather. Impacts to downstream water quality could occur as a result of the potential erosion and sediment transport. Impervious surfaces which are generally associated with various pollutants such as petroleum hydrocarbons, metals, and sedimentation. The proposed Project is located in the Desert Aquifers Watershed and within the Southern Mojave Basin. The hydrologic features within five miles of the Project site are limited to Lake Tamarisk, which is approximately 250 feet to the west. During construction, grading and excavation activities associated with the Project would generate potential for short-term erosion and discharge of pollutants, especially during times of inclement weather. Impacts to downstream water quality could occur as a result of the potential erosion and sediment transport. Impervious surfaces which are generally associated with various pollutants such as petroleum hydrocarbons, metals, and sedimentation. The Project area does not discharge into a waterbody. The topography of the are slopes to the northeast and flattens out approximately 4 miles to the northeast near Capp Road. The SWPPP will contain BMPs that include erosion control measures that are designed to reduce impacts from on- and off-site erosion during construction. Construction BMPs are categorized, by erosion control, sediment control, tracking control, and wind erosion control measures. Typical erosion control BMPs include scheduling to avoid adverse weather conditions, covering unused stockpiles, retaining existing vegetation, and implementing non vegetative cover. Typical sediment control BMPs include silt fencing, fiber rolls, gravel bag berms, street sweeping, and storm drain inlet protection. The application of water and silt fencing is used to control for wind erosion and rump pads and rocked entries are used as tracking controls to keep dirt on-site. The erosion control plan details the BMPs and locations to be implemented. BMPs will also be implemented for operation of the Project which include catch basins, sand/oil interceptor and cleanouts. Implementation of the SWPPP and adherence with the operational BMPs (catch basins, riprap, a sand/oil interceptor, and cleanouts) would ensure that water discharged from the site would not violate any water quality standards or waste discharge requirements during construction. Therefore, a less-than-significant impact related to water quality standards and waste discharge requirements will occur.

- b) The proposed Project site lies within the service area of the Lake Tamarisk Water District in which the water is obtained from groundwater. The Lake Tamarisk Water District is operated by County Service Area #51 Water supply consists of two groundwater wells and serves a population of 330 people. The Project would implement water conservation practices to the maximum extent practical including water efficient plumbing fixtures, the installation of drought tolerant plants in landscaped areas, and the use of reclaimed water for irrigation when available, all of which comply with Title 24 efficiency standards. Therefore, a less-than-significant impact related to Project-related depletion of groundwater supply will occur.

- c) The Project lies in on a relatively flat site in the center of the Southern Mojave Basin. There are no drainage facilities in the vicinity of the Project site nor is the site adjacent to any tributaries, streams or rivers. Based on the topography and Project design, existing flow lines would be maintained, and drainage would still flow to the northeast. Therefore, a less-than- significant impact related to the alteration of drainage patterns will occur.

The proposed Project site is not located within a 100-year flood hazard area and the Project site is located on relatively level topography. As a critical facility, the facility the Project would be built up so that the finished floor of the building is elevated 1.25 feet above the highest adjacent ground to provide protection against flood inundation. Based on a size of 7,000 square feet, the Project would be unlikely to impede or redirect flood flows. As discussed above, the Project would implement a SWPPP, as well as incorporate capture systems for fueling, car washing would ensure that no substantial soil erosion, siltation, or other on-site contaminants would result in on-sit runoff construction and operation of the Project. Therefore, a less-than-significant impact related to erosion, runoff, or the impedance or redirection of flooding will occur.

- d) The proposed Project site is not located within a 100-year flood hazard area, but the Project site is generally in the middle of a flat basin which is sensitive to flooding. As a critical facility, the facility the Project would be built up so that the finished floor of the building is elevated 1.25 feet above the highest adjacent ground to provide protection against flood inundation. Therefore, a less-than-significant impact related to flooding and inundation will occur.
- d) The proposed Project would be required to adhere to federal, state and local water quality provisions. The new impervious area that would occur with the Project would not substantially alter or affect groundwater recharge on site as there is ample pervious area surrounding the Project to allow for groundwater recharge. The Project will have sufficient capacity to handle stormwater runoff and prevent impacts to water quality. With implementation of the SWPPP and compliance with federal, state, and local regulations pertaining to the maintenance of water quality, a less-than-significant impact related to effects to water quality control and sustainable groundwater management plans would occur.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

XI LAND USE AND PLANNING

Would the Project

| | SI | LTS | NI | AP | M-DP |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) <i>Physically divide an established community?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: County of Riverside General Plan; RCIT (GIS Database); Eastern Coachella Valley Area Plan.

Findings of Fact:

- a) The general plan land use designation for the Project site is Medium High Density Residential. The Project site is zoned (R-2-5000). The Project site is presently vacant and is located in a rural area of the County within the Lake Tamarisk community. Within the County zoning, there is no zoning classification for public facilities, as they are allowed within all zoning designations (except for Open Space) provided they are compatible with the surrounding land uses (LU 7.2). The existing adjacent Fire Station #49 is an existing public facility that provides fire services to the community. The Project would not result in any changes in access to the surrounding residential community and would not create a visual separation to the surrounding community or a physical or perceived barrier which could disrupt or divide the physical arrangement of an established community. Therefore, no significant impact related to the division of a community will occur.

- b) The proposed Project would result in a continued land use as a public facility. The replacement fire station would enhance the quality of fire services for the existing fire station and will continue to be compatible with the surrounding residential uses and would not influence a pattern of change to any adjacent jurisdictions. Therefore, no significant impact related to land use compatibility will occur.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

XII 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 or the residents of the State? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: Riverside County General Plan Figure OS-5 “Mineral Resources Area”; California Department of Conservation Mineral Resources Program.

Findings of Fact:

- a-b) According to the Riverside County General Plan, the County has extensive deposits of clay, limestone, iron, sand, and aggregates; however, the Project site is located in a zone that has not been studied for the presence of mineral resources. The Project site would implement a new fire station. Excavation would be required for foundational footings utility trenching; however, based on the depth for excavation, construction is unlikely to uncover any mineral resources. The Project is not located on or near a locally-important mineral resource recovery site and would not expose people or property to hazards from proposed, existing or abandoned quarries or mines. Therefore, less-than-significant impacts related to mineral resources will occur.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

XIII NOISE AND VIBRATION

Would the Project

- | | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Result in generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: Project Description; Riverside County Ordinance No. 847; Riverside Municipal Code Section 7.35

Findings of Fact:

Sound is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by differentiating among frequencies in a manner approximating the sensitivity of the human ear. The perceived loudness of sound is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and should be approximated by the A-weighted sound levels (expressed as dBA) and the way the human ear perceives noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period. The Leq is the foundation of the composite noise descriptor, day/night average (Ldn), and shows very good correlation with community response to noise. Human response to noise varies widely depending on the type of noise, time of day, and sensitivity of the receptor. The effects of noise on humans can range from temporary or permanent hearing loss to mild stress and annoyance due to such things as speech interference and sleep deprivation. Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks, and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours.

Noise levels decrease as the distance from the noise source to the receiver increases. Noise generated by a stationary noise source, or “point source,” will decrease by approximately 6 dBA over hard surfaces (e.g., reflective surfaces such as parking lots or smooth bodies of water) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt, grass, or scattered bushes and trees) for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level would be 83 dBA at a distance of 100 feet from the noise source, 77 dBA at a distance of 200 feet, and so on. Noise generated by a mobile source will decrease by approximately 3 dBA over hard surfaces and 4.8 dBA over soft surfaces for each doubling of the distance.

Ambient noise measurements were taken at sensitive receptors near the Project site to establish a baseline to assess the potential noise effects from construction and operation of the Project. **Table N-1** shows the existing ambient noise levels. As shown in **Table N-1**, daytime existing ambient sound levels ranged between 52.6 and 56.7 dBA Leq.

Table N-1 Ambient Noise Levels at Sensitive Receptors Near the Project Site

| Receptor | Location | Distance to Project site (feet) | Leq, dBA(a) |
|-------------------------|--------------------|---------------------------------|-------------|
| Single-Family Residence | 43701 Tamarisk Dr. | 100 | 52.6 |
| Single-Family Residence | 26631 Catalina Way | 175 | 53.4 |
| RV Park | Unit 1 | 550 | 54.5 |
| Golf Course | 26250 Parkview Dr. | 225 | 56.7 |

(a) Noise Measurements taken using a Sper Scientific Class I noise meter and wind screen on March 17, 2022. Weather conditions were sunny with a slight breeze.

SOURCE: Riverside County Facilities Management

- a) Noise impacts could be considered significant if they caused a violation of any adopted standards. County Ordinance No. 847 and the Noise Element of the County General Plan are the documents that guide noise regulations within the County. According to Section 2a of the Noise Ordinance, facilities owned or operated by or for a governmental agency are exempt. The Project site is owned by the County and is exempt from the Ordinance. In addition, the Project does not incorporate new noise-generating equipment or increase capacity that would result in a new noise source. Therefore, no effect related to consistency with adopted noise standards will occur and less-than-significant impacts will occur.

The proposed Project would result in the construction and operation of a replacement fire station. Construction of the Project would result in temporary and periodic increases in noise, which is more likely to result in annoyance and inconveniences, rather than the more serious effects such as hearing loss, sleep deprivation, and stress. While there would be a temporary increase in noise levels within the Project vicinity during construction, the operation of the replacement fire station would not add staff or equipment that would raise ambient noise levels at surrounding sensitive receptors beyond the existing baseline noise environment. Therefore, the noise analysis is limited to the effects of noise generated during construction.

Noise from construction activities is generated by two primary sources: (1) the noise related to active construction equipment; and, (2) the transport of workers and equipment to construction sites. Project construction is expected to require the use of earthmoving and construction equipment for site prep, excavation/grading, construction, paving, and architectural coatings. Typical operating cycles for earthmoving equipment, such as excavators, graders, and bulldozers, may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Based on the intensity of use and equipment mix, noise levels during construction are estimated to have an L_{eq} of 89 dBA at 50 feet.⁴

The nearest noise-sensitive receptor is the single-family residence located approximately 100 feet south of the proposed Project site. As shown in **Table N-3**, exterior noise levels would exceed 65 dBA, however, the resulting interior noise levels at the nearest sensitive receptors would be less than 55 dBA. This would result in a temporary increase to existing ambient noise levels, and would represent an inconvenience to the nearest residential receptors.

Because construction noise is usually generated in short bursts and the heavy equipment used during site preparation moves around the construction site, this maximum noise level is not likely to occur for sustained periods of time and the temporary inconvenience would not be a substantial increase which could alter human health or safety. The National Institute of Occupational Health has identified a recommended exposure limit of 85 dBA as an 8-hour weighted average, which can result in potential hearing loss. Construction noise levels would not result in an 8-hour weighted average that would exceed this noise level. In addition, while construction activity would last for approximately 9 months, the majority of the construction noise effects would occur during excavation and grading which would only last for approximately 45 days. Therefore, a less-than-significant impact related to noise from construction activity and equipment will occur.

Table N-2 Project Construction Noise Impacts

| Receptor | Distance | Estimated Exterior Construction Noise Level (dBA, L_{eq}) (a) | Estimated Interior Construction Noise Level (dBA, L_{eq}) (b) | Potentially Significant Impact |
|-------------------------|----------|--|--|--------------------------------|
| Single-Family Residence | 100 | 83.0 | 63.0 | No |
| Single-Family Residence | 175 | 78.1 | 58.1 | No |
| RV Park | 550 | 68.2 | 48.2 | No |
| Golf Course | 225 | 75.9 | 55.9 | No |

(a) Construction activity used an L_{eq} of 89 dBA.

(b) A 20-dBA reduction was applied for construction as identified in the Department of Housing and Urban Development Noise Notebook.

Source: Riverside County FM and Google.

⁴USEPA, *Noise from Construction Equipment and Operations*, 1971.

Construction activity, although temporary at any given location, can be substantially disruptive to adjacent uses during the construction period. Construction activity is anticipated to last 9 months and will not occur during night time hours or on weekends when the majority of people are home. Construction noise impacts will be minimized to the extent feasible by limiting construction hours, staging vehicles and equipment away from sensitive receptors, and using equipment that is maintained and in good operating condition. These measures have been identified as Mitigation Measures **NOI-1** through **NOI-4**. With implementation of mitigation, a less-than-significant impact related to a substantial or periodic increase in noise levels will occur.

- b) No significant sources of groundborne vibration or noise would be generated during the operation of the proposed Project. The construction of the Project would have the potential to produce short-term ground-borne vibrations. The closest land uses potentially impacted from groundborne vibration and noise (primarily from the use of heavy construction equipment) is the single-family residence located to the east of the Project site. The Federal Transit Administration has identified a construction vibration damage criterion of 0.2 inches per second peak particle velocity (PPV) for non-engineered timber and masonry buildings. General construction activity typically generates a vibration level of 0.089 inches per second PPV at 25 feet. This reference level would result in a vibration level of 0.011 inches per second PPV at the closest residence. This level would be well below the construction vibration damage criteria of 0.2 inches per second PPV and would not expose people to risk of building failure. Therefore, a less-than-significant impact related to groundborne vibration and noise will occur.
- c) The Project site is not within an airport influence area and is located approximately 20 miles to the nearest public airport. Therefore, no significant impact related to public airport noise will occur.

Mitigation:

- NOI-1** A construction noise coordinator shall be established prior to construction and signage will be provided on site that will identify the designated person and contact number. The coordinator shall be responsible for receiving calls from residents regarding specific construction noise-related complaints. The coordinator would then be responsible for taking appropriate measures to reduce or eliminate noise levels as appropriate.
- NOI-2** During construction, all staging areas and equipment shall be located and directed as far to the south as possible to avoid any disruptions to the sensitive receptors located north of the Project site.
- NOI-3** Construction activity shall be prohibited during the hours of 6:00 p.m. and 7:00 a.m. and on weekends and County-designated holidays.
- NOI-4** Construction equipment shall be properly maintained and equipped with mufflers and other State-required noise-attenuation devices.

Monitoring: Riverside County Facilities Management and Construction Contractor

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact; AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

SI LTS NI AP M-DP

XIV POPULATION AND HOUSING

Would the Project

| | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| <i>a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: Project Description; RCIT (GIS Database); Riverside County General Plan Housing Element.

Findings of Fact:

a-b) The proposed Project involves the construction and operation of a replacement fire station and associated infrastructure to enhance the service capability of an existing fire station within a County owned parcel. The Project will not displace people, necessitating replacement housing and is not located within a redevelopment area. The Project will primarily consist of the enhancement of existing services and would not create a demand that would result in the need for new housing or interfere with the development of planned housing. Therefore, no significant impact related to population and housing will occur.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

XV PUBLIC SERVICES

Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government 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:

| | | | | | |
|----------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a) Fire Protection? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Police Protection? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Schools? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Parks? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Other public facilities | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: Project description, Google Earth.

Findings of Fact:

a-e) The proposed Project site is currently served by all required public services. The County of Riverside Fire Department provides fire protection and fire suppression services to the Project area with the existing fire station. The construction and operation of the Project would enhance the quality of fire services provided, incorporating better facilities to allow fire fighters to maintain response times and performance objectives for public services.

The Project site is within the Riverside County Sheriff’s Department Colorado River Station area. The police station is located approximately 46 miles to the east of the Project site at 260 North Spring Street, Blythe, California. The construction and operation of Fire Station #49 would primarily result in the enhancement of existing services. The Project would not induce any additional population or create unsafe conditions that would create additional demand for police services and trigger the need for new or altered facilities to meet the required service ratio or response times.

The Project site is located within the Desert Center Unified School District. The closest school in the district is Eagle Mountain School, which is located approximately nine miles to the northwest. The construction and operation of the Project would not induce any additional population or create conditions that would create additional demand for educational services. The proposed Project does not include the construction or expansion of a recreational facility and does not propose to include the use of an existing park or other recreational facility. The Project would be constructed on existing County owned land and would not displace or create additional demand for recreational area. The proposed Project would not induce population growth or activities which would result in an increased demand for fire, police, school, and other public facilities services and trigger the need for new or altered facilities to meet required service ratios or response times. Therefore, a less-than-significant impact related to public services will occur.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

XVI RECREATION

Would the Project

a) *Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated??*

b) *Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

Source: RCIT (GIS Database); Ord. No. 460 Section 10.35 (Regulating the Division of Land – Park and Recreation Fees and Dedications); Ord. No. 659 (Establishing Development Impact Fees); County of Riverside General Plan.

Findings of Fact:

a-b) According to Riverside County GIS, the Project site is within a County Service Area (CSA) 51. However, parks and recreational services would not be affected as a result of Project implementation. In addition, the Project site is not subject to Quimby fees. Therefore, no significant impact related to designated recreational districts will occur.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

XVII TRANSPORTATION

Would the Project

a) *Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, 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?*

Source: RCIP, Site Plan, Site Reconnaissance, ITE Manual, County of Riverside General Plan, ITE 9th Generation Trip Rates.

Findings of Fact:

a-b) The Regional Transportation Plan (RTP) is a multi-modal, long-range planning document and includes programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight, and finances. The RTP is prepared every three years by SCAG and reflects the current future horizon based on a 20-year Projection of needs.

Urbanized areas such as Riverside County are required by State law to adopt a Congestion Management Plan (CMP). The goals of the CMP are to reduce traffic congestion and to provide a mechanism for coordinating land use development and transportation improvement decisions. The Riverside County Congestion Management Program (CMP) is updated every two years in accordance with Proposition 111. The purpose of a CMP is to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds, alleviate traffic congestion and related impacts, and improve air quality.

Local agencies are required to establish minimum level of service (LOS) thresholds in their general plans and conduct traffic impact assessments on individual development Projects. Deficiency plans must be prepared when a development Project would cause LOS F on non-exempt CMP roadway segments. The deficiency plans outline specific mitigation measures and a schedule for mitigating the deficiency.

The construction schedule for this Project is estimated to be 130 working days. Construction traffic includes a mix of light and heavy vehicles corresponding to workers and construction trucks. Construction of the Project would occur in four phases: site preparation, grading, building construction, and architectural coating. The summary of construction activity is presented in **Table T-1**. Construction trip generation estimates are based on the anticipated construction schedule and phasing. Typical construction work schedules are expected to be during daylight hours only, with the arrival of construction workers occurring well before the morning peak commute period due to high temperatures and departures in the mid afternoon before the evening peak period. Truck and delivery activity to and from the site would also occur predominantly outside the peak commute periods.

Table T-2 estimates that the daily construction traffic would range from about 14 vehicles per day for Phase 1 to about 56 vehicles per day assuming traffic is evenly spread over the working days of each phase. These are conservative assumptions assuming no carpooling of construction workers (that is all workers arrive in their individual vehicles). If only half of the workers arrive and depart pre-commute periods in the morning and evening then the site generated traffic occurring in the peak period is about 20 trips. Construction activity is not anticipated to generate more than 28 trips during the AM or PM peak hour. The Project would not add staff or equipment that would result in new trips associated with the existing Fire Station #49. Therefore, no impact related to the performance of the circulation system will occur.

Table T-1: Summary of Construction Activity

| Phase | Duration (days) | Crew | Equipment |
|-----------------------|-----------------|------|---|
| Site Prep | 5 | 15 | Grader, Tractor/Loader/Backhoe |
| Grading | 25 | 15 | Excavator, Grader, Dozer, Backhoe (2) |
| Building Construction | 90 | 40 | Crane, Forklifts (2), Generator Sets (3), Backhoe, Welder |
| Paving | 5 | 15 | Cement Mixer, Paver, Paving Equipment, Roller, Backhoe |
| Architectural Coating | 5 | 10 | Air Compressor |

Source: Construction Contractor, CalEEMod.

Table T-2: Estimated Construction Daily Trip Generation

| Phase | Duration (days) | Number of Workers | Maximum Truck Trips | Total Trips |
|-----------------------|-----------------|-------------------|---------------------|-------------|
| Site Prep | 5 | 5 | 4 | 14 |
| Grading | 25 | 13 | 20 | 56 |
| Building Construction | 90 | 20 | 10 | 50 |
| Paving | 5 | 18 | 14 | 50 |
| Architectural Coating | 5 | 10 | 2 | 22 |

Source: CalEEMod, Construction Contractor Assumptions.

- c) The proposed Project would not alter existing roadways or increase hazards due to a geometric design feature. The interior access of the Project site would be modified to facilitate circulation, but these improvements would have not an effect on the surrounding roadway network. As a result, the Project would not create any hazardous or incompatible conditions to the surrounding circulation network. Therefore, no impact related to the creation of hazardous roadway conditions will occur.
- h) Fire and emergency access is provided in compliance with the Uniform Fire Code. The proposed Project does not propose any action that would negatively affect emergency access to and from the site beyond the existing condition. There are two access points to Fire Station #49 from Tamarisk Drive, such that if one were blocked, others would be available to ensure that emergency service can be provided to the Project site in an efficient manner. Therefore, no impact related to emergency access will occur.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

XVIII 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:

(i) *Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.100? or*

(ii) *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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe*

Source: Tribal Consultation, Cultural Records Search.

Findings of Fact:

Native American consultation began with letters being sent out to three tribes, Agua Caliente Band of Cahuilla Indians, Ramona Band of Cahuilla Indians, and the Torrez-Martinez Desert Cahuilla Indians on June 26, 2019 requesting the initiation of consultation within 30 days. Agua Caliente Band of Cahuilla Indians provided a response requesting consultation and no response was received from Torrez-Martinez or Ramona. Government-to-government consultation pursuant to AB 52 was initiated on March 7, 2022. County staff met to discuss Project components, impacts, and mitigation requirements. During consultation meetings, it was requested that the tribes provide County staff with any issues or concerns. In addition, it was requested that they identify any tribal cultural resources that may be present within the Project area. To date, no issues have been raised and no information has been provided regarding tribal cultural resources. No information has been provided indicating that tribal cultural resources are present within the Project site. Regardless, Mitigation Measures **CR-1** through **CR-5** will ensure that a tribal monitor will still be on-site when undisturbed soil is excavated to monitor in the case of an accidental discovery. Therefore, implementation of the Project would have no impact on tribal cultural resources.

Mitigation: None

Monitoring: None

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SI LTS NI AP M-DP

XIX UTILITIES AND SERVICE SYSTEMS

Would the Project

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 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 the 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?*

Source: Coachella Valley Water District, California State Water Quality Resources Control Board.

Findings of Fact:

a) The Project site will tie into the existing water, wastewater, gas, electrical, and telecommunications systems that serve the Project area and will not require expansion of capacity. There are no stormwater drainage facilities in the vicinity of the Project area. However, the Project site will consist of pervious surfaces and capture systems to control all stormwater generated on site, without significantly impacting the surrounding properties and street system. Therefore, a less-than-significant impact related to the need for relocated or expanded utility systems will occur.

b) No substantial increase in water would result from the residence or landscaping as no additional staff would be added as part of the proposed Project. Water usage resulting from operation of the Project would be similar to the existing fire station, primarily resulting from restroom facilities and sinks, as well as the cleaning and maintenance of fire equipment. The Project would be required to comply with the mandatory measures for non-residential buildings under Division 5.3, Part 11 of Title 24 (CALGreen) for both indoor and outdoor water use. Indoor water conservation measures include, but are not limited to 1.28 gallons per flush for toilets, 0.125 gallons per flush for wall-mounted urinals, 0.5 gallons per flush for floor mounted urinals, 2 gallons per minute at 80 pounds per square inch (psi) for single showerheads, and 0.5 gallons per minute at 60 psi for lavatory faucets. Outdoor conservation measures address the amount of water use based on the amount of aggregate landscaping to comply with the County water-efficient landscape ordinance and the California Department of Water Resources Model Efficient Landscape Ordinance. The Project is anticipated to generate a water demand of approximately 1.2 acre-feet per year (afy). Water is obtained from groundwater wells. The proposed Project would fall within the existing use and would be accounted for in the projected water demand. Therefore, the water consumption estimated for the Project site would not exceed that which is anticipated.

Implementation of the Project would not result in a significant increase in the consumption of water compared to the existing fire station as there are no increases in staff of equipment. Additional demand would result from the addition of landscaped area that would require for irrigation; however, not to a degree that would adversely impact the capacity of the CVWD water treatment facility. The CVWD requires new Projects to apply water conservation practices to the maximum extent practical including water efficient plumbing fixtures, the installation of drought tolerant plants in landscaped areas, and the use of reclaimed water for irrigation when available, all of which comply with Title 24 efficiency standards. Adherence to all applicable rules and regulations related to the conservation of water will ensure that a less-than-significant impact related to water supply will occur.

c) The proposed Project site is within the wastewater treatment service area of the Lake Tamarisk Water District. The Project would generate 1,300 gallons per day based on a conservative estimate of all of the employees in the fire station⁵ As there would be no new staff, there would be no new increase in wastewater. Therefore, a less-than-significant impact related to water treatment facilities will occur.

d) According to the California Department of Resources Recycling and Recovery; the County's landfills collectively have a total capacity of approximately 2.6 million cubic yards. The County landfills are collectively at less than 30 percent capacity. The proposed Project would be regulated by federal, state and local government and would be required to comply with all statutes and regulations related to solid waste. All solid waste generated by the Project would be disposed at a Riverside County permitted landfills. As no additional staff would be in the replacement fire station, waste generated would not

⁵City of LA Wastewater Generation Rates, based on 190 gpd per employee.

increase during operation of the Project. New waste would be limited to construction activity. Solid waste generated by the Project would most likely be disposed of at the Desert Center Landfill. Construction waste generated by the Project would be a one time occurrence and would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs. Therefore, a less-than-significant impact related to solid waste treatment and capacity will occur.

- e) The California Integrated Waste Management Act of 1989, also known as Assembly Bill 939 (AB939), revised the focus of solid waste management from landfill to diversion strategies such as source reduction, recycling, and composting. AB939 identified a 50 percent diversion rate goal by 2000. In 1995, the unincorporated County had a diversion rate of 36 percent and it increased to 50 percent in 2000 to meet the standard. In 2008, Senate Bill 1016 (SB1016) was passed, which changed the way compliance is measured beginning in 2007. Compliance is the same under SB1016 as it was under AB939, except that the emphasis on program implementation is more focused. Compliance is evaluated by looking at a jurisdiction's per capita disposal rate as an indicator of how well its programs are doing to keep disposal at or below a jurisdiction's unique 50 percent equivalent per capita disposal target. The disposal rate targets for the unincorporated County are 5.5 ppd per resident and 25.5 ppd per employee. The Project's solid waste would not substantially increase with the replacement fire station and would be disposed of at an approved site in compliance with federal, state and county regulations. The proposed Project would not conflict with the applicable CIWMP (County Integrated Waste Management Plan). Therefore, a less-than-significant impact related to consistency with solid waste statutes and regulations will occur.

Mitigation: None

Monitoring: None

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact; AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

SI LTS NI AP M-DP

XX WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project

| | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Expose people or structures to significant risks, including downslope or downstream, flooding or landslides, as a result of runoff, post-fire instability, or drainage changes? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: Project Description; RCIT (GIS Database);

Findings of Fact:

- a-d) The proposed Project site is not located in an area designated as State Responsibility or classified as very high fire hazard severity zones that is susceptible to wildfires. Therefore no significant impact related to emergency response plans, slope, winds, flooding, landslides, drainage, or other factors that would exacerbate fire risks located in wildfire areas will occur.

Mitigation: None

Monitoring: None

XXI MANDATORY FINDINGS OF SIGNIFICANCE

Would the Project

| | | | | | |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <p>a) <i>Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?</i></p> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <p>b) <i>Does the Project have impacts that are individually limited, but cumulatively considerable?(Cumulatively considerable means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of current Projects, and the effects of probable future Projects.)</i></p> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <p>c) <i>Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</i></p> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Source: Project Description; RCIT (GIS Database); Analyses contained herein.

Findings of Fact:

a) Implementation of the proposed Project will not degrade the quality of the environment. The greatest concern regarding degradation to the environment will occur during construction when non-renewable resources will be expended to construct the Project. However, as indicated in the preceding analysis, construction effects would be abated to the greatest extent feasible with the implementation of mitigation measures. Therefore, a less-than-significant impact related to the degradation in quality of environment will occur.

Implementation of the Project will not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community; or reduce the number, or restrict the range of an endangered, threatened, or rare species. The Project is not within an CVMSHCP conservation plan area and the site is devoid of native habitat. However, there is vegetation on the Project site that could provide suitable roosting and nesting habitat for a number of common and sensitive avian species protected under the federal MBTA. Implementation of Mitigation Measure **BIO-1** would require a preconstruction survey prior to the removal of any trees on the Project site during the nesting season, to identify and avoid impacts to any nesting birds. Therefore, a less-than-significant impact related to biological resources would occur.

As discussed in the Cultural Resources section, there would be less-than-significant impacts to resources of historical, cultural or paleontological significance. However, during construction of the proposed Project, the potential accidental discovery of an unknown cultural resource could occur. Implementation of Mitigation Measures **CR1** through **CR5** will ensure that in the event of an accidental discovery, the proper procedures and process is in place to avoid any potential impact on a significant resource. Therefore, a less-than-significant impact related to cultural resources will occur.

b) No significant impacts have been determined to occur with the implementation of the proposed Project. The cumulative analysis considers the impacts of the park in combination with potential environmental effects of related Projects in the Project area. Related Projects, also referred to as cumulative Projects, include recently completed Projects, Projects currently under construction, and future Projects currently in development that have the potential to have a cumulative impact based on both geographic location and schedule of implementation. The geographic area affected by cumulative Projects varies depending on the environmental topic. For example, construction noise impacts would be limited to areas directly affected by construction noise, while aesthetic impacts include the affected viewshed, which is location dependent, and the area affected by a Project's traffic generally includes a larger street network and is dependent on the

number of trips. Air quality and GHG effects, which occur on a more regional basis, are analyzed separately within the individual topic sections presented previously. For the remaining environmental topic areas and based on the attributes of the Project and existing conditions described above; the traffic effects are anticipated to have the largest geographic effect. However, with the low number of trips generated dispersed over a large area, the farther away from the Project site, the number of vehicle trips generated by the Project would be negligible when added to the existing circulation network. Therefore, this chapter considers the potential cumulative effects of the Project in combination with Projects within a one-mile radius of the Project site, where any potential effects of the Project could be cumulatively considerable.

Related Projects considered in this analysis include those that have recently been completed, are near the start of construction, or are in planning. Schedule is particularly relevant to the consideration of cumulative construction-related impacts, since construction impacts tend to be relatively short-term. However, for planned Projects, construction schedules are often conceptually estimated and can often change. Based on what is reasonably foreseeable, this analysis assumes these Projects would be implemented concurrently with construction of the fire station, between mid 2022 until early 2023. There were no related projects that could potentially contribute to cumulative impacts within the Project area.

Aesthetics. Based on location of the park in proximity to the State eligible scenic highway, SR-111, the setback and low-scale building and development of structure would not create any significant blockage or obstruction of views from surrounding roadways or viewpoints. The operation of the fire station would have night-time lighting, but this is consistent with the existing fire station and will not create a substantial new source of light. The low scale of development would be consistent with the surrounding community, and would not significantly alter background views of surrounding mountains, which are visible in all directions or the Salton Sea. The Project's contribution to cumulative aesthetic effects would not be considerable. Therefore, a less-than-significant cumulative impact related to aesthetic effects will occur.

Agricultural Resources. The Project site is located within the community of North Shore and is not designated as Important Farmland on maps prepared pursuant to the Farmland Mapping and Monitoring Program. Although the Project site is in proximity to agricultural land, the zoning overlay implemented on the site, is indicative of the vision for the community to provide community resources and infrastructure within the North Shore community to support and maintain the livelihood of the community. Future development in the Project area, including the Project, would be consistent with the existing zoning and would not result in the loss of Important Farmland, would not displace land zoned for agricultural use or forest land or timberland, and would not conflict with land under a Williamson Act contract. The Project's contribution to cumulative agricultural effects would not be considerable. Therefore, a less-than-significant cumulative impact related to agricultural effects will occur.

Air Quality. The impact from the Project's air quality emissions is based on a cumulative assessment and the analysis presented in the section provides the cumulative effects of the Project's impact related to air quality emissions. Therefore, a less-than-significant cumulative impact was determined to occur.

Biological Resources. The proposed Project is not located within an MSCHP conservation area, which requires special studies and conservation measures to control development. The Project would not contribute to significant impacts to biological resources with implementation of mitigation Measures **BIO 1** and **BIO-2**. The Project's contribution to cumulative effects on biological resources would not be considerable. Therefore, a less-than-significant cumulative impact related to biological resources will occur.

Cultural Resources. Based on previous record searches, no identified cultural resources are known to exist within the Project site. Projects are required to provide provisions in the event of any unanticipated discoveries of archaeological or paleontological resources during construction. As these unknown resources are located underground, the resulting effects are typically site-specific, unless a large scale village or other significant cultural area is discovered. Mandatory coordination with relevant Native American Tribes under AB52 establishes a process of communication and identification for dealing with any wide scale cumulative effects to cultural resources. The Project has identified mitigation measures in the event of any unanticipated discovery of unknown resources to coordinate with the relevant Tribes and develop the appropriate procedures for treatment to reduce any potential impacts to the greatest extent feasible. The Project's contribution to cumulative effects on cultural resources would not be considerable. Therefore, a less-than-significant cumulative impact related to cultural resources will occur.

Geology. Geologic impacts, such as those related to faults, liquefaction, landslides, slope stability, and expansive soils are site-specific and effects do not increase with the addition of surrounding cumulative development. However, construction of the Project does have the potential to have a cumulative effect related to soil erosion and runoff. However, all Projects within Riverside County are required to abide by the NPDES, which establishes procedures for controlling and treating erosion and surface runoff. These procedures have been established to ensure that any potential effects from runoff and erosion are minimized to the greatest extent feasible. The Project would require the implementation of a SWPPP to design for the elimination of any potential soil erosion and subsequent runoff and would include primarily permeable surfaces to support the collection of and infiltration of stormwater. The Project's contribution to cumulative effects on geology would not be considerable. Therefore, a less-than-significant cumulative impact related to geology will occur.

GHG. The impact from the Project's GHG emissions is based on a cumulative assessment and the analysis presented in the section provides the cumulative effects of the Project's impact related to GHG emissions. Therefore, a less-than-significant cumulative impact will occur.

Hazards/Hazardous Materials. Development within the Project vicinity has the potential to expose the public and the environment to risks associated with hazards from on-site contamination (e.g. fuel) and routine use of hazardous materials. However, the Project would be required to adhere to federal, state, and local agency regulatory requirements, which have been established to minimize any potential risks from exposure to hazards and hazardous material. Potential exposures of risk are site specific due to the infrequent occurrence in isolated locations. The possibility of multiple incidents occurring simultaneously is low for reasonably foreseeable incidents and existing regulations provide the appropriate measures to minimize exposure. The Project's contribution to cumulative effects on hazards and hazardous materials would not be considerable. Therefore, no significant cumulative impact related to hazards and hazardous materials will occur.

Hydrology. The Project is required to comply with the NPDES requirements established by the Riverside County Flood Control to address water quality and discharge requirements. During construction, the Project would have a SWPPP in place to identify potential pollutant sources and establish BMPs to eliminate pollutants in storm water discharges. During operation, drainage from the Project site would be captured on site through operational BMPs (catch basins, riprap, a sand/oil interceptor, and cleanouts). The Project would be elevated so as not to be at risk from flooding. The Project's contribution to cumulative effects on hydrology would not be considerable. Therefore, a less-than-significant cumulative impact related to hydrology will occur.

Land Use. The Project is consistent with the existing zoning and planned land use for the area, which is to provide services to support the community. The Project's contribution to cumulative effects on land use would not be considerable. Therefore, a less-than-significant cumulative impact related to land use will occur.

Mineral Resources. The Project is not located within an area containing known mineral resources. The Project's contribution to cumulative effects on mineral resources would not be considerable. Therefore, no significant cumulative impact related to mineral resources will occur.

Noise and Vibration. The Project's noise and vibration effects would be limited to the immediate vicinity of the Project site as noise attenuates based on distance. Because construction would be temporary, ambient noise levels would not experience a permanent increase; therefore, no cumulatively considerable increase would occur. During operation, noise and vibration levels would be similar to the existing fire station and would not increase ambient noise levels. The Project's contribution to cumulative effects from noise and vibration would not be considerable. Therefore, a less-than-significant cumulative impact related to noise and vibration will occur.

Population and Housing. The Project is being built to enhance existing fire protection services and would not induce future population and housing growth. The existing zoning for the community has established the appropriate mechanism to ensure and control growth at a rate that can be supported and sustained. The Project would provide additional enhances fire-fighting services that would support the existing community. The Project's contribution to cumulative effects on population and housing would not be considerable. Therefore, a less-than-significant cumulative impact related to population and housing will occur.

Public Services. The existing Project site has existing public services in place to support the Project. The Project's contribution to cumulative effects on public services would not be considerable. Therefore, a less-than-significant cumulative impact related to public services will occur.

Recreational Resources. The proposed Project would not result in an increase in demand for recreational facilities. The Project's contribution to cumulative effects on recreational resources would not be considerable. Therefore, a less-than-significant cumulative impact related to recreational resources will occur.

Transportation. The proposed Project would not generate any new trips as no new staff would be required. The Project's contribution to cumulative effects on transportation would not be considerable. Therefore, a less-than-significant cumulative impact related to transportation will occur.

Utilities. The existing Project site has all of the necessary infrastructure in place to provide for utilities. The additional new demand for utilities would not be substantial and could be accommodated by the existing infrastructure. The Project's contribution to cumulative effects on utilities would not be considerable. Therefore, a less-than-significant cumulative impact related to utilities will occur.

As described above, impacts from the proposed Project would not be cumulatively considerable. Furthermore, mitigation identified in this Initial Study would result in the Project having a less-than-significant impact related to cumulative effects.

- c) The proposed Project would not result in environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly. Construction of the Project would result in a one-time consumption of non-renewable resources needed to construct the Project and would not expose people to hazardous conditions or hazardous materials, which could have a substantial adverse direct or indirect effect. Operation of the Project would not create conditions that would adversely affect the health of humans, increase risk to human safety, or affect the surrounding environment. The operation of the replacement fire station would provide enhanced fire protection services which would be betterment for citizens of the County. Therefore, a less-than-significant impact related to direct and indirect effects on human beings will occur.

Mitigation: None

Monitoring: None

V. AUTHORITIES CITED

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California Health and Safety Code Section 7050.5-7054; California Integrated Waste Management Plan; California Public Resources Code 5097.98; California Uniform Fire Code; California Water Code Urban Water Management Act; Coachella Valley Multi-Species Habitat Conservation Plan; Department of Housing and Urban Development Noise Notebook; Eastern Coachella Valley Area Plan; Desert Center Unified School District; Eastern Information Center Cultural Records Database; Federal Ambient Air Quality Standards; Federal Emergency Management Act Flood Insurance Rate Maps; Google Earth™; Harris Handbook of Acoustical Measurements and Noise Control, Speech Interference Thresholds; ITE Manual; Lake Tamarisk Water District; On-site Inspection; Ramona Band of Cahuilla Indians; RCIT GIS Database; Riverside County Board Policy H-29 Sustainable Building Policy; Riverside County Climate Action Plan; Riverside County Congestion Management Program; Riverside County Environmental Protection Division Biological Assessment; Riverside County General Plan; Riverside County General Plan Circulation Element; Riverside County General Plan Circulation Element, Trails, and Bike System; Riverside County Final Environmental Impact Report; Riverside County Flood Control District Flood Hazard Report/Condition; Riverside County General Plan Figure C-1 "Circulation Plan"; Riverside County General Plan Figure C-5 "Airport Influence Areas"; Riverside County General Plan Figure C-6 "Trails and Bikeways System; Riverside County General Plan Figure C-8 "Scenic Highways"; Riverside County General Plan Figure OS-2 "Agricultural Resources"; Riverside County General Plan Figure OS-3b "Forestry Resources within Eastern Riverside County"; Riverside County General Plan Figure OS-4b "Coachella Valley Natural Communities"; Riverside County General Plan Figure OS-6 "Mineral Resources Area"; Riverside County General Plan Figure OS-8 "Paleontological Sensitivity"; Riverside County General Plan Figure S-1 "Mapped Faulting in Riverside County"; Riverside County General Plan Figure S-4 "Earthquake-Induced Slope Instability Map"; Riverside County General Plan Figure S-5 "Regions Underlain by Steep Slopes"; Riverside County General Plan Figure S-8 "Wind Erosion Susceptibility Map"; Riverside County General Plan Figure S-9 "Special Flood Hazard Zones"; Riverside County General Plan Figure S-10 "Dam Failure Inundation Zone"; Riverside County General Plan Figure S-11 "Wildfire Susceptibility"; Riverside County General Plan Figure S-14 "Inventory of Emergency Response Facilities"; Riverside County General Plan Housing Element; Riverside County General Plan Land Use Element; Riverside County General Plan Noise Element; Riverside County General Plan; Riverside County General Plan Table N-1 "Land Use Compatibility for Community Noise Exposure"; Riverside County General Plan Safety Element; Riverside County Ordinance No. 559 (Tree Protection Ordinance); Riverside County Ordinance No. 655 (Regulating Light Pollution); Riverside County Ordinance No. 847 (Regulating Noise in Riverside County); Riverside County Public and Private Airports, California; Riverside County Regional Transportation Plan; Riverside County Sheriff's Department; Riverside County Traffic Impact Study Thresholds; Riverside County Waste Management Department; SB1016 Solid Waste Per Capita Disposal Measurement Act; SCAQMD 2016 Air Quality Management Plan; SCAQMD Attainment Status; SCAQMD Carbon Monoxide Re-designation Request and Maintenance Plan; SCAQMD CEQA Air Quality Handbook Table 6-2; SCAQMD Localized Significance Thresholds; SCAQMD Rule 403 Fugitive Dust; SCAQMD Rule 402 Nuisance; Southern California Association of Governments Regional Transportation Plan; Torres-Martinez Band of Desert Cahuilla Indians; US Department of Agriculture, Soil Conservation Service Soil Surveys; US Department of Agriculture Soil Conservation Service Shrink Swell Potentials; US Department of Transportation; US EPA Noise from Construction Equipment and Operations; US Fish and Wildlife Migratory Bird Treaty Act; US Geological Survey Preliminary Geologic Map of the Desert Center 7.5' Quadrangle; 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Appendix A

Mitigation Monitoring and Reporting Program

FIRE STATION #49 PROJECT

Community of Lake Tamarisk,

Riverside County, California



April 2022

The Riverside County Fire Department (RCFD) is one of the largest regional fire service organizations in California and serves an area of 7,206 square miles. The RCFD operates an integrated regionalized fire protection system, which strives for seamless operations between fire stations with a goal to locate fire stations such that there is some degree of overlap in the response loops. The RCFD also provides hazardous materials incident response, emergency medical services, training for paid and volunteer emergency personnel, and other safety planning and emergency response services.

The Project consists of the construction of a new 8,896 square-foot fire station to replace the existing station. The Project site area, including parking and building footprint is on Assessor's Parcel Number (APN) 808-170-034 which comprises 1.5 acres of County-owned property. APN 808-170-029 is also County owned and contains the existing 2,073 square foot Lake Tamarisk Fire Station. The existing station has three garage bays and a covered structure to house the existing engines and access from the front and rear of the property. The existing fire station is an aged structure that was constructed in 1970 is and is limited in both size and function. The replacement fire station would have two egress/ingress driveways from Tamarisk Drive, 24 parking spaces, with 12 reserved for staff, a 418 square foot hose house, an emergency generator, a fueling station, and trash enclosure. The new apparatus bay would be 24 feet in height, with three doors, and a circular driveway allowing equipment to enter and exit without needed to backup.

Additional staffing would not be required for the replacement fire station. The Project would also involve utility alterations, including stormwater drainage improvements, electrical and sewer connections to provide service to the new building. Construction is anticipated to start in 2022 and would be completed by the end of 2022/beginning of 2023. The participating County agencies in this Project are RCFD and Facilities Management.

Mitigation measures were identified in the Project's Initial Study and incorporated into the Project to reduce potential environmental impacts to a level determined to be less than significant.

Section 21081.6 of the California Public Resources Code requires a Lead Agency to adopt a *reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment*. Section 15097 of the *State CEQA Guidelines* summarizes the criteria required for mitigation monitoring and/or reporting. This Mitigation Monitoring and Reporting Program (MMRP) has been compiled to verify implementation of adopted mitigation measures.

The County of Riverside Facilities Management will have the responsibility for implementing the measures and various public agencies will have the primary responsibility for enforcing, monitoring, and reporting the implementation of the mitigation measures. This MMRP is set up as a Documentation of Compliance Report, with space for confirming that mitigation measures have been implemented. The required mitigation measures are listed and categorized by impact area, with an accompanying identification of the following:

- ✓ **Mitigation Measure**
- ✓ **Monitoring Phase** – the phase of the Project during which the mitigation measure shall be implemented and monitored:
- ✓ **Enforcement Agency** – the agency with the authority to enforce the mitigation measure
- ✓ **Monitoring Agency** – the agency to which reports involving feasibility, compliance, and implementation are made
- ✓ **Action Indicating Compliance**
- ✓ **Verification of Compliance**, which will be used during the reporting/monitoring

| Mitigation Measure | Monitoring Phase | Enforcement Agency | Monitoring Agency | Action Indicating Compliance | Compliance Verification | |
|---|-------------------|--------------------|---------------------|--------------------------------|-------------------------|------|
| | | | | | Initials | Date |
| BIOLOGICAL RESOURCES | | | | | | |
| <p>BIO-1 To maintain compliance with the Migratory Bird Treaty Act and California Fish and Game Code, if ground-disturbing and/or vegetation clearance activities are scheduled to occur during the avian nesting season (typically February 15 through August 31), a qualified biologist shall conduct a preconstruction nesting bird survey within the Project impact footprint and a 500-foot buffer where legal access is granted around the disturbance footprint. Surveys shall be conducted within 3 days prior to initiation of ground-disturbing activities. If an active nest is detected during the nesting bird survey, avoidance buffers shall be implemented as determined by a qualified biologist (typically 300 feet for passerines and 500 feet for raptors and special-status species). The buffer shall be of a distance to ensure avoidance of adverse effects to the nesting bird by accounting for buffering topography and buildings, ambient conditions, species, nest location, and activity type. All nests shall be monitored as determined by the qualified biologist until nestlings have fledged and dispersed or it is confirmed that the nest has been unsuccessful or abandoned. The qualified biologist shall halt all construction activities within proximity to an active nest if it is determined that the activities are harassing the nest and may result in nest abandonment or take. The qualified biologist shall also have the authority to require implementation of avoidance measures related to noise, vibration, or light pollution if indirect impacts are resulting in harassment of the nest.</p> | Pre-Construction: | CDFW | Qualified Biologist | Clearance Report/Documentation | | |
| <p>BIO-2 A qualified biologist (someone with at least 5 years of conducting surveys for the species) will conduct a desert tortoise survey one week prior to the start of construction. The survey will consist of 10-meter-wide belt transects that covers the Project site and an adequate buffer (up to 500- feet) to ensure 100% coverage of the site and adjacent areas of influence. Any individuals, burrows constructed by the species, scat, and carcasses will be recorded and mapped using ESRI ArcGIS mobile application with submeter accuracy. Any desert tortoise burrows found within 100-feet of the Project will be flagged for avoidance. The survey will then be repeated 72 hours prior to the start of construction.</p> | | | | | | |

| Mitigation Measure | Monitoring Phase | Enforcement Agency | Monitoring Agency | Action Indicating Compliance | Compliance Verification | |
|--|--------------------|---------------------------------------|---|---|-------------------------|------|
| | | | | | Initials | Date |
| CULTURAL RESOURCES | | | | | | |
| CR-1: Prior to the seeking and/or issuance of a grading permit, the County and consulting Tribes will co-create a Tribal Monitoring Agreement (Agreement) that (1) assures a Tribal Monitor will be present during all grading, excavation, and ground-disturbing activities within the Project Area of Potential Effect and (2) discusses and delineates subjects including, but not limited to, (a) the monitors' scheduling; (b) the monitors' duties and/or SOW; (c) monitors' compensation by the applicant; (d) safety requirements; and (e) the protocols and stipulations that the County contractor, and Tribal Monitor, will follow in the event of inadvertent cultural resources discoveries. Stipulations for treatment and final disposition of any cultural resources, with the exception of human remains, funerary objects, and sacred objects are addressed in Mitigation Measure CR-4 . | Pre-construction | County FM | Santa Rosa Tribal Monitor | Tribal Monitoring Agreement | | |
| CR-2: The Tribal Monitor shall have the authority to stop and redirect grading in order to identify and preliminarily evaluate any cultural resource(s) discovered on the property. If the resource(s) is determined to hold potential significance, a 25-foot buffer shall be established and the relevant Tribes shall be immediately contacted by the Project supervisor to come to the Project site. The Tribal Monitor shall, in consultation with the consulting Tribes, determine the significance of the resource(s) and whether additional monitoring by an archaeologist or a tribal monitor needs to occur. | Excavation | County FM | County FM, Project Archaeologist Tribal Monitor | Tribal Monitoring Contract with Archaeologist for Monitoring | | |
| CR-3: In the event that Native American cultural resources are inadvertently discovered during the course of ground- disturbing activity for this Project, the following procedures will be carried out for treatment and disposition of the discoveries: Temporary Curation and Storage: During the course of construction, all discovered resources shall be temporarily curated in a secure location onsite or at the offices of the Project Archaeologist. The removal of any artifacts from the Project site will need to be thoroughly documented via inventory and conducted with Tribal Monitor(s) oversight of the process. | Ground disturbance | County Archaeologist,, Tribal Monitor | County FM, Project Archaeologist Tribal Monitor | Evaluation of Resource and Report from County Archaeologist and Tribal Representative | | |

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|--|---------------------------|--|--|--|--|--|
| <p>Treatment and Final Disposition: The County/applicant/contractor shall relinquish ownership of all cultural resources, including sacred items, unassociated funerary objects/burial goods, all archaeological artifacts, and non-human remains as part of the required mitigation for impacts to cultural resources. The County/applicant/contractor shall relinquish the artifacts through one or more of the following methods and provide the County with evidence of same:</p> <p>a. Accommodate the process for onsite reburial of the discovered items with the consulting Tribes. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing and basic recordation have been completed. A reburial site shall be documented as a new site and recorded with the Eastern Information Center;</p> <p>b. A curation agreement with an appropriately qualified repository within Riverside County that meets federal standards per 36 CFR Part 79 whereby the collections and associated records shall be transferred, including title, and accompanied by payment from the County/applicant of the fees necessary for permanent curation;</p> <p>c. On request by the consulting Tribe for repatriation of the discovered items, the County shall relinquish ownership and shall deliver the items to the custody of the consulting Tribe. For purposes of conflict resolution, if the consulting Tribes cannot come to an agreement as to the disposition of cultural materials, they shall be curated at the Western Science Center or Riverside Metropolitan Museum by default; and</p> <p>d. At the completion of any and all ground disturbing activities on the Project site, a Phase IV Monitoring Report shall be written by the Project Archaeologist and submitted to the County within 120 days of the completion of ground-disturbing activities related to the Project. This report shall (1) document monitoring activities conducted by the Project Archaeologist and Tribal Monitors; (2) document the impacts to the known resources on the property, if any; (3) describe how each mitigation measure was fulfilled; (4) document the type of cultural resources discovered during Project implementation, the treatment of those resources, and their disposition; (5) provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and (6) in a confidential appendix, include the daily/weekly monitoring notes from the Project Archaeologist. All reports produced will be submitted to the County, Eastern Information Center and consulting Tribes.</p> | <p>Ground disturbance</p> | <p>County Archaeologist,, Tribal Monitor</p> | <p>County FM, Project Archaeologist Tribal Monitor</p> | <p>Evaluation of Resource and Report from County Archaeologist and Tribal Representative</p> | | |
|--|---------------------------|--|--|--|--|--|

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|---|---------------------------|--|---|--|--|--|
| <p>CR-4: If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then immediately identify the "most likely descendant(s)" of receiving notification of the discovery. The most likely descendant(s) shall then make recommendations within 48 hours, and engage in consultations concerning the treatment of the remains.</p> | <p>Excavation</p> | <p>Agua Caliente Tribe</p> | <p>County FM, Project Archaeologist Tribal Monitor, Coroner</p> | <p>Coroner Evaluation</p> | | |
| <p>CR-5: If inadvertent discoveries of subsurface archaeological/cultural resources are discovered during grading, Riverside County, and the monitoring Tribe shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. Pursuant to California Public Resources Code § 21083.2(b) and 21084.3(b) avoidance is the preferred method of preservation for archaeological resources and tribal cultural resources. If the County and the monitoring Tribe cannot agree on the significance or the mitigation for such resources, these issues will be presented to the Riverside County Archaeologist. The County Archaeologist shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources and tribal cultural resources and shall take into account the religious beliefs, customs, and practices of the consulting Tribes.</p> | <p>Ground disturbance</p> | <p>County FM, County Coroner Native American Heritage Commission</p> | <p>County FM, Project Archaeologist Tribal Monitor, MLD</p> | <p>Evaluation of Resource and Report from County Archaeologist and Tribal Representative</p> | | |
| GEOLOGY AND SOILS | | | | | | |
| <p>GEO-1 In the event that any paleontological resources are unintentionally discovered during proposed Project construction, construction activities in the vicinity of the resource shall immediately halt and/or be moved to other parts of the Project site. A Riverside County-qualified paleontologist shall be retained by the County or their designee to determine the significance of the resource, if any. If the find is determined to be significant, avoidance or other appropriate measures including extraction and relocation, as recommended by the paleontologist, shall be implemented</p> | <p>Excavation</p> | <p>County FM</p> | <p>County FM, Project Archaeologist</p> | <p>Sacred and burial sites preserved in place, as feasible</p> | | |

| Mitigation Measure | Monitoring Phase | Enforcement Agency | Monitoring Agency | Action Indicating Compliance | Compliance Verification | |
|---|--------------------------|------------------------------------|------------------------------------|---|-------------------------|------|
| | | | | | Initials | Date |
| NOISE | | | | | | |
| NOI-1: A construction noise coordinator shall be established prior to construction and signage will be provided on site that will identify the designated person and contact number. The coordinator shall be responsible for receiving calls from residents regarding specific construction noise-related complaints. The coordinator would then be responsible for taking appropriate measures to reduce or eliminate noise levels as appropriate. | Pre-construction | County FM, Construction Contractor | County FM, Construction Contractor | Documentation of Coordinator and evidence of signage | | |
| NOI-2 During construction, all staging areas and equipment shall be located and directed as far to the south as possible to avoid any disruptions to the sensitive receptors located north of the Project site. | Grading and Construction | County FM, Construction Contractor | FM, Construction Contractor | Periodic inspections and monitoring during construction | | |
| NOI-3: Construction activity shall be prohibited during the hours of 6:00 p.m. and 7:00 a.m. and on weekends and County-designated holidays. | Grading and Construction | County FM, Construction Contractor | FM, Construction Contractor | Periodic inspections and monitoring during construction | | |
| NOI-4: Construction equipment shall be properly maintained and equipped with mufflers and other State-required noise-attenuation devices. | Grading and Construction | County FM, Construction Contractor | FM, Construction Contractor | Periodic inspections and monitoring during construction | | |



Appendix B

Air Quality and GHG

FIRE STATION #49 PROJECT

Community of Lake Tamarisk,
Riverside County, California



April 2022

2020 AIR QUALITY SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

| Source/Receptor Area No. Location | | Station No. | Carbon Monoxide ^{a)} | | | Ozone ^{b)} | | | | | | | | | Nitrogen Dioxide ^{c)} | | | | Sulfur Dioxide ^{d)} | | | |
|--------------------------------------|----------------------------------|----------------|-------------------------------|-------------------------------------|-------------------------------------|---------------------------|--------------------------------------|--------------------------------------|--|--|--|---|---|---|--|---------------------------|-------------------------------------|--|--|---------------------------|--------------------------------------|--|
| | | | No. Days of Data | Max Conc. in ppm 1-hour | Max Conc. in ppm 8-hour | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 8-hour | Fourth High Conc. ppm 8-hour | Number of Days Standard Exceeded | | | | | | No. Days of Data | Max Conc. in ppb 1-hour | 98 th Percentile Conc. ppb 1-hour | Annual Average AAM Conc. ppb | No. Days of Data | Max. Conc. in ppb 1-hour | 99 th Conc. ppb 1-hour |
| | | | | | | | | | | Old Federal > 0.124 ppm 1-hour | Current Federal > 0.070 ppm 8-hour | 2008 Federal > 0.075 ppm 8-hour | 1997 Federal > 0.084 ppm 8-hour | Current State > 0.09 ppm 1-hour | Current State > 0.070 ppm 8-hour | | | | | | | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Central LA | 087 | 359 | 1.9 | 1.5 | 332 | 0.185 | 0.118 | 0.093 | 1 | 22 | 16 | 6 | 14 | 22 | 364 | 61.8 | 54.7 | 16.9 | 333 | 3.8 | 3.3 |
| 2 | Northwest Coastal LA County | 091 | 365 | 2.0 | 1.2 | 357 | 0.134 | 0.092 | 0.078 | 1 | 8 | 5 | 1 | 6 | 8 | 360 | 76.6 | 43.9 | 10.6 | -- | -- | -- |
| 3 | Southwest Coastal LA County | 820 | 364 | 1.6 | 1.3 | 350 | 0.117 | 0.074 | 0.066 | 0 | 2 | 0 | 0 | 1 | 2 | 364 | 59.7 | 50.9 | 9.5 | 361 | 6.0 | 3.3 |
| 4 | South Coastal LA County 1 | 072 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | South Coastal LA County 2 | 077 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | South Coastal LA County 3 | 033 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 9.4 |
| 4 | South Coastal LA County 4 | 039 | -- | -- | -- | 332 | 0.105 | 0.083 | 0.071 | 0 | 4 | 2 | 0 | 4 | 4 | 357 | 75.3 | 56.3 | 12.8 | -- | -- | -- |
| 4 | I-710 Near Road ^{##} | 032 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 355 | 90.3 | 79.1 | 22.3 | -- | -- | -- |
| 6 | West San Fernando Valley | 074 | 349 | 2.0 | 1.7 | 345 | 0.142 | 0.115 | 0.097 | 0 | 49 | 23 | 12 | 14 | 49 | 365 | 57.2 | 50.1 | 12.1 | -- | -- | -- |
| 7 | East San Fernando Valley | 200 | -- | -- | -- | 359 | 0.133 | 0.108 | 0.102 | 5 | 49 | 33 | 20 | 31 | 49 | 357 | 60.4 | 52.4 | 14.5 | -- | -- | -- |
| 8 | West San Gabriel Valley | 088 | 361 | 2.6 | 2.2 | 354 | 0.163 | 0.115 | 0.108 | 9 | 60 | 44 | 21 | 41 | 60 | 354 | 61.2 | 49.7 | 13.6 | -- | -- | -- |
| 9 | East San Gabriel Valley 1 | 060 | 349 | 2.4 | 2.0 | 347 | 0.168 | 0.125 | 0.105 | 11 | 61 | 43 | 19 | 53 | 61 | 347 | 64.8 | 54.1 | 13.6 | -- | -- | -- |
| 9 | East San Gabriel Valley 2 | 591 | 310 | 2.3 | 1.9 | 348 | 0.173 | 0.138 | 0.124 | 17 | 97 | 71 | 32 | 76 | 97 | 366 | 50.4 | 41.9 | 8.5 | -- | -- | -- |
| 10 | Pomona/Walnut Valley | 075 | 363 | 1.5 | 1.1 | 353 | 0.180 | 0.124 | 0.106 | 10 | 84 | 53 | 29 | 51 | 84 | 355 | 67.9 | 59.8 | 18.3 | -- | -- | -- |
| 11 | South San Gabriel Valley | 085 | 362 | 3.1 | 1.7 | 356 | 0.169 | 0.114 | 0.089 | 3 | 23 | 15 | 7 | 20 | 23 | 365 | 69.2 | 57.8 | 17.8 | -- | -- | -- |
| 12 | South Central LA County | 112 | 364 | 4.5 | 3.1 | 354 | 0.152 | 0.115 | 0.072 | 1 | 4 | 3 | 2 | 3 | 4 | 362 | 72.3 | 60.5 | 14.5 | -- | -- | -- |
| 13 | Santa Clarita Valley | 090 | 363 | 1.2 | 0.8 | 348 | 0.148 | 0.122 | 0.106 | 10 | 73 | 56 | 29 | 44 | 73 | 361 | 46.3 | 35.9 | 9.4 | -- | -- | -- |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 16 | North Orange County | 3177 | 347 | 2.1 | 1.2 | 340 | 0.171 | 0.113 | 0.088 | 3 | 23 | 19 | 6 | 15 | 23 | 347 | 57.2 | 50.1 | 12.7 | -- | -- | -- |
| 17 | Central Orange County | 3176 | 361 | 2.3 | 1.7 | 356 | 0.142 | 0.097 | 0.079 | 2 | 15 | 4 | 3 | 6 | 15 | 364 | 70.9 | 52.1 | 13.3 | -- | -- | -- |
| 17 | I-5 Near Road ^{##} | 3131 | 359 | 2.4 | 2.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 365 | 69.9 | 52.6 | 18.8 | -- | -- | -- |
| 19 | Saddleback Valley | 3812 | 366 | 1.7 | 0.8 | 364 | 0.171 | 0.122 | 0.090 | 1 | 32 | 25 | 10 | 20 | 32 | -- | -- | -- | -- | -- | -- | -- |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Corona/Norco Area | 4155 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Metropolitan Riverside County 1 | 4144 | 361 | 1.9 | 1.4 | 348 | 0.143 | 0.115 | 0.102 | 6 | 81 | 59 | 27 | 46 | 81 | 359 | 66.4 | 54.1 | 13.6 | 356 | 2.2 | 1.7 |
| 23 | Metropolitan Riverside County 3 | 4165 | 359 | 1.8 | 1.5 | 350 | 0.140 | 0.117 | 0.103 | 7 | 89 | 62 | 32 | 51 | 89 | 352 | 58.1 | 49.9 | 12.3 | -- | -- | -- |
| 24 | Perris Valley | 4149 | -- | -- | -- | 358 | 0.125 | 0.106 | 0.097 | 1 | 74 | 48 | 14 | 34 | 74 | -- | -- | -- | -- | -- | -- | -- |
| 25 | Elsinore Valley | 4158 | 358 | 0.9 | 0.7 | 355 | 0.130 | 0.100 | 0.093 | 1 | 52 | 30 | 10 | 18 | 52 | 345 | 43.6 | 37.9 | 7.4 | -- | -- | -- |
| 26 | Temecula Valley | 4031 | -- | -- | -- | 364 | 0.108 | 0.091 | 0.084 | 0 | 37 | 20 | 2 | 5 | 37 | -- | -- | -- | -- | -- | -- | -- |
| 29 | San Geronio Pass | 4164 | -- | -- | -- | 358 | 0.150 | 0.115 | 0.104 | 3 | 68 | 48 | 21 | 29 | 68 | 363 | 51.1 | 47.1 | 8.5 | -- | -- | -- |
| 30 | Coachella Valley 1 ^{**} | 4137 | 365 | 0.8 | 0.5 | 360 | 0.119 | 0.094 | 0.089 | 0 | 49 | 28 | 5 | 9 | 49 | 365 | 47.4 | 34.3 | 6.6 | -- | -- | -- |
| 30 | Coachella Valley 2 ^{**} | 4157 | -- | -- | -- | 358 | 0.097 | 0.084 | 0.081 | 0 | 42 | 17 | 0 | 2 | 42 | -- | -- | -- | -- | -- | -- | -- |
| 30 | Coachella Valley 3 ^{**} | 4032 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Northwest San Bernardino Valley | 5175 | 364 | 1.5 | 1.1 | 360 | 0.158 | 0.123 | 0.116 | 15 | 114 | 87 | 43 | 82 | 114 | 364 | 55.4 | 44.8 | 13.9 | -- | -- | -- |
| 33 | I-10 Near Road ^{##} | 5035 | 363 | 1.5 | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 345 | 94.2 | 75.1 | 28.7 | -- | -- | -- |
| 33 | CA-60 Near Road ^{##} | 5036 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 346 | 101.6 | 78.0 | 29.1 | -- | -- | -- |
| 34 | Central San Bernardino Valley 1 | 5197 | 358 | 1.7 | 1.2 | 348 | 0.151 | 0.111 | 0.105 | 8 | 89 | 65 | 27 | 56 | 89 | 360 | 66.4 | 57.9 | 18.7 | 363 | 2.5 | 1.7 |
| 34 | Central San Bernardino Valley 2 | 5203 | 360 | 1.9 | 1.4 | 359 | 0.162 | 0.128 | 0.122 | 15 | 128 | 110 | 60 | 89 | 128 | 365 | 54.0 | 45.6 | 14.9 | -- | -- | -- |
| 35 | East San Bernardino Valley | 5204 | -- | -- | -- | 361 | 0.173 | 0.136 | 0.125 | 16 | 141 | 127 | 78 | 104 | 141 | -- | -- | -- | -- | -- | -- | -- |
| 37 | Central San Bernardino Mountains | 5181 | -- | -- | -- | 364 | 0.159 | 0.139 | 0.117 | 7 | 118 | 97 | 55 | 69 | 118 | -- | -- | -- | -- | -- | -- | -- |
| 38 | East San Bernardino Mountains | 5818 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DISTRICT MAXIMUM ^{e)} | | | 4.5 | 3.1 | | 0.185 | 0.139 | 0.125 | | 17 | 141 | 127 | 78 | 104 | 141 | | 101.6 | 86.3 | 29.1 | | 6.0 | 3.3 |
| SOUTH COAST AIR BASIN ^{d)} | | | 4.5 | 3.1 | | 0.185 | 0.139 | 0.125 | | 27 | 157 | 142 | 97 | 132 | 157 | | 101.6 | 86.3 | 29.1 | | 6.0 | 3.3 |

* Incomplete data. ** Salton Sea Air Basin -- Pollutant not monitored ppm - Parts Per Million parts of air, by volume ppb - Parts Per Billion parts of air, by volume AAM = Annual Arithmetic Mean

- a) The federal and state 8-hour CO standards (9 ppm and 9.0 ppm) and the federal and state 1-hour CO standards (35 ppm and 20 ppm) were not exceeded.
- b) The current (2015) O₃ federal standard was revised effective December 28, 2015.
- c) The NO₂ federal 1-hour standard is 100 ppb annual standard is annual arithmetic mean NO₂ > 0.0534 ppm (53.4 ppb). The state 1-hour and annual standards are 0.18 ppm and 0.030 ppm.
- d) The federal SO₂ 1-hour standard is 75 ppb (0.075 ppm). The state standards are 1-hour average SO₂ > 0.25 ppm (250 ppb) and 24-hour average SO₂ > 0.04 ppm (40 ppb).
- e) District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction
- f) Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin
- ## Four near-road sites measuring one or more of the pollutants PM_{2.5}, CO and/or NO₂ are operating near the following freeways: I-5, I-10, CA-60 and I-710.



**South Coast
Air Quality Management District**
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

**2020 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

2020

| Source/Receptor Area No. Location Station No. | | | Suspended Particulates PM10 ^{e) k) +} | | | | Fine Particulates PM2.5 ^{g) #} | | | | | Lead ^{i) ++} | | PM10 Sulfate ^{j)} | | | |
|--|----------------------------------|------|--|--|--|-----------|---|------------------|--|---|---|---|---|---|------------------|--|--|
| | | | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | No. (%) Samples Exceeding Standards Federal $> 150 \mu\text{g}/\text{m}^3$ 24-hour State $> 50 \mu\text{g}/\text{m}^3$ 24-hour | | Annual Average Conc. ^{f)} (AAM) $\mu\text{g}/\text{m}^3$ | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | 98 th Percentile Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | No (%) Samples Exceeding Federal Std. 24-hour | Annual Average Conc. ^{h)} (AAM) $\mu\text{g}/\text{m}^3$ | Max. Monthly Average Conc. $\mu\text{g}/\text{m}^3$ | Max. 3-Months Rolling Averages $\mu\text{g}/\text{m}^3$ | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | | |
| 1 | Central LA | 087 | 337 | 77 | 0 | 24 (7%) | 23.0 | 353 | 47.30 | 28.00 | 2 (1%) | 12.31 | 0.013 | 0.011 | 45 | 3.3 | |
| 2 | Northwest Coastal LA County | 091 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Southwest Coastal LA County | 820 | 37 | 43 | 0 | 0 | 22.5 | -- | -- | -- | -- | -- | 0.008 | 0.005 | -- | -- | |
| 4 | South Coastal LA County 1 | 072 | -- | -- | -- | -- | -- | 117 | 28.10 | 26.10 | 0 | 11.26 | -- | -- | -- | -- | |
| 4 | South Coastal LA County 2 | 077 | 42 | 59 | 0 | 2 (5%) | 24.9 | 357 | 39.00 | 28.00 | 1 (0%) | 11.38 | 0.008 | 0.006 | -- | -- | |
| 4 | South Coastal LA County 3 | 033 | 12 | 54 | 0 | 2 (17%) | 27.8 | -- | -- | -- | -- | -- | -- | -- | 14 | 2.3 | |
| 4 | South Coastal LA County 4 | 039 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | I-710 Near Road ^{##} | 032 | -- | -- | -- | -- | -- | 356 | 44.00 | 31.50 | 2 (1%) | 12.93 | -- | -- | -- | -- | |
| 6 | West San Fernando Valley | 074 | -- | -- | -- | -- | -- | 116 | 27.60 | 26.40 | 0 | 10.13 | -- | -- | -- | -- | |
| 7 | East San Fernando Valley | 200 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8 | West San Gabriel Valley | 088 | -- | -- | -- | -- | -- | 117 | 34.90 | 31.20 | 0 | 11.06 | -- | -- | -- | -- | |
| 9 | East San Gabriel Valley 1 | 060 | 43 | 95 | 0 | 8 (19%) | 37.7 | 116 | 33.00 | 25.80 | 0 | 11.13 | 0.010 | 0.007 | 45 | 3.1 | |
| 9 | East San Gabriel Valley 2 | 591 | 333 | 105 | 0 | 9 (3%) | 25.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | Pomona/Walnut Valley | 075 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 11 | South San Gabriel Valley | 085 | -- | -- | -- | -- | -- | 116 | 35.40 | 30.50 | 0 | 13.22 | 0.012 | 0.011 | -- | -- | |
| 12 | South Central LA County | 112 | -- | -- | -- | -- | -- | 352 | 43.20 | 34.10 | 7 (2%) | 13.57 | 0.010 | 0.009 | -- | -- | |
| 13 | Santa Clarita Valley | 090 | 36 | 48 | 0 | 0 | 22.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | |
| 16 | North Orange County | 3177 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 17 | Central Orange County | 3176 | 329 | 120 | 0 | 13 (4%) | 23.9 | 355 | 41.40 | 27.10 | 1 (0%) | 11.27 | -- | -- | 44 | 3.3 | |
| 17 | I-5 Near Road ^{##} | 3131 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | Saddleback Valley | 3812 | 42 | 53 | 0 | 1 (2%) | 16.8 | 120 | 35.00 | 32.70 | 0 | 8.81 | -- | -- | -- | -- | |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | | |
| 22 | Corona/Norco Area | 4155 | 44 | 100 | 0 | 10 (23%) | 39.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 23 | Metropolitan Riverside County 1 | 4144 | 320 | 104 | 0 | 110 (34%) | 30.0 | 357 | 41.00 | 29.60 | 4 (1%) | 12.63 | 0.016 | 0.010 | 84 | 5.2 | |
| 23 | Metropolitan Riverside County 3 | 4165 | 304 | 124 | 0 | 154 (51%) | 52.2 | 358 | 38.70 | 34.70 | 5 (1.5%) | 14.03 | -- | -- | -- | -- | |
| 24 | Perris Valley | 4149 | 37 | 77 | 0 | 6 (16%) | 35.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 25 | Elsinore Valley | 4158 | 334 | 84 | 0 | 7 (2%) | 22.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 26 | Temecula Valley | 4031 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | San Geronio Pass | 4164 | 42 | 46 | 0 | 0 | 19.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 30 | Coachella Valley 1 ^{**} | 4137 | 251 | 48 | 0 | 0 | 20.4 | 122 | 23.90 | 16.90 | 0 | 6.42 | -- | -- | -- | -- | |
| 30 | Coachella Valley 2 ^{**} | 4157 | 317 | 77 | 0 | 8 (3%) | 29.1 | 121 | 25.60 | 20.20 | 0 | 8.41 | -- | -- | 89 | 2.7 | |
| 30 | Coachella Valley 3 ^{**} | 4032 | 320 | 259 | 1 (0%) | 69 (22%) | 38.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | | |
| 32 | Northwest San Bernardino Valley | 5175 | 305 | 63 | 0 | 12 (4%) | 30.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | I-10 Near Road ^{##} | 5035 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | CA-60 Near Road ^{##} | 5036 | -- | -- | -- | -- | -- | 356 | 53.10 | 33.70 | 4 (1%) | 14.36 | -- | -- | -- | -- | |
| 34 | Central San Bernardino Valley 1 | 5197 | 40 | 61 | 0 | 6 (15%) | 35.8 | 117 | 46.10 | 27.40 | 1 (1%) | 11.95 | -- | -- | 44 | 3.0 | |
| 34 | Central San Bernardino Valley 2 | 5203 | 320 | 80 | 0 | 81 (25%) | 38.7 | 115 | 25.70 | 24.70 | 0 | 11.66 | 0.010 | 0.009 | -- | -- | |
| 35 | East San Bernardino Valley | 5204 | 40 | 57 | 0 | 1 (3%) | 23.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 37 | Central San Bernardino Mountains | 5181 | 40 | 51 | 0 | 1 (3%) | 18.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 38 | East San Bernardino Mountains | 5818 | -- | -- | -- | -- | -- | 58 | 24.30 | 20.40 | 0 | 7.62 | -- | -- | -- | -- | |
| DISTRICT MAXIMUM ^{l)} | | | 259 | | | | 1 | 154 | 52.2 | 53.1 | 34.1 | 7 | 14.36 | 0.016 | 0.011 | 5.2 | |
| SOUTH COAST AIR BASIN ^{m)} | | | 124 | | | | 0 | 173 | 52.2 | 53.1 | 34.1 | 13 | 14.36 | 0.016 | 0.011 | 5.2 | |

* Incomplete data due to the site improvement. ** Salton Sea Air Basin $\mu\text{g}/\text{m}^3$ – Micrograms per cubic meter of air AAM – Annual Arithmetic Mean -- Pollutant not monitored

+ High PM10 ($\geq 155 \mu\text{g}/\text{m}^3$) data recorded in the Coachella Valley and the Basin attributed to high winds are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

PM2.5 concentrations above the 24-hour standard attributed to wildfire smoke and fireworks are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

e) PM10 statistics listed above are based on combined Federal Reference Method (FRM) and Federal Equivalent Method (FEM) data.

f) State annual average (AAM) PM10 standard is $20 \mu\text{g}/\text{m}^3$. Federal annual PM10 standard ($50 \mu\text{g}/\text{m}^3$) was revoked in 2006.

g) PM2.5 statistics listed above represent FRM data only with the exception of Central Orange County, I-710 Near Road, Metropolitan Riverside County 1 and 3, CA-60 Near Road, and South Coastal LA County 2 where FEM PM2.5 measurements are used to supplement missing FRM measurements because they pass the screening criteria in the South Coast AQMD Continuous Monitor Comparability Assessment and Request for Waiver dated July 1, 2021.

h) The Federal and State annual standards are $12.0 \mu\text{g}/\text{m}^3$.

i) Federal lead standard is 3-months rolling average $> 0.15 \mu\text{g}/\text{m}^3$; state standard is monthly average $> 1.5 \mu\text{g}/\text{m}^3$. Lead standards were not exceeded.

j) State sulfate standard is 24-hour $> 25 \mu\text{g}/\text{m}^3$. There is no federal standard for sulfate.

k) Filter-based measurements for PM10 from March 28, 2020 to June 26, 2020 are not available due to the COVID-19 Pandemic

l) District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction

m) Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin

++ Higher lead concentrations were recorded at near-source monitoring sites immediately downwind of stationary lead sources. Maximum monthly and 3-month rolling averages recorded were $0.096 \mu\text{g}/\text{m}^3$ and $0.059 \mu\text{g}/\text{m}^3$, respectively.

Four near-road sites measuring one or more of the pollutants PM2.5, CO and/or NO2 are operating near the following freeways: I-5, I-10, CA-60 and I-710.

2019 AIR QUALITY SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2019

| Source/Receptor Area No. Location | Station No. | Carbon Monoxide ^{a)} | | | Ozone ^{b)} | | | | | | | | | Nitrogen Dioxide ^{c)} | | | | Sulfur Dioxide ^{d)} | | | | |
|--------------------------------------|----------------------------------|-------------------------------|-------------------------------------|-------------------------------------|---------------------------|--------------------------------------|--------------------------------------|--|--|--|---|---|---|--|---------------------------|-------------------------------------|--|--|---------------------------|--------------------------------------|--|-----|
| | | No. Days of Data | Max Conc. in ppm 1-hour | Max Conc. in ppm 8-hour | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 8-hour | Fourth High Conc. ppm 8-hour | No. Days Standard Exceeded | | | | | | No. Days of Data | Max Conc. in ppb 1-hour | 98 th Percentile Conc. ppb 1-hour | Annual Average AAM Conc. ppb | No. Days of Data | Max. Conc. in ppb 1-hour | 99 th Conc. ppb 1-hour | |
| | | | | | | | | | Old Federal > 0.124 ppm 1-hour | Current Federal > 0.070 ppm 8-hour | 2008 Federal > 0.075 ppm 8-hour | 1997 Federal > 0.084 ppm 8-hour | Current State > 0.09 ppm 1-hour | Current State > 0.070 ppm 8-hour | | | | | | | | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Central LA | 87 | 364 | 2.0 | 1.6 | 364 | 0.085 | 0.080 | 0.065 | 0 | 2 | 1 | 0 | 0 | 2 | 365 | 69.7 | 55.5 | 17.7 | 365 | 10.0 | 2.3 |
| 2 | Northwest Coastal LA County | 91 | 364 | 1.9 | 1.2 | 360 | 0.086 | 0.075 | 0.064 | 0 | 1 | 0 | 0 | 0 | 1 | 365 | 48.8 | 43.0 | 9.7 | -- | -- | -- |
| 3 | Southwest Coastal LA County | 820 | 364 | 1.8 | 1.3 | 365 | 0.082 | 0.067 | 0.060 | 0 | 0 | 0 | 0 | 0 | 0 | 363 | 56.6 | 48.9 | 9.5 | 365 | 8.2 | 3.7 |
| 4 | South Coastal LA County 1 | 72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | South Coastal LA County 2 | 77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | South Coastal LA County 3 | 33 | 340 | 3.0 | 2.1 | 343 | 0.074 | 0.064 | 0.055 | 0 | 0 | 0 | 0 | 0 | 0 | 255 | 71.8 | 56.3 | 16.2 | 344 | 8.9 | 7.7 |
| 4 | I-710 Near Road## | 32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 365 | 97.7 | 78.3 | 22.8 | -- | -- | -- |
| 6 | West San Fernando Valley | 74 | 363 | 2.6 | 2.2 | 267 | 0.101 | 0.087 | 0.076 | 0 | 6 | 4 | 1 | 1 | 6 | 365 | 64.4 | 43.8 | 10.7 | -- | -- | -- |
| 8 | West San Gabriel Valley | 88 | 361 | 1.5 | 1.2 | 302 | 0.120 | 0.098 | 0.086 | 0 | 12 | 8 | 4 | 4 | 12 | 361 | 59.1 | 50.6 | 13.2 | -- | -- | -- |
| 9 | East San Gabriel Valley 1 | 60 | 361 | 1.6 | 1.1 | 362 | 0.123 | 0.094 | 0.090 | 0 | 39 | 21 | 10 | 34 | 39 | 365 | 59.7 | 49.8 | 13.7 | -- | -- | -- |
| 9 | East San Gabriel Valley 2 | 591 | 360 | 1.2 | 0.8 | 356 | 0.130 | 0.102 | 0.097 | 1 | 58 | 38 | 17 | 46 | 58 | 360 | 52.9 | 36.5 | 8.6 | -- | -- | -- |
| 10 | Pomona/Walnut Valley | 75 | 364 | 1.7 | 1.3 | 365 | 0.096 | 0.083 | 0.077 | 0 | 12 | 4 | 0 | 1 | 12 | 365 | 64.4 | 57.8 | 17.9 | -- | -- | -- |
| 11 | South San Gabriel Valley | 85 | 364 | 1.9 | 1.5 | 364 | 0.108 | 0.091 | 0.073 | 0 | 7 | 3 | 1 | 5 | 7 | 364 | 61.8 | 55.1 | 17.6 | -- | -- | -- |
| 12 | South Central LA County | 112 | 363 | 3.8 | 3.2 | 363 | 0.100 | 0.079 | 0.064 | 0 | 1 | 1 | 0 | 1 | 1 | 363 | 70.0 | 52.8 | 14.1 | -- | -- | -- |
| 13 | Santa Clarita Valley | 90 | 359 | 1.5 | 1.2 | 359 | 0.128 | 0.106 | 0.101 | 1 | 56 | 42 | 17 | 34 | 56 | 357 | 46.3 | 35.3 | 9.1 | -- | -- | -- |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 16 | North Orange County | 3177 | 364 | 2.6 | 1.2 | 364 | 0.107 | 0.094 | 0.074 | 0 | 6 | 3 | 1 | 2 | 6 | 362 | 59.4 | 44.5 | 12.1 | -- | -- | -- |
| 17 | Central Orange County | 3176 | 363 | 2.4 | 1.3 | 365 | 0.096 | 0.082 | 0.064 | 0 | 1 | 1 | 0 | 1 | 1 | 365 | 59.4 | 49.2 | 12.7 | -- | -- | -- |
| 17 | I-5 Near Road## | 3131 | 350 | 2.6 | 1.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 365 | 59.4 | 50.4 | 19.2 | -- | -- | -- |
| 18 | North Coastal Orange County | 3195 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | Saddleback Valley | 3812 | 363 | 1.0 | 0.8 | 365 | 0.106 | 0.087 | 0.082 | 0 | 11 | 7 | 1 | 3 | 11 | -- | -- | -- | -- | -- | -- | -- |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Corona/Norco Area | 4155 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Metropolitan Riverside County 1 | 4144 | 364 | 1.5 | 1.2 | 360 | 0.123 | 0.096 | 0.092 | 0 | 59 | 37 | 15 | 24 | 59 | 365 | 56.0 | 52.8 | 13.5 | 365 | 1.8 | 1.4 |
| 23 | Metropolitan Riverside County 3 | 4165 | 364 | 2.0 | 1.3 | 365 | 0.131 | 0.099 | 0.096 | 2 | 64 | 42 | 19 | 26 | 64 | 346 | 56.0 | 49.4 | 12.2 | -- | -- | -- |
| 24 | Perris Valley | 4149 | -- | -- | -- | 365 | 0.118 | 0.095 | 0.090 | 0 | 64 | 38 | 13 | 26 | 64 | -- | -- | -- | -- | -- | -- | -- |
| 25 | Lake Elsinore | 4158 | 364 | 1.6 | 0.7 | 365 | 0.108 | 0.089 | 0.079 | 0 | 28 | 11 | 1 | 4 | 28 | 365 | 38.0 | 33.3 | 6.8 | -- | -- | -- |
| 26 | Temecula Valley | 4031 | -- | -- | -- | 365 | 0.091 | 0.079 | 0.074 | 0 | 6 | 2 | 0 | 0 | 6 | -- | -- | -- | -- | -- | -- | -- |
| 29 | San Geronio Pass | 4164 | -- | -- | -- | 365 | 0.119 | 0.096 | 0.093 | 0 | 59 | 37 | 11 | 24 | 59 | 364 | 56.0 | 43.3 | 7.5 | -- | -- | -- |
| 30 | Coachella Valley 1** | 4137 | 360 | 1.3 | 0.7 | 364 | 0.100 | 0.084 | 0.083 | 0 | 34 | 17 | 0 | 5 | 34 | 361 | 41.4 | 32.2 | 7.3 | -- | -- | -- |
| 30 | Coachella Valley 2** | 4157 | -- | -- | -- | 365 | 0.103 | 0.087 | 0.083 | 0 | 43 | 15 | 2 | 4 | 43 | -- | -- | -- | -- | -- | -- | -- |
| 30 | Coachella Valley 3** | 4032 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Northwest San Bernardino Valley | 5175 | 337 | 1.5 | 1.1 | 338 | 0.131 | 0.107 | 0.097 | 1 | 52 | 34 | 13 | 31 | 52 | 328 | 57.9 | 46.4 | 14.0 | -- | -- | -- |
| 33 | I-10 Near Road## | 5035 | 364 | 1.5 | 1.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 346 | 86.3 | 70.5 | 27.6 | -- | -- | -- |
| 33 | CA-60 Near Road## | 5036 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 364 | 87.7 | 73.9 | 29.0 | -- | -- | -- |
| 34 | Central San Bernardino Valley 1 | 5197 | 359 | 2.7 | 1.0 | 364 | 0.124 | 0.109 | 0.097 | 0 | 67 | 46 | 20 | 41 | 67 | 365 | 76.1 | 57.7 | 17.2 | 358 | 2.4 | 1.9 |
| 34 | Central San Bernardino Valley 2 | 5203 | 352 | 1.3 | 1.1 | 354 | 0.127 | 0.114 | 0.103 | 2 | 96 | 73 | 37 | 63 | 96 | 352 | 59.3 | 46.3 | 14.3 | -- | -- | -- |
| 35 | East San Bernardino Valley | 5204 | -- | -- | -- | 364 | 0.137 | 0.117 | 0.106 | 8 | 109 | 88 | 63 | 73 | 109 | -- | -- | -- | -- | -- | -- | -- |
| 37 | Central San Bernardino Mountains | 5181 | -- | -- | -- | 365 | 0.129 | 0.112 | 0.106 | 2 | 99 | 79 | 44 | 53 | 99 | -- | -- | -- | -- | -- | -- | -- |
| 38 | East San Bernardino Mountains | 5818 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DISTRICT MAXIMUM ^{e)} | | | 3.8 | 3.2 | | 0.137 | 0.117 | 0.106 | 8 | 109 | 88 | 63 | 73 | 109 | | 97.7 | 78.3 | 29.0 | | 10.0 | 7.7 | |
| SOUTH COAST AIR BASIN ^{d)} | | | 3.8 | 3.2 | | 0.137 | 0.117 | 0.106 | 10 | 126 | 101 | 71 | 82 | 126 | | 97.7 | 78.3 | 29.0 | | 10.0 | 7.7 | |

*Incomplete Data ** Salton Sea Air Basin -- Pollutant not monitored ppm - Parts Per Million parts of air, by volume ppb - Parts Per Billion parts of air, by volume
AAM = Annual Arithmetic Mean ## Four near-road sites measuring one or more of the pollutants PM_{2.5}, CO and/or NO_x are operating near freeways: I-5, I-10, I-710 and CA-60.

- a) - The federal and state 8-hour CO standards (9 ppm and 9.0 ppm) and the federal and state 1-hour CO standards (35 ppm and 20 ppm) were not exceeded.
- b) - The current (2015) O₃ federal standard was revised effective December 28, 2015.
- c) - The NO₂ federal 1-hour standard is 100 ppb and the federal annual standard is 53.4 ppb. The state 1-hour and annual standards are 0.18 ppm and 0.030 ppm.
- d) - The federal SO₂ 1-hour standard is 75 ppb (0.075 ppm). The state 1-hour SO standard is 0.25 ppm (250 ppb) and the state 24-hour SO₂ standard is 0.04 ppm (40 ppb).
- e) - District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction
- f) - Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin.



For information on the current standard levels and most recent revisions please refer to "Appendix II - Current Air Quality" of the "2016 AQMP" which can be accessed at <https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>. Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the South Coast AQMD [Current Hourly Air Quality Map](https://www.aqmd.gov/aqimap), at <https://www.aqmd.gov/aqimap>. A printed map or copy of the AQMP Appendix II is also available free of charge from the South Coast AQMD Public Information Center at 1-800-CUT-SMOG.

**2019 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

2019

| Source/Receptor Area No. Location | Station No. | Suspended Particulates PM10 ^{e)+} | | | | | Fine Particulates PM2.5 ^{g)##} | | | | | Lead ⁱ⁾⁺⁺ | | PM10 Sulfate ^{j)} | | |
|---|----------------|--|---|---|-----------|---|---|---|--|--|-------|---|--|--|------------------------|---|
| | | No. Days of Data | Max. Conc. in µg/m ³ 24-hour | No. (%) Samples Exceeding Standards Federal State | | Annual Average Conc. ^{f)} µg/m ³ | No. Days of Data | Max. Conc. in µg/m ³ 24-hour | 98 th Percentile Conc. in µg/m ³ 24-hour | No (%) Samples Exceeding Federal Std. > 35 µg/m ³ 24-hour | | Annual Average Conc. ^{h)} µg/m ³ | Max. Monthly Average Conc. µg/m ³ | Max. 3-Months Rolling Averages µg/m ³ | No. Days of Data | Max. Conc. in µg/m ³ 24-hour |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | |
| 1 Central LA | 087 | 9 | 62 | 0 | 3 (6%) | 25.5 | 360 | 43.50 | 28.30 | 1 (0.3%) | 10.85 | 0.012 | 0.010 | 55 | 5.1 | |
| 2 Northwest Coastal LA County | 091 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 Southwest Coastal LA County | 820 | 59 | 62 | 0 | 2 (3%) | 19.2 | -- | -- | -- | -- | -- | 0.004 | 0.004 | -- | -- | |
| 4 South Coastal LA County 1 | 072 | -- | -- | -- | -- | -- | 159 | 28.00 | 20.70 | 0 | 9.23 | -- | -- | -- | -- | |
| 4 South Coastal LA County 2 | 077 | 60 | 72 | 0 | 2 (3%) | 21.0 | 354 | 30.60 | 23.20 | 0 | 9.22 | 0.006 | 0.005 | -- | -- | |
| 4 South Coastal LA County 3 | 033 | 58 | 74 | 0 | 3 (5%) | 26.9 | -- | -- | -- | -- | -- | -- | -- | 59 | 5.8 | |
| 4 I-710 Near Road## | 032 | -- | -- | -- | -- | -- | 365 | 36.70 | 26.40 | 1 (0.3%) | 10.99 | -- | -- | -- | -- | |
| 6 West San Fernando Valley | 074 | -- | -- | -- | -- | -- | 118 | 30.00 | 26.30 | 0 | 9.16 | -- | -- | -- | -- | |
| 8 West San Gabriel Valley | 088 | -- | -- | -- | -- | -- | 118 | 30.90 | 24.60 | 0 | 8.90 | -- | -- | -- | -- | |
| 9 East San Gabriel Valley 1 | 060 | 61 | 82 | 0 | 4 (7%) | 28.1 | 120 | 28.30 | 21.20 | 0 | 9.18 | -- | -- | 61 | 6.2 | |
| 9 East San Gabriel Valley 2 | 591 | 308 | 97 | 0 | 3 (1%) | 20.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 Pomona/Walnut Valley | 075 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 11 South San Gabriel Valley | 085 | -- | -- | -- | -- | -- | 119 | 29.60 | 24.40 | 0 | 10.34 | 0.009 | 0.007 | -- | -- | |
| 12 South Central LA County | 112 | -- | -- | -- | -- | -- | 303 | 39.50 | 26.60 | 1 (0.3%) | 10.87 | 0.009 | 0.007 | -- | -- | |
| 13 Santa Clarita Valley | 090 | 60 | 62 | 0 | 1 (2%) | 18.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| ORANGE COUNTY | | | | | | | | | | | | | | | | |
| 16 North Orange County | 3177 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 17 Central Orange County | 3176 | 364 | 127 | 0 | 13 (4%) | 21.9 | 346 | 36.10 | 23.30 | 3 (0.9%) | 9.32 | -- | -- | 60 | 5.1 | |
| 17 I-5 Near Road## | 3131 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 North Coastal Orange County | 3195 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 Saddleback Valley | 3812 | 60 | 45 | 0 | 0 | 16.6 | 111 | 20.80 | 14.70 | 0 | 7.11 | -- | -- | -- | -- | |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | |
| 22 Corona/Norco Area | 4155 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 23 Metropolitan Riverside County 1 | 4144 | 120 | 99 | 0 | 21 (18%) | 34.4 | 352 | 46.70 | 31.80 | 4 (1.1%) | 11.13 | 0.008 | 0.007 | 121 | 14.6 | |
| 23 Metropolitan Riverside County 3 | 4165 | 362 | 143 | 0 | 130 (36%) | 43.1 | 356 | 46.70 | 36.20 | 9 (2.5%) | 12.53 | -- | -- | -- | -- | |
| 24 Perris Valley | 4149 | 61 | 97 | 0 | 4 (7%) | 25.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 25 Elsinore Valley | 4158 | 301 | 93 | 0 | 5 (2%) | 18.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 26 Temecula Valley | 4031 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 San Geronio Pass | 4164 | 56 | 63 | 0 | 2 (4%) | 17.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 30 Coachella Valley 1** | 4137 | 346 | 75 | 0 | 5 (1%) | 19.5 | 119 | 15.50 | 12.40 | 0 | 6.05 | -- | -- | -- | -- | |
| 30 Coachella Valley 2** | 4157 | 361 | 141 | 0 | 27 (7%) | 27.8 | 118 | 15.00 | 13.50 | 0 | 7.37 | -- | -- | 119 | 3.2 | |
| 30 Coachella Valley 3** | 4032 | 324 | 154 | 0 | 44 (14%) | 33.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | |
| 32 Northwest San Bernardino Valley | 5175 | 306 | 125 | 0 | 7 (2%) | 28.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 I-10 Near Road## | 5035 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 CA-60 Near Road## | 5036 | -- | -- | -- | -- | -- | 364 | 41.30 | 30.70 | 5 (1.4%) | 12.70 | -- | -- | -- | -- | |
| 34 Central San Bernardino Valley 1 | 5197 | 61 | 88 | 0 | 12 (20%) | 34.8 | 114 | 46.50 | 29.70 | 2 (1.8%) | 10.84 | -- | -- | 62 | 5.2 | |
| 34 Central San Bernardino Valley 2 | 5203 | 269 | 112 | 0 | 36 (13%) | 29.9 | 97 | 34.80 | 33.00 | 0 | 10.06 | 0.013 | 0.011 | -- | -- | |
| 35 East San Bernardino Valley | 5204 | 59 | 44 | 0 | 0 | 21.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 37 Central San Bernardino Mountains | 5181 | 54 | 38 | 0 | 0 | 16.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 38 East San Bernardino Mountains | 5818 | -- | -- | -- | -- | -- | 46 | 31.00 | 31.00 | 0 | 5.94 | -- | -- | -- | -- | |
| DISTRICT MAXIMUM^{k)} | | | 154 | 0 | 130 | 43.1 | | 46.7 | 36.2 | 9 | 12.70 | 0.013 | 0.011 | | 14.6 | |
| SOUTH COAST AIR BASIN^{m)} | | | 143 | 0 | 137 | 43.1 | | 46.7 | 36.2 | 10 | 12.70 | 0.013 | 0.011 | | 14.6 | |

* Incomplete data due to the site improvement. ** Salton Sea Air Basin µg/m³ - Micrograms per cubic meter of air AAM - Annual Arithmetic Mean -- Pollutant not monitored

+ High PM10 (≥ 155 µg/m³) data recorded in the Coachella Valley and the Basin (due to high winds) are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

+ PM2.5 concentrations above the 24-hour standard attributed to wildfire smoke and fireworks are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

e) PM10 statistics listed above are based on combined Federal Reference Method (FRM) and Federal Equivalent Method (FEM) data.

f) State annual average (AAM) PM10 standard is > 20 µg/m³. Federal annual PM10 standard (AAM > 50 µg/m³) was revoked in 2006.

g) PM2.5 statistics listed above are for the FRM data only. FEM PM2.5 continuous monitoring instruments were operated at some of the above locations for real-time alerts and forecasting only.

h) Both Federal and State standards are annual average (AAM) > 12.0 µg/m³.

i) Federal lead standard is 3-months rolling average > 0.15 µg/m³; state standard is monthly average ³ 1.5 µg/m³. Lead standards were not exceeded.

j) State sulfate standard is 24-hour ³ 25 µg/m³. There is no federal standard for sulfate.

k) District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction

m) Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin.

++ Higher lead concentrations were recorded at near-source monitoring sites immediately downwind of stationary lead sources. Maximum monthly and 3-month rolling averages recorded were 0.021 µg/m³ and 0.017 µg/m³, respectively.

Four near-road sites measuring one or more of the pollutants PM2.5, CO and/or NO2 are operating near the following freeways: I-5, I-10, CA-60 and I-710.

**2018 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

2018

| Source/Receptor Area No. Location | Station No. | Carbon Monoxide ^{a)} | | | Ozone ^{b)} | | | | | | | | | Nitrogen Dioxide ^{c)} | | | | Sulfur Dioxide ^{d)} | | | | |
|--------------------------------------|----------------------------------|-------------------------------|-------------------------------------|-------------------------------------|---------------------------|--------------------------------------|--------------------------------------|--|--|--|---|---|---|--|---------------------------|-------------------------------------|--|--|---------------------------|--------------------------------------|--|-----|
| | | No. Days of Data | Max Conc. in ppm 1-hour | Max Conc. in ppm 8-hour | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 8-hour | Fourth High Conc. ppm 8-hour | No. Days Standard Exceeded | | | | | | No. Days of Data | Max Conc. in ppb 1-hour | 98 th Percentile Conc. ppb 1-hour | Annual Average AAM Conc. ppb | No. Days of Data | Max. Conc. in ppb 1-hour | 99 th Percentile Conc. ppb 1-hour | |
| | | | | | | | | | Old Federal > 0.124 ppm 1-hour | Current Federal > 0.070 ppm 8-hour | 2008 Federal > 0.075 ppm 8-hour | 1997 Federal > 0.084 ppm 8-hour | Current State > 0.09 ppm 1-hour | Current State > 0.070 ppm 8-hour | | | | | | | | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Central LA | 087 | 365 | 2.0 | 1.7 | 359 | 0.098 | 0.073 | 0.071 | 0 | 4 | 0 | 0 | 2 | 4 | 365 | 70.1 | 57.2 | 18.5 | 358 | 17.9 | 2.8 |
| 2 | Northwest Coastal LA County | 091 | 359 | 1.6 | 1.3 | 364 | 0.094 | 0.073 | 0.068 | 0 | 2 | 0 | 0 | 0 | 2 | 242 | 64.7 | 46.1 | 12.6 | -- | -- | -- |
| 3 | Southwest Coastal LA County | 820 | 342 | 1.8 | 1.5 | 365 | 0.074 | 0.065 | 0.060 | 0 | 0 | 0 | 0 | 0 | 0 | 338 | 59.6 | 49.8 | 9.2 | 365 | 11.5 | 5.3 |
| 4 | South Coastal LA County 1 | 072 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | South Coastal LA County 2 | 077 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | South Coastal LA County 3 | 033 | 364 | 4.7 | 2.1 | 363 | 0.074 | 0.063 | 0.053 | 0 | 0 | 0 | 0 | 0 | 0 | 359 | 85.3 | 62.7 | 17.3 | 365 | 10.5 | 9.4 |
| 4 | I-710 Near Road## | 032 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 355 | 90.3 | 79.1 | 22.3 | -- | -- | -- |
| 6 | West San Fernando Valley | 074 | 359 | 3.4 | 2.1 | 362 | 0.120 | 0.101 | 0.094 | 0 | 49 | 23 | 12 | 14 | 49 | 365 | 57.2 | 50.1 | 12.1 | -- | -- | -- |
| 8 | West San Gabriel Valley | 088 | 365 | 2.0 | 1.4 | 365 | 0.112 | 0.090 | 0.085 | 0 | 19 | 8 | 4 | 8 | 19 | 364 | 68.2 | 54.4 | 14.4 | -- | -- | -- |
| 9 | East San Gabriel Valley 1 | 060 | 365 | 1.4 | 1.0 | 364 | 0.139 | 0.099 | 0.097 | 3 | 42 | 23 | 10 | 24 | 42 | 363 | 70.8 | 56.8 | 14.9 | -- | -- | -- |
| 9 | East San Gabriel Valley 2 | 591 | 365 | 1.0 | 0.8 | 365 | 0.140 | 0.104 | 0.102 | 5 | 46 | 27 | 10 | 32 | 46 | 349 | 55.2 | 44.2 | 9.7 | -- | -- | -- |
| 10 | Pomona/Walnut Valley | 075 | 365 | 2.1 | 1.8 | 362 | 0.112 | 0.092 | 0.081 | 0 | 10 | 8 | 3 | 7 | 10 | 365 | 67.9 | 60.4 | 19.4 | -- | -- | -- |
| 11 | South San Gabriel Valley | 085 | 344 | 2.0 | 1.8 | 352 | 0.115 | 0.082 | 0.074 | 0 | 5 | 2 | 0 | 3 | 5 | 356 | 76.8 | 59.7 | 18.3 | -- | -- | -- |
| 12 | South Central LA County | 112 | 357 | 4.7 | 3.5 | 365 | 0.075 | 0.063 | 0.058 | 0 | 0 | 0 | 0 | 0 | 0 | 335 | 68.3 | 55.6 | 15.0 | -- | -- | -- |
| 13 | Santa Clarita Valley | 090 | 365 | 1.0 | 0.8 | 365 | 0.132 | 0.106 | 0.097 | 3 | 52 | 36 | 12 | 21 | 52 | 365 | 58.9 | 37.9 | 10.9 | -- | -- | -- |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 16 | North Orange County | 3177 | 365 | 3.0 | 1.4 | 365 | 0.111 | 0.077 | 0.071 | 0 | 4 | 3 | 0 | 3 | 4 | 365 | 67.1 | 50.4 | 13.0 | -- | -- | -- |
| 17 | Central Orange County | 3176 | 358 | 2.3 | 1.9 | 365 | 0.112 | 0.071 | 0.065 | 0 | 1 | 0 | 0 | 1 | 1 | 365 | 66.0 | 54.5 | 13.7 | -- | -- | -- |
| 17 | I-5 Near Road## | 3131 | 320 | 2.7 | 2.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 348 | 61.7 | 55.8 | 20.8 | -- | -- | -- |
| 18 | North Coastal Orange County | 3195 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | Saddleback Valley | 3812 | 300 | 1.2 | 0.9 | 365 | 0.121 | 0.088 | 0.074 | 0 | 9 | 2 | 2 | 2 | 9 | -- | -- | -- | -- | -- | -- | -- |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Corona/Norco Area | 4155 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Metropolitan Riverside County 1 | 4144 | 365 | 2.2 | 2.0 | 365 | 0.123 | 0.101 | 0.096 | 0 | 53 | 34 | 14 | 22 | 53 | 364 | 55.4 | 50.5 | 14.3 | 360 | 1.7 | 1.6 |
| 23 | Metropolitan Riverside County 3 | 4165 | 358 | 2.6 | 2.4 | 355 | 0.129 | 0.107 | 0.097 | 1 | 57 | 32 | 12 | 21 | 57 | 358 | 54.5 | 50.4 | 13.7 | -- | -- | -- |
| 24 | Perris Valley | 4149 | -- | -- | -- | 365 | 0.117 | 0.103 | 0.095 | 0 | 67 | 47 | 19 | 31 | 67 | -- | -- | -- | -- | -- | -- | -- |
| 25 | Lake Elsinore | 4158 | 361 | 1.1 | 0.8 | 365 | 0.116 | 0.095 | 0.089 | 0 | 30 | 26 | 7 | 16 | 30 | 359 | 41.3 | 36.4 | 8.5 | -- | -- | -- |
| 26 | Temecula Valley | 4031 | -- | -- | -- | 363 | 0.107 | 0.085 | 0.077 | 0 | 15 | 5 | 1 | 2 | 15 | -- | -- | -- | -- | -- | -- | -- |
| 29 | San Geronio Pass | 4164 | -- | -- | -- | 363 | 0.119 | 0.106 | 0.100 | 0 | 69 | 43 | 22 | 33 | 69 | 344 | 50.6 | 46.5 | 8.5 | -- | -- | -- |
| 30 | Coachella Valley 1** | 4137 | 349 | 1.1 | 0.8 | 362 | 0.111 | 0.099 | 0.093 | 0 | 56 | 22 | 10 | 11 | 56 | 364 | 42.6 | 35.4 | 6.8 | -- | -- | -- |
| 30 | Coachella Valley 2** | 4157 | -- | -- | -- | 359 | 0.106 | 0.091 | 0.089 | 0 | 49 | 28 | 8 | 4 | 49 | -- | -- | -- | -- | -- | -- | -- |
| 30 | Coachella Valley 3** | 4032 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Northwest San Bernardino Valley | 5175 | 365 | 1.7 | 1.2 | 363 | 0.133 | 0.111 | 0.106 | 6 | 52 | 32 | 14 | 25 | 52 | 355 | 58.7 | 48.9 | 14.7 | -- | -- | -- |
| 33 | I-10 Near Road## | 5035 | 339 | 1.6 | 1.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 339 | 88.3 | 67.7 | 27.2 | -- | -- | -- |
| 33 | CA-60 Near Road## | 5036 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 357 | 79.4 | 71.3 | 30.4 | -- | -- | -- |
| 34 | Central San Bernardino Valley 1 | 5197 | 365 | 1.9 | 1.1 | 365 | 0.141 | 0.111 | 0.106 | 7 | 69 | 47 | 18 | 38 | 69 | 365 | 63.0 | 55.9 | 18.3 | 362 | 2.9 | 2.5 |
| 34 | Central San Bernardino Valley 2 | 5203 | 362 | 2.7 | 2.5 | 362 | 0.138 | 0.116 | 0.107 | 7 | 102 | 71 | 33 | 63 | 102 | 362 | 57.3 | 49.9 | 15.8 | -- | -- | -- |
| 35 | East San Bernardino Valley | 5204 | -- | -- | -- | 365 | 0.136 | 0.114 | 0.111 | 4 | 94 | 66 | 26 | 53 | 94 | -- | -- | -- | -- | -- | -- | -- |
| 37 | Central San Bernardino Mountains | 5181 | -- | -- | -- | 362 | 0.142 | 0.125 | 0.105 | 3 | 113 | 91 | 46 | 57 | 113 | -- | -- | -- | -- | -- | -- | -- |
| 38 | East San Bernardino Mountains | 5818 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DISTRICT MAXIMUM | | | | 4.7 | 3.5 | | 0.142 | 0.125 | 0.111 | 7 | 113 | 91 | 46 | 63 | 113 | | 90.3 | 79.1 | 30.4 | | 17.9 | 9.4 |
| SOUTH COAST AIR BASIN | | | | 4.7 | 3.5 | | 0.142 | 0.125 | 0.111 | 10 | 141 | 108 | 59 | 84 | 141 | | 90.3 | 79.1 | 30.4 | | 17.9 | 9.4 |

** Salton Sea Air Basin -- Pollutant not monitored ppm - Parts Per Million parts of air, by volume ppb - Parts Per Billion parts of air, by volume
AAM = Annual Arithmetic Mean ## Four near-road sites measuring one or more of the pollutants PM_{2.5}, CO and/or NO₂ are operating near freeways: I-5, I-10, I-710 and CA-60.

- a) - The federal and state 8-hour CO standards (9 ppm and 9.0 ppm) and the federal and state 1-hour CO standards (35 ppm and 20 ppm) were not exceeded.
- b) - The current (2015) O₃ federal standard was revised effective December 28, 2015.
- c) - The NO₂ federal 1-hour standard is 100 ppb and the federal annual standard is 53.4 ppb. The state 1-hour and annual standards are 0.18 ppm and 0.030 ppm, respectively.
- d) - The federal SO₂ 1-hour standard is 75 ppb (0.075 ppm). The state 1-hour SO standard is 0.25 ppm (250 ppb) and the state 24-hour SO₂ standard is 0.04 ppm (40 ppb).



**South Coast
Air Quality Management District**
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

For information on the current standard levels and most recent revisions please refer to "Appendix II - Current Air Quality" of the "2016 AQMP" which can be accessed at <https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>. Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the South Coast AQMD Current Hourly Air Quality Map, at <https://www.aqmd.gov/aqimap>. A printed map or copy of the AQMP Appendix II is also available free of charge from the South Coast AQMD Public Information Center at 1-800-CUT-SMOG.

**2018 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

2018

| Source/Receptor Area No. Location | Station No. | Suspended Particulates PM10 ^{e)} | | | | Fine Particulates PM2.5 ^{g)} # | | | | Lead ⁱ⁾⁺⁺ | | PM10 Sulfate ^{j)} | | | |
|--------------------------------------|----------------|---|--|---|---|---|--|---|--|---|---|---|------------------|--|-----|
| | | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | No. (%) Samples Exceeding Standards Federal > 150 $\mu\text{g}/\text{m}^3$ State > 50 $\mu\text{g}/\text{m}^3$ 24-hour | Annual Average Conc. (AAM) $\mu\text{g}/\text{m}^3$ | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | 98 th Percentile Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | No. (%) Samples Exceeding Federal Std. > 35 $\mu\text{g}/\text{m}^3$ 24-hour | Annual Average Conc. (AAM) $\mu\text{g}/\text{m}^3$ | Max. Monthly Average Conc. $\mu\text{g}/\text{m}^3$ | Max. 3-Months Rolling Averages $\mu\text{g}/\text{m}^3$ | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | |
| 1 Central LA | 087 | 363 | 81 | 0 | 31 (9%) | 34.1 | 344 | 43.80 | 30.50 | 3 (0.9%) | 12.58 | 0.011 | 0.011 | 53 | 4.5 |
| 2 Northwest Coastal LA County | 091 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 Southwest Coastal LA County | 820 | 48 | 45 | 0 | 0 | 20.5 | -- | -- | -- | -- | -- | 0.005 | 0.004 | 48 | 5.2 |
| 4 South Coastal LA County 1 | 072 | -- | -- | -- | -- | -- | 342 | 46.40 | 29.80 | 2 (0.6%) | 10.99 | -- | -- | -- | -- |
| 4 South Coastal LA County 2 | 077 | 58 | 55 | 0 | 1 (2%) | 23.9 | 330 | 47.10 | 27.70 | 2 (0.6%) | 11.15 | 0.006 | 0.007 | 58 | 4.0 |
| 4 South Coastal LA County 3 | 033 | 57 | 84 | 0 | 4 (7%) | 32.3 | -- | -- | -- | -- | -- | -- | -- | 57 | 5.0 |
| 4 I-710 Near Road## | 032 | -- | -- | -- | -- | -- | 359 | 46.10 | 31.90 | 4 (1.1%) | 12.75 | -- | -- | -- | -- |
| 6 West San Fernando Valley | 074 | -- | -- | -- | -- | -- | 106 | 31.00 | 22.60 | 0 | 10.32 | -- | -- | -- | -- |
| 8 West San Gabriel Valley | 088 | -- | -- | -- | -- | -- | 121 | 32.50 | 29.50 | 0 | 10.28 | -- | -- | -- | -- |
| 9 East San Gabriel Valley 1 | 060 | 60 | 78 | 0 | 10 (17%) | 32.2 | 119 | 30.20 | 25.90 | 0 | 10.35 | -- | -- | 60 | 4.0 |
| 9 East San Gabriel Valley 2 | 591 | 317 | 101 | 0 | 20 (6%) | 27.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10 Pomona/Walnut Valley | 075 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11 South San Gabriel Valley | 085 | -- | -- | -- | -- | -- | 113 | 35.40 | 28.10 | 0 | 12.31 | 0.009 | 0.009 | -- | -- |
| 12 South Central LA County | 112 | -- | -- | -- | -- | -- | 117 | 43.00 | 34.20 | 1 (0.9%) | 12.96 | 0.009 | 0.011 | -- | -- |
| 13 Santa Clarita Valley | 090 | 54 | 49 | 0 | 0 | 23.4 | -- | -- | -- | -- | -- | -- | -- | 54 | 3.5 |
| ORANGE COUNTY | | | | | | | | | | | | | | | |
| 16 North Orange County | 3177 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 Central Orange County | 3176 | 320 | 129 | 0 | 13 (4%) | 27.2 | 353 | 54.10 | 28.90 | 3 (0.8%) | 11.02 | -- | -- | 61 | 4.1 |
| 17 I-5 Near Road## | 3131 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 North Coastal Orange County | 3195 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 Saddleback Valley | 3812 | 59 | 55 | 0 | 1 (2%) | 19.0 | 107 | 20.80 | 18.50 | 0 | 8.31 | -- | -- | 59 | 4.0 |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | |
| 22 Corona/Norco Area | 4155 | 58 | 100 | 0 | 3 (5%) | 30.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 Metropolitan Riverside County 1 | 4144 | 356 | 126 | 0 | 132 (37%) | 44.0 | 354 | 50.70 | 26.30 | 2 (0.6%) | 12.41 | 0.009 | 0.007 | 117 | 4.1 |
| 23 Metropolitan Riverside County 3 | 4165 | 354 | 148 | 0 | 168 (47%) | 49.4 | 349 | 64.80 | 32.80 | 4 (1.1%) | 13.87 | -- | -- | 59 | 3.5 |
| 24 Perris Valley | 4149 | 60 | 64 | 0 | 3 (5%) | 29.7 | -- | -- | -- | -- | -- | -- | -- | 60 | 3.2 |
| 25 Elsinore Valley | 4158 | 342 | 104 | 0 | 9 (3%) | 22.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26 Temecula Valley | 4031 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29 San Geronio Pass | 4164 | 61 | 39 | 0 | 0 | 19.4 | -- | -- | -- | -- | -- | -- | -- | 61 | 2.9 |
| 30 Coachella Valley 1** | 4137 | 359 | 117 | 0 | 7 (2%) | 21.0 | 122 | 30.20 | 14.30 | 0 | 6.02 | -- | -- | 61 | 2.7 |
| 30 Coachella Valley 2** | 4157 | 353 | 146 | 0 | 43 (12%) | 33.2 | 122 | 28.70 | 17.00 | 0 | 8.32 | -- | -- | 118 | 3.7 |
| 30 Coachella Valley 3** | 4032 | 352 | 274 | 2 (1%) | 63 (18%) | 38.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | |
| 32 Northwest San Bernardino Valley | 5175 | 322 | 73 | 0 | 14 (4%) | 32.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 I-10 Near Road## | 5035 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 CA-60 Near Road## | 5036 | -- | -- | -- | -- | -- | 357 | 47.90 | 30.40 | 5 (1.4%) | 14.31 | -- | -- | -- | -- |
| 34 Central San Bernardino Valley 1 | 5197 | 56 | 64 | 0 | 9 (16%) | 34.1 | 110 | 29.20 | 26.80 | 0 | 11.13 | -- | -- | 56 | 3.9 |
| 34 Central San Bernardino Valley 2 | 5203 | 355 | 129 | 0 | 25 (7%) | 30.2 | 114 | 30.10 | 22.90 | 0 | 11.17 | 0.008 | 0.008 | 58 | 3.8 |
| 35 East San Bernardino Valley | 5204 | 59 | 74 | 0 | 2 (3%) | 25.9 | -- | -- | -- | -- | -- | -- | -- | 59 | 3.6 |
| 37 Central San Bernardino Mountains | 5181 | 59 | 78 | 0 | 1 (2%) | 19.5 | -- | -- | -- | -- | -- | -- | -- | 59 | 2.4 |
| 38 East San Bernardino Mountains | 5818 | -- | -- | -- | -- | -- | 54 | 17.30 | 16.00 | 0 | 6.80 | -- | -- | -- | -- |
| DISTRICT MAXIMUM | | | 148 | 0 | 168 | 49.4 | | 64.8 | 34.2 | 5 | 14.31 | 0.011 | 0.011 | | 5.2 |
| SOUTH COAST AIR BASIN | | | 148 | 0 | 185 | 49.4 | | 64.8 | 34.2 | 11 | 14.31 | 0.011 | 0.011 | | 5.2 |

** Salton Sea Air Basin $\mu\text{g}/\text{m}^3$ – Micrograms per cubic meter of air AAM – Annual Arithmetic Mean -- Pollutant not monitored

+ High PM10 ($\geq 155 \mu\text{g}/\text{m}^3$) data recorded in the Coachella Valley and the Basin attributed to high winds are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

PM2.5 concentrations above the 24-hour standard attributed to wildfire smoke and fireworks are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

++ Higher lead concentrations were recorded at near-source monitoring sites immediately downwind of stationary lead sources. Maximum monthly and 3-month rolling averages recorded were $0.096 \mu\text{g}/\text{m}^3$ and $0.059 \mu\text{g}/\text{m}^3$, respectively.

Four near-road sites measuring one or more of the pollutants PM2.5, CO and/or NO2 are operating near the following freeways: I-5, I-10, CA-60 and I-710.

e) PM10 statistics listed above are based on combined Federal Reference Method (FRM) and Federal Equivalent Method (FEM) data.

f) State annual average (AAM) PM10 standard is $20 \mu\text{g}/\text{m}^3$. Federal annual PM10 standard ($50 \mu\text{g}/\text{m}^3$) was revoked in 2006.

g) PM2.5 statistics listed above are for the FRM data only. FEM PM2.5 continuous monitoring instruments were operated at some of the above locations for real-time alerts and forecasting only.

h) The federal and state annual standards are $12.0 \mu\text{g}/\text{m}^3$.

i) Federal lead standard is 3-months rolling average $> 0.15 \mu\text{g}/\text{m}^3$; state standard is monthly average $\geq 1.5 \mu\text{g}/\text{m}^3$. Lead standards were not exceeded.

j) State sulfate standard is 24-hour $\geq 25 \mu\text{g}/\text{m}^3$. There is no federal standard for sulfate.



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive, Diamond Bar, CA 91765-4182
Information: 1-800-CUT-SMOG (1-800-288-7664)
Internet: <http://www.aqmd.gov>

Air Quality Reporting

Since 1977, the South Coast Air Quality Management District has served as the local government agency responsible for measuring, reporting and taking steps to improve air quality.

To inform the AQMD's 15 million residents about air quality conditions, the AQMD issues an air quality forecast each day and reports current air quality conditions for each

numbered Monitoring Area and General Forecast Area depicted here.

This air quality information is transmitted to the public through newspapers, television, radio and pager services, through faxes to schools, through recorded messages on the AQMD's toll-free Smog Update telephone line, 1-800-CUT-SMOG, and on the AQMD's Internet Website <http://www.aqmd.gov>.

Newspapers, television and radio stations typically will report air

quality information using the General Forecast Areas, shown in color below, which are larger groupings of the more specific Air Monitoring Areas.

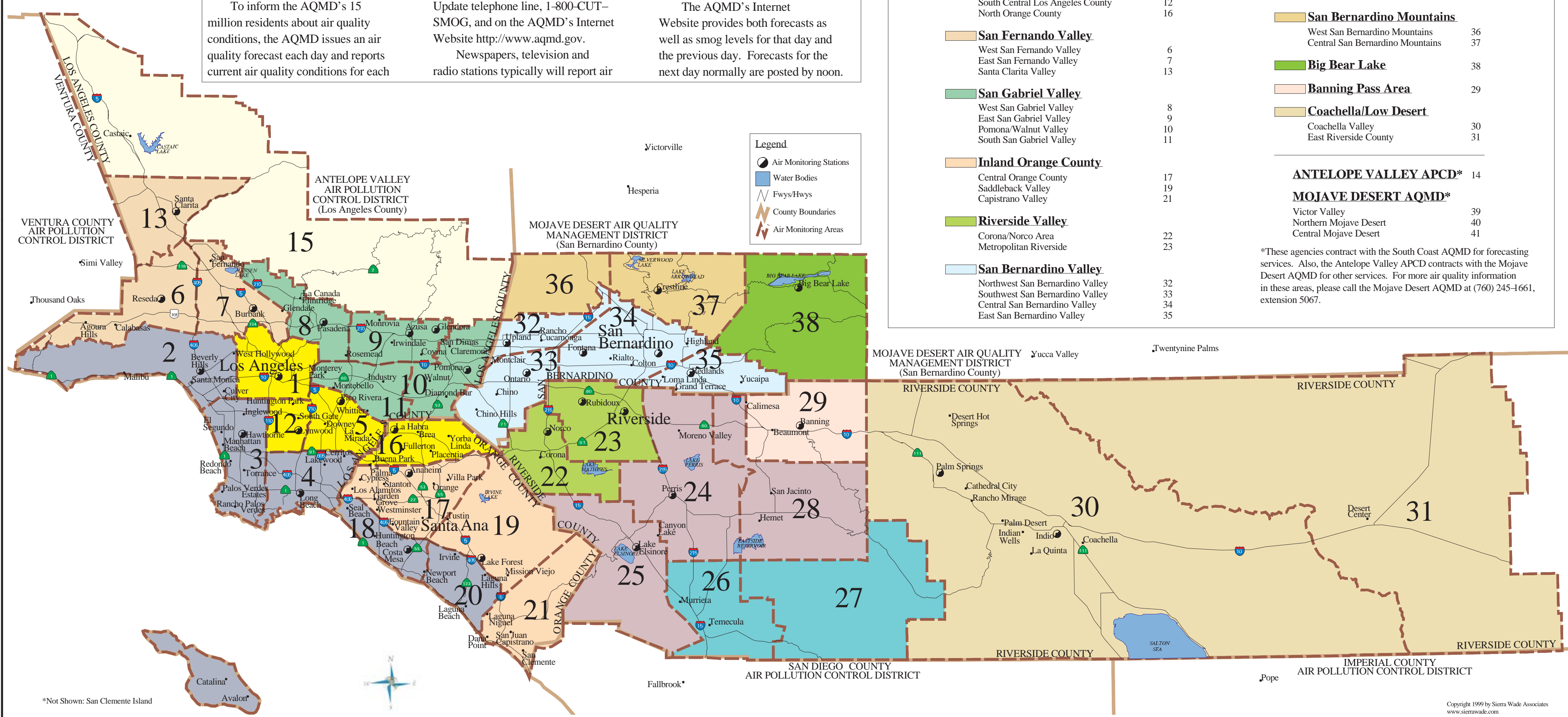
The 1-800-CUT-SMOG (1-800-288-7664) line also provides smog forecast and current smog level information by ZIP code.

The AQMD's Internet Website provides both forecasts as well as smog levels for that day and the previous day. Forecasts for the next day normally are posted by noon.

General Forecast Areas & Air Monitoring Areas

| | | | | |
|--------------------------------------|----|--|----------------------------------|----|
| Coastal | | | Hemet/Elsinore Area | |
| Northwest Los Angeles County Coastal | 2 | | Perris Valley | 24 |
| Southwest Los Angeles County Coastal | 3 | | Lake Elsinore | 25 |
| South Los Angeles County Coastal | 4 | | Hemet/San Jacinto Valley | 28 |
| North Orange County Coastal | 18 | | | |
| Central Orange County Coastal | 20 | | Temecula/Anza Area | |
| | | | Temecula Valley | 26 |
| | | | Anza Area | 27 |
| Metropolitan | | | San Gabriel Mountains | 15 |
| Central Los Angeles County | 1 | | | |
| Southeast Los Angeles County | 5 | | San Bernardino Mountains | |
| South Central Los Angeles County | 12 | | West San Bernardino Mountains | 36 |
| North Orange County | 16 | | Central San Bernardino Mountains | 37 |
| | | | Big Bear Lake | 38 |
| San Fernando Valley | | | Banning Pass Area | 29 |
| West San Fernando Valley | 6 | | | |
| East San Fernando Valley | 7 | | Coachella/Low Desert | |
| Santa Clarita Valley | 13 | | Coachella Valley | 30 |
| | | | East Riverside County | 31 |
| San Gabriel Valley | | | | |
| West San Gabriel Valley | 8 | | ANTELOPE VALLEY APCD* | 14 |
| East San Gabriel Valley | 9 | | MOJAVE DESERT AQMD* | |
| Pomona/Walnut Valley | 10 | | Victor Valley | 39 |
| South San Gabriel Valley | 11 | | Northern Mojave Desert | 40 |
| | | | Central Mojave Desert | 41 |
| Inland Orange County | | | | |
| Central Orange County | 17 | | | |
| Saddleback Valley | 19 | | | |
| Capistrano Valley | 21 | | | |
| Riverside Valley | | | | |
| Corona/Norco Area | 22 | | | |
| Metropolitan Riverside | 23 | | | |
| | | | | |
| San Bernardino Valley | | | | |
| Northwest San Bernardino Valley | 32 | | | |
| Southwest San Bernardino Valley | 33 | | | |
| Central San Bernardino Valley | 34 | | | |
| East San Bernardino Valley | 35 | | | |

*These agencies contract with the South Coast AQMD for forecasting services. Also, the Antelope Valley APCD contracts with the Mojave Desert AQMD for other services. For more air quality information in these areas, please call the Mojave Desert AQMD at (760) 245-1661, extension 5067.



Legend

- Air Monitoring Stations
- Water Bodies
- Fwys/Hwys
- County Boundaries
- Air Monitoring Areas

*Not Shown: San Clemente Island

FS49 - Riverside-Mojave Desert SCAQMD County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

FS49

Riverside-Mojave Desert SCAQMD County, Annual

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|-------------------------|------|-------------------|-------------|--------------------|------------|
| User Defined Commercial | 0.48 | User Defined Unit | 1.00 | 7,000.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.6 | Precipitation Freq (Days) | 28 |
| Climate Zone | 15 | Operational Year | | 2023 | |
| Utility Company | Southern California Edison | | | | |
| CO2 Intensity (lb/MWhr) | 390.98 | CH4 Intensity (lb/MWhr) | 0.033 | N2O Intensity (lb/MWhr) | 0.004 |

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Based on ITE Land Use code 575 Fire and Rescue
- Construction Phase - Based on contractor assumptions and similar project phasing
- Off-road Equipment -
- Off-road Equipment -
- Trips and VMT - contractor info and distance from worker areas
- Grading - construction details
- Vehicle Trips - ITE Rate for Fire stations
- Energy Use - eia survey for fire station
- Water And Wastewater - annual averages med res/retail
- Solid Waste - 20 ppd for 7 employes
- Land Use Change -

FS49 - Riverside-Mojave Desert SCAQMD County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Area Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Process Boilers -

| Table Name | Column Name | Default Value | New Value |
|---------------------------------|---------------------|---------------|------------|
| tblLandUse | LandUseSquareFeet | 0.00 | 7,000.00 |
| tblLandUse | LotAcreage | 0.00 | 1.00 |
| tblStationaryGeneratorsPumpsUse | HorsePowerValue | 0.00 | 50.00 |
| tblStationaryGeneratorsPumpsUse | HoursPerYear | 0.00 | 30.00 |
| tblStationaryGeneratorsPumpsUse | NumberOfEquipment | 0.00 | 1.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblVehicleTrips | HW_TR | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 0.00 | 3.36 |
| tblVehicleTrips | SU_TR | 0.00 | 3.36 |
| tblVehicleTrips | WD_TR | 0.00 | 3.36 |
| tblWater | IndoorWaterUseRate | 0.00 | 110,000.00 |
| tblWater | OutdoorWaterUseRate | 0.00 | 220,000.00 |

2.0 Emissions Summary

FS49 - Riverside-Mojave Desert SCAQMD County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|--------------------|----------------|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2022 | 0.0628 | 0.6328 | 0.5962 | 1.0900e-003 | 0.0686 | 0.0313 | 0.1000 | 0.0294 | 0.0288 | 0.0582 | 0.0000 | 95.9743 | 95.9743 | 0.0272 | 6.4000e-004 | 96.8458 |
| 2023 | 0.0659 | 6.5100e-003 | 9.0600e-003 | 1.0000e-005 | 0.0000 | 3.5000e-004 | 3.5000e-004 | 0.0000 | 3.5000e-004 | 3.5000e-004 | 0.0000 | 1.2766 | 1.2766 | 8.0000e-005 | 0.0000 | 1.2785 |
| Maximum | 0.0659 | 0.6328 | 0.5962 | 1.0900e-003 | 0.0686 | 0.0313 | 0.1000 | 0.0294 | 0.0288 | 0.0582 | 0.0000 | 95.9743 | 95.9743 | 0.0272 | 6.4000e-004 | 96.8458 |

Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|--------------------|----------------|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2022 | 0.0628 | 0.6328 | 0.5962 | 1.0900e-003 | 0.0346 | 0.0313 | 0.0659 | 0.0136 | 0.0288 | 0.0424 | 0.0000 | 95.9742 | 95.9742 | 0.0272 | 6.4000e-004 | 96.8457 |
| 2023 | 0.0659 | 6.5100e-003 | 9.0600e-003 | 1.0000e-005 | 0.0000 | 3.5000e-004 | 3.5000e-004 | 0.0000 | 3.5000e-004 | 3.5000e-004 | 0.0000 | 1.2766 | 1.2766 | 8.0000e-005 | 0.0000 | 1.2785 |
| Maximum | 0.0659 | 0.6328 | 0.5962 | 1.0900e-003 | 0.0346 | 0.0313 | 0.0659 | 0.0136 | 0.0288 | 0.0424 | 0.0000 | 95.9742 | 95.9742 | 0.0272 | 6.4000e-004 | 96.8457 |

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| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 49.56 | 0.00 | 33.91 | 53.88 | 0.00 | 27.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|--|--|
| 1 | 6-1-2022 | 8-31-2022 | 0.3188 | 0.3188 |
| 2 | 9-1-2022 | 11-30-2022 | 0.2532 | 0.2532 |
| 3 | 12-1-2022 | 2-28-2023 | 0.1750 | 0.1750 |
| | | Highest | 0.3188 | 0.3188 |

2.2 Overall Operational

Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.0285 | 0.0000 | 1.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 0.0000 | 1.0000e-005 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Stationary | 1.2300e-003 | 4.0100e-003 | 4.4700e-003 | 1.0000e-005 | | 1.8000e-004 | 1.8000e-004 | | 1.8000e-004 | 1.8000e-004 | 0.0000 | 0.5712 | 0.5712 | 8.0000e-005 | 0.0000 | 0.5732 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0349 | 0.6875 | 0.7224 | 3.6400e-003 | 9.0000e-005 | 0.8408 |
| Total | 0.0298 | 4.0100e-003 | 4.4800e-003 | 1.0000e-005 | 0.0000 | 1.8000e-004 | 1.8000e-004 | 0.0000 | 1.8000e-004 | 1.8000e-004 | 0.0349 | 1.2587 | 1.2936 | 3.7200e-003 | 9.0000e-005 | 1.4140 |

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2.2 Overall Operational

Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.0285 | 0.0000 | 1.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 0.0000 | 1.0000e-005 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Stationary | 1.2300e-003 | 4.0100e-003 | 4.4700e-003 | 1.0000e-005 | | 1.8000e-004 | 1.8000e-004 | | 1.8000e-004 | 1.8000e-004 | 0.0000 | 0.5712 | 0.5712 | 8.0000e-005 | 0.0000 | 0.5732 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0349 | 0.6875 | 0.7224 | 3.6400e-003 | 9.0000e-005 | 0.8408 |
| Total | 0.0298 | 4.0100e-003 | 4.4800e-003 | 1.0000e-005 | 0.0000 | 1.8000e-004 | 1.8000e-004 | 0.0000 | 1.8000e-004 | 1.8000e-004 | 0.0349 | 1.2587 | 1.2936 | 3.7200e-003 | 9.0000e-005 | 1.4140 |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|------------------|------------------|------------|-----------|---------------|----------|-------------------|
| 1 | Site Preparation | Site Preparation | 6/1/2022 | 6/14/2022 | 5 | 1 | |
| 2 | Grading | Grading | 6/14/2022 | 7/11/2022 | 5 | 2 | |

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| | | | | | | |
|---|-----------------------|-----------------------|------------|------------|---|-----|
| 3 | Building Construction | Building Construction | 7/11/2022 | 12/30/2022 | 5 | 100 |
| 4 | Paving | Paving | 12/12/2022 | 12/23/2022 | 5 | 5 |
| 5 | Architectural Coating | Architectural Coating | 1/2/2023 | 1/13/2023 | 5 | 5 |

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 10,500; Non-Residential Outdoor: 3,500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Graders | 1 | 6.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 6.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 4.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 6.00 | 89 | 0.20 |
| Building Construction | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Paving | Cement and Mortar Mixers | 4 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 7.00 | 130 | 0.42 |
| Paving | Rollers | 1 | 7.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

Trips and VMT

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| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 2 | 5.00 | 0.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 3 | 8.00 | 0.00 | 6.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 5 | 2.00 | 1.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 7 | 18.00 | 0.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 0.00 | 0.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 2.6500e-003 | 0.0000 | 2.6500e-003 | 2.9000e-004 | 0.0000 | 2.9000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.9000e-003 | 0.0347 | 0.0198 | 5.0000e-005 | | 1.2900e-003 | 1.2900e-003 | | 1.1800e-003 | 1.1800e-003 | 0.0000 | 4.2752 | 4.2752 | 1.3800e-003 | 0.0000 | 4.3098 |
| Total | 2.9000e-003 | 0.0347 | 0.0198 | 5.0000e-005 | 2.6500e-003 | 1.2900e-003 | 3.9400e-003 | 2.9000e-004 | 1.1800e-003 | 1.4700e-003 | 0.0000 | 4.2752 | 4.2752 | 1.3800e-003 | 0.0000 | 4.3098 |

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3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 2.1000e-004 | 2.0000e-004 | 2.5800e-003 | 1.0000e-005 | 9.3000e-004 | 0.0000 | 9.4000e-004 | 2.5000e-004 | 0.0000 | 2.5000e-004 | 0.0000 | 0.7236 | 0.7236 | 1.0000e-005 | 2.0000e-005 | 0.7290 |
| Total | 2.1000e-004 | 2.0000e-004 | 2.5800e-003 | 1.0000e-005 | 9.3000e-004 | 0.0000 | 9.4000e-004 | 2.5000e-004 | 0.0000 | 2.5000e-004 | 0.0000 | 0.7236 | 0.7236 | 1.0000e-005 | 2.0000e-005 | 0.7290 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 1.0300e-003 | 0.0000 | 1.0300e-003 | 1.1000e-004 | 0.0000 | 1.1000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.9000e-003 | 0.0347 | 0.0198 | 5.0000e-005 | | 1.2900e-003 | 1.2900e-003 | | 1.1800e-003 | 1.1800e-003 | 0.0000 | 4.2752 | 4.2752 | 1.3800e-003 | 0.0000 | 4.3098 |
| Total | 2.9000e-003 | 0.0347 | 0.0198 | 5.0000e-005 | 1.0300e-003 | 1.2900e-003 | 2.3200e-003 | 1.1000e-004 | 1.1800e-003 | 1.2900e-003 | 0.0000 | 4.2752 | 4.2752 | 1.3800e-003 | 0.0000 | 4.3098 |

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3.2 Site Preparation - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 2.1000e-004 | 2.0000e-004 | 2.5800e-003 | 1.0000e-005 | 9.3000e-004 | 0.0000 | 9.4000e-004 | 2.5000e-004 | 0.0000 | 2.5000e-004 | 0.0000 | 0.7236 | 0.7236 | 1.0000e-005 | 2.0000e-005 | 0.7290 |
| Total | 2.1000e-004 | 2.0000e-004 | 2.5800e-003 | 1.0000e-005 | 9.3000e-004 | 0.0000 | 9.4000e-004 | 2.5000e-004 | 0.0000 | 2.5000e-004 | 0.0000 | 0.7236 | 0.7236 | 1.0000e-005 | 2.0000e-005 | 0.7290 |

3.3 Grading - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0531 | 0.0000 | 0.0531 | 0.0257 | 0.0000 | 0.0257 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0108 | 0.1201 | 0.0594 | 1.4000e-004 | | 5.1700e-003 | 5.1700e-003 | | 4.7600e-003 | 4.7600e-003 | 0.0000 | 12.3814 | 12.3814 | 4.0000e-003 | 0.0000 | 12.4816 |
| Total | 0.0108 | 0.1201 | 0.0594 | 1.4000e-004 | 0.0531 | 5.1700e-003 | 0.0583 | 0.0257 | 4.7600e-003 | 0.0305 | 0.0000 | 12.3814 | 12.3814 | 4.0000e-003 | 0.0000 | 12.4816 |

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3.3 Grading - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 9.0000e-005 | 4.0400e-003 | 8.6000e-004 | 2.0000e-005 | 5.2000e-004 | 4.0000e-005 | 5.6000e-004 | 1.4000e-004 | 4.0000e-005 | 1.8000e-004 | 0.0000 | 1.6698 | 1.6698 | 2.0000e-005 | 2.6000e-004 | 1.7488 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 6.9000e-004 | 6.4000e-004 | 8.2600e-003 | 3.0000e-005 | 2.9900e-003 | 1.0000e-005 | 3.0000e-003 | 7.9000e-004 | 1.0000e-005 | 8.1000e-004 | 0.0000 | 2.3157 | 2.3157 | 4.0000e-005 | 5.0000e-005 | 2.3329 |
| Total | 7.8000e-004 | 4.6800e-003 | 9.1200e-003 | 5.0000e-005 | 3.5100e-003 | 5.0000e-005 | 3.5600e-003 | 9.3000e-004 | 5.0000e-005 | 9.9000e-004 | 0.0000 | 3.9855 | 3.9855 | 6.0000e-005 | 3.1000e-004 | 4.0816 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0207 | 0.0000 | 0.0207 | 0.0100 | 0.0000 | 0.0100 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0108 | 0.1201 | 0.0594 | 1.4000e-004 | | 5.1700e-003 | 5.1700e-003 | | 4.7600e-003 | 4.7600e-003 | 0.0000 | 12.3814 | 12.3814 | 4.0000e-003 | 0.0000 | 12.4815 |
| Total | 0.0108 | 0.1201 | 0.0594 | 1.4000e-004 | 0.0207 | 5.1700e-003 | 0.0259 | 0.0100 | 4.7600e-003 | 0.0148 | 0.0000 | 12.3814 | 12.3814 | 4.0000e-003 | 0.0000 | 12.4815 |

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3.3 Grading - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 9.0000e-005 | 4.0400e-003 | 8.6000e-004 | 2.0000e-005 | 5.2000e-004 | 4.0000e-005 | 5.6000e-004 | 1.4000e-004 | 4.0000e-005 | 1.8000e-004 | 0.0000 | 1.6698 | 1.6698 | 2.0000e-005 | 2.6000e-004 | 1.7488 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 6.9000e-004 | 6.4000e-004 | 8.2600e-003 | 3.0000e-005 | 2.9900e-003 | 1.0000e-005 | 3.0000e-003 | 7.9000e-004 | 1.0000e-005 | 8.1000e-004 | 0.0000 | 2.3157 | 2.3157 | 4.0000e-005 | 5.0000e-005 | 2.3329 |
| Total | 7.8000e-004 | 4.6800e-003 | 9.1200e-003 | 5.0000e-005 | 3.5100e-003 | 5.0000e-005 | 3.5600e-003 | 9.3000e-004 | 5.0000e-005 | 9.9000e-004 | 0.0000 | 3.9855 | 3.9855 | 6.0000e-005 | 3.1000e-004 | 4.0816 |

3.4 Building Construction - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0429 | 0.4391 | 0.4470 | 7.1000e-004 | | 0.0233 | 0.0233 | | 0.0214 | 0.0214 | 0.0000 | 62.5923 | 62.5923 | 0.0202 | 0.0000 | 63.0984 |
| Total | 0.0429 | 0.4391 | 0.4470 | 7.1000e-004 | | 0.0233 | 0.0233 | | 0.0214 | 0.0214 | 0.0000 | 62.5923 | 62.5923 | 0.0202 | 0.0000 | 63.0984 |

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3.4 Building Construction - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 1.0000e-004 | 2.7700e-003 | 9.3000e-004 | 1.0000e-005 | 3.9000e-004 | 4.0000e-005 | 4.3000e-004 | 1.1000e-004 | 4.0000e-005 | 1.5000e-004 | 0.0000 | 1.0945 | 1.0945 | 1.0000e-005 | 1.6000e-004 | 1.1432 |
| Worker | 1.0700e-003 | 1.0000e-003 | 0.0129 | 4.0000e-005 | 4.6700e-003 | 2.0000e-005 | 4.6900e-003 | 1.2400e-003 | 2.0000e-005 | 1.2600e-003 | 0.0000 | 3.6182 | 3.6182 | 6.0000e-005 | 9.0000e-005 | 3.6451 |
| Total | 1.1700e-003 | 3.7700e-003 | 0.0138 | 5.0000e-005 | 5.0600e-003 | 6.0000e-005 | 5.1200e-003 | 1.3500e-003 | 6.0000e-005 | 1.4100e-003 | 0.0000 | 4.7127 | 4.7127 | 7.0000e-005 | 2.5000e-004 | 4.7883 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0429 | 0.4391 | 0.4470 | 7.1000e-004 | | 0.0233 | 0.0233 | | 0.0214 | 0.0214 | 0.0000 | 62.5922 | 62.5922 | 0.0202 | 0.0000 | 63.0983 |
| Total | 0.0429 | 0.4391 | 0.4470 | 7.1000e-004 | | 0.0233 | 0.0233 | | 0.0214 | 0.0214 | 0.0000 | 62.5922 | 62.5922 | 0.0202 | 0.0000 | 63.0983 |

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3.4 Building Construction - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 1.0000e-004 | 2.7700e-003 | 9.3000e-004 | 1.0000e-005 | 3.9000e-004 | 4.0000e-005 | 4.3000e-004 | 1.1000e-004 | 4.0000e-005 | 1.5000e-004 | 0.0000 | 1.0945 | 1.0945 | 1.0000e-005 | 1.6000e-004 | 1.1432 |
| Worker | 1.0700e-003 | 1.0000e-003 | 0.0129 | 4.0000e-005 | 4.6700e-003 | 2.0000e-005 | 4.6900e-003 | 1.2400e-003 | 2.0000e-005 | 1.2600e-003 | 0.0000 | 3.6182 | 3.6182 | 6.0000e-005 | 9.0000e-005 | 3.6451 |
| Total | 1.1700e-003 | 3.7700e-003 | 0.0138 | 5.0000e-005 | 5.0600e-003 | 6.0000e-005 | 5.1200e-003 | 1.3500e-003 | 6.0000e-005 | 1.4100e-003 | 0.0000 | 4.7127 | 4.7127 | 7.0000e-005 | 2.5000e-004 | 4.7883 |

3.5 Paving - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 3.2300e-003 | 0.0296 | 0.0352 | 6.0000e-005 | | 1.4800e-003 | 1.4800e-003 | | 1.3800e-003 | 1.3800e-003 | 0.0000 | 4.6984 | 4.6984 | 1.3700e-003 | 0.0000 | 4.7326 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 3.2300e-003 | 0.0296 | 0.0352 | 6.0000e-005 | | 1.4800e-003 | 1.4800e-003 | | 1.3800e-003 | 1.3800e-003 | 0.0000 | 4.6984 | 4.6984 | 1.3700e-003 | 0.0000 | 4.7326 |

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3.5 Paving - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 7.7000e-004 | 7.2000e-004 | 9.2900e-003 | 3.0000e-005 | 3.3600e-003 | 2.0000e-005 | 3.3800e-003 | 8.9000e-004 | 1.0000e-005 | 9.1000e-004 | 0.0000 | 2.6051 | 2.6051 | 4.0000e-005 | 6.0000e-005 | 2.6245 |
| Total | 7.7000e-004 | 7.2000e-004 | 9.2900e-003 | 3.0000e-005 | 3.3600e-003 | 2.0000e-005 | 3.3800e-003 | 8.9000e-004 | 1.0000e-005 | 9.1000e-004 | 0.0000 | 2.6051 | 2.6051 | 4.0000e-005 | 6.0000e-005 | 2.6245 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 3.2300e-003 | 0.0296 | 0.0352 | 6.0000e-005 | | 1.4800e-003 | 1.4800e-003 | | 1.3800e-003 | 1.3800e-003 | 0.0000 | 4.6984 | 4.6984 | 1.3700e-003 | 0.0000 | 4.7326 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 3.2300e-003 | 0.0296 | 0.0352 | 6.0000e-005 | | 1.4800e-003 | 1.4800e-003 | | 1.3800e-003 | 1.3800e-003 | 0.0000 | 4.6984 | 4.6984 | 1.3700e-003 | 0.0000 | 4.7326 |

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3.5 Paving - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 7.7000e-004 | 7.2000e-004 | 9.2900e-003 | 3.0000e-005 | 3.3600e-003 | 2.0000e-005 | 3.3800e-003 | 8.9000e-004 | 1.0000e-005 | 9.1000e-004 | 0.0000 | 2.6051 | 2.6051 | 4.0000e-005 | 6.0000e-005 | 2.6245 |
| Total | 7.7000e-004 | 7.2000e-004 | 9.2900e-003 | 3.0000e-005 | 3.3600e-003 | 2.0000e-005 | 3.3800e-003 | 8.9000e-004 | 1.0000e-005 | 9.1000e-004 | 0.0000 | 2.6051 | 2.6051 | 4.0000e-005 | 6.0000e-005 | 2.6245 |

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.0649 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 9.6000e-004 | 6.5100e-003 | 9.0600e-003 | 1.0000e-005 | | 3.5000e-004 | 3.5000e-004 | | 3.5000e-004 | 3.5000e-004 | 0.0000 | 1.2766 | 1.2766 | 8.0000e-005 | 0.0000 | 1.2785 |
| Total | 0.0659 | 6.5100e-003 | 9.0600e-003 | 1.0000e-005 | | 3.5000e-004 | 3.5000e-004 | | 3.5000e-004 | 3.5000e-004 | 0.0000 | 1.2766 | 1.2766 | 8.0000e-005 | 0.0000 | 1.2785 |

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3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.0649 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 9.6000e-004 | 6.5100e-003 | 9.0600e-003 | 1.0000e-005 | | 3.5000e-004 | 3.5000e-004 | | 3.5000e-004 | 3.5000e-004 | 0.0000 | 1.2766 | 1.2766 | 8.0000e-005 | 0.0000 | 1.2785 |
| Total | 0.0659 | 6.5100e-003 | 9.0600e-003 | 1.0000e-005 | | 3.5000e-004 | 3.5000e-004 | | 3.5000e-004 | 3.5000e-004 | 0.0000 | 1.2766 | 1.2766 | 8.0000e-005 | 0.0000 | 1.2785 |

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|-------------------------|-------------------------|----------|--------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| User Defined Commercial | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

4.3 Trip Type Information

| Land Use | Miles | | | Trip % | | | Trip Purpose % | | |
|-------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| User Defined Commercial | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| User Defined Commercial | 0.534849 | 0.056022 | 0.172639 | 0.141007 | 0.026597 | 0.007310 | 0.011327 | 0.018693 | 0.000616 | 0.000315 | 0.024057 | 0.001100 | 0.005468 |

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5.3 Energy by Land Use - Electricity

Unmitigated

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|-----------------|---------------|---------------|---------------|---------------|
| Land Use | kWh/yr | MT/yr | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Mitigated

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|-----------------|---------------|---------------|---------------|---------------|
| Land Use | kWh/yr | MT/yr | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|---------|--------|-------------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.0285 | 0.0000 | 1.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 0.0000 | 1.0000e-005 |
| Unmitigated | 0.0285 | 0.0000 | 1.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 0.0000 | 1.0000e-005 |

6.2 Area by SubCategory

Unmitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 3.2400e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.0253 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0000 | 0.0000 | 1.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 0.0000 | 1.0000e-005 |
| Total | 0.0285 | 0.0000 | 1.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 0.0000 | 1.0000e-005 |

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6.2 Area by SubCategory

Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 3.2400e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.0253 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0000 | 0.0000 | 1.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 0.0000 | 1.0000e-005 |
| Total | 0.0285 | 0.0000 | 1.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 0.0000 | 1.0000e-005 |

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Landscaping

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| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|-------------|-------------|--------|
| Category | MT/yr | | | |
| Mitigated | 0.7224 | 3.6400e-003 | 9.0000e-005 | 0.8408 |
| Unmitigated | 0.7224 | 3.6400e-003 | 9.0000e-005 | 0.8408 |

7.2 Water by Land Use

Unmitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|--------------------|---------------|--------------------|--------------------|---------------|
| Land Use | Mgal | MT/yr | | | |
| User Defined Commercial | 0.11 / 0.22 | 0.7224 | 3.6400e-003 | 9.0000e-005 | 0.8408 |
| Total | | 0.7224 | 3.6400e-003 | 9.0000e-005 | 0.8408 |

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7.2 Water by Land Use

Mitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|--------------------|---------------|--------------------|--------------------|---------------|
| Land Use | Mgal | MT/yr | | | |
| User Defined Commercial | 0.11 / 0.22 | 0.7224 | 3.6400e-003 | 9.0000e-005 | 0.8408 |
| Total | | 0.7224 | 3.6400e-003 | 9.0000e-005 | 0.8408 |

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|--------|--------|--------|
| | MT/yr | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

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8.2 Waste by Land Use

Unmitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|----------------|---------------|---------------|---------------|---------------|
| Land Use | tons | MT/yr | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Mitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|----------------|---------------|---------------|---------------|---------------|
| Land Use | tons | MT/yr | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---------------------|--------|-----------|------------|-------------|-------------|-----------|
| Emergency Generator | 1 | 0 | 30 | 50 | 0.73 | Diesel |

Boilers

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

User Defined Equipment

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

10.1 Stationary Sources

Unmitigated/Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|--------------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Equipment Type | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Emergency Generator - Diesel (50 - 75 HP) | 1.2300e-003 | 4.0100e-003 | 4.4700e-003 | 1.0000e-005 | | 1.8000e-004 | 1.8000e-004 | | 1.8000e-004 | 1.8000e-004 | 0.0000 | 0.5712 | 0.5712 | 8.0000e-005 | 0.0000 | 0.5732 |
| Total | 1.2300e-003 | 4.0100e-003 | 4.4700e-003 | 1.0000e-005 | | 1.8000e-004 | 1.8000e-004 | | 1.8000e-004 | 1.8000e-004 | 0.0000 | 0.5712 | 0.5712 | 8.0000e-005 | 0.0000 | 0.5732 |

11.0 Vegetation

FS49 - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

FS49

Riverside-Mojave Desert SCAQMD County, Summer

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|-------------------------|------|-------------------|-------------|--------------------|------------|
| User Defined Commercial | 0.48 | User Defined Unit | 1.00 | 7,000.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.6 | Precipitation Freq (Days) | 28 |
| Climate Zone | 15 | | | Operational Year | 2023 |
| Utility Company | Southern California Edison | | | | |
| CO2 Intensity (lb/MWhr) | 390.98 | CH4 Intensity (lb/MWhr) | 0.033 | N2O Intensity (lb/MWhr) | 0.004 |

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Based on ITE Land Use code 575 Fire and Rescue
- Construction Phase - Based on contractor assumptions and similar project phasing
- Off-road Equipment -
- Off-road Equipment -
- Trips and VMT - contractor info and distance from worker areas
- Grading - construction details
- Vehicle Trips - ITE Rate for Fire stations
- Energy Use - eia survey for fire station
- Water And Wastewater - annual averages med res/retail
- Solid Waste - 20 ppd for 7 employes
- Land Use Change -

FS49 - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Area Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Process Boilers -

| Table Name | Column Name | Default Value | New Value |
|---------------------------------|---------------------|---------------|------------|
| tblLandUse | LandUseSquareFeet | 0.00 | 7,000.00 |
| tblLandUse | LotAcreage | 0.00 | 1.00 |
| tblStationaryGeneratorsPumpsUse | HorsePowerValue | 0.00 | 50.00 |
| tblStationaryGeneratorsPumpsUse | HoursPerYear | 0.00 | 30.00 |
| tblStationaryGeneratorsPumpsUse | NumberOfEquipment | 0.00 | 1.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblVehicleTrips | HW_TR | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 0.00 | 3.36 |
| tblVehicleTrips | SU_TR | 0.00 | 3.36 |
| tblVehicleTrips | WD_TR | 0.00 | 3.36 |
| tblWater | IndoorWaterUseRate | 0.00 | 110,000.00 |
| tblWater | OutdoorWaterUseRate | 0.00 | 220,000.00 |

2.0 Emissions Summary

FS49 - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|------------------------|------------------------|---------------|---------------|------------------------|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2022 | 1.8726 | 19.5307 | 16.6860 | 0.0308 | 6.3886 | 0.8960 | 7.1700 | 2.7712 | 0.8246 | 3.5101 | 0.0000 | 3,016.551 4 | 3,016.551 4 | 0.8070 | 0.0390 | 3,048.352 1 |
| 2023 | 13.1697 | 1.3030 | 1.8111 | 2.9700e-003 | 0.0000 | 0.0708 | 0.0708 | 0.0000 | 0.0708 | 0.0708 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | 0.0000 | 281.8690 |
| Maximum | 13.1697 | 19.5307 | 16.6860 | 0.0308 | 6.3886 | 0.8960 | 7.1700 | 2.7712 | 0.8246 | 3.5101 | 0.0000 | 3,016.551 4 | 3,016.551 4 | 0.8070 | 0.0390 | 3,048.352 1 |

Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|------------------------|------------------------|---------------|---------------|------------------------|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2022 | 1.8726 | 19.5307 | 16.6860 | 0.0308 | 2.8249 | 0.8960 | 3.6063 | 1.1694 | 0.8246 | 1.9433 | 0.0000 | 3,016.551 4 | 3,016.551 4 | 0.8070 | 0.0390 | 3,048.352 1 |
| 2023 | 13.1697 | 1.3030 | 1.8111 | 2.9700e-003 | 0.0000 | 0.0708 | 0.0708 | 0.0000 | 0.0708 | 0.0708 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | 0.0000 | 281.8690 |
| Maximum | 13.1697 | 19.5307 | 16.6860 | 0.0308 | 2.8249 | 0.8960 | 3.6063 | 1.1694 | 0.8246 | 1.9433 | 0.0000 | 3,016.551 4 | 3,016.551 4 | 0.8070 | 0.0390 | 3,048.352 1 |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 55.78 | 0.00 | 49.22 | 57.80 | 0.00 | 43.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

2.2 Overall Operational

Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Stationary | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Total | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | 0.0000 | 1.1000e-004 |

FS49 - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Stationary | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Total | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | 0.0000 | 1.1000e-004 |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1 | Site Preparation | Site Preparation | 6/1/2022 | 6/14/2022 | 5 | 1 | |
| 2 | Grading | Grading | 6/14/2022 | 7/11/2022 | 5 | 2 | |
| 3 | Building Construction | Building Construction | 7/11/2022 | 12/30/2022 | 5 | 100 | |
| 4 | Paving | Paving | 12/12/2022 | 12/23/2022 | 5 | 5 | |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

| | | | | | | |
|---|-----------------------|-----------------------|----------|-----------|---|---|
| 5 | Architectural Coating | Architectural Coating | 1/2/2023 | 1/13/2023 | 5 | 5 |
|---|-----------------------|-----------------------|----------|-----------|---|---|

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 10,500; Non-Residential Outdoor: 3,500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Graders | 1 | 6.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 6.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 4.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 6.00 | 89 | 0.20 |
| Building Construction | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Paving | Cement and Mortar Mixers | 4 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 7.00 | 130 | 0.42 |
| Paving | Rollers | 1 | 7.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 2 | 5.00 | 0.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 3 | 8.00 | 0.00 | 6.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

| | | | | | | | | | | |
|-----------------------|---|-------|------|------|-------|------|-------|--------|---------|------|
| Building Construction | 5 | 2.00 | 1.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 7 | 18.00 | 0.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 0.00 | 0.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.5303 | 0.0000 | 0.5303 | 0.0573 | 0.0000 | 0.0573 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5797 | 6.9332 | 3.9597 | 9.7300e-003 | | 0.2573 | 0.2573 | | 0.2367 | 0.2367 | | 942.5179 | 942.5179 | 0.3048 | | 950.1386 |
| Total | 0.5797 | 6.9332 | 3.9597 | 9.7300e-003 | 0.5303 | 0.2573 | 0.7876 | 0.0573 | 0.2367 | 0.2940 | | 942.5179 | 942.5179 | 0.3048 | | 950.1386 |

FS49 - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0460 | 0.0374 | 0.6210 | 1.7000e-003 | 0.1900 | 8.9000e-004 | 0.1909 | 0.0504 | 8.2000e-004 | 0.0512 | | 172.2461 | 172.2461 | 2.9400e-003 | 3.5800e-003 | 173.3870 |
| Total | 0.0460 | 0.0374 | 0.6210 | 1.7000e-003 | 0.1900 | 8.9000e-004 | 0.1909 | 0.0504 | 8.2000e-004 | 0.0512 | | 172.2461 | 172.2461 | 2.9400e-003 | 3.5800e-003 | 173.3870 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.2068 | 0.0000 | 0.2068 | 0.0223 | 0.0000 | 0.0223 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5797 | 6.9332 | 3.9597 | 9.7300e-003 | | 0.2573 | 0.2573 | | 0.2367 | 0.2367 | 0.0000 | 942.5179 | 942.5179 | 0.3048 | | 950.1386 |
| Total | 0.5797 | 6.9332 | 3.9597 | 9.7300e-003 | 0.2068 | 0.2573 | 0.4641 | 0.0223 | 0.2367 | 0.2591 | 0.0000 | 942.5179 | 942.5179 | 0.3048 | | 950.1386 |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0460 | 0.0374 | 0.6210 | 1.7000e-003 | 0.1900 | 8.9000e-004 | 0.1909 | 0.0504 | 8.2000e-004 | 0.0512 | | 172.2461 | 172.2461 | 2.9400e-003 | 3.5800e-003 | 173.3870 |
| Total | 0.0460 | 0.0374 | 0.6210 | 1.7000e-003 | 0.1900 | 8.9000e-004 | 0.1909 | 0.0504 | 8.2000e-004 | 0.0512 | | 172.2461 | 172.2461 | 2.9400e-003 | 3.5800e-003 | 173.3870 |

3.3 Grading - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 5.3119 | 0.0000 | 5.3119 | 2.5686 | 0.0000 | 2.5686 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.0832 | 12.0046 | 5.9360 | 0.0141 | | 0.5173 | 0.5173 | | 0.4759 | 0.4759 | | 1,364.8198 | 1,364.8198 | 0.4414 | | 1,375.8551 |
| Total | 1.0832 | 12.0046 | 5.9360 | 0.0141 | 5.3119 | 0.5173 | 5.8292 | 2.5686 | 0.4759 | 3.0445 | | 1,364.8198 | 1,364.8198 | 0.4414 | | 1,375.8551 |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 9.4900e-003 | 0.3831 | 0.0852 | 1.7200e-003 | 0.0525 | 4.4500e-003 | 0.0570 | 0.0144 | 4.2600e-003 | 0.0187 | | 184.0056 | 184.0056 | 2.4900e-003 | 0.0290 | 192.7056 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0736 | 0.0599 | 0.9935 | 2.7300e-003 | 0.3040 | 1.4200e-003 | 0.3054 | 0.0806 | 1.3100e-003 | 0.0819 | | 275.5937 | 275.5937 | 4.7100e-003 | 5.7300e-003 | 277.4191 |
| Total | 0.0831 | 0.4430 | 1.0787 | 4.4500e-003 | 0.3565 | 5.8700e-003 | 0.3623 | 0.0950 | 5.5700e-003 | 0.1006 | | 459.5993 | 459.5993 | 7.2000e-003 | 0.0347 | 470.1248 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.0717 | 0.0000 | 2.0717 | 1.0017 | 0.0000 | 1.0017 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.0832 | 12.0046 | 5.9360 | 0.0141 | | 0.5173 | 0.5173 | | 0.4759 | 0.4759 | 0.0000 | 1,364.8198 | 1,364.8198 | 0.4414 | | 1,375.8551 |
| Total | 1.0832 | 12.0046 | 5.9360 | 0.0141 | 2.0717 | 0.5173 | 2.5889 | 1.0017 | 0.4759 | 1.4776 | 0.0000 | 1,364.8198 | 1,364.8198 | 0.4414 | | 1,375.8551 |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 9.4900e-003 | 0.3831 | 0.0852 | 1.7200e-003 | 0.0525 | 4.4500e-003 | 0.0570 | 0.0144 | 4.2600e-003 | 0.0187 | | 184.0056 | 184.0056 | 2.4900e-003 | 0.0290 | 192.7056 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0736 | 0.0599 | 0.9935 | 2.7300e-003 | 0.3040 | 1.4200e-003 | 0.3054 | 0.0806 | 1.3100e-003 | 0.0819 | | 275.5937 | 275.5937 | 4.7100e-003 | 5.7300e-003 | 277.4191 |
| Total | 0.0831 | 0.4430 | 1.0787 | 4.4500e-003 | 0.3565 | 5.8700e-003 | 0.3623 | 0.0950 | 5.5700e-003 | 0.1006 | | 459.5993 | 459.5993 | 7.2000e-003 | 0.0347 | 470.1248 |

3.4 Building Construction - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6863 | 7.0258 | 7.1527 | 0.0114 | | 0.3719 | 0.3719 | | 0.3422 | 0.3422 | | 1,103.9393 | 1,103.9393 | 0.3570 | | 1,112.8652 |
| Total | 0.6863 | 7.0258 | 7.1527 | 0.0114 | | 0.3719 | 0.3719 | | 0.3422 | 0.3422 | | 1,103.9393 | 1,103.9393 | 0.3570 | | 1,112.8652 |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 1.6300e-003 | 0.0423 | 0.0147 | 1.8000e-004 | 6.4100e-003 | 6.1000e-004 | 7.0100e-003 | 1.8400e-003 | 5.8000e-004 | 2.4300e-003 | | 19.2945 | 19.2945 | 2.0000e-004 | 2.8600e-003 | 20.1523 |
| Worker | 0.0184 | 0.0150 | 0.2484 | 6.8000e-004 | 0.0760 | 3.5000e-004 | 0.0764 | 0.0202 | 3.3000e-004 | 0.0205 | | 68.8984 | 68.8984 | 1.1800e-003 | 1.4300e-003 | 69.3548 |
| Total | 0.0200 | 0.0573 | 0.2631 | 8.6000e-004 | 0.0824 | 9.6000e-004 | 0.0834 | 0.0220 | 9.1000e-004 | 0.0229 | | 88.1930 | 88.1930 | 1.3800e-003 | 4.2900e-003 | 89.5071 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6863 | 7.0258 | 7.1527 | 0.0114 | | 0.3719 | 0.3719 | | 0.3422 | 0.3422 | 0.0000 | 1,103.9393 | 1,103.9393 | 0.3570 | | 1,112.8652 |
| Total | 0.6863 | 7.0258 | 7.1527 | 0.0114 | | 0.3719 | 0.3719 | | 0.3422 | 0.3422 | 0.0000 | 1,103.9393 | 1,103.9393 | 0.3570 | | 1,112.8652 |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 1.6300e-003 | 0.0423 | 0.0147 | 1.8000e-004 | 6.4100e-003 | 6.1000e-004 | 7.0100e-003 | 1.8400e-003 | 5.8000e-004 | 2.4300e-003 | | 19.2945 | 19.2945 | 2.0000e-004 | 2.8600e-003 | 20.1523 |
| Worker | 0.0184 | 0.0150 | 0.2484 | 6.8000e-004 | 0.0760 | 3.5000e-004 | 0.0764 | 0.0202 | 3.3000e-004 | 0.0205 | | 68.8984 | 68.8984 | 1.1800e-003 | 1.4300e-003 | 69.3548 |
| Total | 0.0200 | 0.0573 | 0.2631 | 8.6000e-004 | 0.0824 | 9.6000e-004 | 0.0834 | 0.0220 | 9.1000e-004 | 0.0229 | | 88.1930 | 88.1930 | 1.3800e-003 | 4.2900e-003 | 89.5071 |

3.5 Paving - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6469 | 5.9174 | 7.0348 | 0.0113 | | 0.2961 | 0.2961 | | 0.2758 | 0.2758 | | 1,035.8246 | 1,035.8246 | 0.3017 | | 1,043.3677 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 0.6469 | 5.9174 | 7.0348 | 0.0113 | | 0.2961 | 0.2961 | | 0.2758 | 0.2758 | | 1,035.8246 | 1,035.8246 | 0.3017 | | 1,043.3677 |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.1656 | 0.1348 | 2.2355 | 6.1400e-003 | 0.6839 | 3.1900e-003 | 0.6871 | 0.1813 | 2.9400e-003 | 0.1843 | | 620.0859 | 620.0859 | 0.0106 | 0.0129 | 624.1930 |
| Total | 0.1656 | 0.1348 | 2.2355 | 6.1400e-003 | 0.6839 | 3.1900e-003 | 0.6871 | 0.1813 | 2.9400e-003 | 0.1843 | | 620.0859 | 620.0859 | 0.0106 | 0.0129 | 624.1930 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6469 | 5.9174 | 7.0348 | 0.0113 | | 0.2961 | 0.2961 | | 0.2758 | 0.2758 | 0.0000 | 1,035.8246 | 1,035.8246 | 0.3017 | | 1,043.3677 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 0.6469 | 5.9174 | 7.0348 | 0.0113 | | 0.2961 | 0.2961 | | 0.2758 | 0.2758 | 0.0000 | 1,035.8246 | 1,035.8246 | 0.3017 | | 1,043.3677 |

FS49 - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.1656 | 0.1348 | 2.2355 | 6.1400e-003 | 0.6839 | 3.1900e-003 | 0.6871 | 0.1813 | 2.9400e-003 | 0.1843 | | 620.0859 | 620.0859 | 0.0106 | 0.0129 | 624.1930 |
| Total | 0.1656 | 0.1348 | 2.2355 | 6.1400e-003 | 0.6839 | 3.1900e-003 | 0.6871 | 0.1813 | 2.9400e-003 | 0.1843 | | 620.0859 | 620.0859 | 0.0106 | 0.0129 | 624.1930 |

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 12.9780 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1917 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |
| Total | 13.1697 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |

FS49 - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 12.9780 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1917 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |
| Total | 13.1697 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |

FS49 - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

FS49 - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|-------------------------|-------------------------|----------|--------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| User Defined Commercial | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

4.3 Trip Type Information

| Land Use | Miles | | | Trip % | | | Trip Purpose % | | |
|-------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| User Defined Commercial | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| User Defined Commercial | 0.534849 | 0.056022 | 0.172639 | 0.141007 | 0.026597 | 0.007310 | 0.011327 | 0.018693 | 0.000616 | 0.000315 | 0.024057 | 0.001100 | 0.005468 |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|------------------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

5.2 Energy by Land Use - NaturalGas

Unmitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

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5.2 Energy by Land Use - Natural Gas

Mitigated

| | Natural Gas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|--------|--------|-------------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|-----|-------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |
| Unmitigated | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0178 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.1386 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 0.0000 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |
| Total | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0178 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.1386 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 0.0000 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |
| Total | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Landscaping

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

10.0 Stationary Equipment

FS49 - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fire Pumps and Emergency Generators

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---------------------|--------|-----------|------------|-------------|-------------|-----------|
| Emergency Generator | 1 | 0 | 30 | 50 | 0.73 | Diesel |

Boilers

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

User Defined Equipment

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

10.1 Stationary Sources

Unmitigated/Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Equipment Type | lb/day | | | | | | | | | | lb/day | | | | | |
| Emergency Generator - Diesel (50 - 75 HP) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Total | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

11.0 Vegetation

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

FS49

Riverside-Mojave Desert SCAQMD County, Winter

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|-------------------------|------|-------------------|-------------|--------------------|------------|
| User Defined Commercial | 0.48 | User Defined Unit | 1.00 | 7,000.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.6 | Precipitation Freq (Days) | 28 |
| Climate Zone | 15 | Operational Year | | 2023 | |
| Utility Company | Southern California Edison | | | | |
| CO2 Intensity (lb/MWhr) | 390.98 | CH4 Intensity (lb/MWhr) | 0.033 | N2O Intensity (lb/MWhr) | 0.004 |

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Based on ITE Land Use code 575 Fire and Rescue
- Construction Phase - Based on contractor assumptions and similar project phasing
- Off-road Equipment -
- Off-road Equipment -
- Trips and VMT - contractor info and distance from worker areas
- Grading - construction details
- Vehicle Trips - ITE Rate for Fire stations
- Energy Use - eia survey for fire station
- Water And Wastewater - annual averages med res/retail
- Solid Waste - 20 ppd for 7 employes
- Land Use Change -

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Area Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Process Boilers -

| Table Name | Column Name | Default Value | New Value |
|---------------------------------|---------------------|---------------|------------|
| tblLandUse | LandUseSquareFeet | 0.00 | 7,000.00 |
| tblLandUse | LotAcreage | 0.00 | 1.00 |
| tblStationaryGeneratorsPumpsUse | HorsePowerValue | 0.00 | 50.00 |
| tblStationaryGeneratorsPumpsUse | HoursPerYear | 0.00 | 30.00 |
| tblStationaryGeneratorsPumpsUse | NumberOfEquipment | 0.00 | 1.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 50.00 |
| tblVehicleTrips | HW_TR | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 0.00 | 3.36 |
| tblVehicleTrips | SU_TR | 0.00 | 3.36 |
| tblVehicleTrips | WD_TR | 0.00 | 3.36 |
| tblWater | IndoorWaterUseRate | 0.00 | 110,000.00 |
| tblWater | OutdoorWaterUseRate | 0.00 | 220,000.00 |

2.0 Emissions Summary

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2022 | 1.8730 | 19.5567 | 16.1425 | 0.0305 | 6.3886 | 0.8961 | 7.1700 | 2.7712 | 0.8246 | 3.5101 | 0.0000 | 2,983.9325 | 2,983.9325 | 0.8065 | 0.0392 | 3,015.7757 |
| 2023 | 13.1697 | 1.3030 | 1.8111 | 2.9700e-003 | 0.0000 | 0.0708 | 0.0708 | 0.0000 | 0.0708 | 0.0708 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | 0.0000 | 281.8690 |
| Maximum | 13.1697 | 19.5567 | 16.1425 | 0.0305 | 6.3886 | 0.8961 | 7.1700 | 2.7712 | 0.8246 | 3.5101 | 0.0000 | 2,983.9325 | 2,983.9325 | 0.8065 | 0.0392 | 3,015.7757 |

Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2022 | 1.8730 | 19.5567 | 16.1425 | 0.0305 | 2.8249 | 0.8961 | 3.6063 | 1.1694 | 0.8246 | 1.9433 | 0.0000 | 2,983.9325 | 2,983.9325 | 0.8065 | 0.0392 | 3,015.7757 |
| 2023 | 13.1697 | 1.3030 | 1.8111 | 2.9700e-003 | 0.0000 | 0.0708 | 0.0708 | 0.0000 | 0.0708 | 0.0708 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | 0.0000 | 281.8690 |
| Maximum | 13.1697 | 19.5567 | 16.1425 | 0.0305 | 2.8249 | 0.8961 | 3.6063 | 1.1694 | 0.8246 | 1.9433 | 0.0000 | 2,983.9325 | 2,983.9325 | 0.8065 | 0.0392 | 3,015.7757 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 55.78 | 0.00 | 49.22 | 57.80 | 0.00 | 43.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

2.2 Overall Operational

Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Stationary | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Total | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | 0.0000 | 1.1000e-004 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Stationary | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Total | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | 0.0000 | 1.1000e-004 |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1 | Site Preparation | Site Preparation | 6/1/2022 | 6/14/2022 | 5 | 1 | |
| 2 | Grading | Grading | 6/14/2022 | 7/11/2022 | 5 | 2 | |
| 3 | Building Construction | Building Construction | 7/11/2022 | 12/30/2022 | 5 | 100 | |
| 4 | Paving | Paving | 12/12/2022 | 12/23/2022 | 5 | 5 | |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

| | | | | | | |
|---|-----------------------|-----------------------|----------|-----------|---|---|
| 5 | Architectural Coating | Architectural Coating | 1/2/2023 | 1/13/2023 | 5 | 5 |
|---|-----------------------|-----------------------|----------|-----------|---|---|

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 10,500; Non-Residential Outdoor: 3,500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Graders | 1 | 6.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 6.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 4.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 6.00 | 89 | 0.20 |
| Building Construction | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Paving | Cement and Mortar Mixers | 4 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 7.00 | 130 | 0.42 |
| Paving | Rollers | 1 | 7.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 2 | 5.00 | 0.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 3 | 8.00 | 0.00 | 6.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

| | | | | | | | | | | |
|-----------------------|---|-------|------|------|-------|------|-------|--------|---------|------|
| Building Construction | 5 | 2.00 | 1.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 7 | 18.00 | 0.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 0.00 | 0.00 | 0.00 | 50.00 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.5303 | 0.0000 | 0.5303 | 0.0573 | 0.0000 | 0.0573 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5797 | 6.9332 | 3.9597 | 9.7300e-003 | | 0.2573 | 0.2573 | | 0.2367 | 0.2367 | | 942.5179 | 942.5179 | 0.3048 | | 950.1386 |
| Total | 0.5797 | 6.9332 | 3.9597 | 9.7300e-003 | 0.5303 | 0.2573 | 0.7876 | 0.0573 | 0.2367 | 0.2940 | | 942.5179 | 942.5179 | 0.3048 | | 950.1386 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0465 | 0.0388 | 0.4850 | 1.5400e-003 | 0.1900 | 8.9000e-004 | 0.1909 | 0.0504 | 8.2000e-004 | 0.0512 | | 155.8559 | 155.8559 | 2.6800e-003 | 3.6600e-003 | 157.0142 |
| Total | 0.0465 | 0.0388 | 0.4850 | 1.5400e-003 | 0.1900 | 8.9000e-004 | 0.1909 | 0.0504 | 8.2000e-004 | 0.0512 | | 155.8559 | 155.8559 | 2.6800e-003 | 3.6600e-003 | 157.0142 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.2068 | 0.0000 | 0.2068 | 0.0223 | 0.0000 | 0.0223 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5797 | 6.9332 | 3.9597 | 9.7300e-003 | | 0.2573 | 0.2573 | | 0.2367 | 0.2367 | 0.0000 | 942.5179 | 942.5179 | 0.3048 | | 950.1386 |
| Total | 0.5797 | 6.9332 | 3.9597 | 9.7300e-003 | 0.2068 | 0.2573 | 0.4641 | 0.0223 | 0.2367 | 0.2591 | 0.0000 | 942.5179 | 942.5179 | 0.3048 | | 950.1386 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0465 | 0.0388 | 0.4850 | 1.5400e-003 | 0.1900 | 8.9000e-004 | 0.1909 | 0.0504 | 8.2000e-004 | 0.0512 | | 155.8559 | 155.8559 | 2.6800e-003 | 3.6600e-003 | 157.0142 |
| Total | 0.0465 | 0.0388 | 0.4850 | 1.5400e-003 | 0.1900 | 8.9000e-004 | 0.1909 | 0.0504 | 8.2000e-004 | 0.0512 | | 155.8559 | 155.8559 | 2.6800e-003 | 3.6600e-003 | 157.0142 |

3.3 Grading - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 5.3119 | 0.0000 | 5.3119 | 2.5686 | 0.0000 | 2.5686 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.0832 | 12.0046 | 5.9360 | 0.0141 | | 0.5173 | 0.5173 | | 0.4759 | 0.4759 | | 1,364.8198 | 1,364.8198 | 0.4414 | | 1,375.8551 |
| Total | 1.0832 | 12.0046 | 5.9360 | 0.0141 | 5.3119 | 0.5173 | 5.8292 | 2.5686 | 0.4759 | 3.0445 | | 1,364.8198 | 1,364.8198 | 0.4414 | | 1,375.8551 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 9.0400e-003 | 0.4041 | 0.0875 | 1.7300e-003 | 0.0525 | 4.4600e-003 | 0.0570 | 0.0144 | 4.2700e-003 | 0.0187 | | 184.1461 | 184.1461 | 2.4700e-003 | 0.0290 | 192.8522 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0743 | 0.0621 | 0.7759 | 2.4700e-003 | 0.3040 | 1.4200e-003 | 0.3054 | 0.0806 | 1.3100e-003 | 0.0819 | | 249.3694 | 249.3694 | 4.2900e-003 | 5.8600e-003 | 251.2227 |
| Total | 0.0834 | 0.4663 | 0.8635 | 4.2000e-003 | 0.3565 | 5.8800e-003 | 0.3624 | 0.0950 | 5.5800e-003 | 0.1006 | | 433.5155 | 433.5155 | 6.7600e-003 | 0.0349 | 444.0749 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.0717 | 0.0000 | 2.0717 | 1.0017 | 0.0000 | 1.0017 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.0832 | 12.0046 | 5.9360 | 0.0141 | | 0.5173 | 0.5173 | | 0.4759 | 0.4759 | 0.0000 | 1,364.8198 | 1,364.8198 | 0.4414 | | 1,375.8551 |
| Total | 1.0832 | 12.0046 | 5.9360 | 0.0141 | 2.0717 | 0.5173 | 2.5889 | 1.0017 | 0.4759 | 1.4776 | 0.0000 | 1,364.8198 | 1,364.8198 | 0.4414 | | 1,375.8551 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 9.0400e-003 | 0.4041 | 0.0875 | 1.7300e-003 | 0.0525 | 4.4600e-003 | 0.0570 | 0.0144 | 4.2700e-003 | 0.0187 | | 184.1461 | 184.1461 | 2.4700e-003 | 0.0290 | 192.8522 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0743 | 0.0621 | 0.7759 | 2.4700e-003 | 0.3040 | 1.4200e-003 | 0.3054 | 0.0806 | 1.3100e-003 | 0.0819 | | 249.3694 | 249.3694 | 4.2900e-003 | 5.8600e-003 | 251.2227 |
| Total | 0.0834 | 0.4663 | 0.8635 | 4.2000e-003 | 0.3565 | 5.8800e-003 | 0.3624 | 0.0950 | 5.5800e-003 | 0.1006 | | 433.5155 | 433.5155 | 6.7600e-003 | 0.0349 | 444.0749 |

3.4 Building Construction - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6863 | 7.0258 | 7.1527 | 0.0114 | | 0.3719 | 0.3719 | | 0.3422 | 0.3422 | | 1,103.9393 | 1,103.9393 | 0.3570 | | 1,112.8652 |
| Total | 0.6863 | 7.0258 | 7.1527 | 0.0114 | | 0.3719 | 0.3719 | | 0.3422 | 0.3422 | | 1,103.9393 | 1,103.9393 | 0.3570 | | 1,112.8652 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 1.5600e-003 | 0.0446 | 0.0153 | 1.8000e-004 | 6.4100e-003 | 6.1000e-004 | 7.0200e-003 | 1.8400e-003 | 5.8000e-004 | 2.4300e-003 | | 19.3156 | 19.3156 | 2.0000e-004 | 2.8700e-003 | 20.1749 |
| Worker | 0.0186 | 0.0155 | 0.1940 | 6.2000e-004 | 0.0760 | 3.5000e-004 | 0.0764 | 0.0202 | 3.3000e-004 | 0.0205 | | 62.3424 | 62.3424 | 1.0700e-003 | 1.4600e-003 | 62.8057 |
| Total | 0.0201 | 0.0601 | 0.2093 | 8.0000e-004 | 0.0824 | 9.6000e-004 | 0.0834 | 0.0220 | 9.1000e-004 | 0.0229 | | 81.6579 | 81.6579 | 1.2700e-003 | 4.3300e-003 | 82.9805 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6863 | 7.0258 | 7.1527 | 0.0114 | | 0.3719 | 0.3719 | | 0.3422 | 0.3422 | 0.0000 | 1,103.9393 | 1,103.9393 | 0.3570 | | 1,112.8652 |
| Total | 0.6863 | 7.0258 | 7.1527 | 0.0114 | | 0.3719 | 0.3719 | | 0.3422 | 0.3422 | 0.0000 | 1,103.9393 | 1,103.9393 | 0.3570 | | 1,112.8652 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 1.5600e-003 | 0.0446 | 0.0153 | 1.8000e-004 | 6.4100e-003 | 6.1000e-004 | 7.0200e-003 | 1.8400e-003 | 5.8000e-004 | 2.4300e-003 | | 19.3156 | 19.3156 | 2.0000e-004 | 2.8700e-003 | 20.1749 |
| Worker | 0.0186 | 0.0155 | 0.1940 | 6.2000e-004 | 0.0760 | 3.5000e-004 | 0.0764 | 0.0202 | 3.3000e-004 | 0.0205 | | 62.3424 | 62.3424 | 1.0700e-003 | 1.4600e-003 | 62.8057 |
| Total | 0.0201 | 0.0601 | 0.2093 | 8.0000e-004 | 0.0824 | 9.6000e-004 | 0.0834 | 0.0220 | 9.1000e-004 | 0.0229 | | 81.6579 | 81.6579 | 1.2700e-003 | 4.3300e-003 | 82.9805 |

3.5 Paving - 2022

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6469 | 5.9174 | 7.0348 | 0.0113 | | 0.2961 | 0.2961 | | 0.2758 | 0.2758 | | 1,035.8246 | 1,035.8246 | 0.3017 | | 1,043.3677 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 0.6469 | 5.9174 | 7.0348 | 0.0113 | | 0.2961 | 0.2961 | | 0.2758 | 0.2758 | | 1,035.8246 | 1,035.8246 | 0.3017 | | 1,043.3677 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2022

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.1673 | 0.1398 | 1.7458 | 5.5500e-003 | 0.6839 | 3.1900e-003 | 0.6871 | 0.1813 | 2.9400e-003 | 0.1843 | | 561.0812 | 561.0812 | 9.6500e-003 | 0.0132 | 565.2510 |
| Total | 0.1673 | 0.1398 | 1.7458 | 5.5500e-003 | 0.6839 | 3.1900e-003 | 0.6871 | 0.1813 | 2.9400e-003 | 0.1843 | | 561.0812 | 561.0812 | 9.6500e-003 | 0.0132 | 565.2510 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6469 | 5.9174 | 7.0348 | 0.0113 | | 0.2961 | 0.2961 | | 0.2758 | 0.2758 | 0.0000 | 1,035.8246 | 1,035.8246 | 0.3017 | | 1,043.3677 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 0.6469 | 5.9174 | 7.0348 | 0.0113 | | 0.2961 | 0.2961 | | 0.2758 | 0.2758 | 0.0000 | 1,035.8246 | 1,035.8246 | 0.3017 | | 1,043.3677 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2022

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.1673 | 0.1398 | 1.7458 | 5.5500e-003 | 0.6839 | 3.1900e-003 | 0.6871 | 0.1813 | 2.9400e-003 | 0.1843 | | 561.0812 | 561.0812 | 9.6500e-003 | 0.0132 | 565.2510 |
| Total | 0.1673 | 0.1398 | 1.7458 | 5.5500e-003 | 0.6839 | 3.1900e-003 | 0.6871 | 0.1813 | 2.9400e-003 | 0.1843 | | 561.0812 | 561.0812 | 9.6500e-003 | 0.0132 | 565.2510 |

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 12.9780 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1917 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |
| Total | 13.1697 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 12.9780 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1917 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |
| Total | 13.1697 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|-------------------------|-------------------------|----------|--------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| User Defined Commercial | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

4.3 Trip Type Information

| Land Use | Miles | | | Trip % | | | Trip Purpose % | | |
|-------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| User Defined Commercial | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| User Defined Commercial | 0.534849 | 0.056022 | 0.172639 | 0.141007 | 0.026597 | 0.007310 | 0.011327 | 0.018693 | 0.000616 | 0.000315 | 0.024057 | 0.001100 | 0.005468 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|------------------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

5.2 Energy by Land Use - NaturalGas

Unmitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - Natural Gas

Mitigated

| | Natural Gas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| User Defined Commercial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|--------|--------|-------------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|-----|-------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |
| Unmitigated | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0178 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.1386 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 0.0000 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |
| Total | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0178 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.1386 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 0.0000 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |
| Total | 0.1564 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 1.1000e-004 | 1.1000e-004 | 0.0000 | | 1.1000e-004 |

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Landscaping

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

10.0 Stationary Equipment

FS49 - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fire Pumps and Emergency Generators

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---------------------|--------|-----------|------------|-------------|-------------|-----------|
| Emergency Generator | 1 | 0 | 30 | 50 | 0.73 | Diesel |

Boilers

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

User Defined Equipment

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

10.1 Stationary Sources

Unmitigated/Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Equipment Type | lb/day | | | | | | | | | | lb/day | | | | | |
| Emergency Generator - Diesel (50 - 75 HP) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Total | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

11.0 Vegetation



Appendix C

Biological Resources Report

FIRE STATION #49 PROJECT

Community of Lake Tamarisk,

Riverside County, California



April 2022

November 9, 2021

13762

Mike Sullivan, Senior Environmental Planner
County of Riverside Facilities Management
3133 Mission Inn Avenue
Riverside, California 92508

Subject: Biological Resources Assessment for Lake Tamarisk Modular Fire Station Project – Riverside County, California

Dear Mr. Sullivan:

This biological resource assessment describes the existing biological conditions of the proposed Lake Tamarisk Modular Fire Station Project (project) site. The project site, totaling approximately 1.6 acres, includes one parcel (Assessor's Parcel Number 808-170-034), and will undergo development to construct a modular fire station that will be approximately 7,000 square feet. The project and special-status biological resources are analyzed in the context of the California Environmental Quality Act (CEQA). The biological assessment report will support the CEQA documents prepared for the development of the site.

This biological resources assessment is intended to describe the existing conditions of special-status biological resources on the project site (project footprint) and within a 500-foot buffer where access was granted (study area), totaling 31.5 acres; quantify impacts to special-status biological resources that would result from implementation of the project and describe those impacts in terms of biological significance under CEQA; and recommend avoidance, minimization, and mitigation measures to avoid and reduce impacts to special-status biological resources, if necessary.

1 Project Location and Description

The project site is located east of the intersection of Parkview Drive and Tamarisk Drive and across the street from Riverside County Fire Department Station No. 49, in the unincorporated community of Desert Center in the County of Riverside (Assessor's Parcel Number 808-170-034) (Figure 1, Project Location; figures are provided in Attachment A). The majority of the 1.6-acre project site is currently undeveloped disturbed habitat, with a small amount of desert woodland along the eastern boundary of the site. The project site is located in the northeastern quarter of Section 14, Township 5 South, and Range 15 East of the San Bernardino Baseline and Meridian U.S. Geological Survey Desert Center 7.5-minute quadrangle. The approximate center of the project site corresponds to 33.738470 latitude and -115.391539 longitude.

The project involves the development of a modular fire station that is planned to be approximately 7,000 square feet, along with supporting features (e.g., driveway, parking area). Specific site plan details were not finalized at the time this report was completed.

2 Regional Planning Context

The project is located within the boundaries of the Desert Center Area Plan, which is within the Riverside County General Plan. The purpose of an area plan is to provide a more detailed land use and policy direction for the unincorporated portions of Riverside County. There are three policies under the Desert Center Area Plan that apply to the proposed project: **DCAP 4.1** requires the use of outdoor lighting fixtures that minimize effects on nighttime sky and wildlife habitat areas, except as necessary for security reasons; **DCAP 9.1** encourages the clustering of development for the preservation of contiguous open space; and **DCAP 9.3** requires new development to conform with Desert Tortoise Critical Habitat designation requirements. These policies are addressed further in Section 5.5 of this report.

3 Methods

3.1 Literature Review

For this biological resources assessment, “special-status” species are those that are (1) listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act; (2) listed or candidates for listing as threatened or endangered under the California Endangered Species Act; (3) state fully protected species; (4) California Department of Fish and Wildlife (CDFW) Species of Special Concern; (5) California Fish and Game Code Section 4000 fur-bearing animal; or (6) species listed on the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants with a California Rare Plant Rank of 1B or 2B.

Other special-status biological resources include sensitive plant communities; wetlands, including riparian habitat; and wildlife corridors. Sensitive plant communities are those that are considered to support unique vegetation communities that have a rank of S1–S3 on the CDFW List of Terrestrial Communities or are considered locally important by a local planning document, such as the County of Riverside General Plan.

Special-status biological resources present or potentially present on the project site were identified through a literature search using the following sources: U.S. Fish and Wildlife Service (USFWS) Critical Habitat and Occurrence Data (USFWS 2021), CDFW’s California Natural Diversity Database (CDFW 2021a), and the CNPS’s Online Inventory of Rare, Threatened, and Endangered Plants (CNPS 2021a). Searches were completed for the following U.S. Geological Survey quadrangles (which includes the quadrangle in which the study area is located and the eight surrounding quadrangles): Desert Center, Corn Spring, East of Victory Pass, Victory Pass, Buzzard Spring, Hayfield Spring, East of Red Canyon, Red Cloud Canyon, and Pilot Mountain.

3.2 Field Reconnaissance

Dudek biologists Britney Strittmater and Sarah Greely conducted a general reconnaissance survey of the study area on October 1, 2021, from 10:05 a.m. to 11:50 a.m. The assessment was conducted on foot and when weather conditions were favorable, with clear skies, wind speeds from 0 to 1 mile per hour, and temperatures ranging from 83°F to 90°F. All native and naturalized plant species encountered within the study area were identified and recorded. The potential for special-status plant and wildlife species to occur within the study area was evaluated based on the vegetation communities, soils present, and surrounding features. Vegetation communities and land covers on site were mapped in an ESRI Desktop Collector application. A formal jurisdictional delineation was not conducted; however, an investigation

was conducted of the extent and distribution of potential jurisdictional waters of the United States regulated by the U.S. Army Corps of Engineers, jurisdictional waters of the state regulated by the Regional Water Quality Control Board, and jurisdictional streambed and associated riparian vegetation regulated by CDFW.

Latin and common names for plant species with a California Rare Plant Rank (formerly CNPS List) follow the CNPS Online Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2021a). For plant species without a California Rare Plant Rank, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2021), and common names follow the California Natural Community List (CDFW 2020) or the U.S. Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2021a). Natural vegetation communities were mapped in the field consistent with the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 20121b) and vegetation communities were identified by keying them out using the Manual of California Vegetation Online (CNPS 2021b), where feasible, with modifications to accommodate the lack of conformity of the observed communities to those of Oberbauer et al. (2008). Land cover types (i.e., areas that lack vegetation communities) were described in accordance with Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008). Vegetation communities were generally mapped to the association level, which is necessary to determine sensitivity in accordance with the California Natural Community List (CDFW 2021b). Latin and common names of animals follow Crother (2017) for reptiles and amphibians, American Ornithological Society (AOS 2020) for birds, Wilson and Reeder (2005) for mammals, North American Butterfly Association (NABA 2016) or San Diego Natural History Museum (SDNHM 2002) for butterflies, and Moyle (2002) for fish.

Dudek used geographic information system software (ArcGIS) to map biological resources and prepare figures.

3.3 Survey Limitations

Access to a portion of the 500-foot buffer was not available during the survey as some of the properties are private, and access was not granted. Areas of the 500-foot buffer that were inaccessible were surveyed visually using binoculars. Therefore, vegetation mapping and habitat assessments were conducted from the project site or other public roads, in addition to being complimented with the use of aerial signatures of vegetation communities occurring within the study area.

The reconnaissance survey was conducted during the early fall season; due to the timing of the surveys, spring and summer annuals and cryptic perennials may not have been detectable. Conditions were suitable for detection of most wildlife species (i.e., clear skies, 83°F to 90°F temperatures, and light winds). Surveys specifically aimed at detection of the full range of wildlife species were not conducted. However, notes were taken for incidental wildlife observations made during the survey to establish a general baseline of wildlife diversity within the study area. The survey was conducted during the daytime, which usually results in few observations of mammals, many of which may be active at night. In addition, many species of reptiles and amphibians are nocturnal or cryptic in their habitats and are difficult to observe using standard meandering transects.

The current survey effort provides an accurate representation of the potential for special-status species to occur in the study area. The survey conducted was thorough and comprehensive, and the results of the study contained herein provide a reasonable, accurate assessment of the study area.

4 Results

4.1 Site Description

The project site is located in the southeastern portion of the Town of Lake Tamarisk within the Colorado Desert, in the Chuckwalla Valley, just north of Desert Center in eastern Riverside County. It is generally bound by the Chuckwalla Mountains to the south, the Eagle Mountains to the northwest, the Coxcomb Mountains to the northeast, and the Palen Mountains to the east. The project site is relatively flat. Elevations range from approximately 725 feet above mean sea level to approximately 730 feet above mean sea level.

The project site is vacant and consists of disturbed habitat and allscale scrub. The site is generally bound by Tamarisk Drive to the south and Parkview Drive to the west. The study area includes a mix of undeveloped disturbed habitat to the north, west, and southwest; palo verde–ironwood woodland to the east and south; and developed areas including the fire station and rural residential lots to the west and south. The area outside the study area consists of the community of Lake Tamarisk (including private residences, paved streets, golf courses, and two human-made lakes) and open desert. Lake Tamarisk is immediately surrounding on all sides by open, undeveloped desert. Representative photographs of the project site are included in Attachment B.

4.2 Soils

There was no digital data available on the soil makeup for the Lake Tamarisk area (USDA 2021b). The presence of the palo verde–ironwood vegetation alliance in the study area indicates the soils in the study area are sandy, well-drained, and derived from alluvium or colluvium (CNPS 2021b). Soils within the project site were highly compacted and comprised sandy/gravelly soils.

4.3 Vegetation Communities and Land Covers

A total of four vegetation communities and land cover types occur within the study area based on general physiognomy and species composition. Two vegetation communities, blue palo verde woodland and blue palo verde–ironwood woodland, were mapped, along with two land covers (disturbed habitat and urban/developed). Figure 2, Biological Resources, illustrates the distribution of the vegetation communities and land covers, and Table 1 provides a summary of the vegetation community and each land cover’s extent within the study area.

Table 1. Vegetation Communities and Land Covers within the Study Area

| Vegetation Community/Land Cover | Acreage |
|---|-------------|
| Vegetation Communities | |
| Blue palo verde woodland (<i>Parkinsonia florida</i> association) ¹ | 0.7 |
| Blue palo verde–ironwood woodland (<i>Parkinsonia florida</i> – <i>Olneya tesota</i> association) ¹ | 3.3 |
| Non-Natural Land Covers | |
| Disturbed habitat | 10.9 |
| Urban/developed | 16.6 |
| Total² | 31.5 |

Sources: CDFW 2020; Oberbauer et al. 2008.

Notes:

- ¹ Considered a special-status vegetation community under CEQA.
- ² Totals may not add due to rounding.

4.3.1 Blue Palo Verde–Ironwood Woodland Alliance

The blue palo verde–ironwood woodland alliance includes blue palo verde (*Parkinsonia florida*) or ironwood (*Olneya tesota*) as either co-dominant or with either species as dominant in the tree or tall shrub canopy. This alliance forms an open to continuous canopy less than approximately 14 meters (42 feet) in height, and occurs along desert arroyo margins, seasonal watercourses and washes, bottomlands, middle and upper bajadas and alluvial fans, and lower slopes. The soils are sandy, well-drained, and derived from alluvium or colluvium (CNPS 2021b). Two blue palo verde–ironwood woodland associations were mapped within the study area and are further described below.

4.3.1.1 Blue Palo Verde Woodland Association

Within the study area, the blue palo verde woodland association occurs along the wash in the southern portion of the study area buffer, running east to west and intersecting with Parkview Drive. It is dominated by blue palo verde that creates an open cover, with a low cover of cheesebush (*Ambrosia salsola*).

The blue palo verde woodland alliance has a rank of G4S4 by CDFW, meaning that it is apparently secure both globally and within California (CDFW 2020). However, the blue palo verde–ironwood alliance is considered a special-status vegetation community under CEQA and a high priority for inventory.

4.3.1.2 Blue Palo Verde–Ironwood Woodland Association

Within the study area, the blue palo verde–ironwood woodland association occurs east of the project footprint and south of the wash located in the southern portion of the study area. It is dominated by blue palo verde that creates an open cover, with a low cover of ironwood, olive (*Olea europaea*), and cheesebush.

The blue palo verde–ironwood woodland alliance has a rank of G4S4 by CDFW, meaning that it is apparently secure both globally and within California (CDFW 2020). However, the blue palo verde–ironwood alliance is considered a special-status vegetation community under CEQA and a high priority for inventory.

4.3.2 Disturbed Habitat

The classification of disturbed habitat is due to the predominance of bare ground, non-native plant species, and other disturbance-tolerant plant species. Oberbauer et al. (2008) describes disturbed habitat as areas that have been physically disturbed by previous human activity and are no longer recognizable as a native or naturalized vegetation association, but that continue to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native annual plant species.

Within the study area, disturbed land consists of vacant areas, some with dirt roads running through them, that have been previously graded. These areas support a low cover (less than 10%) of vegetation.

Disturbed habitat is not a vegetation community; therefore, it is not considered a special-status vegetation community under CEQA (CDFW 2021b).

4.3.3 Urban/Developed Land

Urban/developed areas include areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation (Oberbauer et al. 2008).

Within the study area, developed areas include paved roads (e.g., Parkview Drive, Tamarisk Drive and Catalina Way), the County of Riverside Fire Station No. 49, rural residential residences, a parking lot, and a portion of a golf course.

Developed land is not a vegetation community; therefore, it is not considered a special-status vegetation community under CEQA (CDFW 2021b).

4.3.4 Floral Diversity

A total of 15 species of vascular plants, including 11 native (73%) and 4 non-native (27%), were recorded within the study area. This low plant diversity reflects the developed nature of the project footprint and study area buffer (i.e., disturbed land with dirt roads that have been previously graded, urban developed roads, residences, golf course) and reflects the early fall survey timeframe, when spring and summer annuals and cryptic perennials may not be detectable. Plant species observed within the study area are listed in Attachment C, Vascular Plant Species Compendium.

4.4 Wildlife

Within the study area, 13 bird species were detected: house finch (*Haemorhous mexicanus*), Say's phoebe (*Sayornis saya*), osprey (*Pandion haliaetus*), northern mockingbird (*Mimus polyglottos*), Gambel's quail (*Callipepla gambelii*), house sparrow (*Passer domesticus*), black-tailed gnatcatcher (*Poliophtila melanura*), mourning dove (*Zenaida macroura*), Eurasian collared-dove (*Streptopelia decaocto*), common yellowthroat (*Geothlypis trichas*), yellow-rumped warbler (*Setophaga coronata*), ladder-backed woodpecker (*Dryobates scalaris*), and white-crowned sparrow (*Zonotrichia leucophrys*). One inactive nest was observed within the project site in a palo verde during the survey. No amphibian species were observed during the survey. Two reptile species were observed within the study area: common side-blotched lizard (*Uta stansburiana*) and tiger whiptail (*Aspidoscelis tigris*). One mammal species was detected during the survey: desert cottontail (*Sylvilagus audubonii*). One invertebrate species was observed during the survey: painted lady (*Vanessa cardui*). Wildlife species observed within the study area are listed in Attachment D, Wildlife Species Compendium.

4.5 Special-Status Plant Species

Attachment E, Special-Status Plant Species Detected or Potentially Occurring in the Study Area, lists special-status plant species that were identified by the literature review. For each species listed, a determination was made regarding the potential for the species to occur in the study area based on information gathered during the field reconnaissance, including the location of the site, habitats present, current site conditions, and past and present land use.

No focused special-status plant surveys were conducted. No special-status plants were incidentally observed during the October 2021 survey. No federally or state-listed species have a potential to occur within the study area. No

non-listed special-status species were determined to have a moderate to high potential to occur within the biological study area (Attachment E). Those special-status plant species that occur in the region but that are not expected or have low potential to occur in the study area due to the site being outside of the species' known elevation range or a lack of suitable habitat or soils are also included in Attachment E; however, these species are not discussed further because no significant direct or indirect impacts are expected.

There is no critical habitat designated by USFWS for listed plant species within the project site (Figure 3, USFWS Critical Habitat; USFWS 2021).

4.6 Special-Status Wildlife Species

Attachment F, Special-Status Wildlife Species Detected or Potentially Occurring in the Study Area, lists special-status wildlife species that were identified in the literature review. For each species listed, a determination was made regarding potential use of the project site based on information gathered during the field reconnaissance, known habitat preferences, and knowledge of the species' relative distributions in the area.

No focused special-status wildlife surveys were conducted. No listed or non-listed special-status wildlife species were incidentally detected within the study area during the October 2021 survey. One listed species, elf owl (*Micrathene whitneyi*), was determined to have a moderate potential to occur in the study area buffer but is not expected to occur or nest within the project footprint. In addition, one federally and state-listed species was determined to have a low potential to occur; Mojave desert tortoise (*Gopherus agassizii*) has a low potential to occur within the study area buffer, but is not expected to occur within the project footprint.

Three non-listed species have a moderate potential to occur within the study area: burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), and LeConte's thrasher (*Toxostoma lecontei*). Burrowing owl has a moderate potential to occur in the study area buffer but is not expected to occur within the project footprint, due to the absence of suitable habitat within the project footprint (i.e., site contains highly compacted soils and lacks burrows at least 4 inches in diameter). Loggerhead shrike has a moderate potential to occur in the study area, including the project footprint. LeConte's thrasher has a moderate potential to occur within the study area buffer, but a low potential to occur within the project footprint.

Those special-status wildlife species that occur in the region but that are not expected or have low potential to occur in the study area due to the site being outside of the species' known range or a lack of suitable habitat are also included in Attachment F; however, these species are not discussed further because no significant direct or indirect impacts are expected.

There is no critical habitat designated by USFWS for listed wildlife species within the project site (Figure 3; USFWS 2021).

4.7 Nesting Birds

The study area contains larger shrubs (i.e., palo verde) and trees (i.e., ironwood trees and palm trees) that provide potential habitat for commonly occurring nesting birds and raptors. One old nest was observed within the study area during the October 2021 survey. This nest was found in a palo verde within the project footprint and was inactive; however, the visit was conducted outside of breeding season.

4.8 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. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as stepping-stones for wildlife dispersal.

According to the Terrestrial Connectivity dataset, a key component of the CDFW's Areas of Conservation Emphasis (ACE) suite of terrestrial conservation information, the project site is located in an area designated as a "connection with implementation flexibility," otherwise known as ACE Rank 3 (CDFW 2021c). Lands designated as ACE Rank 3 are areas that have been identified as having some connectivity importance, but that have not been identified as channelized areas, species corridors, or habitat linkages at this time (CDFW 2019).

The Lake Tamarisk project site is located in the southeastern section of the Lake Tamarisk community. The site is surrounded by rural development to varying degrees. The development extends approximately 0.2 miles south of the site, while to the east and the north, the development extends approximately 0.4 miles. There is a golf course, complete with two large surface water features, that extends approximately 0.6 miles west of the site. Outside of this rural development is primarily open, undeveloped desert that is also designated as an ACE Rank 3 area. Given the open, contiguous surrounding landscape, it is relatively unlikely that the project site would experience substantial wildlife movement. The eastern portion of the project site, along with the southern and eastern portions of the study area, consist of blue palo verde–ironwood woodland habitat that likely functions as open habitat but does not function as a corridor for wildlife.

5 Impacts and Recommendations

This section addresses potential impacts (permanent, temporary, direct, and indirect), as defined below, to special-status biological resources that could result from implementation of the project. This section addresses each CEQA significance threshold, identifies potential impacts, and provides mitigation measures, as applicable.

Permanent Impacts result in the permanent long-term loss of a biological resource (e.g., loss of suitable habitat for special-status plant and wildlife species). Permanent impacts associated with the proposed project would occur from the construction of a modular fire station and supporting features (e.g., driveway, parking area).

Temporary Impacts refer to areas directly and indirectly impacted for the duration of construction only. No temporary impacts would result from the project implementation; any staging for the proposed project would be within the existing development footprint.

Direct Impacts include the alteration, disturbance, or destruction of biological resources that would result from project-related activities. Direct impacts can include temporary impacts, such as the disturbance or removal of vegetation that returns to pre-activity conditions, or permanent impacts, which could result, for example, from construction of new buildings.

Indirect Impacts are reasonably foreseeable effects caused by project implementation on biological resources outside of the area of direct impact (usually the limits of work areas). Indirect impacts may include increased human

activity, decreased water quality and altered hydrology, soil compaction, elevated noise and dust levels, and the introduction of invasive wildlife or plant species. Temporary indirect impacts may include temporary increases in noise or dust, whereas permanent indirect impacts could result from long-term effects to surrounding habitat such as the introduction of invasive species.

Table 2 summarizes permanent impacts to vegetation communities and land covers as a result of the proposed project; these impacts are depicted on Figure 4, Biological Resource Impacts. As described in Section 1 of this report, the project would include construction of a modular fire station and supporting features (e.g., driveway, parking area). The proposed project would not result in any temporary impacts.

Table 2. Impacts to Vegetation Communities and Land Covers within the Project Site

| Vegetation Community/Land Cover | Permanent Impact (acres) |
|-----------------------------------|--------------------------|
| Vegetation Communities | |
| Blue palo verde woodland | 0.1 |
| Blue palo verde-ironwood woodland | - |
| Non-Natural Land Covers | |
| Disturbed habitat | 1.3 |
| Urban/developed | 0.1 |
| Total¹ | 1.6 |

Note:

¹ Totals may not sum due to rounding.

CEQA Significance Thresholds

The following are the significance thresholds for biological resources provided in the CEQA Appendix G Environmental Checklist, which states that project activities could potentially have a significant affect if they:

- Impact-BIO-1:** 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 CDFW or USFWS (Threshold Bio-1).
- Impact-BIO-2:** 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 CDFW or USFWS (Threshold Bio-2).
- Impact-BIO-3:** Have a substantial adverse effect on state and federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (Threshold Bio-3).
- Impact-BIO-4:** 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 (Threshold Bio-4).
- Impact-BIO-5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Threshold Bio-5).
- Impact-BIO-6:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan (Threshold Bio-6).

5.1 Impact-BIO-1: Special-Status Species

5.1.1 Special-Status Plants

No federally or state-listed plant species have a potential to occur within the project site. There are no special-status plant species with a moderate or high potential to occur. Therefore, the project would not result in direct or indirect impacts to special-status plant species. As such, impacts to special-status plant species would be less than significant.

5.1.2 Special-Status Wildlife

No listed or non-listed special-status wildlife species were incidentally observed during the October 2021 survey. One state-listed species, elf owl, has a moderate potential to nest in the study area buffer. In addition, one federally and state-listed species, Mojave desert tortoise, has a low potential to occur within the study area buffer, but is not expected to occur within the project footprint. Additionally, three non-listed species have a moderate potential to occur within the study area. Burrowing owl has a moderate potential to occur in the study area buffer, but is not expected to occur within the project footprint. Loggerhead shrike has a moderate potential to occur in the study area, including the project footprint. LeConte's thrasher has a moderate potential to occur within the study area buffer, but a low potential to occur within the project footprint.

5.1.2.1 Birds

One state listed special-status species, elf owl, has a moderate potential to nest within the study area buffer, but is not expected within the project footprint. One non-listed special-status species, loggerhead shrike, has a moderate potential to occur within the study area (including the project footprint). Two non-listed species, burrowing owl and LeConte's thrasher, both have a moderate potential to occur within the study area buffer. While the proposed project could result in the permanent impacts to 0.1 acres of suitable nesting habitat with the project footprint for these species (i.e., two palo verde trees in the eastern portion of the project footprint), this impact would be less than significant due to the remaining 3.9 acres of unimpacted suitable habitat (i.e., palo verde and ironwood trees within the palo verde-ironwood woodland) and other lands beyond that. Additionally, these species are protected under the Migratory Bird Treaty Act and California Fish and Game Code Section 3516, which protect nesting birds. Implementation of **Mitigation Measure BIO-1, Nesting Birds**, would reduce potential direct and indirect impacts to these species to less than significant.

5.1.2.2 Reptiles

One federally and state-listed special-status species, Mojave desert tortoise, has a low potential to occur within study area buffer, but is not expected within the project footprint. The Mojave desert tortoise is a federally threatened and state endangered species. Typical habitat for this species within the Mojave Desert is creosote bush scrub with a relatively high diversity of perennial plants. This species typically occurs on gently sloping terrain with sandy gravel soils in locations with sparse cover of low-growing shrubs. Soils must be friable enough for the digging of burrows but firm enough to prevent burrow collapse (USFWS 2011).

The study area buffer contains suitable desert wash habitat and some creosote flats habitat, and the study area buffer connects to open lands in the north, east and west. There are two nearby documented occurrences from 2008 approximately 2.1 and 3.3 miles southeast of the study area. In addition, there are two nearby documented occurrences from 2010 approximately 3.6 and 4.8 miles southeast of the study area (CDFW 2021a). Finally, the

study area is within the USFWS-designated Colorado Desert Recovery Unit (USFWS 2011) for desert tortoise. Due to the project being located within the range of desert tortoise and the presence of suitable habitat within the study area buffer, there is low potential for Mojave desert tortoise to occur within the study area buffer.

The proposed project and study area buffer are not located in designated Critical Habitat for desert tortoise; however, there is Critical Habitat within 5 miles of the project (Figure 3), though the project is not expected to cause indirect impacts to this species. The project footprint lacks suitable habitat (i.e., sandy or gravelly locations along riverbanks, washes, sandy dunes, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides) and no burrows were observed during the October 2021 survey (i.e., site contained highly compactable soils); therefore, implementation of the proposed project would not result in any direct impacts to this species. No indirect impacts to Mojave desert tortoise within the study area buffer are expected, given the low probability of occurrence of the species within the study area buffer. However, because the proposed project is located within the USFWS-designated Colorado Desert Recovery Unit (USFWS 2011), a pre-project focused desert tortoise protocol-level survey is required. Therefore, with implementation of **Mitigation Measure BIO-2**, the proposed project would not result in significant impacts to Mojave desert tortoise.

5.2 Impact-BIO-2: Riparian and Special-Status Vegetation Communities

The project footprint does not contain any riparian habitat; however, it does contain 0.1 acres of sensitive natural community (i.e., palo verde woodland) identified by CDFW or USFWS. Implementation of the proposed project would result in permanent impacts to 0.1 acres of palo verde woodland. Due to the small size of the habitat loss as compared to the remaining 3.9 acres of palo verde woodland that will remain unimpacted, along with similar suitable habitat within the vicinity of the project site, this impact would be less than significant. As a result, implementation of the project would not result in significant impacts to riparian and special-status vegetation communities.

5.3 Impact-BIO-3: Jurisdictional Waters

The proposed project site does not contain any jurisdictional water features. As a result, implementation of the project would not result in significant impacts to jurisdictional waters.

5.4 Impact-BIO-4: Migratory Birds and Wildlife Corridor/ Nursery Sites

5.4.1 Nesting Birds

Project construction could result in direct and indirect impacts to nesting birds, including the loss of nests, eggs, and fledglings if ground-disturbing activities occur during the nesting season (generally February 15 through August 31). Construction activities during this time may result in reduced reproductive success and may violate the federal Migratory Bird Treaty Act and California Fish and Game Code. If construction (including any ground-disturbing activities) occurs during the nesting season, a nesting bird survey must be conducted by a qualified biologist prior to grading activities and impacts to nests must be avoided. With implementation of **Mitigation Measure BIO-1**, no significant impacts to nesting birds would occur.

5.4.2 Wildlife Corridors and Nursery Sites

The project site does not function as a wildlife corridor and does not support any wildlife nursery sites. As a result, implementation of the project would not result in significant impacts to these resources.

5.5 Impact-BIO-5: Other Local Ordinances

The project site is located in the unincorporated area of Desert Center. As such, it is subject to the County of Riverside Desert Center Area Plan. The purpose of an area plan is to provide a more detailed land use and policy direction for the unincorporated portions of Riverside County. There are three policies under the Desert Center Area Plan that apply to the proposed project.

DCAP 4.1 requires the use of outdoor lighting fixtures that minimize effects on nighttime sky and wildlife habitat areas, except as necessary for security reasons. The proposed project will use outdoor lighting fixtures that would comply with this requirement; therefore, implementation of the proposed project would comply with and meet the requirements of DCAP Policy 4.1.

DCAP 9.1 encourages the clustering of development for the preservation of contiguous open space. The proposed project is located within the community of Lake Tamarisk and is surrounded on all sides by rural development; therefore, implementation of the proposed project would comply with and meet the requirements of DCAP Policy 9.1.

DCAP 9.3 requires new development to conform with Desert Tortoise Critical Habitat designation requirements. The community of Lake Tamarisk lies outside of the Desert Tortoise Critical Habitat area that occupies the Chuckwalla Mountains area. As a result, implementation of the proposed project would comply with and meet the requirements of DCAP Policy 9.3.

These requirements either do not apply or the project will conform to them. As a result, implementation of the project would not result in significant impacts to these criteria.

5.6 Impact-BIO-6: Habitat Conservation Plans

The project site overlaps the Desert Renewable Energy Conservation Plan area, which provides protection and conservation of desert ecosystems while allowing for appropriate development of renewable energy projects. However, while the Desert Renewable Energy Conservation Plan area overlaps the project site, the Desert Renewable Energy Conservation Plan focuses on renewable energy projects and would not be applicable to the proposed project. Therefore, the project would not be in conflict with any habitat conservation plans.

6 Avoidance, Minimization, and Mitigation Measures

Mitigation Measure BIO-1 Nesting Birds

To maintain compliance with the Migratory Bird Treaty Act and California Fish and Game Code, if ground-disturbing and/or vegetation clearance activities are scheduled to occur during the avian

nesting season (typically February 15 through August 31), a qualified biologist shall conduct a pre-construction nesting bird survey within the project impact footprint and a 500-foot buffer where legal access is granted around the disturbance footprint. Surveys shall be conducted within 3 days prior to initiation of ground-disturbing activities.

If an active nest is detected during the nesting bird survey, avoidance buffers shall be implemented as determined by a qualified biologist (typically 300 feet for passerines and 500 feet for raptors and special-status species). The buffer shall be of a distance to ensure avoidance of adverse effects to the nesting bird by accounting for topography, ambient conditions, species, nest location, and activity type. All nests shall be monitored as determined by the qualified biologist until nestlings have fledged and dispersed or it is confirmed that the nest has been unsuccessful or abandoned. The qualified biologist shall halt all construction activities within proximity to an active nest if it is determined that the activities are harassing the nest and may result in nest abandonment or take. The qualified biologist shall also have the authority to require implementation of avoidance measures related to noise, vibration, or light pollution if indirect impacts are resulting in harassment of the nest.

Mitigation Measure BIO-2 Desert Tortoise

A qualified biologist (someone with at least 5 years of conducting surveys for the species) will conduct a desert tortoise survey one week prior to the start of construction. The survey will consist of 10-meter-wide belt transects that covers the project site and an adequate buffer (up to 500-feet) to ensure 100% coverage of the site and adjacent areas of influence. Any individuals, burrows constructed by the species, scat, and carcasses will be recorded and mapped using ESRI ArcGIS mobile application with submeter accuracy. Any desert tortoise burrows found within 100-feet of the project will be flagged for avoidance. The survey will then be repeated 72 hours prior to the start of construction.

7 Conclusion

With implementation of the recommended mitigation measures, the project would not result in significant impacts to biological resources.

If you have any questions regarding this biological resources assessment, please contact me at bstrittmater@dudek.com or 760.685.1231.

Sincerely,



Britney Strittmater
Biologist

Att.: Attachment A – Figures
Attachment B – Site Photographs
Attachment C – Vascular Plant Species Compendium

Attachment D – Wildlife Species Compendium

Attachment E – Special-Status Plant Species Detected or Potentially Occurring in the Study Area

Attachment F – Special-Status Wildlife Species Detected or Potentially Occurring in the Study Area

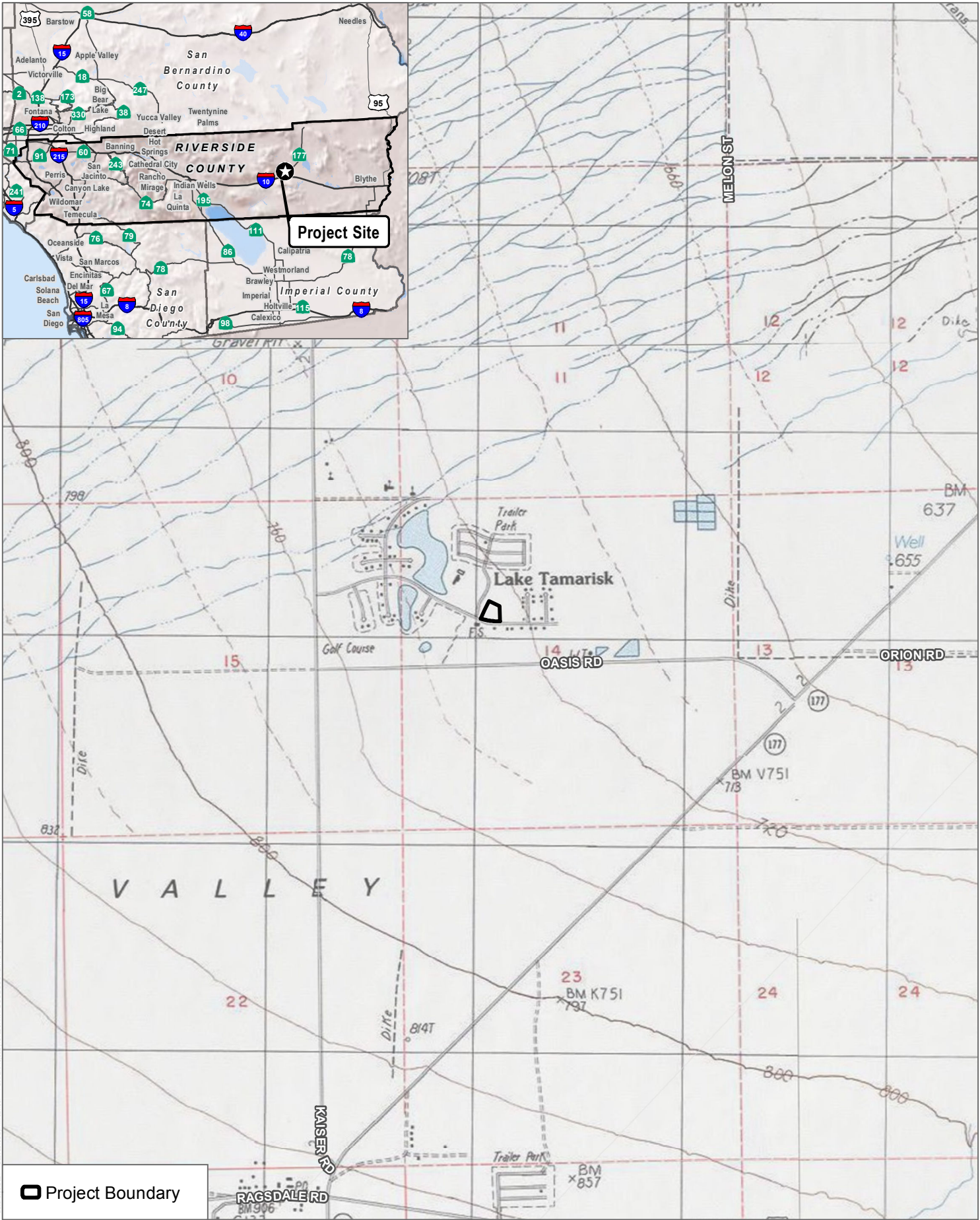
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Attachment A

Figures



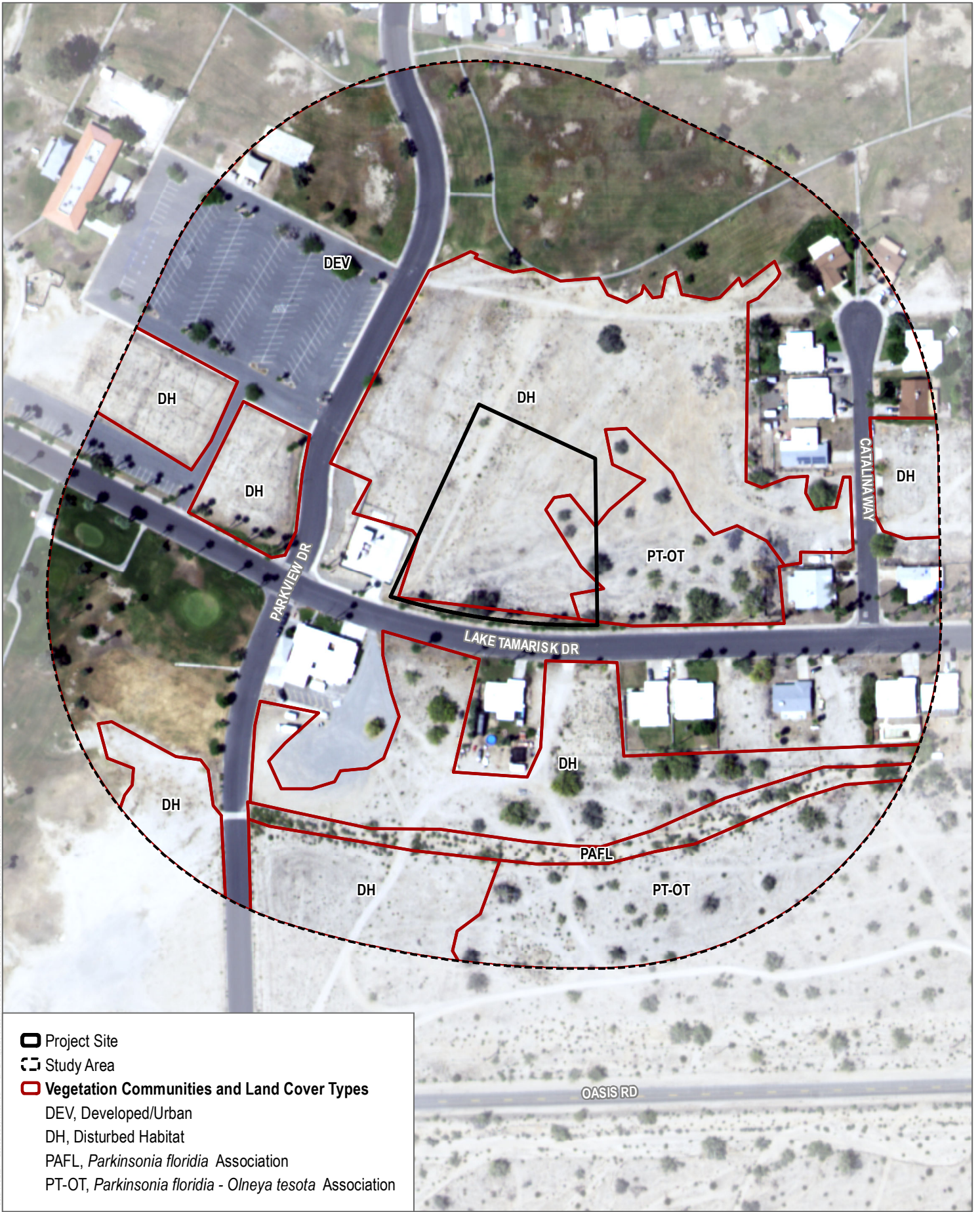
SOURCE: USGS 7.5-Minute Series Desert Center Quadrangles
 Township 5S; Range 15E; Section 14



FIGURE 1

Project Location

Lake Tamarisk Modular Fire Station Project



 Project Site
 Study Area
 Vegetation Communities and Land Cover Types
 DEV, Developed/Urban
 DH, Disturbed Habitat
 PAFL, *Parkinsonia florida* Association
 PT-OT, *Parkinsonia florida* - *Olneya tesota* Association

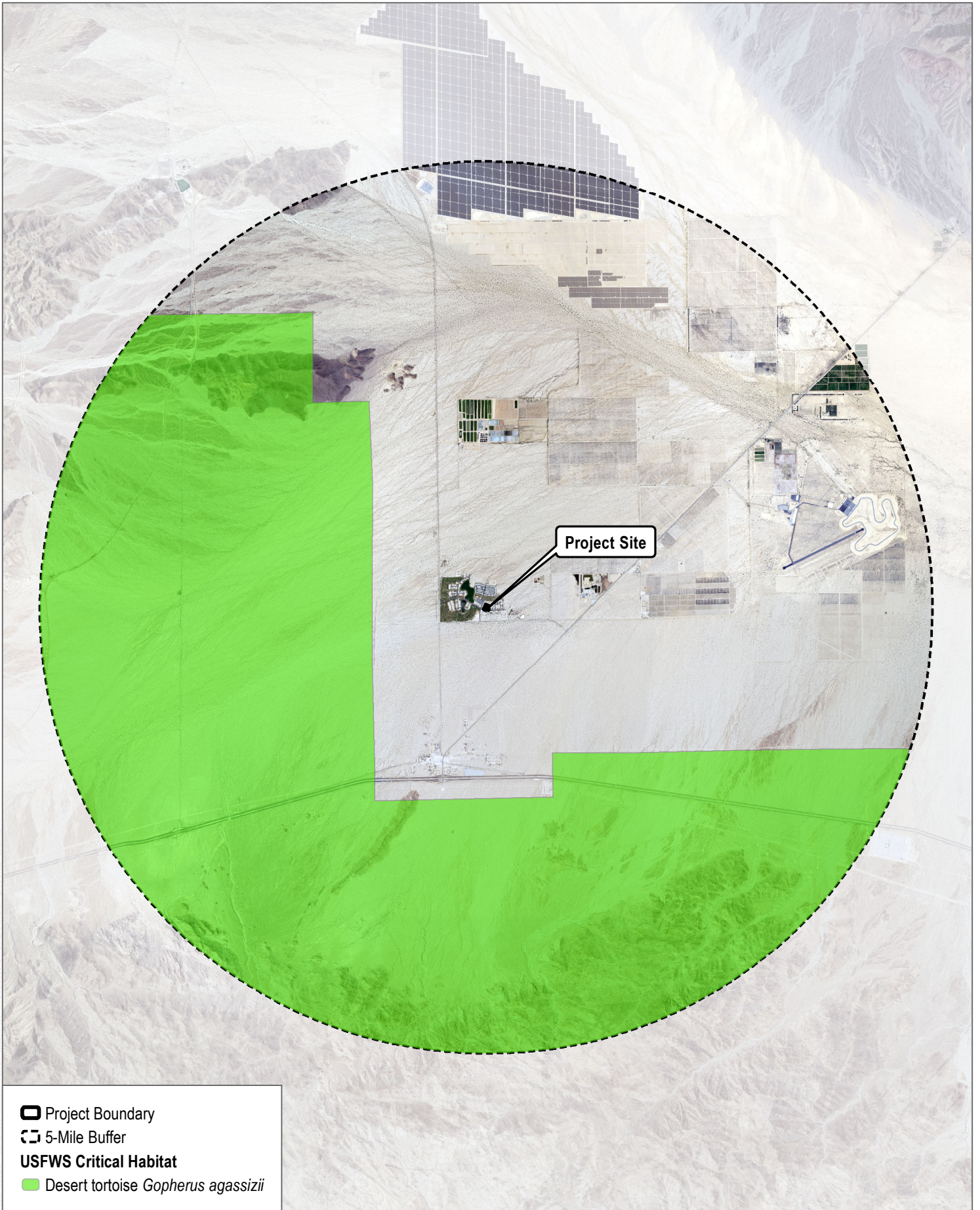
SOURCE: NAIP 2020, County of Riverside 2021




FIGURE 2

Biological Resources

Lake Tamarisk Modular Fire Station Project

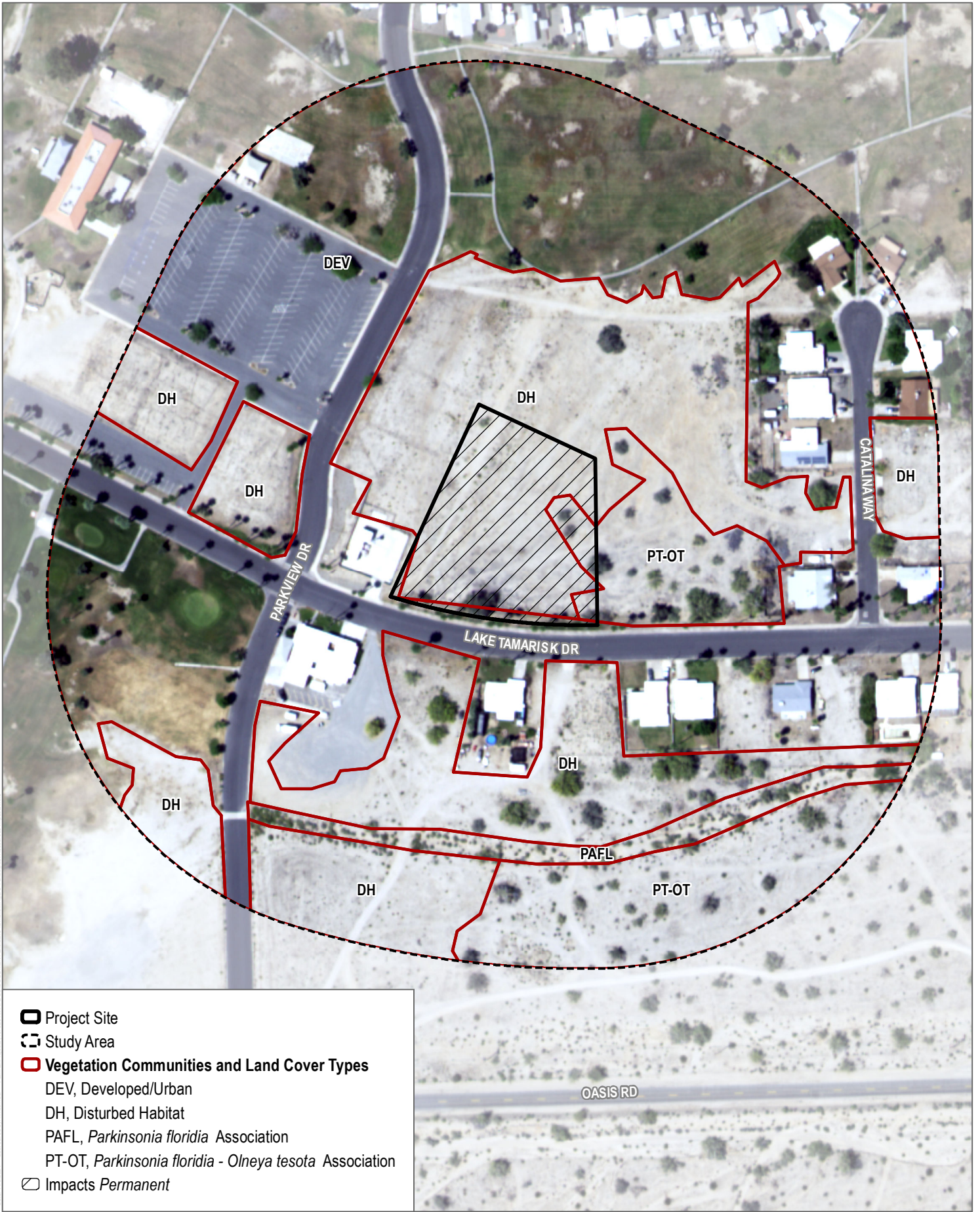
DUDEK



-  Project Boundary
-  5-Mile Buffer
- USFWS Critical Habitat**
-  Desert tortoise *Gopherus agassizii*

SOURCE: NAIP 2020, County of Riverside 2021, USFWS 1994

FIGURE 3
USFWS Critical Habitat
 Lake Tamarisk Modular Fire Station Project



SOURCE: NAIP 2020, County of Riverside 2021

FIGURE 4

Biological Resource Impacts
Lake Tamarisk Modular Fire Station Project

Attachment B

Site Photographs



Photo 1: Lake Tamarisk project site comprised primarily of disturbed habitat with compacted soils, note the development in the background.



Photo 2: Lake Tamarisk project, note palo verde trees along eastern boundary and dirt road.



Photo 3: Palo verde – ironwood woodland association east of the project site, outside of the proposed project footprint.



Photo 4: Looking south from the southern border of the project site. The wash is visible in the background and located outside of the proposed project footprint.



Photo 5: Photo of the wash where it intersects Parkview Drive, located outside of the proposed project footprint.



Photo 6: Area south of the wash, disturbed habitat is in the foreground with palo verde – ironwood association in the background, located outside of the proposed project footprint.

Attachment C

Vascular Plant Species Compendium

Vascular Species

Eudicots

AMARANTHACEAE—AMARANTH FAMILY

Tidestromia suffruticosa—no common name

ASTERACEAE—SUNFLOWER FAMILY

Ambrosia salsola—cheesebush

Pectis papposa—manybristle chinchweed

* *Pseudognaphalium luteoalbum*—Jersey cudweed

EUPHORBIACEAE—SPURGE FAMILY

Euphorbia albomarginata—whitemargin sandmat

FABACEAE—LEGUME FAMILY

Olneya tesota—ironwood

Parkinsonia florida—blue palo verde

Psoralea arguta—dyebush

NYCTAGINACEAE—FOUR O’CLOCK FAMILY

Allionia incarnata—trailing windmills

OLEACEAE—OLIVE FAMILY

* *Olea europaea*—olive

ZYGOPHYLLACEAE—CALTROP FAMILY

Larrea tridentata—creosote bush

Monocots

ARECACEAE—PALM FAMILY

* *Washingtonia robusta*—Washington fan palm

CYPERACEAE—SEDGE FAMILY

Eleocharis obtusa—blunt spikerush

POACEAE—GRASS FAMILY

Bouteloua curtipendula—sideoats grama

* *Cynodon dactylon*—Bermudagrass

* signifies introduced (non-native) species

Attachment D

Wildlife Species Compendium

Birds

Finches

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus—house finch

Flycatchers

TYRANNIDAE—TYRANT FLYCATCHERS

Sayornis saya—Say's phoebe

Hawks

PANDIONIDAE—OSPREYS

Pandion haliaetus—osprey

Mockingbirds and Thrashers

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird

New World Quail

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla gambelii—Gambel's quail

Old World Sparrows

PASSERIDAE—OLD WORLD SPARROWS

* *Passer domesticus*—house sparrow

Old World Warblers and Gnatcatchers

POLIOPTILIDAE—GNATCATCHERS

Poliioptila melanura—black-tailed gnatcatcher

Pigeons and Doves

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

* *Streptopelia decaocto*—Eurasian collared-dove

Wood Warblers and Allies

PARULIDAE—WOOD-WARBLERS

Geothlypis trichas—common yellowthroat

Setophaga coronata—yellow-rumped warbler

Woodpeckers

PICIDAE—WOODPECKERS AND ALLIES

Dryobates scalaris—ladder-backed woodpecker

New World Sparrows

PASSERELLIDAE—NEW WORLD SPARROWS

Zonotrichia leucophrys—white-crowned sparrow

Invertebrates

Butterflies

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Vanessa cardui—painted lady

Mammals

Hares and Rabbits

LEPORIDAE—HARES AND RABBITS

Sylvilagus audubonii—desert cottontail

Reptiles

Lizards

PHRYNOSOMATIDAE—IGUANID LIZARDS

Uta stansburiana—common side-blotched lizard

TEIIDAE—WHIPTAIL LIZARDS

Aspidoscelis tigris—tiger whiptail

* signifies introduced (non-native) species

Attachment E

Special-Status Plant Species Detected or
Potentially Occurring in the Study Area

ATTACH MENT E / SPECIAL-STATUS PLANT SPECIES DETECTED OR POTENTIALLY OCCURRING WITHIN THE STUDY AREA

| Scientific Name | Common Name | Status (Federal/State/CRPR) | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) | Potential to Occur |
|---|---------------------------|-----------------------------|---|--|
| <i>Abronia villosa</i> var. <i>aurita</i> | chaparral sand-verbena | None/None/1B.1 | Chaparral, Coastal scrub, Desert dunes; sandy/annual herb/ (Jan)Mar–Sep/246–5,245 | Not expected to occur. No suitable chaparral, coastal scrub, or dune habitat present. This species generally occurs west of Desert Center. There is only one CCH record east of Desert Center (CCH 2021). |
| <i>Astragalus insularis</i> var. <i>harwoodii</i> | Harwood's milk-vetch | None/None/2B.2 | Desert dunes, Mojavean desert scrub; sandy or gravelly/annual herb/Jan–May/0–2,325 | Low potential to occur within project footprint, which is largely disturbed. Moderate potential to occur in study area. There is a historical record approximately 2 miles south of the project site, south of I-10, along with others south of I-10 (CCH 2021). |
| <i>Astragalus tricarinatus</i> | triple-ribbed milk-vetch | FE/None/1B.2 | Joshua tree woodland, Sonoran desert scrub; sandy or gravelly/perennial herb/ Feb–May/1,475–3,900 | Not expected to occur. The site is outside of the species' known elevation range. |
| <i>Ayenia compacta</i> | California ayenia | None/None/2B.3 | Mojavean desert scrub, Sonoran desert scrub; rocky/perennial herb/Mar–Apr/492–3,590 | Low potential to occur. The nearest records are in the Corn Springs area south of I-10, approximately 7 miles from the project site (CCH 2021). |
| <i>Castela emoryi</i> | Emory's crucifixion-thorn | None/None/2B.2 | Mojavean desert scrub, Playas, Sonoran desert scrub; gravelly/perennial deciduous shrub/(Apr)June–July(Sep–Oct)/295–2,375 | Low potential to occur within project footprint, which is open and disturbed. This shrub would have been observed if present. Moderate potential to occur in larger study area. There is suitable desert scrub habitat and there is a CNDDDB record within 1 mile of the study area (CDFW 2021). |
| <i>Chylismia arenaria</i> | sand evening-primrose | None/None/2B.2 | Sonoran desert scrub (sandy or rocky)/annual / perennial herb/Nov–May/-230–3,000 | Low potential to occur. The nearest records are over 20 miles from the study area (CCH 2021). |

ATTACHMENT E / SPECIAL-STATUS PLANT SPECIES DETECTED OR POTENTIALLY OCCURRING WITHIN THE STUDY AREA

| Scientific Name | Common Name | Status (Federal/State/CRPR) | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) | Potential to Occur |
|---|---------------------------|-----------------------------|--|---|
| <i>Colubrina californica</i> | Las Animas colubrina | None/None/2B.3 | Mojavean desert scrub, Sonoran desert scrub/perennial deciduous shrub/Apr-June/33-3,280 | Low potential to occur within project footprint, which is open and disturbed. This shrub would have been observed if present. Moderate potential to occur in larger study area. Moderate potential to occur in larger study area. There is suitable desert scrub habitat and there is a CNDDDB record within 5 miles of the study area (CDFW 2021). |
| <i>Ditaxis claryana</i> | glandular ditaxis | None/None/2B.2 | Mojavean desert scrub, Sonoran desert scrub; sandy/perennial herb/Oct,Dec,Jan,Feb,Mar/0-1,525 | Low potential to occur. The nearest record is over 30 miles from the study area (CCH 2021). Additionally, this species was not observed within the open, disturbed project footprint during October surveys. |
| <i>Echinocereus engelmannii</i> var. <i>howei</i> | Howe's hedgehog cactus | None/None/1B.1 | Mojavean desert scrub/perennial stem succulent/Apr-May/1,410-2,540 | Not expected to occur. The site is outside of the species' known elevation range. |
| <i>Eriastrum harwoodii</i> | Harwood's eriastrum | None/None/1B.2 | Desert dunes/annual herb/Mar-June/410-3,000 | Not expected to occur. No suitable dune habitat present. |
| <i>Euphorbia abramsiana</i> | Abrams' spurge | None/None/2B.2 | Mojavean desert scrub, Sonoran desert scrub; sandy/annual herb/(Aug)Sep-Nov/-16-4,295 | Low potential to occur. The nearest record is over 10 miles from the study area (CCH 2021). Additionally, this species was not observed within the open, disturbed project footprint during October surveys. |
| <i>Euphorbia jaegeri</i> | Orocopia Mountains spurge | None/None/1B.1 | Mojavean desert scrub; Rocky hillsides and arroyos, gravelly or rocky crevices; granitic, carbonate, or metamorphic/ perennial shrub/Oct-May/1,965-2,785 | Not expected to occur. The site is outside of the species' known elevation range. |
| <i>Grusonia parishii</i> | Parish's club-cholla | None/None/2B.2 | Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub; sandy, rocky/perennial stem | Not expected to occur. The site is outside of the species' known elevation range. |

ATTACH MENT E / SPECIAL-STATUS PLANT SPECIES DETECTED OR POTENTIALLY OCCURRING WITHIN THE STUDY AREA

| Scientific Name | Common Name | Status (Federal/State/CRPR) | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) | Potential to Occur |
|--|------------------------------|-----------------------------|--|---|
| | | | succulent/May-June(July)/ 984-5,000 | |
| <i>Jaffueliobryum wrightii</i> | Wright's jaffueliobryum moss | None/None/2B.3 | Alpine dwarf scrub, Mojavean desert scrub, Pinyon and juniper woodland; Dry openings, rock crevices, carbonate/moss/ N.A./525-8,200 | Low potential to occur. No suitable carbonate microhabitat. |
| <i>Koeberlinia spinosa</i> var. <i>tenuispina</i> | slender-spined all thorn | None/None/2B.2 | Riparian woodland, Sonoran desert scrub/perennial deciduous shrub/May-July/492-1,670 | Low potential to occur within project footprint, which is open and disturbed. This shrub would have been observed if present. Moderate potential to occur in larger study area. There is suitable desert scrub habitat and there is a CNDDDB record within 5 miles of the study area (CDFW 2021). |
| <i>Matelea parvifolia</i> | spearleaf | None/None/2B.3 | Mojavean desert scrub, Sonoran desert scrub; rocky/perennial herb/Mar-May(July)/ 1,440-3,590 | Not expected to occur. The site is outside of the species' known elevation range. |
| <i>Mentzelia puberula</i> | Darlington's blazing star | None/None/2B.2 | Mojavean desert scrub, Sonoran desert scrub; sandy or rocky/perennial herb/ Mar-May/295-4,195 | Low potential to occur. The nearest record is over 11 miles from the study area (CCH 2021). |
| <i>Panicum hirticaule</i> ssp. <i>hirticaule</i> | roughstalk witch grass | None/None/2B.1 | Desert dunes, Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub; sandy, silty, depressions/annual herb/Aug-Dec/148-4,310 | Low potential to occur. No suitable depressions microhabitat. Additionally, this species was not observed within the open, disturbed project footprint during October surveys. |
| <i>Penstemon pseudospectabilis</i> ssp. <i>pseudospectabilis</i> | desert beardtongue | None/None/2B.2 | Mojavean desert scrub, Sonoran desert scrub; often sandy washes, sometimes rocky/perennial herb/ Jan-May/262-6,345 | Low potential to occur within project footprint, which is open and disturbed. This perennial herb would have been observed if present. Moderate potential to occur in larger study area. There is suitable desert scrub habitat and there |

ATTACH MENT E / SPECIAL-STATUS PLANT SPECIES DETECTED OR POTENTIALLY OCCURRING WITHIN THE STUDY AREA

| Scientific Name | Common Name | Status (Federal/State/CRPR) | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) | Potential to Occur |
|---|-----------------------------|-----------------------------|--|--|
| | | | | is a CNDDDB record within 5 miles of the study area (CDFW 2021). |
| <i>Petalonyx linearis</i> | narrow-leaf sandpaper-plant | None/None/2B.3 | Mojavean desert scrub, Sonoran desert scrub; Sandy or rocky canyons/perennial shrub/(Jan-Feb)Mar-May(June-Dec)/-82-3,655 | Low potential to occur. No suitable canyon microhabitat. Additionally, this species was not observed within the open, disturbed project footprint during October surveys. |
| <i>Selaginella eremophila</i> | desert spike-moss | None/None/2B.2 | Chaparral, Sonoran desert scrub (gravelly or rocky)/perennial rhizomatous herb/(May)June(July)/656-4,245 | Low potential to occur. The nearest record is over 8 miles from the study area (CCH 2021). |
| <i>Senna covesii</i> | Coves' cassia | None/None/2B.2 | Sonoran desert scrub; Dry, sandy desert washes and slopes/perennial herb/Mar-June(Aug)/738-4,245 | Low potential to occur. No suitable wash or slope microhabitat. |
| <i>Spermolepis gigantea</i> | desert scaleseed | None/None/2B.1 | Sonoran desert scrub/annual herb/Mar-Apr/1,310-1,310 | Not expected to occur. The site is outside of the species' known elevation range. |
| <i>Stylocline sonorensis</i> | mesquite neststraw | None/None/2A | Sonoran desert scrub (sandy)/annual herb/Apr/1,390-1,390 | Not expected to occur. The site is outside of the species' known elevation range. |
| <i>Teucrium cubense ssp. depressum</i> | dwarf germander | None/None/2B.2 | Desert dunes, Playas margins, Sonoran desert scrub/annual herb/Mar-May(Sep-Nov)/148-1,310 | Low potential to occur. Nearest record is a historical record from the Eagle Mountains. Additionally, this species was not observed within the open, disturbed project footprint during October surveys. |
| <i>Wislizenia refracta ssp. palmeri</i> | Palmer's jackass clover | None/None/2B.2 | Chenopod scrub, Desert dunes, Sonoran desert scrub, Sonoran thorn woodland/perennial deciduous shrub/Jan-Dec/0-985 | Low potential to occur. There are several records east of Desert Center, approximately 8 miles from the study area. Additionally, this species was not observed within the open, disturbed project footprint during October surveys. |

Statuses:

FE: Federally listed as endangered

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere

CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere

CRPR 2A: Plants presumed extirpated in California but common elsewhere

CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere

References

CCH (Consortium of California Herbaria). 2021. Featuring California vascular plant data from the Consortium of California Herbaria and other sources. University of California. Updated February 2021. Accessed July 2021. <https://ucjeps.berkeley.edu/consortium/>.

CDFW (California Department of Fish and Wildlife). 2021. California Natural Diversity Database. RareFind 5 and CNDDDB in BIOS (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. Accessed October 2021. <http://www.dfg.ca.gov/biogeodata/cnddb/rarefind.asp>.

Attachment F

Special-Status Wildlife Species Detected or
Potentially Occurring in the Study Area

| Species Name | Common Name | Status (Federal/State) | Habitat | Potential to Occur |
|---|------------------------|------------------------|---|---|
| Reptiles | | | | |
| <i>Gopherus agassizii</i> | Mojave desert tortoise | FT/ST | Arid and semi-arid habitats in Mojave and Sonoran Deserts, including sandy or gravelly locations along riverbanks, washes, sandy dunes, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides | Not expected to occur on the project site, low potential to occur in the study area buffer. The project site lacks suitable habitat and is surrounded by development, however there is potentially suitable desert wash and creosote flats within the southern portion of the study area buffer. The nearest known occurrence is approximately 2.1 miles southeast of the project site (CDFW 2021). |
| Birds | | | | |
| <i>Aquila chrysaetos</i> (nesting and wintering) | golden eagle | None/FP, WL | Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats | Not expected to occur. While there is a small amount of potentially suitable open desert habitat in the study area buffer, this species avoids developed areas, which surround the project site. The nearest known occurrence is approximately 9.7 miles to the northeast of the site, in the Coxcomb mountains (CDFW 2021). |
| <i>Athene cunicularia</i> (burrow sites and some wintering sites) | burrowing owl | BCC/SSC | Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows | Not expected to occur on the project site, moderate potential to occur in the study area buffer. While the site falls within the species' known range, the site lacks suitable soils (i.e., highly compacted soils/gravel present) and no man-made features are present to provide burrow surrogates/refuge. There is |

| Species Name | Common Name | Status (Federal/State) | Habitat | Potential to Occur |
|--------------------------------------|--------------------|------------------------|--|--|
| | | | | potentially suitable habitat in the southern portion of the study area buffer along the desert wash area and to the south. The nearest known occurrence is approximately 1.1 miles southeast of the site (CDFW 2021). |
| <i>Lanius ludovicianus</i> (nesting) | loggerhead shrike | None/SSC | Nests and forages in open habitats with scattered shrubs, trees, or other perches | Moderate potential to occur in the study area. The eastern portion of the site, as well as portions of the study area buffer contain suitable habitat of open desert with scattered shrubs and trees. Additionally, this species is known to frequent golf courses, (Cornell Lab of Ornithology 2019) which are found in the northern and eastern portions of the study area buffer. The nearest known occurrence is approximately 10.6 miles southwest of the site (CDFW 2021). |
| <i>Micrathene whitneyi</i> (nesting) | elf owl | None/SE | Nests in desert riparian with cottonwood, sycamore, willow, and mesquite | Not expected to nest in the project site; moderate potential to nest in the study area buffer. The project site lacks suitable desert riparian habitat to support the species, however there is potentially suitable nesting habitat in the southern portion of the study area buffer. The nearest known occurrence is approximately 0.9 miles south of the site (CDFW 2021). |
| <i>Toxostoma bendirei</i> | Bendire's thrasher | BCC/SSC | Nests and forages in desert succulent scrub and Joshua tree habitat in Mojave Desert; nests in | Low potential to occur in the study area. The eastern portion of the site, and the study area buffer contain potentially suitable shrub habitat that |

| Species Name | Common Name | Status (Federal/State) | Habitat | Potential to Occur |
|------------------------------------|---------------------|------------------------|--|--|
| | | | yucca, cholla, and other thorny scrubs shrubs(?) or small trees | could support this species. The nearest known occurrence is approximately 2.8 miles southeast of the site (CDFW 2021). |
| <i>Toxostoma lecontei</i> | LeConte's thrasher | BCC/SSC | Nests and forages in desert wash, desert scrub, alkali desert scrub, desert succulent, and Joshua tree habitats; nests in spiny shrubs or cactus | Low potential to occur on the project site; moderate potential to occur in the study area buffer. The very eastern portion of the site provides potential habitat in the form of palo verde and ironwood shrubs/trees. The study area buffer provides suitable desert wash and desert scrub habitat to support this species. The nearest known occurrence is approximately 3.0 miles both to the southeast and to the southwest of the site (CDFW 2021). |
| Mammals | | | | |
| <i>Antrozous pallidus</i> | pallid bat | None/SSC | Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees | Not expected to roost; low potential to forage in the study area buffer. The site lacks rocky outcrops, as well as derelict manmade structures to support roosting by this species. While the study area buffer contains suitable open habitat to support foraging for this species, the surrounding rural development reduces the suitability of the site. The nearest known occurrence is approximately 7.6 miles southeast of the site (CDFW 2021). |
| <i>Eumops perotis californicus</i> | western mastiff bat | None/SSC | Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in | Not expected to roost, low potential to forage in the study area buffer. The study area lacks suitable cliff-face crevices for roosting. The study |

| Species Name | Common Name | Status (Federal/State) | Habitat | Potential to Occur |
|--------------------------------|----------------------------|------------------------|---|---|
| | | | crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels | area buffer contains suitable open desert habitat to support foraging by this species, but the surrounding rural development reduces the suitability of the site. The nearest known occurrence is approximately 7.6 miles southeast of the site (CDFW 2120). |
| <i>Macrotus californicus</i> | Californian leaf-nosed bat | None/SSC | Riparian woodlands, desert wash, desert scrub; roosts in mines and caves, occasionally buildings | Not expected to roost, low potential to forage in the study area buffer. The study area lacks suitable caves, mines, or derelict manmade structures to support roosting by this species. While study area buffer does provide some suitable desert wash and desert scrub foraging habitat for the species, the rural development surrounding the area reduce the suitability of the site. The nearest known occurrence is approximately 10 miles northwest of the site (CDFW 2021). |
| <i>Ovis canadensis nelsoni</i> | Nelson's bighorn sheep | None/FP | Steep slopes and cliffs, rough and rocky topography, sparse vegetation; also canyons, washes, and alluvial fans | Not expected to occur. While the study area buffer contains potentially suitable desert wash habitat and sparse vegetation, the site lacks any nearby suitable steep slopes and rocky topography to provide escape terrain that this species relies heavily upon, and is surrounded by development. The nearest known occurrence is approximately 4 miles southeast of the site in the Chuckwalla Mountains, however interstate 10 creates a movement |

| Species Name | Common Name | Status (Federal/State) | Habitat | Potential to Occur |
|--------------|-------------|---------------------------|---------|--|
| | | | | barrier from the Chuckwalla Mountains to the project site. The nearest known occurrence on the north side of interstate 10 is approximately 5.4 miles west of the site in the Eagle Mountains (CDFW 2021). |



Appendix D

Geotechnical Investigation

FIRE STATION #49 PROJECT

Community of Lake Tamarisk,

Riverside County, California



April 2022

Geotechnical Report

Proposed New Fire Station No. 49

Tamarisk Drive

Desert Center, California

Prepared for:

County of Riverside Project Management Office

3133 Mission Inn Avenue

Riverside, CA 92507



Prepared by:

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April 9, 2021

Mr. Dominick Lombardi
County of Riverside - Project Management Office
3133 Mission Inn Avenue
Riverside, CA 92507

**Geotechnical Report
New Fire Station No. 49
Tamarisk Drive
Desert Center, California
LCI Report No. LP21057**


Dear Mr. Lombardi:

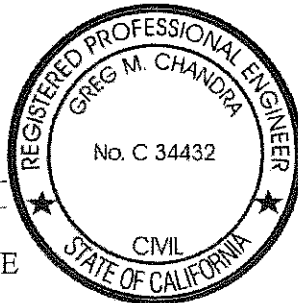
This geotechnical report is provided for design and construction of the proposed new fire station No. 49 located on the north side of Tamarisk Drive east of Parkview Drive in the unincorporated community of Desert Center, California. Our geotechnical exploration was conducted in response to your request for our services. The enclosed report describes our soil engineering site evaluation and presents our professional opinions regarding geotechnical conditions at the site to be considered in the design and construction of the project.

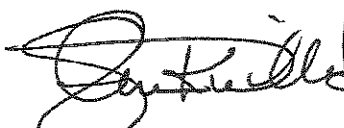
Based on the geotechnical conditions encountered at the points of exploration, the project site appears suitable for the proposed construction provided the professional opinions contained in this report are considered in the design and construction of this project.

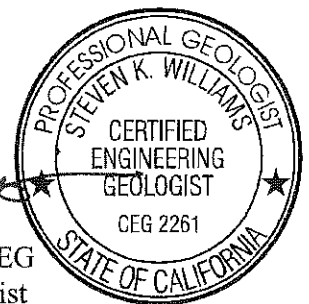
We appreciate the opportunity to provide our findings and professional opinions regarding geotechnical conditions at the site. Please provide our office with a set of the foundation plans and civil plans for review to insure that the geotechnical site constraints have been included in the design documents. If you have any questions or comments regarding our findings, please call our office at (760) 370-3000.

Respectfully Submitted,
LandMark Consultants, Inc.


Greg M. Chandra, PE, M.ASCE
Principal Engineer




Steven K. Williams, PG, CEG
Senior Engineering Geologist



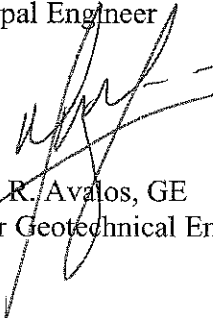

Julian R. Avalos, GE
Senior Geotechnical Engineer



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Table 2: 2016 California Building Code (CBC) and ASCE 7-10 Seismic Parameters

Table 3: Soil Site Class Determination

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Figure 1: Regional Fault Map

Figure 2: Map of Local Faults

Figure 3: Fault Map Explanation

Appendices:

Appendix A: Vicinity and Site Maps

Appendix B: Subsurface Soil Logs and Soil Key

Appendix C: Laboratory Test Results

Appendix D: Seismic Settlement Calculations

Appendix E: Pipe Bedding and Trench Backfill Recommendations

Appendix F: Summary of Infiltration Testing

EXECUTIVE SUMMARY

This executive summary presents *selected* elements of our findings and professional opinions. This summary *may not* present all details needed for the proper application of our findings and professional opinions. Our findings, professional opinions, and application options are *best related through reading the full report*, and are best evaluated with the active participation of the engineer of record who developed them. The findings of this study are summarized below:

- The findings of this study indicate the site is underlain by interbedded sands and silty sand with near surface silty sand soils. The near surface sands are expected to be non-expansive. The subsurface soils are dense to very dense in nature.
- Groundwater was not encountered in the borings at the time of exploration.
- Elevated sulfate levels were not encountered in the soil samples tested for this investigation. It is recommended that concrete should use Type II cement with a maximum water-cement ratio of 0.50 and a minimum compressive strength of 3,000 psi.
- Design soil bearing pressure of 1,800 psf. Differential movement of $\frac{1}{2}$ to $\frac{3}{4}$ inch can be expected for slab on grade foundations placed on native soils.
- Evaluation of liquefaction potential at the site indicates that it is unlikely that the subsurface soil will liquefy under seismically induced ground-shaking due to the dense nature of the underlying saturated granular soils and depth to groundwater (greater than 100 ft.). No mitigation is required for liquefaction effects at this site.
- Seismic settlements of the dry sands have been calculated and are not expected to occur at the project site due to the dense nature of the subsurface soil.
- All reinforcing bars, anchor bolts and hold down bolts shall have a minimum concrete cover of 3.0 inches unless epoxy coated (ASTM D3963/A934). Hold-down straps are not allowed at the foundation perimeter. No pressurized water lines are allowed below or within the foundations.
- Pavement structural sections should be designed for subgrade soils (R-Value = 50) and an appropriate Traffic Index (TI) selected by the civil designer.

Section 1 INTRODUCTION

1.1 Project Description

This report presents the findings of our geotechnical exploration and soil testing for the proposed new fire station No. 49 located on the north side of Tamarisk Drive east of Parkview Drive in the unincorporated community of Desert Center, California (See Vicinity Map, Plate A-1). A site plan for the proposed development was provided by your office

The structure is planned to consist of slabs-on-grade foundations and steel-frame construction. Footing loads at exterior bearing walls are estimated at 2 to 5 kips per lineal foot. Column loads are estimated to range from 5 to 80 kips. If structural loads exceed those stated above, we should be notified so we may evaluate their impact on foundation settlement and bearing capacity. Site development will include building pad preparation, underground utility installation including trench backfill, concrete foundation construction, parking lot construction, and concrete driveway and sidewalk placement.

1.2 Purpose and Scope of Work

The purpose of this geotechnical study was to investigate the subsurface soil at selected locations within the site for evaluation of physical/engineering properties and liquefaction potential during seismic events. Professional opinions were developed from field and laboratory test data and are provided in this report regarding geotechnical conditions at this site and the effect on design and construction. The scope of our services consisted of the following:

- < Field exploration and in-situ testing of the site soils at selected locations and depths.
- < Laboratory testing for physical and/or chemical properties of selected samples.
- < Review of the available literature and publications pertaining to local geology, faulting, and seismicity.
- < Engineering analysis and evaluation of the data collected.
- < Preparation of this report presenting our findings and professional opinions regarding the geotechnical aspects of project design and construction.

This report addresses the following geotechnical parameters:

- < Subsurface soil and groundwater conditions
- < Site geology, regional faulting and seismicity, near source factors, and site seismic accelerations
- < Liquefaction potential and its mitigation
- < Expansive soil and methods of mitigation
- < Aggressive soil conditions to metals and concrete
- < Soil infiltration rates of the native soil for storm-water retention basin design

Professional opinions with regard to the above parameters are provided for the following:

- < Site grading and earthwork
- < Building pad and foundation subgrade preparation
- < Allowable soil bearing pressures and expected settlements
- < Concrete slabs-on-grade
- < Excavation conditions and buried utility installations
- < Mitigation of the potential effects of salt concentrations in native soil to concrete mixes and steel reinforcement
- < Seismic design parameters
- < Preliminary pavement structural sections

Our scope of work for this report did not include an evaluation of the site for the presence of environmentally hazardous materials or conditions, storm water infiltration, groundwater mounding, or landscape suitability of the soil.

1.3 Authorization

Mr. Dominick Lombardi of County of Riverside, Project Management Office provided authorization by written agreement to proceed with our work on March 11, 2021. We conducted our work in general accordance with our written proposal dated March 11, 2021.

Section 2

METHODS OF INVESTIGATION

2.1 Field Exploration

Subsurface exploration was performed on March 17, 2021 using 2R Drilling of Ontario, California to advance two (2) borings to depths of 26.5 to 51.5 feet below existing ground surface. The borings were advanced with a truck-mounted, CME 75 drill rig using 8-inch diameter, hollow-stem, continuous-flight augers. The approximate boring locations were established in the field and plotted on the site map by sighting to discernible site features. The boring locations are shown on the Site and Exploration Plan (Plate A-2).

A geo-technician observed the drilling operations and maintained logs of the soil encountered with sampling depths. Soils were classified during drilling according to the Unified Soil Classification System using the visual-manual procedure in accordance with ASTM D2488. Relatively undisturbed and bulk samples of the subsurface materials were obtained at selected intervals. The relatively undisturbed soil samples were retrieved using a 2-inch outside diameter (OD) split-spoon sampler or a 3-inch OD Modified California Split-Barrel (ring) sampler lined with 6-inch stainless-steel sleeves.

After logging and sampling the soil, the exploratory borings were backfilled with the excavated material. The backfill was loosely placed and was not compacted to the requirements specified for engineered fill. The existing asphalt surfaces were repaired with asphalt cold patch or quickset concrete with black pigment.

The subsurface logs are presented on Plates B-1 and B-2 in Appendix B. A key to the log symbols is presented on Plate B-3. The stratification lines shown on the subsurface logs represent the approximate boundaries between the various strata. However, the transition from one stratum to another may be gradual over some range of depth.

2.2 Laboratory Testing

Laboratory tests were conducted on selected bulk (auger cuttings) and relatively undisturbed soil samples obtained from the soil borings to aid in classification and evaluation of selected engineering properties of the site soils.

The tests were conducted in general conformance to the procedures of the American Society for Testing and Materials (ASTM) or other standardized methods as referenced below. The laboratory testing program consisted of the following tests:

- < Particle Size Analyses (ASTM D422)
- < Unit Dry Densities (ASTM D2937)
- < Moisture Contents (ASTM D2216)
- < Moisture-Density Relationship (ASTM D1557)
- < Chemical Analyses (soluble sulfates & chlorides, pH, and resistivity) (Caltrans Methods)

The laboratory test results are presented on the subsurface logs (Appendix B) and in Appendix C. Engineering parameters of soil strength, compressibility and relative density utilized for developing design criteria provided within this report were obtained from the field and laboratory testing program.

2.3 Soil Infiltration Testing

A total of two (2) infiltration tests were conducted on March 23, 2021 at the proposed location for the on-site storm-water retention basin as shown on the Site and Exploration Plan (Plate A-2). The infiltration tests were performed to the guideline from Design Handbook for Low Impact Development Best Management Practices, prepared by Riverside County Flood Control and Water Conservation District, Appendix A, Section 2.3, dated September 2011. The tests were performed using perforated pipes inside an 8-inch diameter flight auger borehole made to depths of approximately 5.0 feet below the existing ground surface, corresponding to the anticipated bottom depth of the stormwater retention basin. The pipes were filled with water and successive readings of drop in water levels were made every 30 minutes for a total elapsed time of 180 minutes, until a stabilization drop was recorded.

The test results indicate that the stabilized soil infiltration rate for the soil ranges from 2.5 to 4.2 inches per hour. A maximum soil infiltration rate of 2.5 inches per hour may be used for the on-site storm-water retention basin design. An oil/water separator should be installed at inlets to the stormwater retention basin to prevent sealing of the basin bottom with silt and oil residues. The field and conversion calculation worksheets are included in Appendix F. We recommend additional testing should be performed after the completion of rough grading operations, to verify the soil infiltration rate.

Section 3

DISCUSSION**3.1 Site Conditions**

The project site is irregularly-shaped in plan view, is relatively flat-lying slopes gently to the northeast. The coordinates of the project site (latitude/longitude) are 33.7385N / -115.3913W. The project site is covered with scattered dry brush and weeds. The site is bounded by Tamarisk Drive to the south and vacant lots to the east and north. A fenced communications building is located to the west. Adjacent properties are flat-lying and are approximately at the same elevation with this site. The existing Lake Tamarisk Fire Station No. 49 is located southwest of the project site at the southeast corner of Tamarisk Drive and Parkview Drive.

The project site lies at an elevation of approximately 725 to 730 feet above mean sea level in the Chuckwalla Valley region of the California low desert. Annual rainfall in this arid region is less than 4 inches per year with four months of average summertime temperatures above 100 °F. Winter temperatures are mild, seldom reaching freezing.

3.2 Geologic Setting

The project site is located in the Eastern Transverse Ranges province and adjacent parts of the Mojave Desert, where highland terrains expose igneous and metamorphic crystalline basement overlain locally by Tertiary cover strata, and intervening basins are filled with Pliocene and Quaternary sedimentary deposits. Basement consists of Proterozoic and Mesozoic plutonic and metamorphic rocks. The Eastern Transverse Ranges block is characterized by left-oblique, east-striking faults that extend east from the Little San Bernardino Mountains. The project site is located in the western portion of the Chuckwalla Valley of the southern Mojave Desert region of southern California. The project site lies on a broad Holocene alluvial fan (bajada) that slopes gently to the northeast toward Palen Lake, a dry lake bed. The Chuckwalla Valley is bounded on the southwest by the Chuckwalla Mountains and the northeast by the McCoy Mountains. The adjacent mountains to the north and east are composed of Precambrian through Mesozoic age gneiss, schist, and granitic rocks overlain by Tertiary through Quaternary age volcanic and nonmarine sedimentary rocks. Figure 1 shows the location of the site in relation to regional faults and physiographic features.

3.3 Site Subsurface Conditions

Subsurface soils encountered during the field exploration conducted in March 2021 consist of dominantly dense to very dense, interbedded sands (SP), sands (SP-SM) and silty sands (SM) to a depth of 51.5 feet, the maximum depth of exploration.

Groundwater was not encountered to a depth of 50 feet below ground surface at the project site during the field exploration.

Groundwater records in the vicinity of the project site indicate that historic groundwater levels fluctuated between 67 and 122 feet below the ground surface between 1961 and 1985 according to the Department of Water Resources.

3.4 Seismic Hazards

3.4.1 Faulting and Seismicity

The project site is located in the seismically active southern California region and is expected to be subjected to moderate to strong ground shaking during the design life of the project. A fault map illustrating known active faults relative to the site is presented on Figure 1, *Regional Fault Map*. Figure 2 shows the project site in relation to local faults.

The criterion for fault classification adopted by the California Geological Survey defines Earthquake Fault Zones along Holocene-active or pre-Holocene faults (CGS, 2018b). Earthquake Fault Zones are regulatory zones that address the hazard of surface fault rupture. A Holocene-active fault is one that has ruptured during Holocene time (within the last 11,700 years). A pre-Holocene fault is a fault that has not ruptured in the last 11,700 years. Pre-Holocene faults may still be capable of surface rupture in the future, but are not regulated by the A-P act. Table 1 lists known faults or seismic zones that lie within a 38 mile (60 kilometer) radius of the project site.

The site is not located within a currently designated Earthquake Fault-Rupture Hazard Zone (CGS, 2018b). *Review of the current Alquist-Priolo Earthquake Fault Zone maps (CGS, 2018a) indicates that the nearest mapped Earthquake Fault Zone is the San Andreas fault, located approximately 32.2 miles west of the site.*

The possibility of ground surface rupture related to active faulting on currently unrecognized faults exists throughout the seismically active Coachella Valley region. However, given the current state of knowledge regarding seismicity of the Coachella Valley, the potential for fault rupture at the project site is considered low.

3.4.2 Historic Seismicity

The Coachella Valley is one of the most seismically active regions in the United States and has experienced several historical events of magnitude 5.9 or greater. The following briefly outlines seismic events that have significantly affected the Coachella Valley in the past 60 years.

- < ***Desert Hot Springs Event*** - On December 4, 1948, a magnitude 6.5M_w earthquake occurred east of Desert Hot Springs (Proctor, 1968).
- < ***Palm Springs Event*** - A magnitude 6.2M_w earthquake occurred on July 8, 1986 in the Painted Hills causing minor surface creep of the Banning segment of the San Andreas Fault (USGS, 1987).
- < ***Joshua Tree Event*** - On April 22, 1992, a magnitude 6.1 M_w earthquake occurred in the mountains 9 miles east of Desert Hot Springs (OSMS, 1992). Some structural damage and minor injuries occurred in the Palm Springs area during this earthquake.
- < ***Landers Event*** - Early on June 28, 1992, the Coachella Valley was subjected to the largest seismic event to strike Southern California in 40 years. The Landers earthquake had a main shock with a 7.3M_w magnitude. Surface rupture occurred just south of the town of Yucca Valley and extended some 43 miles north toward Barstow. Surface horizontal offsets attained a maximum of 21 feet (OSMS, 1992).
- < ***Big Bear Event*** - Approximately three hours after the Landers Event on June 28, 1992, a magnitude 6.4M_w earthquake occurred 10 miles southeast of Big Bear Lake. The earthquake occurred on a previously unknown fault trending northeast from the San Andreas Fault in the San Bernardino Mountains (OSMS, 1992).
- < ***Hector Mine Event*** – On October 16, 1999, a magnitude 7.1 M_w earthquake occurred on the Lavic Lake and Bullion Mountain Faults north of Twentynine Palms.

3.5 General Ground Motion Analysis

The project site is considered likely to be subjected to moderate to strong ground motion from earthquakes in the region. Ground motions are dependent primarily on the earthquake magnitude and distance to the seismogenic (rupture) zone. Acceleration magnitudes also are dependent upon attenuation by rock and soil deposits, direction of rupture and type of fault; therefore, ground motions may vary considerably in the same general area.

2019 CBC General Ground Motion Parameters: The California Building Code (CBC) requires that a site-specific ground motion hazard analysis be performed in accordance with ASCE 7-16 Section 11.4.8 for structures on Site Class D and E sites with S_1 greater than or equal to 0.2 and Site Class E sites with S_s greater than or equal to 1.0. **This project site has been classified as Site Class C, which would not require a site-specific ground motion hazard analysis.**

The 2019 CBC general ground motion parameters are based on the Risk-Targeted Maximum Considered Earthquake (MCE_R). The Structural Engineers Association of California (SEAOC) and Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps Web Application (SEAOC, 2021) was used to obtain the site coefficients and adjusted maximum considered earthquake spectral response acceleration parameters.

Design spectral response acceleration parameters are defined as the earthquake ground motions that are two-thirds (2/3) of the corresponding MCE_R ground motions. The Maximum Considered Earthquake Geometric Mean (MCE_G) peak ground acceleration adjusted for soil site class effects (PGA_M) value to be used for liquefaction and seismic settlement analysis in accordance with 2019 CBC Section 1803.5.12 ($PGA_M = F_{PGA} * PGA$) is estimated at 0.36g for the project site. **Design earthquake ground motion parameters are provided in Table 2.**

3.6 Seismic and Other Hazards

< **Groundshaking.** The primary seismic hazard at the project site is the potential for strong groundshaking during earthquakes along the San Andreas fault. A further discussion of groundshaking is provided in Section 3.5.

- < **Surface Rupture.** The project site does not lie within a State of California, Alquist-Priolo Earthquake Fault Zone. Surface fault rupture is considered to be unlikely at the project site because of the well-delineated fault lines through the Chuckwalla Valley as shown on USGS, CDMG, and County of Riverside maps. However, because of the high tectonic activity and deep alluvium of the region, we cannot preclude the potential for surface rupture on undiscovered or new faults that may underlie the site.
- < **Liquefaction and lateral spreading.** Liquefaction is unlikely to be a potential hazard at the site due to very dense soil conditions and depth to groundwater. The project site lies in a Riverside County designated zone of moderate potential for liquefaction (See Riverside County Geographic Information System (GIS) – Liquefaction Zones, Plate A-7). The potential for liquefaction induced settlement occurring at the project site during a strong seismic event is discussed in Section 3.8.

Other Potential Geologic Hazards.

- < **Landsliding.** The hazard of landsliding is unlikely due to the regional planar topography. No ancient landslides are shown on geologic maps, aerial photographs and topographic maps of the region and no indications of landslides were observed during our site investigation.
- < **Volcanic hazards.** The site is not located proximal to any known volcanically active area and the risk of volcanic hazards is considered low. Obsidian Butte and Red Hill, located at the south end of the Salton Sea approximately 38 miles southwest of the project site, are small remnants of volcanic domes. The domes erupted about 1,800 to 2,500 years ago (Wright et al, 2015). The subsurface brine fluids around the domes have a high heat flow and are currently being utilized to produce geothermal energy.
- < **Tsunamis and seiches.** Tsunamis are giant ocean waves created by strong underwater seismic events, asteroid impact, or large landslides. Seiches are large waves generated in enclosed bodies of water in response to strong ground shaking. The site is not located near any large bodies of water, so the threat of tsunami, seiches, or other seismically-induced flooding is considered unlikely
- < **Flooding.** The site does not lie near any large bodies of water, so the threat of seismically-induced flooding is unlikely. The project site is located within Riverside County Special Flood Hazard Area (SFHA) Zone D as shown on Plate A-9.

- < **Collapsible soils.** Collapsible soil generally consists of dry, loose, low-density material that have the potential collapse and compact (decrease in volume) when subjected to the addition of water or excessive loading. Soils found to be most susceptible to collapse include loess (fine grained wind-blown soils), young alluvium fan deposits in semi-arid to arid climates, debris flow deposits and residual soil deposits. Due to the dense nature of the subsurface soils, the potential for hydro-collapse of the subsurface soils at this project site is considered very low.
- < **Expansive soils.** The near surface soils at the project site consist of sandy silts, silty sands and sands which are non-expansive.

3.8 Liquefaction

Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations. Four conditions are generally required for liquefaction to occur:

- (1) the soil must be saturated (relatively shallow groundwater);
- (2) the soil must be loosely packed (low to medium relative density);
- (3) the soil must be relatively cohesionless (not clayey); and
- (4) groundshaking of sufficient intensity must occur to function as a trigger mechanism.

Liquefaction Induced Settlements: *Based on dense nature of the subsurface granular soil and lack of groundwater in the upper 50 feet, liquefaction is not expected to occur at the project site.*

Mitigation: Liquefaction is not expected to occur at the project site; therefore, mitigation for liquefaction is not required at the site.

3.9 Seismic Settlement

An evaluation of the non-liquefaction seismic settlement potential was performed using the relationships developed by Tokimatsu and Seed (1984, 1987) for dry sands. This method is an empirical approach to quantify seismic settlement using SPT blow counts and PGA estimates from the probabilistic seismic hazard analysis. The soils beneath the site consist primarily of dense to very dense silty sands and sands which are not expected to experience seismic settlement during strong seismic events. A computer printout of the seismic settlement analysis is provided in Appendix D.

3.10 Hydro-consolidation

In arid climatic regions, granular soils have a potential to collapse upon wetting. This collapse (hydroconsolidation) phenomena is the result of the lubrication of soluble cements (carbonates) in the soil matrix causing the soil to densify from its loose configuration during deposition. Based on our experience in the vicinity of the project site and the site soils are dense to very dense in nature, there is a slight risk of collapse upon inundation from the site. Therefore, development of building foundation is not required to include provisions for mitigating the hydroconsolidation caused by soil saturation from landscape irrigation or broken utility lines.

3.11 Regional Subsidence

The project site is located in Riverside County designated area susceptible to subsidence (Plate A-8). The risk of regional subsidence at the project site is considered low.

Section 4

DESIGN CRITERIA**4.1 Site Preparation**

Pre-grade Meeting: Prior to site preparation, a meeting should be held at the site with as a minimum, the owner's representative, grading contractor and geotechnical engineer in attendance.

Clearing and Grubbing: All surface improvements, debris and/or vegetation including grass, bushes, and weeds on the site at the time of construction should be removed from the construction area. Root balls should be completely excavated. Organic stripping should be hauled from the site and not used as fill. *Any trash, construction debris, concrete slabs, old pavement, landfill, and buried obstructions such as old foundations and utility lines exposed during rough grading should be traced to the limits of the foreign materials and removed. [Abandoned pipes should be traced and removed or filled with concrete.* Any excavations resulting from site clearing and grubbing should be dish-shaped to the lowest depth of disturbance and backfilled with engineered fill.

Mass Grading: Prior to placing any fills, the surface 12 inches of soil should be removed, the exposed surface uniformly moisture conditioned to a depth of 8 inches by discing and wetting to at least 2% over optimum moisture, and re-compacted to at least 90% of ASTM D1557 maximum density. Native soils may be used for mass grading, placed in 6 to 8 inches maximum lifts, uniformly moisture conditioned to a depth of 8 inches by discing and wetting to within 2% of optimum moisture, and re-compacted to at least 90% of ASTM D1557 maximum density.

Building Pad Preparation for Foundations: The existing surface soil within the building pad area(s) should be removed to 18 inches below the lowest foundation grade or 36 inches below the original grade (whichever is deeper), extending five feet beyond all exterior wall/column lines (including adjacent concreted areas). The exposed sub-grade should be scarified to a depth of 6 to 8 inches, uniformly moisture conditioned to within 2% of optimum moisture, and re-compacted to at least 90% of ASTM D1557 maximum density.

Auxiliary Structures Foundation Preparation: Auxiliary structures such as free standing or retaining walls should have footings extended to a minimum of 18 inches below grade. The existing soil beneath the structure foundation prepared in the manner described for the building pad except the preparation needs only to extend 18 inches below and beyond the footing.

Street and Parking Lot Subgrade Preparation: The native soils in street areas should be removed and recompacted to 12 inches below the design subgrade elevation. Engineered fill in street areas should be uniformly moisture conditioned to within 2% of optimum moisture, placed in layers not more than 6 to 8 inches in thickness and mechanically compacted to a minimum of 90% of the ASTM D1557 maximum dry density.

Sidewalk and Concrete Hardscape Areas: In areas other than the building pad which are to receive concrete slabs, the ground surface should be over-excavated to a depth of 12 inches, uniformly moisture conditioned to within 2% of optimum moisture, and re-compacted to at least 90% of ASTM D1557 maximum density.

The on-site soils are suitable for use as compacted fill and utility trench backfill. Imported fill soil (if required) should be similar to onsite soil or non-expansive, granular soil meeting the USCS classifications of SM, SP-SM, or SW-SM with a maximum rock size of 6 inches and no less than 5% passing the No. 200 sieve. ***The geotechnical engineer should approve imported fill soil sources before hauling material to the site.*** Native and imported materials should be placed in lifts no greater than 8 inches in loose thickness, uniformly moisture conditioned to within 2% of optimum moisture, and re-compacted to at least 90% of ASTM D1557 maximum density.

Moisture Control and Drainage: The moisture condition of the building pad should be maintained during trenching and utility installation until concrete is placed or should be rewetted before initiating delayed construction. If soil drying is noted, a 2 to 3 inches depth of water may be used in the bottom of footings to restore footing subgrade moisture and reduce potential edge lift.

Adequate site drainage is essential to future performance of the project. Infiltration of excess irrigation water and stormwaters can adversely affect the performance of the subsurface soil at the site. Positive drainage should be maintained away from all structures (5% for 5 feet minimum across unpaved areas) to prevent ponding and subsequent saturation of the native soil. Gutters and downspouts may be considered as a means to convey water away from foundations.

Observation and Density Testing: All site preparation and fill placement should be continuously observed and tested by a representative of a qualified geotechnical engineering firm. Full-time observation services during the excavation and scarification process is necessary to detect undesirable materials or conditions and soft areas that may be encountered in the construction area. The geotechnical firm that provides observation and testing during construction shall assume the responsibility of "*geotechnical engineer of record*" and, as such, shall perform additional tests and investigation as necessary to satisfy themselves as to the site conditions and the geotechnical parameters for site development.

4.2 Utility Trench Backfill

On-site soil free of debris, vegetation, and other deleterious matter may be suitable for use as utility trench backfill. Backfill within roadway should, at a minimum, conform to County of Riverside Standard No. 818 – Utility Trench Backfill (Plate E-1 – Appendix E).

Backfill within roadways should be placed in layers not more than 6 to 8 inches in thickness, uniformly moisture conditioned to within 2% of optimum moisture and mechanically compacted to a minimum of 90% of the ASTM D1557 maximum dry density except for the top 12 inches of the trench which shall be compacted to at least 95%. Native backfill should only be placed and compacted after encapsulating buried pipes with suitable bedding and pipe envelope material.

Pipe envelope/bedding should either be clean sand (Sand Equivalent $SE > 30$). Precautions should be taken in the compaction of the backfill to avoid damage to the pipes and structures.

4.3 Foundations and Settlements

Shallow column footings and continuous wall footings are suitable to support the structures provided they are founded on a layer of properly prepared and compacted soil as described in Section 4.1. The foundations may be designed using an allowable soil bearing pressure of 1,800 psf. The allowable soil pressure may be increased by 20% for each foot of embedment depth in excess of 18 inches and by one-third for short term loads induced by winds or seismic events. The maximum allowable soil pressure at increased embedment depths shall not exceed 2,200 psf.

All exterior and interior foundations should be embedded a minimum of 18 inches below the building support pad or lowest adjacent final grade, whichever is deeper. Continuous wall footings should have a minimum width of 12 inches. Isolated column footings should have a minimum width of 24 inches. *Recommended concrete reinforcement and sizing for all footings should be provided by the structural engineer.*

Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings and concrete slabs. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure of 300 pcf to resist lateral loadings. The top one foot of embedment should not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.35 may also be used at the base of the footings to resist lateral loading.

Foundation movement under the estimated static loadings and seismic site conditions are estimated to not exceed $\frac{3}{4}$ inch with differential movement of about two-thirds of total movement for the loading assumptions stated above when the subgrade preparation guidelines given above are followed. Foundation movements under the seismic loading due to liquefaction and/or dry settlement, and collapse potential are provided in Section 3.9 and 3.10 of this report.

4.4 Slabs-On-Grade

Concrete slabs and flatwork should be a minimum of 5 inches thick. Concrete floor slabs may either be monolithically placed with the foundation or dowelled after footing placement. The concrete slabs may be placed on granular subgrade that has been compacted at least 90% relative compaction (ASTM D1557).

American Concrete Institute (ACI) guidelines (ACI 302.1R-04 Chapter 3, Section 3.2.3) provide recommendations regarding the use of moisture barriers beneath concrete slabs. The concrete floor slabs should be underlain by a 10-mil polyethylene vapor retarder that works as a capillary break to reduce moisture migration into the slab section. All laps and seams should be overlapped 6-inches or as recommended by the manufacturer. The vapor retarder should be protected from puncture. The joints and penetrations should be sealed with the manufacturer's recommended adhesive, pressure-sensitive tape, or both. The vapor retarder should extend a minimum of 12

inches into the footing excavations. The vapor retarder may lie directly on the compacted granular subgrade with 2 inches of clean sand cover.

Placing sand over the vapor retarder may increase moisture transmission through the slab, because it provides a reservoir for bleed water from the concrete to collect. The sand placed over the vapor retarder may also move and mound prior to concrete placement, resulting in an irregular slab thickness. For areas with moisture sensitive flooring materials, ACI recommends that concrete slabs be placed without a sand cover directly over the vapor retarder, provided that the concrete mix uses a low-water cement ratio and concrete curing methods are employed to compensate for release of bleed water through the top of the slab. The vapor retarder should have a minimum thickness of 15-mil (Stego-Wrap or equivalent).

Concrete slab and flatwork reinforcement should consist of chaired rebar slab reinforcement (minimum of No. 4 bars at 18-inch centers, both horizontal directions) placed at slab mid-height to resist potential swell forces and cracking. *Slab thickness and steel reinforcement are minimums only and should be verified by the structural engineer/designer knowing the actual project loadings.* The construction joint between the foundation and any mowstrips/sidewalks placed adjacent to foundations should be sealed with a polyurethane based non-hardening sealant to prevent moisture migration between the joint.

Control joints should be provided in all concrete slabs-on-grade at a maximum spacing (in feet) of 2 to 3 times the slab thickness (in inches) as recommended by American Concrete Institute (ACI) guidelines. All joints should form approximately square patterns to reduce randomly oriented contraction cracks. Contraction joints in the slabs should be tooled at the time of the pour or sawcut ($\frac{1}{4}$ of slab depth) within 6 to 8 hours of concrete placement. Construction (cold) joints in foundations and area flatwork should either be thickened butt-joints with dowels or a thickened keyed-joint designed to resist vertical deflection at the joint. All joints in flatwork should be sealed to prevent moisture, vermin, or foreign material intrusion. Precautions should be taken to prevent curling of slabs in this arid desert region (refer to ACI guidelines).

4.5 Concrete Mixes and Corrosivity

Selected chemical analyses for corrosivity were conducted on bulk samples of the near surface soil from the project site (Plate C-2). The native soils were found to have low (S0) levels of sulfate ion concentration (257 ppm). Sulfate ions in high concentrations can attack the cementitious material in concrete, causing weakening of the cement matrix and eventual deterioration by raveling. The following table provides American Concrete Institute (ACI) recommended cement types, water-cement ratio and minimum compressive strengths for concrete in contact with soils:

Table 4. Concrete Mix Design Criteria due to Soluble Sulfate Exposure

| Sulfate Exposure Class | Water-soluble Sulfate (SO ₄) in soil, ppm | Cement Type | Maximum Water-Cement Ratio by weight | Minimum Strength f _c (psi) |
|------------------------|---|-------------------|--------------------------------------|---------------------------------------|
| S0 | 0-1,000 | – | – | – |
| S1 | 1,000-2,000 | II | 0.50 | 4,000 |
| S2 | 2,000-20,000 | V | 0.45 | 4,500 |
| S3 | Over 20,000 | V (plus Pozzolon) | 0.45 | 4,500 |

Note: From ACI 318-14 Table 19.3.1.1 and Table 19.3.2.1

A minimum of 3,000 psi concrete of Type II Portland Cement with a maximum water-cement ratio of 0.50 (by weight) should be placed in contact with native soil on this project (sitework including streets, flatwork, sidewalks, driveways, patios, and foundations).

A minimum concrete cover of three (3) inches is recommended around steel reinforcing or embedded components (anchor bolts, hold-downs, etc.) exposed to native soil or landscape water (to 18 inches above grade). The concrete should also be thoroughly vibrated during placement. Admixtures may be required to allow placement of this low water/cement ratio concrete. Thorough concrete consolidation and hard trowel finishes should be used due to the aggressive soil exposure.

The native soil has low levels of chloride ion concentration (100 ppm). Chloride ions can cause corrosion of reinforcing steel, anchor bolts and other buried metallic conduits. Resistivity determinations on the soil indicate very potential for metal loss because of electrochemical corrosion processes. Mitigation of the corrosion of steel can be achieved by using steel pipes coated with epoxy corrosion inhibitors, asphaltic and epoxy coatings, cathodic protection or by encapsulating the portion of the pipe lying above groundwater with a minimum of 3 inches of densely consolidated concrete. *No metallic water pipes or conduits should be placed below foundations.*

Foundation designs shall provide a minimum concrete cover of three (3) inches around steel reinforcing or embedded components (anchor bolts, etc.) exposed to native soil or landscape water (to 18 inches above grade). If the 3-inch concrete edge distance cannot be achieved, all embedded steel components (anchor bolts, etc.) shall be epoxy coated for corrosion protection (in accordance with ASTM D3963/A934) or a corrosion inhibitor and a permanent waterproofing membrane shall be placed along the exterior face of the exterior footings. *Hold-down straps should not be used at foundation edges due to corrosion of metal at its protrusion from the slab edge.* Additionally, the concrete should be thoroughly vibrated at footings during placement to decrease the permeability of the concrete.

Copper water piping (except for trap primers) should not be placed under floor slabs. All copper piping within 18 inches of ground surface shall be wrapped with two layers of 10 mil plumbers tape or sleeved with PVC piping to prevent contact with soil. The trap primer pipe shall be completely encapsulated in a PVC sleeve and Type K copper should be utilized if polyethylene tubing cannot be used. Pressurized waterlines are not allowed under the floor slab. Fire protection piping (risers) should be placed outside of the building foundation.

Landmark does not practice corrosion engineering. We recommend that a qualified corrosion engineer evaluate the corrosion potential on metal construction materials and concrete at the site to obtain final design recommendations.

4.6 Excavations

All site excavations should conform to CalOSHA requirements for Type C soil. The contractor is solely responsible for the safety of workers entering trenches. Temporary excavations with depths of 4 feet or less may be cut nearly vertical for short duration. Excavations deeper than 4 feet will require shoring or slope inclinations in conformance to CAL/OSHA regulations for Type C soil. Surcharge loads of stockpiled soil or construction materials should be set back from the top of the slope a minimum distance equal to the height of the slope. All permanent slopes should not be steeper than 3:1 to reduce wind and rain erosion. Protected slopes with ground cover may be as steep as 2:1. However, maintenance with motorized equipment may not be possible at this inclination.

4.7 Seismic Design

This site is located in the seismically active southern California area and the site structures are subject to strong ground shaking due to potential fault movements along the San Andreas fault. Engineered design and earthquake-resistant construction are the common solutions to increase safety and development of seismic areas. Designs should comply with the latest edition of the CBC for Site Class C using the seismic coefficients given in Section 3.6 and Table 2 of this report.

4.8 Pavements

Pavements should be designed according to the 2020 Caltrans Highway Design Manual or other acceptable methods. Traffic indices were not provided by the project engineer or owner; therefore, we have provided structural sections for several traffic indices for comparative evaluation. The public agency or design engineer should decide the appropriate traffic index for the site. Maintenance of proper drainage is necessary to prolong the service life of the pavements.

Based on the current Caltrans method, an estimated R-value of 50 for the subgrade soil and assumed traffic indices, the following table provides our estimates for asphaltic concrete (AC) and Portland Cement Concrete (PCC) pavement sections.

PAVEMENT STRUCTURAL SECTIONS

R-Value of Subgrade Soil - 50 (estimated)

Design Method - CALTRANS 2020

| Traffic Index (assumed) | Flexible Pavements | | Rigid (PCC) Pavements | |
|----------------------------|------------------------------------|--------------------------------|--------------------------|--------------------------------|
| | Asphaltic Concrete Thickness (in.) | Aggregate Base Thickness (in.) | Concrete Thickness (in.) | Aggregate Base Thickness (in.) |
| 5.0 | 3.0 | 4.0 | 6.0 | 4.0 |
| 6.0 | 3.5 | 4.0 | 6.0 | 6.0 |
| 7.0 | 4.5 | 4.0 | 6.0 | 8.0 |
| 8.0 | 5.0 | 5.5 | 8.0 | 8.0 |

Notes:

- 1) Asphaltic concrete shall be Caltrans, Type B, $\frac{3}{4}$ inch maximum medium grading, ($\frac{1}{2}$ inch for parking areas) medium grading with PG70-10 asphalt concrete, compacted to a minimum of 95% of the 50-blow Marshall density (ASTM D1559).
- 2) Aggregate base shall conform to Caltrans Class 2 ($\frac{3}{4}$ in. maximum), compacted to a minimum of 95% of ASTM D1557 maximum dry density.
- 3) Place pavements on 12 inches of moisture conditioned (at least 2% of over optimum) native soil compacted to a minimum of 95% of the maximum dry density determined by ASTM D1557, or the governing agency requirements.
- 4) Portland cement concrete for pavements should have Type V cement, a minimum compressive strength of 4,500 psi at 28 days, and a maximum water-cement ratio of 0.45.

Final pavement sections may need to be determined by sampling and R-Value testing during grading operations when actual subgrade soils are exposed.

Section 5

LIMITATIONS AND ADDITIONAL SERVICES**5.1 Limitations**

The findings and professional opinions within this report are based on current information regarding the proposed new fire station No. 49 located on the north side of Tamarisk Drive east of Parkview Drive in the unincorporated community of Desert Center, California. The conclusions and professional opinions of this report are invalid if:

- < Structural loads change from those stated or the structures are relocated.
- < The Additional Services section of this report is not followed.
- < This report is used for adjacent or other property.
- < Changes of grade or groundwater occur between the issuance of this report and construction other than those anticipated in this report.
- < Any other change that materially alters the project from that proposed at the time this report was prepared.

This report was prepared according to the generally accepted *geotechnical engineering standards of practice* that existed in Riverside County at the time the report was prepared. No express or implied warranties are made in connection with our services.

Findings and professional opinions in this report are based on selected points of field exploration, geologic literature, limited laboratory testing, and our understanding of the proposed project. Our analysis of data and professional opinions presented herein are based on the assumption that soil conditions do not vary significantly from those found at specific exploratory locations. Variations in soil conditions can exist between and beyond the exploration points or groundwater elevations may change. The nature and extend of such variations may not become evident until, during or after construction. If variations are detected, we should immediately be notified as these conditions may require additional studies, consultation, and possible design revisions.

Environmental or hazardous materials evaluations were not performed by *LandMark Consultants, Inc.* for this project. *LandMark Consultants, Inc.* will assume no responsibility or liability whatsoever for any claim, damage, or injury which results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials.

The client has responsibility to see that all parties to the project including designer, contractor, and subcontractor are made aware of this entire report within a reasonable time from its issuance. This report should be considered invalid for periods after two years from the date of report issuance without a review of the validity of the findings and professional opinions by our firm, because of potential changes in the Geotechnical Engineering Standards of Practice.

This report is based upon government regulations in effect at the time of preparation of this report. Future changes or modifications to these regulations may require modification of this report. Land or facility use, on and off-site conditions, regulations, design criteria, procedures, or other factors may change over time, which may require additional work. Any party other than the client who wishes to use this report shall notify *LandMark Consultants, Inc.* of such intended use. Based on the intended use of the report, *LandMark Consultants, Inc.* may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release *LandMark Consultants, Inc.* from any liability resulting from the use of this report by any unauthorized party and client agrees to defend, indemnify, and hold *LandMark Consultants, Inc.* harmless from any claim or liability associated with such unauthorized use or non-compliance.

This report contains information that may be useful in the preparation of contract specifications. However, the report is not worded in such a manner that we recommend its use as a construction specification document without proper modification. The use of information contained in this report for bidding purposes should be done at the contractor's option and risk.

5.2 Plan Review

Landmark Consultants, Inc. should be retained during development of design and construction documents to check that the geotechnical professional opinions are appropriate for the proposed project and that the geotechnical professional opinions are properly interpreted and incorporated into the documents. *Landmark Consultants, Inc.* should have the opportunity to review the final design plans and specifications for the project prior to the issuance of such for bidding.

Governmental agencies may require review of the plans by the geotechnical engineer of record for compliance to the geotechnical report.

5.3 Additional Services

We recommend that **Landmark Consultants, Inc.** be retained to provide the tests and observations services during construction. *The geotechnical engineering firm providing such tests and observations shall become the geotechnical engineer of record and assume responsibility for the project.*

Landmark Consultants, Inc. recommendations for this site are, to a high degree, dependent upon appropriate quality control of subgrade preparation, fill placement, and foundation construction. Accordingly, the findings and professional opinions in this report are made contingent upon the opportunity for Landmark Consultants, Inc. to observe grading operations and foundation excavations for the proposed construction.

If parties other than Landmark Consultants, Inc. are engaged to provide observation and testing services during construction, such parties must be notified that they will be required to assume complete responsibility as the geotechnical engineer of record for the geotechnical phase of the project by concurring with the recommendations in this report and/or by providing alternative recommendations.

Additional information concerning the scope and cost of these services can be obtained from our office.

Section 6

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TABLES

Table 1
Summary of Characteristics of Closest Known Active Faults

| Fault Name | Approximate Distance (miles) | Approximate Distance (km) | Maximum Moment Magnitude (Mw) | Fault Length (km) | Slip Rate (mm/yr) |
|--------------------------------------|------------------------------|---------------------------|-------------------------------|-------------------|-------------------|
| Hot Springs * | 27.5 | 44.1 | | | |
| San Andreas - Coachella | 32.2 | 51.6 | 7.2 | 96 ± 10 | 25 ± 5 |
| Blue Cut * | 34.5 | 55.2 | | | |
| Elmore Ranch | 38.4 | 61.4 | 6.6 | 29 ± 3 | 1 ± 0.5 |
| Pisgah Mtn. - Mesquite Lake | 38.6 | 61.7 | 7.3 | 89 ± 9 | 0.6 ± 0.4 |
| Pinto Mtn. | 41.9 | 67.1 | 7.2 | 74 ± 7 | 2.5 ± 2 |
| Indio Hills * | 43.7 | 69.9 | | | |
| San Andreas - San Bernardino (South) | 48.6 | 77.7 | 7.4 | 103 ± 10 | 30 ± 7 |
| San Andreas - San Bernardino (North) | 48.6 | 77.7 | 7.5 | 103 ± 10 | 24 ± 6 |
| San Jacinto - Anza | 53.4 | 85.4 | 7.2 | 91 ± 9 | 12 ± 6 |
| Brawley * | 54.8 | 87.7 | | | |
| Eureka Peak | 55.4 | 88.7 | 6.4 | 19 ± 2 | 0.6 ± 0.4 |
| Imperial | 55.7 | 89.1 | 7 | 62 ± 6 | 20 ± 5 |
| Superstition Hills | 56.1 | 89.8 | 6.6 | 23 ± 2 | 4 ± 2 |
| San Jacinto - Borrego | 58.4 | 93.5 | 6.6 | 29 ± 3 | 4 ± 2 |
| San Jacinto - Coyote Creek | 60.1 | 96.1 | 6.8 | 41 ± 4 | 4 ± 2 |
| Superstition Mountain | 60.3 | 96.4 | 6.6 | 24 ± 2 | 5 ± 3 |
| Garnet Hill * | 61.7 | 98.7 | | | |
| Burnt Mtn. | 62.6 | 100.2 | 6.5 | 21 ± 2 | 0.6 ± 0.4 |
| Rico * | 63.8 | 102.1 | | | |
| S. Emerson - Copper Mtn. | 63.9 | 102.3 | 7 | 54 ± 5 | 0.6 ± 0.4 |
| Morongo * | 64.6 | 103.4 | | | |

* Note: Faults not included in CGS database.

Table 2
2019 California Building Code (CBC) and ASCE 7-16 Seismic Parameters

| | | |
|--------------------------|-------------|---------------------|
| Soil Site Class: | C | ASCE 7-16 Reference |
| Latitude: | 33.7385 N | Table 20.3-1 |
| Longitude: | -115.3913 W | |
| Risk Category: | IV | |
| Seismic Design Category: | D | |

Maximum Considered Earthquake (MCE) Ground Motion

| | | | |
|---|-----------------|---------|--|
| Mapped MCE _R Short Period Spectral Response | S _s | 0.685 g | ASCE Figure 22-1 |
| Mapped MCE _R 1 second Spectral Response | S ₁ | 0.272 g | ASCE Figure 22-2 |
| Short Period (0.2 s) Site Coefficient | F _a | 1.23 | ASCE Table 11.4-1 |
| Long Period (1.0 s) Site Coefficient | F _v | 1.50 | ASCE Table 11.4-2 |
| MCE _R Spectral Response Acceleration Parameter (0.2 s) | S _{MS} | 0.841 g | = F _a * S _s ASCE Equation 11.4-1 |
| MCE _R Spectral Response Acceleration Parameter (1.0 s) | S _{MI} | 0.408 g | = F _v * S ₁ ASCE Equation 11.4-2 |

Design Earthquake Ground Motion

| | | | | |
|---|------------------|----------|--|----------------------|
| Design Spectral Response Acceleration Parameter (0.2 s) | S _{DS} | 0.561 g | = 2/3*S _{MS} | ASCE Equation 11.4-3 |
| Design Spectral Response Acceleration Parameter (1.0 s) | S _{DI} | 0.272 g | = 2/3*S _{MI} | ASCE Equation 11.4-4 |
| Risk Coefficient at Short Periods (less than 0.2 s) | C _{RS} | 0.931 | | ASCE Figure 22-17 |
| Risk Coefficient at Long Periods (greater than 1.0 s) | C _{RI} | 0.924 | | ASCE Figure 22-18 |
| | T _L | 8.00 sec | | ASCE Figure 22-12 |
| | T _O | 0.10 sec | = 0.2*S _{DI} /S _{DS} | |
| | T _S | 0.49 sec | = S _{DI} /S _{DS} | |
| Peak Ground Acceleration | PGA _M | 0.36 g | | ASCE Equation 11.8-1 |

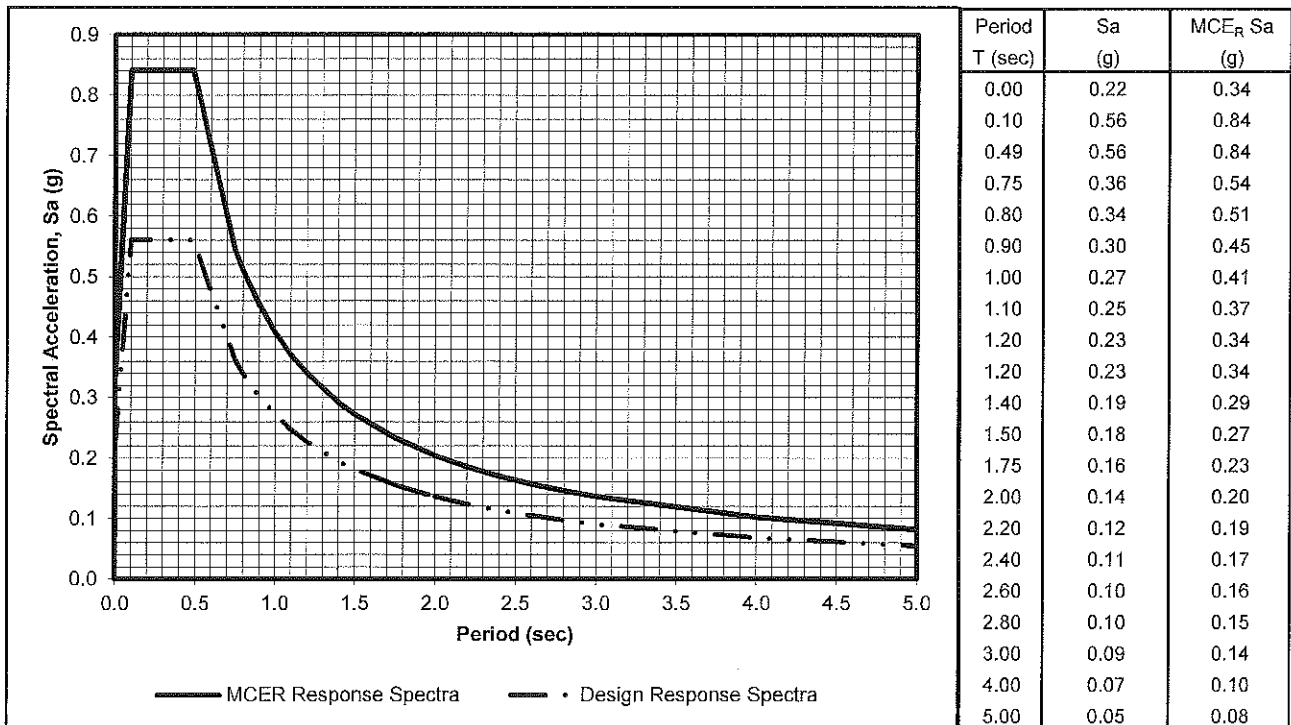
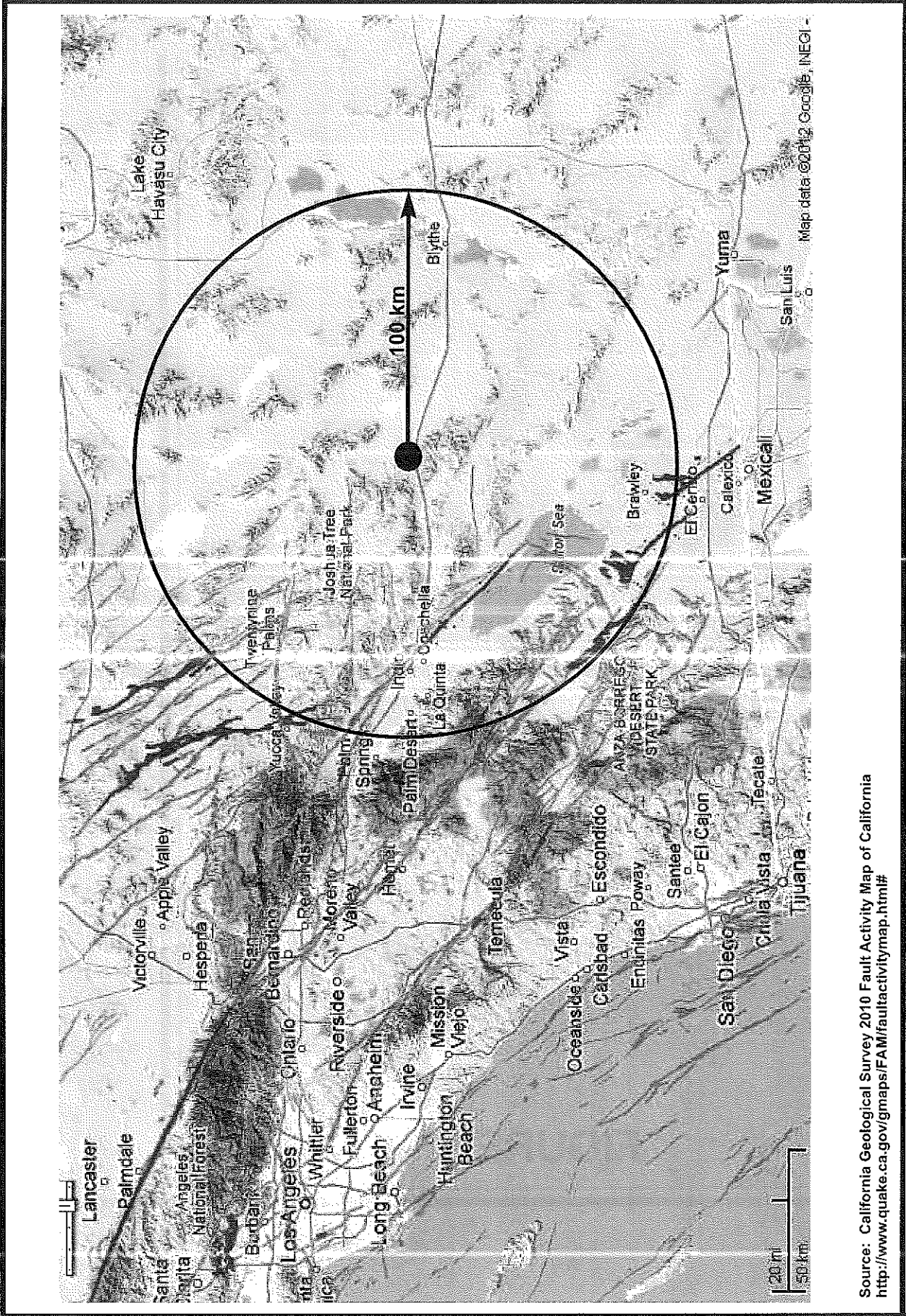


Table 3
Soil Site Class Determination per ASCE 7-16, Section 20.4
Fire Station 49 - Desert Center, CA
LCI Project No. LP21057

Boring B-1

| Sample Depth | SPT Blow Count | di/Ni | Sum di/Ni | Avg. Nch |
|--------------|----------------|-------|-----------|-----------|
| 0 | | | | |
| 2.5 | 45 | 0.06 | 0.95 | 53 |
| 5 | 47 | 0.05 | | |
| 7.5 | 48 | 0.05 | | |
| 10 | 100 | 0.03 | | |
| 15 | 53 | 0.09 | | |
| 20 | 51 | 0.10 | | |
| 25 | 65 | 0.08 | | |
| 30 | 51 | 0.10 | | |
| 35 | 47 | 0.11 | | |
| 40 | 54 | 0.09 | | |
| 45 | 49 | 0.10 | | |
| 50 | 53 | 0.09 | | |
| | | | | |

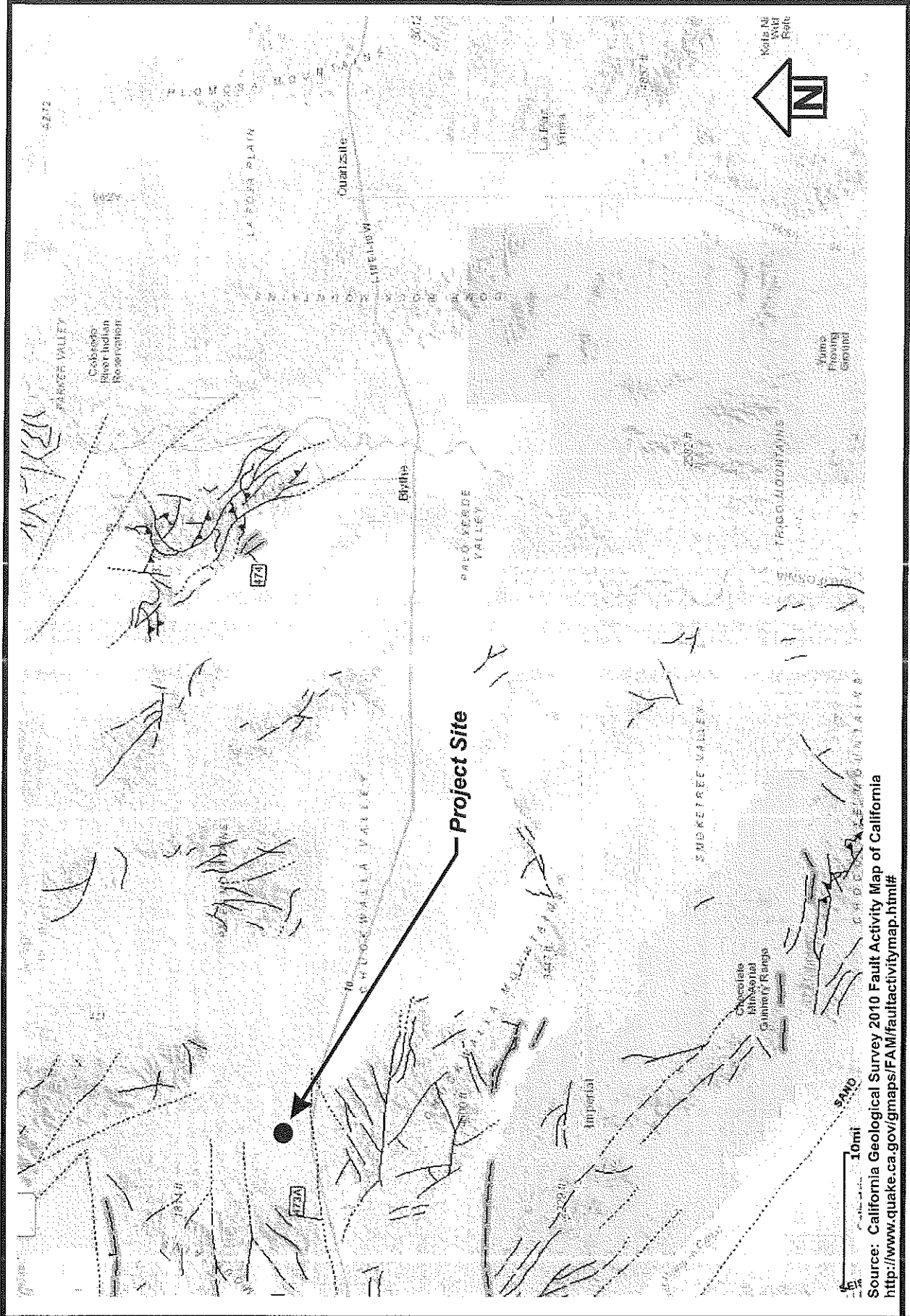
FIGURES



LANDMARK
Geo-Engineers and Geologists
Project No.: LP21057

Regional Fault Map

Figure 1



Map of Local Faults

Figure 2

LANDMARK
Geo-Engineers and Geologists

Project No.: LP21057

EXPLANATION

Fault traces on land are indicated by solid lines where well located, by dashed lines where approximately located or inferred, and by dotted lines where concealed by younger rocks or by lakes or bays. Fault traces are queried where continuation or existence is uncertain. Concealed faults in the Great Valley are based on maps of selected subsurface horizons, so locations shown are approximate and may indicate structural trend only. All offshore faults based on seismic reflection profile records are shown as solid lines where well defined, dashed where inferred, queried where uncertain.

FAULT CLASSIFICATION COLOR CODE (indicating Recency of Movement)

Fault along which historic (last 200 years) displacement has occurred and is associated with one or more of the following:

(a) a recorded earthquake with surface rupture. (Also includes are some well-defined surface breaks caused by ground shaking during earthquakes, e.g. extensive ground breakage, not on the White Wolf fault, caused by the Arvin-Tehachapi earthquake of 1962). The date of the associated earthquake is indicated. Where repeated surface ruptures on the same fault have occurred, only the date of the latest movement may be indicated, especially if earlier reports are not well documented as to location of ground breaks.

(b) fault creep slippage - slow ground displacement usually without accompanying earthquakes.

(c) displaced survey lines.

A triangle to the right or left of the date indicates termination point of observed surface displacement. Solid red triangle indicates known location of rupture termination point. Open black triangle indicates uncertain or estimated location of rupture termination point.

Date bracketed by triangles indicates local fault break.

No triangle by date indicates an intermediate point along fault break.

Fault that exhibits fault creep slippage. Hechures indicate linear extent of fault creep. Annotation (creep with leader) indicates representative locations where fault creep has been observed and recorded.

Squares on fault indicates where fault creep slippage has occurred that has been triggered by an earthquake on some other fault. Date of causative earthquake indicated. Squares to right and left of date indicate terminal points between which triggered creep slippage has occurred (creep either continuous or intermittent between these end points).

Holocene fault displacement (during past 11,700 years) without historic record. Geomorphic evidence for Holocene faulting includes sag ponds, scarps showing little erosion, or the following features in Holocene age deposits: offset stream courses; linear scarps, shutter ridges, and triangular faceted spurs. Recency of faulting offshore is based on the interpreted age of the youngest strata displaced by faulting.

Late Quaternary fault displacement (during past 700,000 years). Geomorphic evidence similar to that described for Holocene faults except features are less distinct. Faulting may be younger, but lack of younger overlying deposits precludes more accurate age classification.

Quaternary fault (age undifferentiated). Most faults of this category show evidence of displacement sometime during the past 1.6 million years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age. Unnumbered Quaternary faults were based on Fault Map of California, 1973. See Balshine, 2011, Appendix D for source date.

Pre-Quaternary fault (older than 1.6 million years) or fault without recognized Quaternary displacement. Some faults are shown in this category because the source of mapping used was of reconnaissance nature, or was not done with the object of dating fault displacements. Faults in this category are not necessarily inactive.

ADDITIONAL FAULT SYMBOLS

Bar and ball on downthrown side (relative or apparent).

Arrows along fault indicate relative or apparent direction of lateral movement.

Arrow on fault indicates direction of dip.

Low angle fault (bars on upper side). Fault surface generally dips less than 45° but locally may have been subsequently steepened. On offshore faults, bars simply indicate a reverse fault regardless of steepness or dip.

OTHER SYMBOLS

Numbers refer to annotations listed in the appendices of the accompanying report. Annotations include fault name, age of fault displacement, and percent references. Unnumbered Fault Zone maps were prepared by the Advisory Earthquake Hazard Planning Act. This Act requires the State Geologist to delineate zones to encompass faults with Holocene displacement.

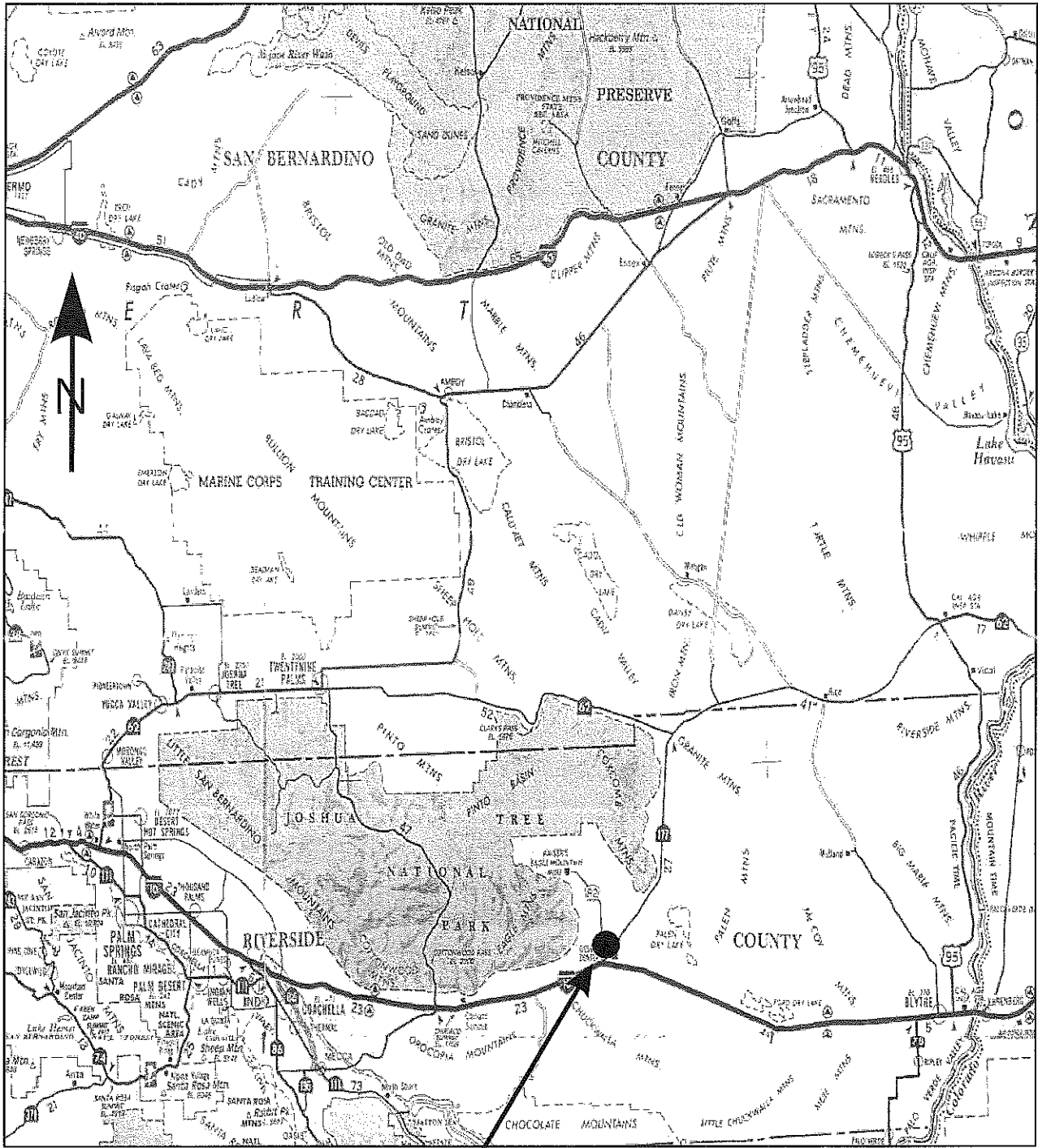
Structural discontinuity (offshore) separating differing Neogene structural domains. May indicate discontinuity between basement rocks.

Brawley Seismic Zone, a linear zone of seismicity locally up to 10 km wide associated with the releasing slip between the Imperial and San Andreas faults.

| Geologic Time Scale | Years Before Present (Approx.) | Fault Symbol | Recency of Movement | DESCRIPTION | |
|---------------------|--------------------------------|--------------|---------------------|--|--|
| | | | | ON LAND | OFFSHORE |
| Quaternary | 200 | | | Displacement during Holocene (e.g. San Andreas fault 1968). Includes areas of Holocene creep. | |
| | 11,700 | | | Displacement during Holocene (e.g. San Andreas fault 1968). Includes areas of Holocene creep. | |
| Early Quaternary | 700,000 | | | Displacement during Pleistocene (e.g. San Andreas fault 1968). Includes areas of Pleistocene creep. | |
| | 1,650,000 | | | Displacement during Pliocene (e.g. San Andreas fault 1968). Includes areas of Pliocene creep. | |
| Pre-Quaternary | 4.6 million (Age of Earth) | | | Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive. | Faults, state of Pleistocene or older age. |

*Quaternary here recognizes as extending to 2.6 Ma (Dobson and Cretzman, 2000). Quaternary faults in this map were established using the nomenclature of the latter.

APPENDIX A



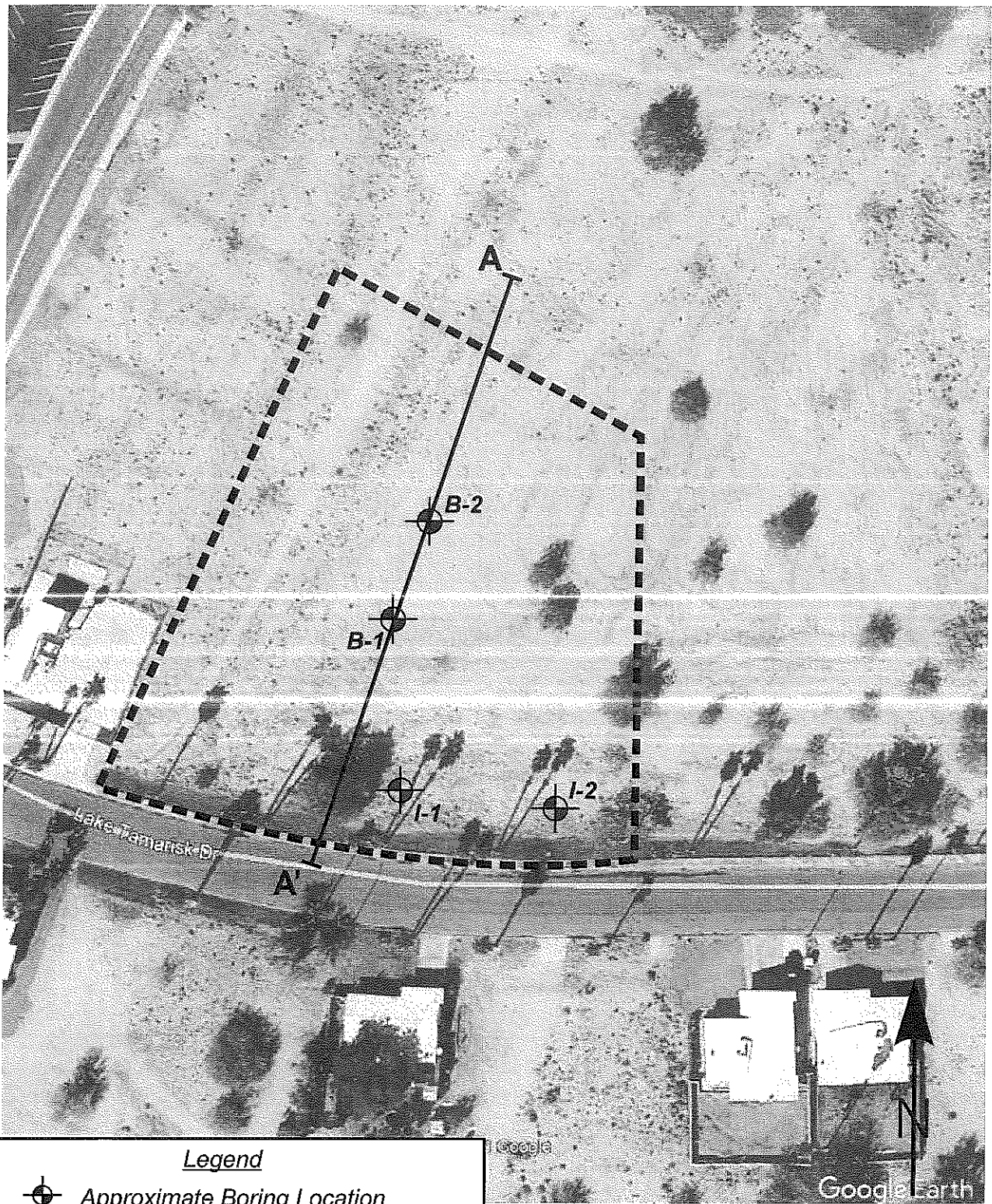
Project Site

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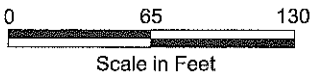
Vicinity Map

Plate
A-1



Legend

-  *Approximate Boring Location*
-  *Approximate Infiltration Test Location*

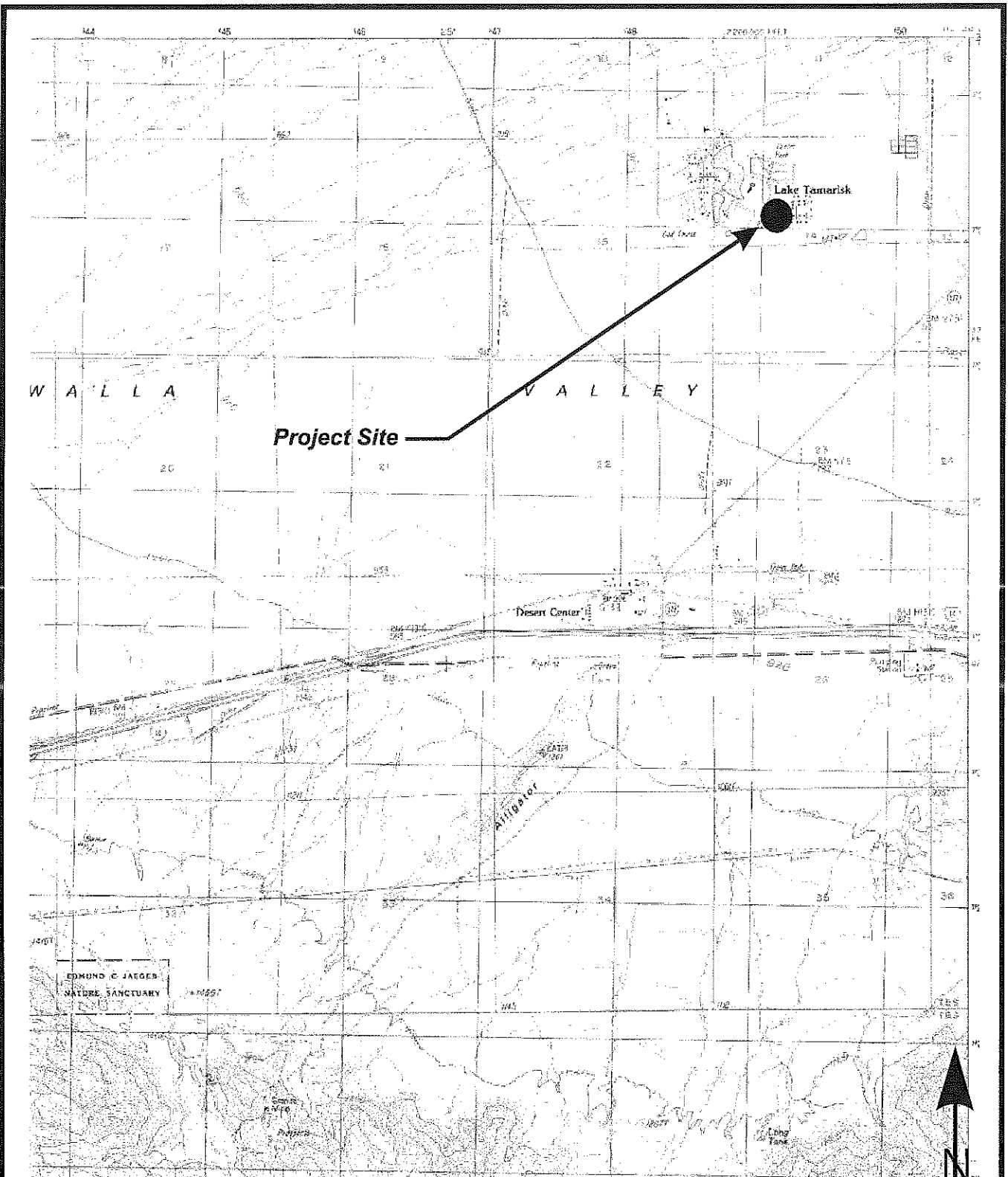


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Site and Exploration Plan

Plate
 A-2



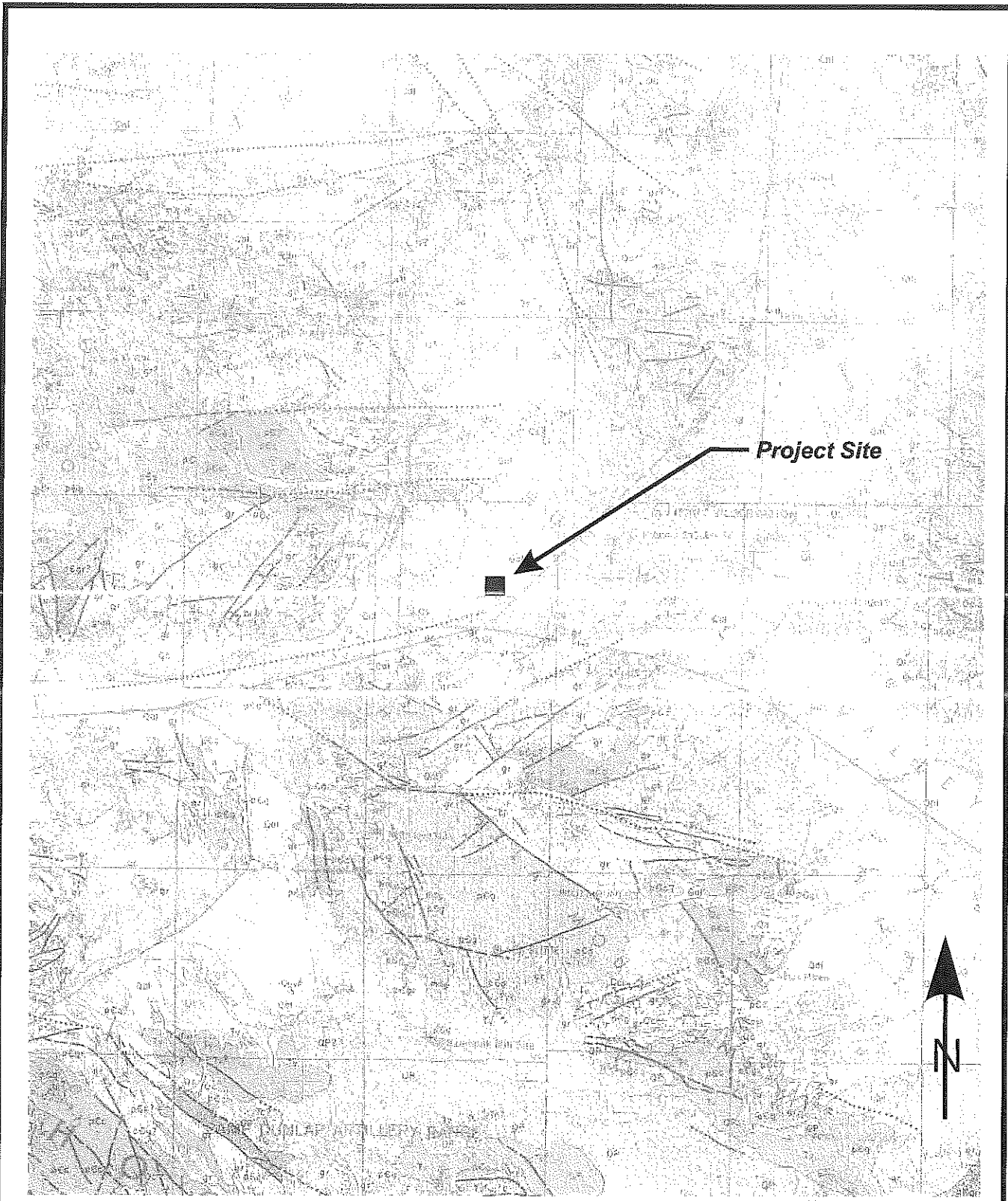
Reference: USGS Topographic Map
Desert Center, CA Quadrangle

Site Coordinates
Lat: 33.7384N
Long: -115.3915W

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Topographic Map

Plate
A-3



Geology Map of California - Salton Sea Sheet (1:250,000)

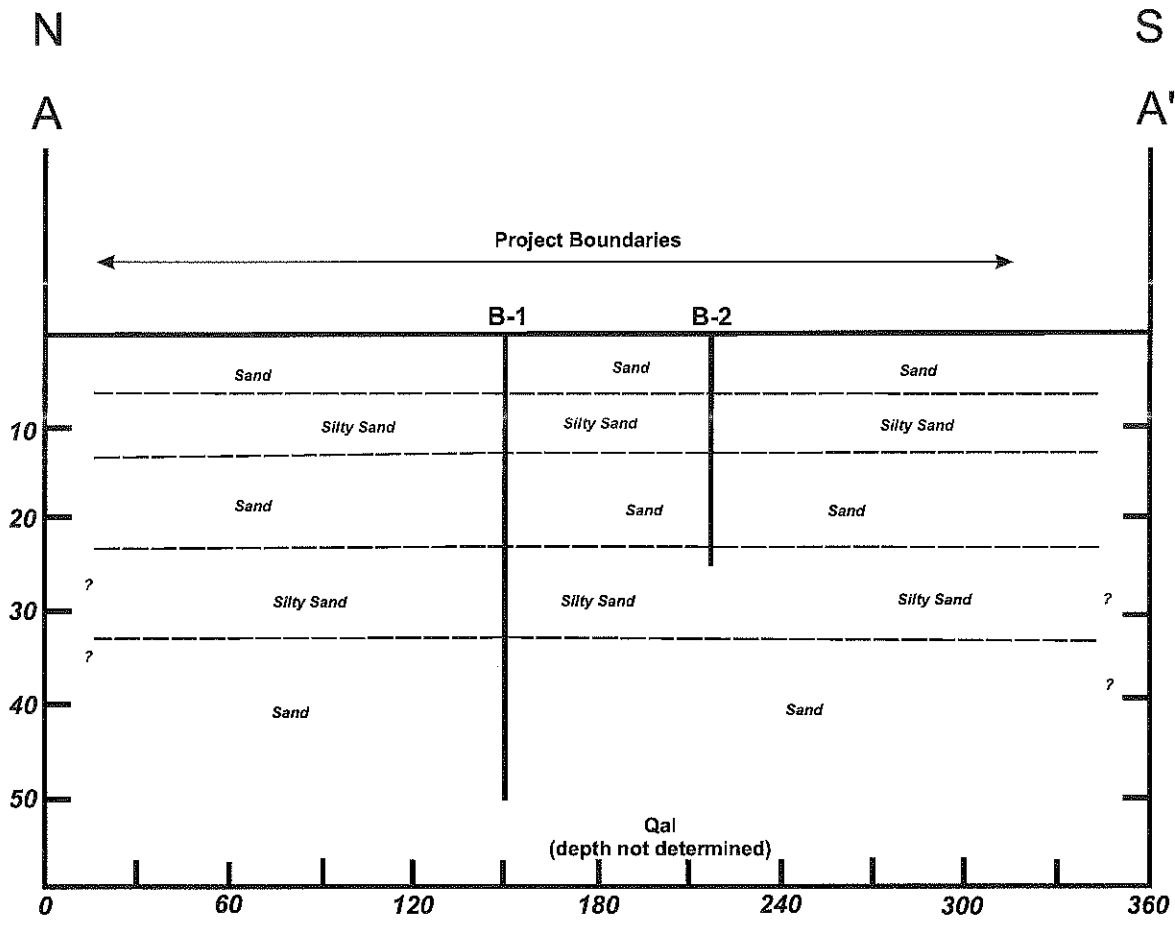
Site Coordinates
Lat: 33.7384N
Long: 115.3915W

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Regional Geologic Map

Plate
A-4



Scale
 1" = 60' Horizontal
 1" = 20' Vertical

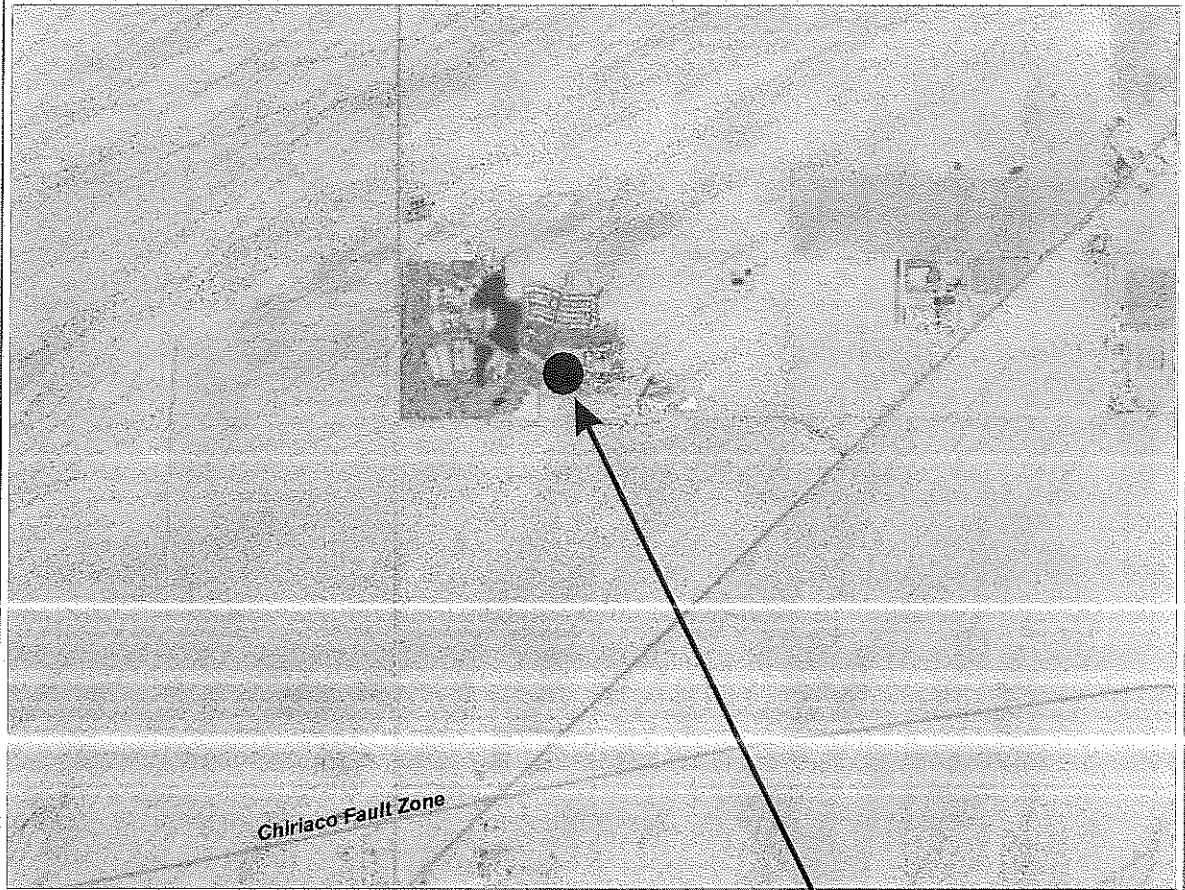
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Schematic Geologic
 Cross-section

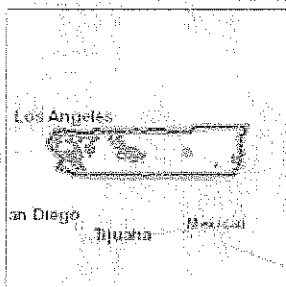
Plate
 A-5

Fault Map



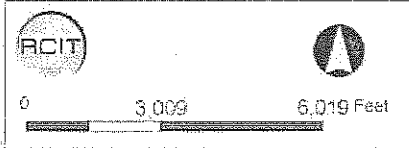
Chiriaco Fault Zone

Project Site



- Legend**
- Faults**
 - UNDEVELOPED
 - RECONSTRUCTED
 - KNOWN OR SUSPECTED
 - Fault Zones**
 - OTHER FAULT ZONE
 - COASTAL FAULT ZONE
 - EL CENTRO FAULT ZONE
 - SAN ANDREAS FAULT ZONE
 - SAN JOAQUIN FAULT ZONE

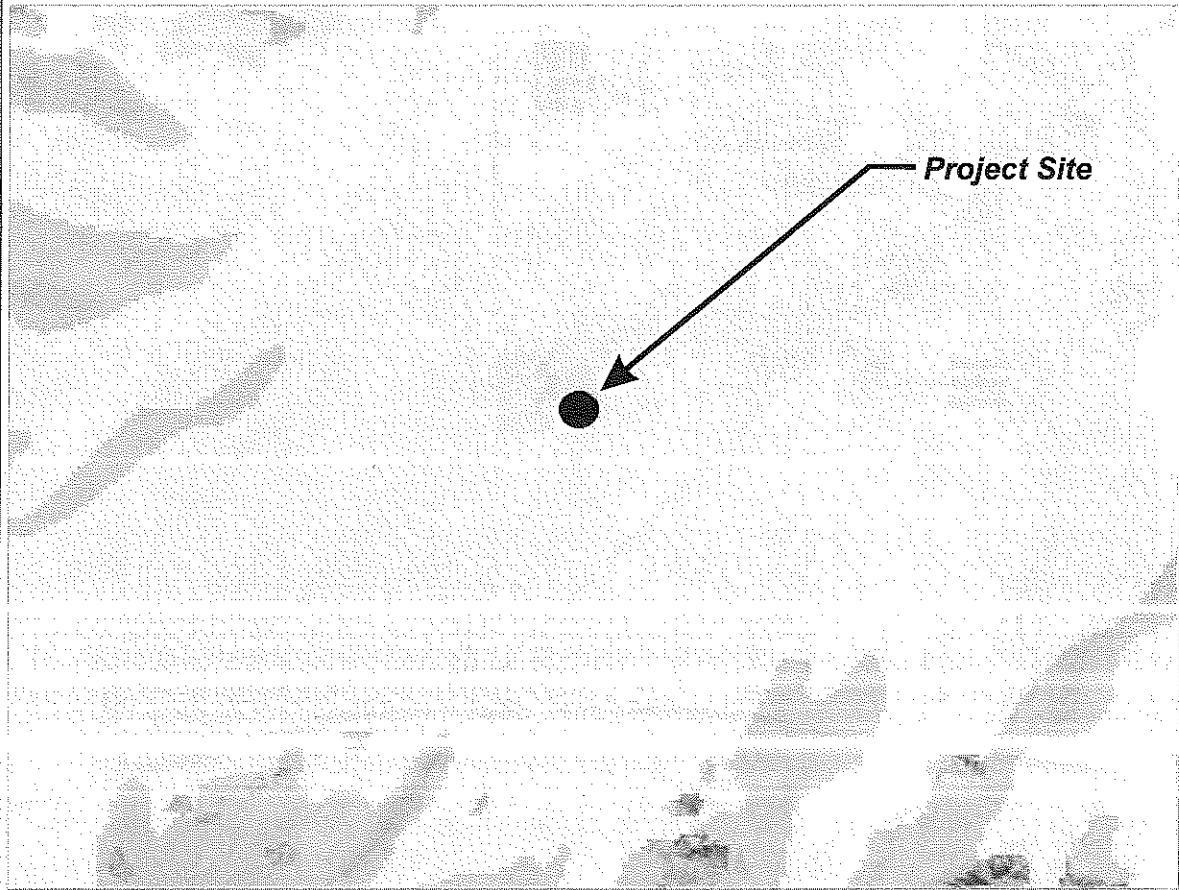
Notes



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Liquefaction Map



Los Angeles
San Diego
Tijuana
Mexico

Legend

Liquefaction

- Very Severe Liquefaction
- Severe Liquefaction
- Moderate Liquefaction
- Mild Liquefaction
- No Liquefaction

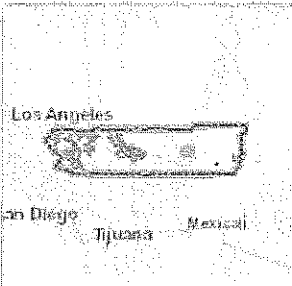
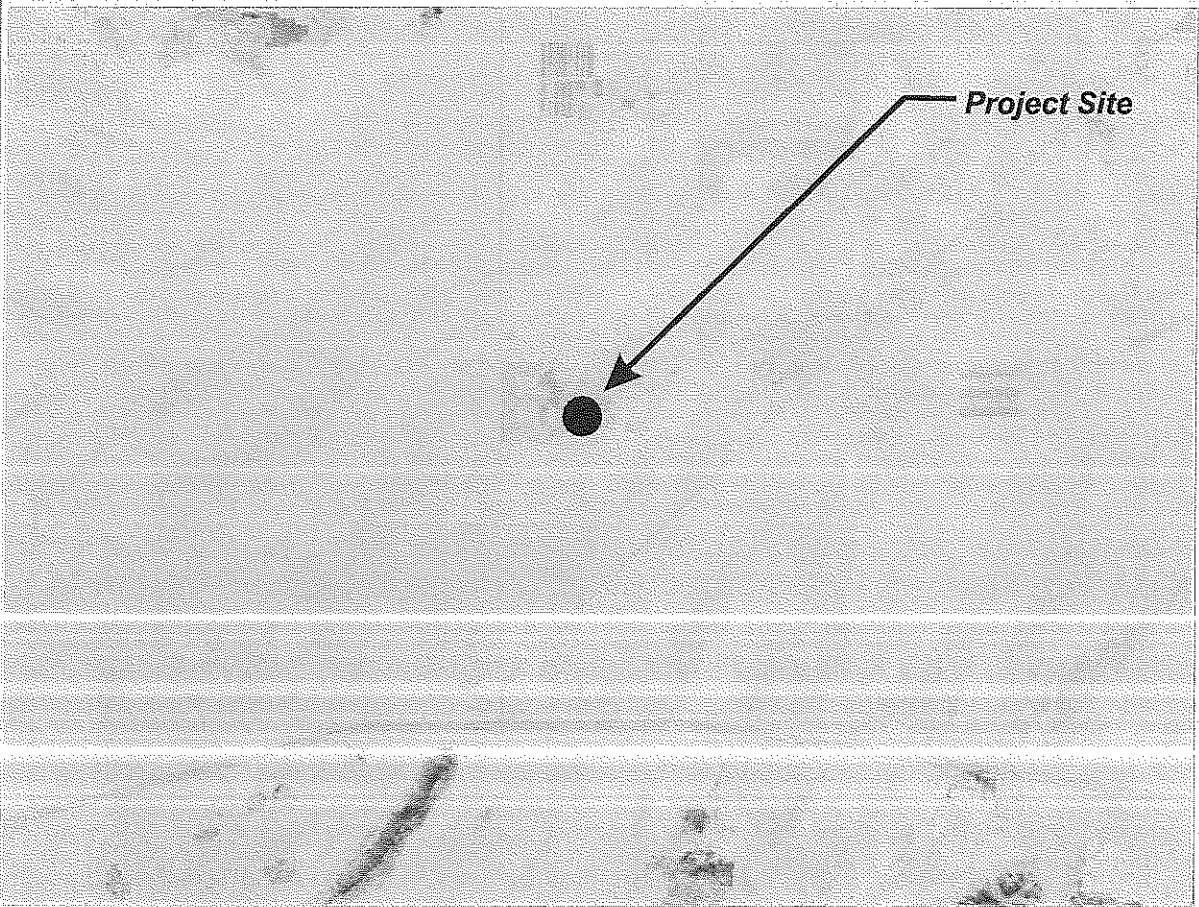
Notes

0 6,019 12,037 Feet

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Subsidence Map



- Legend**
- Subsidence
 - Over Exposed:
 - Area
 - Subsidence

Notes



0 6,019 12,037 Feet

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Riverside County GIS

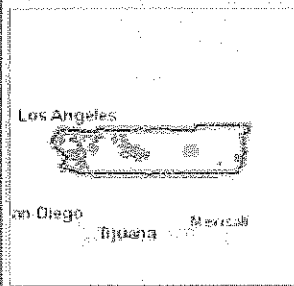
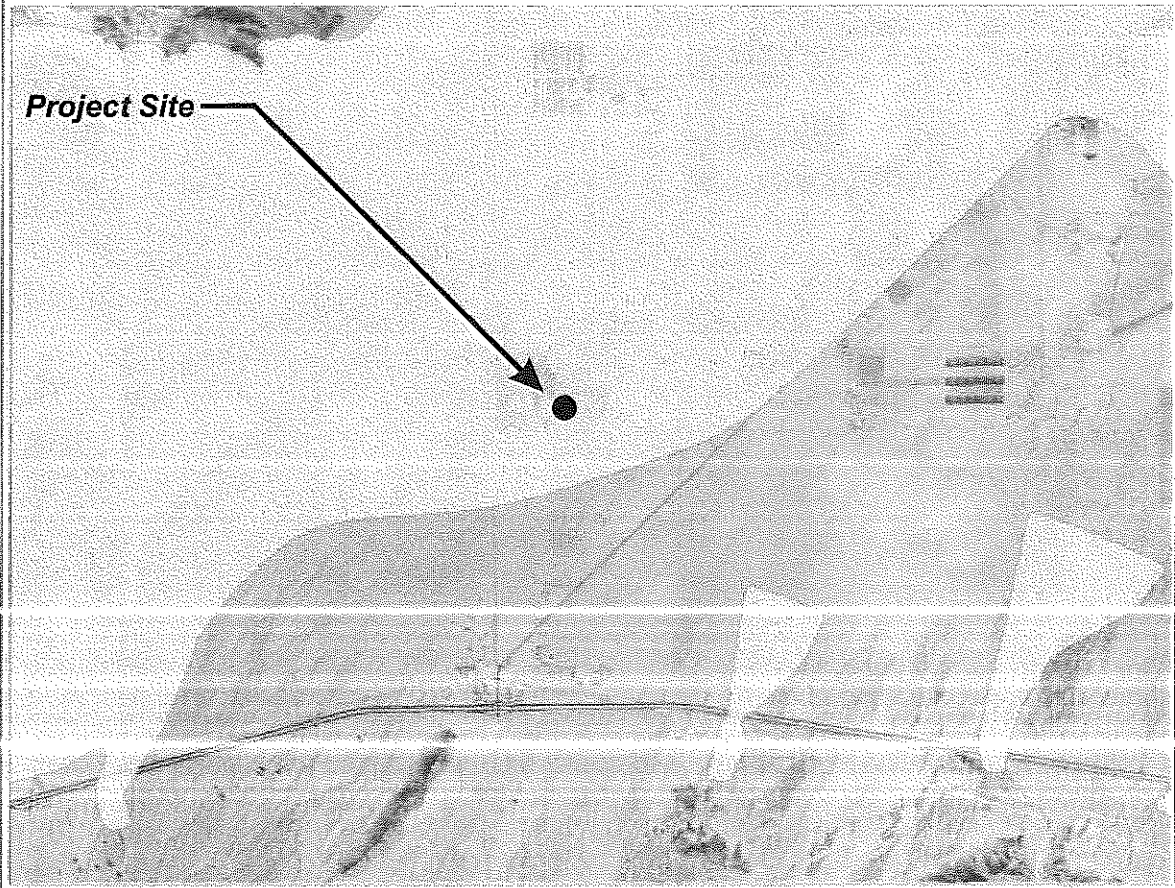


Project No.: LP21057


Riverside County
Geographic Information System (GIS)
Subsidence

Plate
A-8

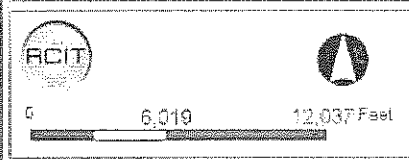
Flood Map



Legend

-  Flood

Notes



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Geo-Engineers and Geologists
Project No.: LP21057

Riverside County
Geographic Information System (GIS)
Flood Zones

Plate
A-9

APPENDIX B

| DEPTH | FIELD | | | | LOG OF BORING No. B-1 SHEET 1 OF 1 | LABORATORY | | |
|-------|--------|-------------|------------|-------------------|--|-------------------------|-------------------|------------------------------|
| | SAMPLE | USCS CLASS. | BLOW COUNT | POCKET PEN. (tsf) | | DESCRIPTION OF MATERIAL | DRY DENSITY (pcf) | MOISTURE CONTENT (% dry wt.) |
| 5 | | | 45 | | SILTY SAND (SM): Reddish brown, dry, dense, fine to coarse grained, some gravel | 122.1 | 1.3 | Passing #200 = 5.4% |
| | | | 47 | | SAND (SP-SM): Reddish brown, dry, dense, medium to coarse grained, some gravel | 125.1 | 1.5 | Passing #200 = 7.5% |
| 10 | | | 48 | | SILTY SAND (SM): Reddish brown, dry, dense to hard, fine to coarse grained, some fine gravel | 126.4 | 1.4 | Passing #200 = 14.6% |
| | | | 50/6" | | | | 2.6 | |
| 15 | | | 53 | | SAND (SP-SM): Reddish brown, dry, dense to very dense, medium to coarse grained, some gravel | 115.2 | 1.3 | |
| 20 | | | 51 | | SILTY SAND (SM): Reddish brown, dry, dense to very dense, fine to coarse grained, some fine gravel | | 2.6 | Passing #200 = 6.3% |
| | | | 61 | | | | 2.3 | |
| 25 | | | 51 | | SAND (SP-SM): Reddish brown, dry, dense to very dense, medium to coarse grained, some gravel | | 2.2 | Passing #200 = 12.8% |
| 30 | | | 47 | | | | 1.2 | |
| 35 | | | 54 | | Light brown, some pea sized gravel | | 1.2 | Passing #200 = 7.0% |
| 40 | | | 49 | | | | 1.5 | |
| 45 | | | 53 | | Groundwater was not encountered at time of drilling. This is not considered the stabilized groundwater depth as groundwater may rise to a level higher than that measured in borehole. | | 1.7 | Passing #200 = 8.8% |
| 50 | | | | | | | | |
| 55 | | | | | | | | |
| 60 | | | | | | | | |

DATE DRILLED: 3/17/21 TOTAL DEPTH: 51.5 feet DEPTH TO WATER: NA
 LOGGED BY: L. Jackson TYPE OF BIT: Hollow Stem Auger DIAMETER: 8 in.
 SURFACE ELEVATION: Approximately 725 ft HAMMER WT.: 140 lbs. DROP: 30 in.

| | | |
|---------------------|--|-----------|
| PROJECT NO. LP21057 | | PLATE B-1 |
|---------------------|--|-----------|

| DEPTH | FIELD | | | LOG OF BORING No. B-2 SHEET 1 OF 1 | LABORATORY | | | |
|-------|--------|-------------|------------|---------------------------------------|---|-------------------------|-------------------|------------------------------|
| | SAMPLE | USCS CLASS. | BLOW COUNT | | POCKET PEN. (tsf) | DESCRIPTION OF MATERIAL | DRY DENSITY (pcf) | MOISTURE CONTENT (% dry wt.) |
| 5 | | | 34 | | SAND (SP-SM): Reddish brown, dry, dense to very dense, medium to coarse grained, some gravel | 119.0 | 2.1 | Passing #200 = 8.8% |
| | | | 60 | | | 126.4 | 1.5 | |
| 10 | | | 53 | | SILTY SAND (SM): Reddish brown, dry, very dense, fine to coarse grained, some fine gravel | 103.2 | 4.3 | Passing #200 = 29.5% |
| | | | 68 | | | 122.6 | 2.5 | |
| 15 | | | 76 | | SAND (SP-SM): Reddish brown, dry, dense to very dense, medium to coarse grained, some gravel | 122.5 | 1.8 | |
| 20 | | | 44 | | | | | |
| 25 | | | 40 | | SILTY SAND (SM): Reddish brown, dry, dense, fine to coarse grained, some fine gravel | | 1.4 | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |
| 40 | | | | | | | | |
| 45 | | | | | | | | |
| 50 | | | | | | | | |
| 55 | | | | | | | | |
| 60 | | | | | Groundwater was not encountered at time of drilling. This is not considered the stabilized groundwater depth as groundwater may rise to a level higher than that measured in borehole. | | | |

DATE DRILLED: 3/17/21 TOTAL DEPTH: 26.5 feet DEPTH TO WATER: NA
 LOGGED BY: L. Jackson TYPE OF BIT: Hollow Stem Auger DIAMETER: 8 in.
 SURFACE ELEVATION: Approximately 725 ft HAMMER WT.: 140 lbs. DROP: 30 in.

| | | |
|---------------------|--|-----------|
| PROJECT NO. LP21057 | | PLATE B-2 |
|---------------------|--|-----------|

DEFINITION OF TERMS

| | PRIMARY DIVISIONS | SYMBOLS | SECONDARY DIVISIONS |
|--|-------------------------------|--|---|
| Coarse grained soils More than half of material is larger than No. 200 sieve | Gravels | Clean gravels (less than 5% fines) | GW Well graded gravels, gravel-sand mixtures, little or no fines |
| | | Gravel with fines | GP Poorly graded gravels, or gravel-sand mixtures, little or no fines |
| | | | GM Silty gravels, gravel-sand-silt mixtures, non-plastic fines |
| | | GC Clayey gravels, gravel-sand-clay mixtures, plastic fines | |
| | Sands | Clean sands (less than 5% fines) | SW Well graded sands, gravelly sands, little or no fines |
| | | Sands with fines | SP Poorly graded sands or gravelly sands, little or no fines |
| | | | SM Silty sands, sand-silt mixtures, non-plastic fines |
| | | SC Clayey sands, sand-clay mixtures, plastic fines | |
| Fine grained soils More than half of material is smaller than No. 200 sieve | Silts and clays | | ML Inorganic silts, clayey silts with slight plasticity |
| | Liquid limit is less than 50% | | CL Inorganic clays of low to medium plasticity, gravelly, sandy, or lean clays |
| | | | OL Organic silts and organic clays of low plasticity |
| | Silts and clays | | MH Inorganic silts, micaceous or diatomaceous silty soils, elastic silts |
| | Liquid limit is more than 50% | | CH Inorganic clays of high plasticity, fat clays |
| | | | OH Organic clays of medium to high plasticity, organic silts |
| Highly organic soils | | PT Peat and other highly organic soils | |

GRAIN SIZES

| Silts and Clays | Sand | | | Gravel | | Cobbles | Boulders |
|-----------------|--------------------------|--------|--------|-----------------------|--------|---------|----------|
| | Fine | Medium | Coarse | Fine | Coarse | | |
| | 200 | 40 | 10 | 4 | 3/4" | 3" | 12" |
| | US Standard Series Sieve | | | Clear Square Openings | | | |

| Sands, Gravels, etc. | Blows/ft. * |
|----------------------|-------------|
| Very Loose | 0-4 |
| Loose | 4-10 |
| Medium Dense | 10-30 |
| Dense | 30-50 |
| Very Dense | Over 50 |

| Clays & Plastic Silts | Strength ** | Blows/ft. * |
|-----------------------|-------------|-------------|
| Very Soft | 0-0.25 | 0-2 |
| Soft | 0.25-0.5 | 2-4 |
| Firm | 0.5-1.0 | 4-8 |
| Stiff | 1.0-2.0 | 8-16 |
| Very Stiff | 2.0-4.0 | 16-32 |
| Hard | Over 4.0 | Over 32 |

* Number of blows of 140 lb. hammer falling 30 inches to drive a 2 inch O.D. (1 3/8 in. I.D.) split spoon (ASTM D1586).

** Unconfined compressive strength in tons/s.f. as determined by laboratory testing or approximated by the Standard Penetration Test (ASTM D1586), Pocket Penetrometer, Torvane, or visual observation.

Type of Samples:

Ring Sample
 Standard Penetration Test
 Shelby Tube
 Bulk (Bag) Sample

Drilling Notes:

1. Sampling and Blow Counts
 - Ring Sampler - Number of blows per foot of a 140 lb. hammer falling 30 inches.
 - Standard Penetration Test - Number of blows per foot.
 - Shelby Tube - Three (3) inch nominal diameter tube hydraulically pushed.
2. P. P. = Pocket Penetrometer (tons/s.f.).
3. NR = No recovery.
4. GWT = Ground Water Table observed @ specified time.



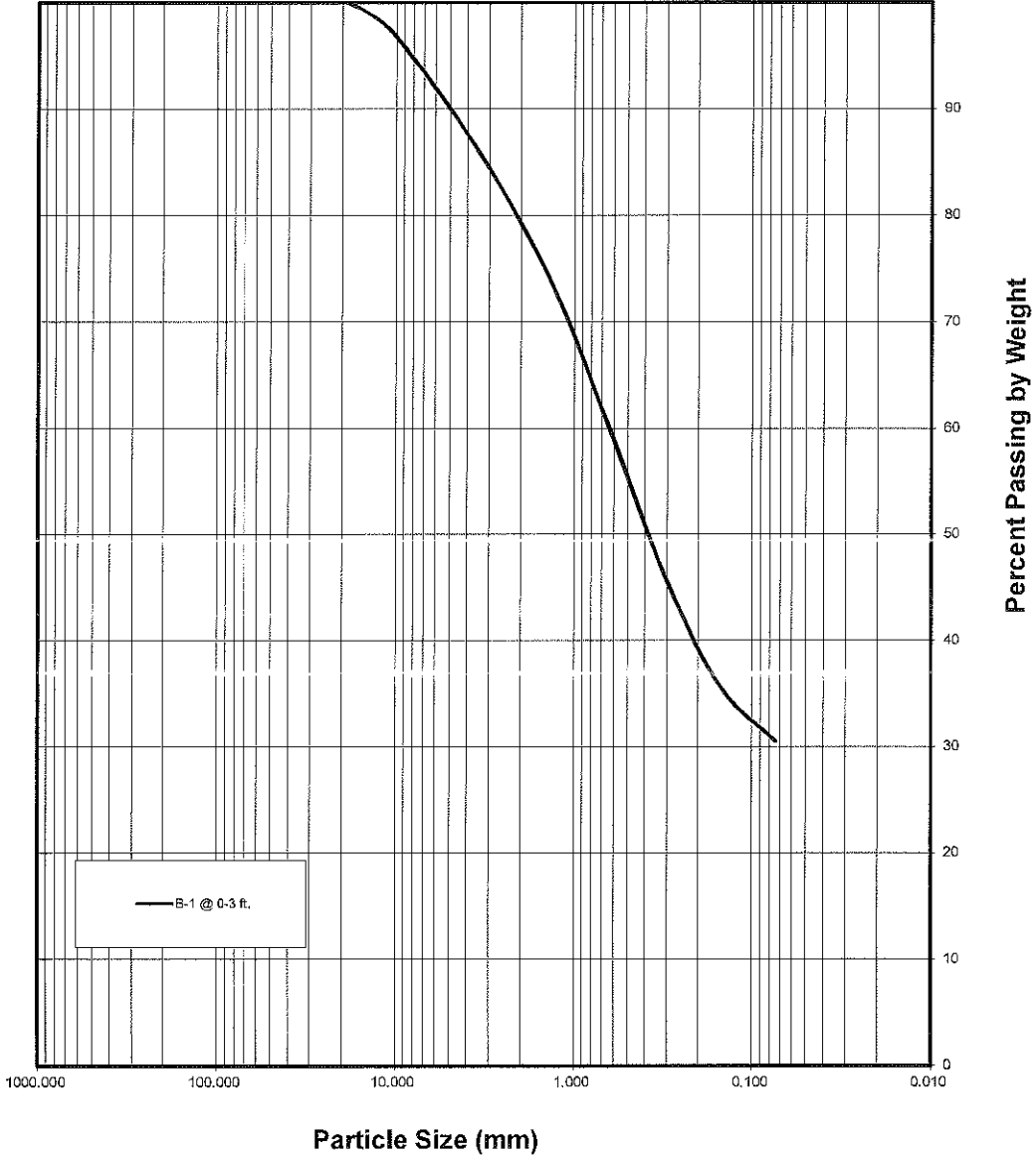
Project No. LP21057

Key to Logs

**Plate
B-3**

APPENDIX C

| SIEVE ANALYSIS | | | | | | |
|----------------------|--------|------|--------|--------|------|---------------|
| Cobbles and Boulders | Gravel | | Sand | | | Silt and Clay |
| | Coarse | Fine | Coarse | Medium | Fine | |



Project No.: LP21057

Grain Size Analysis

Plate C-1

LANDMARK CONSULTANTS, INC.

CLIENT: County of Riverside
PROJECT: Fire Station 49 - Desert Center, CA
JOB No.: LP21057
DATE: 03/29/21

CHEMICAL ANALYSIS

| | | |
|---|-------|-----------------|
| Boring: | B-1 | Caltrans |
| Sample Depth, ft: | 0-3 | Method |
| pH: | 8.5 | 643 |
| Electrical Conductivity (mmhos): | -- | 424 |
| Resistivity (ohm-cm): | 3,800 | 643 |
| Chloride (Cl), ppm: | 100 | 422 |
| Sulfate (SO4), ppm: | 257 | 417 |

General Guidelines for Soil Corrosivity

| Material Affected | Chemical Agent | Amount in Soil (ppm) | Degree of Corrosivity |
|--------------------|-------------------|----------------------|-----------------------|
| Concrete | Soluble Sulfates | 0 - 1,000 | Low |
| | | 1,000 - 2,000 | Moderate |
| | | 2,000 - 20,000 | Severe |
| | | > 20,000 | Very Severe |
| Normal Grade Steel | Soluble Chlorides | 0 - 200 | Low |
| | | 200 - 700 | Moderate |
| | | 700 - 1,500 | Severe |
| | | > 1,500 | Very Severe |
| Normal Grade Steel | Resistivity | 1 - 1,000 | Very Severe |
| | | 1,000 - 2,000 | Severe |
| | | 2,000 - 10,000 | Moderate |
| | | > 10,000 | Low |



Project No.: LP21057

**Selected Chemical
Test Results**

**Plate
C-2**

Client: County of Riverside

Project: Fire Station 49 - Desert Center, CA

Project No.: LP21057

Date: 3/29/2021

Lab. No.: N/A

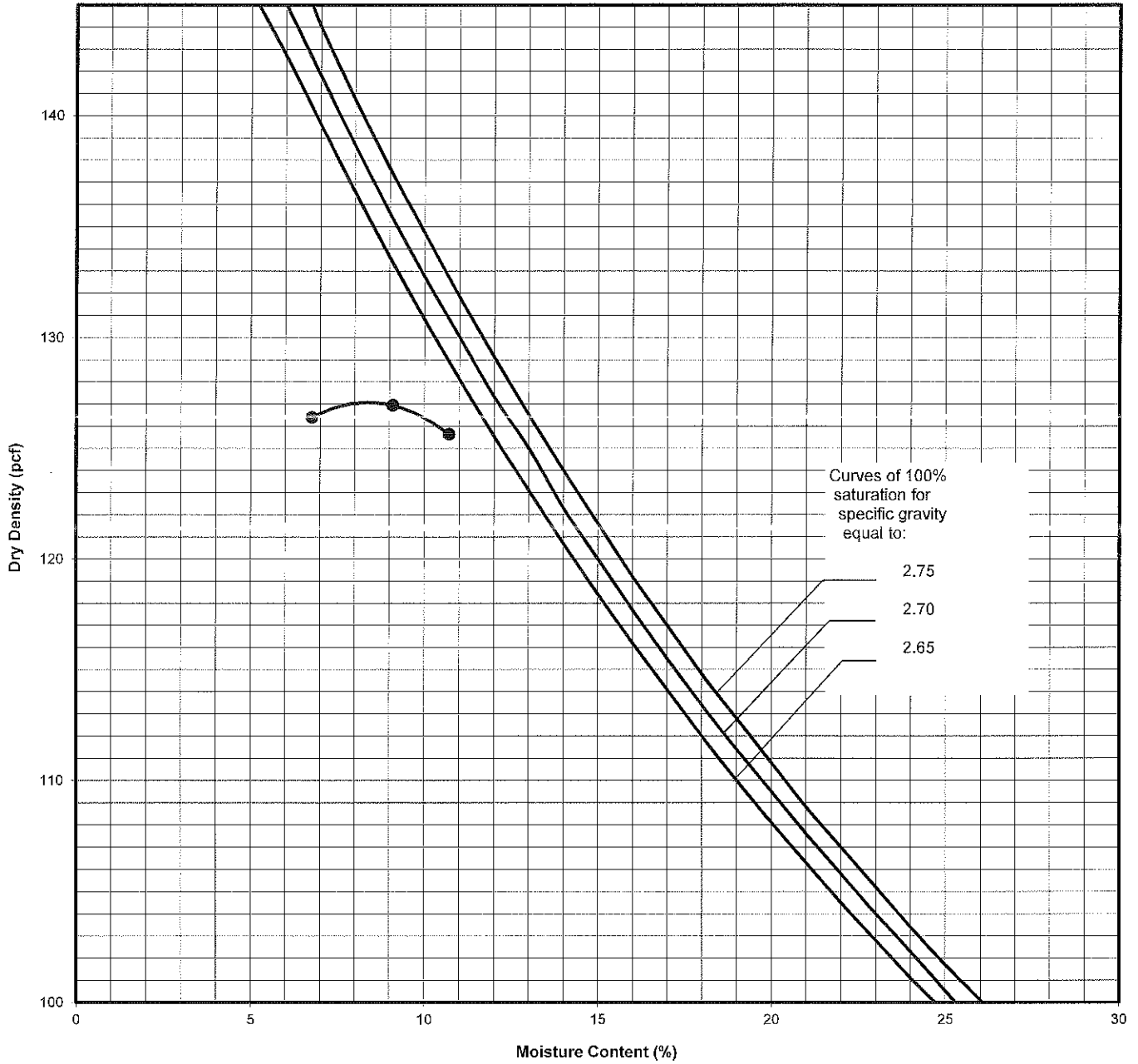
Soil Description: Brown Silty Sand (SM)

Sample Location: B-1 @ 0-3 ft.

Test Method: ASTM D-1557 A

Maximum Dry Density (pcf): 127.1

Optimum Moisture Content (%): 8.4



Project No.: LP21057

Moisture Density Relationship

Plate
C-3

APPENDIX D

Seismic Dry Settlement Calculation

Project Name: Fire Station No. 49 - Desert Center, CA
 Project No.: LP21057
 Location: B-1

Maximum Credible Earthquake 7.4
 Design Ground Motion 0.39 g
 Water Unit Weight 62.4 pcf
 Depth to Groundwater 100 ft
 Hammer Efficiency 85

14.2

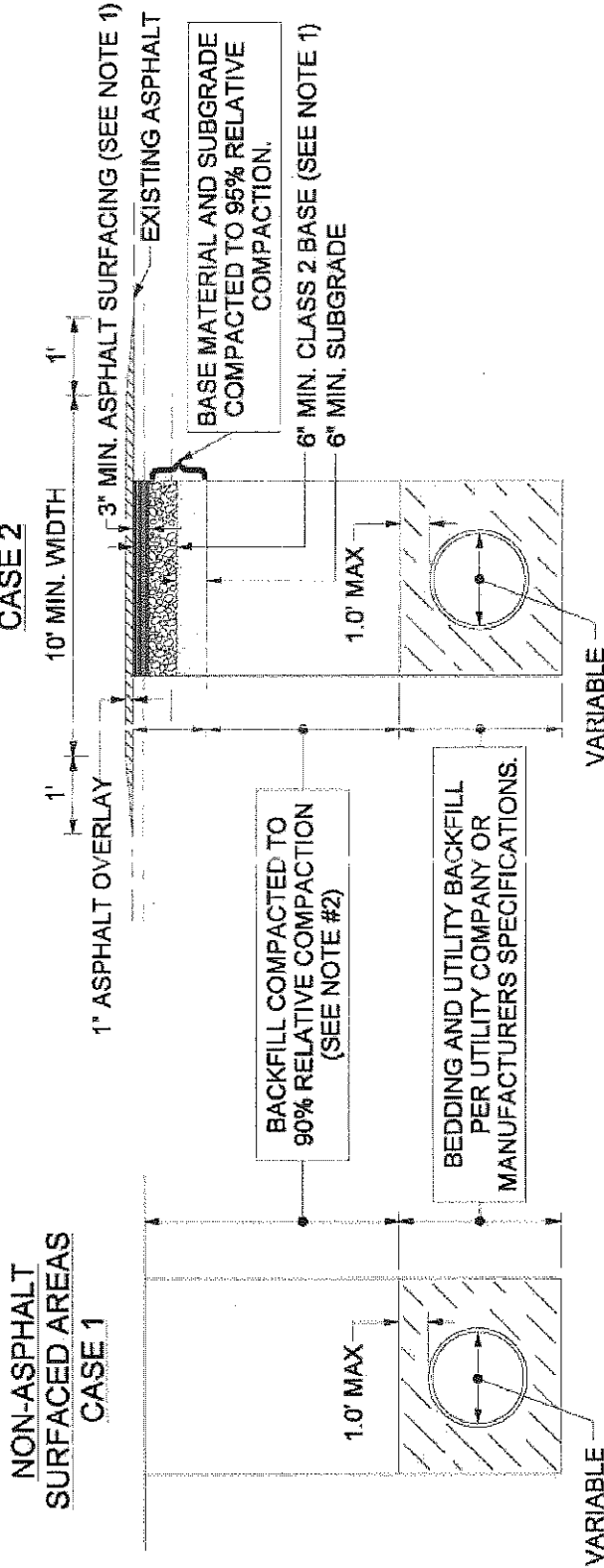
| Mod. Cal | SPT | DEPTH (ft.) | THICKNESS (ft.) | D ₅₀ (mm) | φ (°) | Density (pcf) | Total Pressure (tsf) | N1(60) | Relative Density | Fine Content | N _{loges} | G _{max} | Shear Strain Gam-eff | E15 | Enc | Settlement (in.) | TOTAL (in.) |
|----------|-----|-------------|-----------------|----------------------|-------|---------------|----------------------|--------|------------------|--------------|--------------------|------------------|----------------------|----------|----------|------------------|-------------|
| 45 | | 2.50 | 3 | 0.25 | 40 | 122 | 0.153 | 76.2 | 131 | 31 | 93.4 | 638 | 8.50E-05 | 1.34E-05 | 1.31E-05 | 0.00 | |
| 47 | | 5.00 | 3 | 0.25 | 40 | 125 | 0.313 | 86.8 | 139 | 8 | 88.2 | 897 | 1.20E-04 | 2.03E-05 | 1.98E-05 | 0.00 | |
| 48 | | 7.50 | 3 | 0.25 | 40 | 125 | 0.469 | 129.0 | 170 | 10 | 132.7 | 1257 | 1.19E-04 | 1.23E-05 | 1.20E-05 | 0.00 | |
| 100 | | 10.00 | 3 | 0.25 | 40 | 126 | 0.630 | 154.2 | 186 | 15 | 164.1 | 1563 | 1.24E-04 | 9.94E-06 | 9.71E-06 | 0.00 | |
| 53 | | 15.00 | 5 | 0.25 | 40 | 115 | 0.863 | 86.3 | 139 | 15 | 93.0 | 1516 | 1.88E-04 | 2.93E-05 | 2.88E-05 | 0.00 | |
| | | 20.00 | 5 | 0.25 | 40 | 115 | 1.150 | 127.6 | 169 | 6 | 128.3 | 1947 | 1.82E-04 | 1.95E-05 | 1.91E-05 | 0.00 | |
| | | 25.00 | 5 | 0.25 | 40 | 115 | 1.438 | 136.6 | 175 | 6 | 137.2 | 2226 | 2.07E-04 | 2.06E-05 | 2.01E-05 | 0.00 | |
| | | 30.00 | 5 | 0.25 | 40 | 110 | 1.650 | 106.6 | 154 | 13 | 112.4 | 2233 | 2.43E-04 | 3.07E-05 | 3.00E-05 | 0.00 | |
| | | 35.00 | 5 | 0.25 | 40 | 110 | 1.925 | 95.7 | 146 | 13 | 101.1 | 2329 | 2.77E-04 | 3.96E-05 | 3.87E-05 | 0.00 | |
| | | 40.00 | 5 | 0.25 | 40 | 110 | 2.200 | 102.9 | 152 | 7 | 103.9 | 2512 | 2.98E-04 | 4.08E-05 | 3.96E-05 | 0.00 | |
| | | 45 | 5 | 0.25 | 40 | 110 | 2.475 | 88.0 | 140 | 7 | 88.9 | 2531 | 3.35E-04 | 5.60E-05 | 5.47E-05 | 0.01 | |
| | | 50 | 5 | 0.25 | 40 | 110 | 2.750 | 90.3 | 142 | 9 | 92.4 | 2702 | 3.48E-04 | 5.55E-05 | 5.42E-05 | 0.01 | |
| | | | | | | | | | | | | | | | | | 0.04 |

REFERENCES

- (1) Tokimatsu and Seed, 1984. Simplified Procedures for the Evaluation of Settlements in Clean Sands.
- (2) Seed and Idriss, 1982. Ground Motion and Soil Liquefaction During Earthquakes, EERI Monograph.
- (3) Youd, Leslie, 1997. Proceeding of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils
- (4) Pradel, Daniel, 1998. JGEE, Vol. 124, No. 4, ASCE
- (5) Seed, et.al., 2003. Recent Advances in Soil Liquefaction Engineering: A Unified and Consistent Framework. University of California Earthquake Engineering Research Center Report 2003-06, 71 p.

APPENDIX E

**ASPHALT SURFACED STREETS WITH
OVERLAY PARALLEL INSTALLATION
CASE 2**

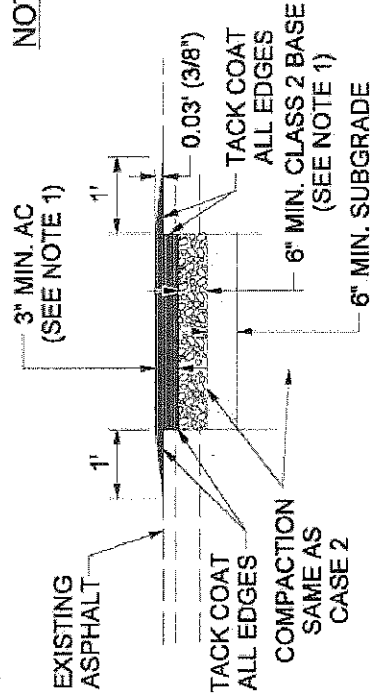
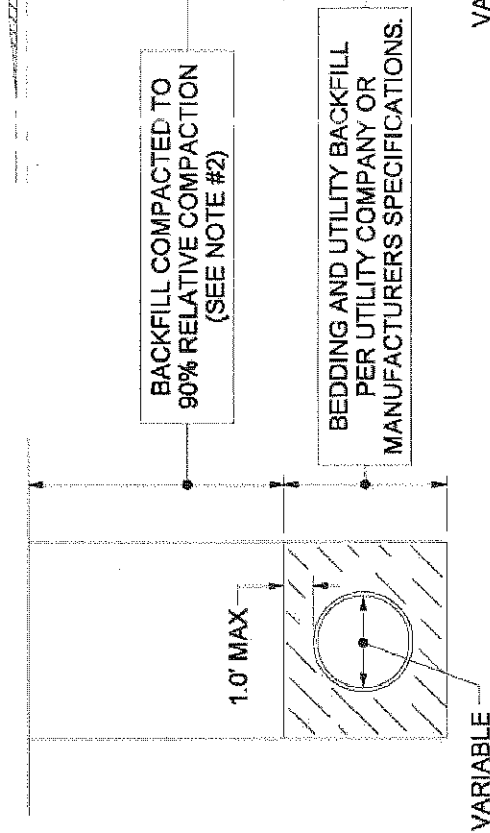


NOT TO SCALE

NOTES:

1. REPLACE STRUCTURAL SECTION AS FOLLOWS:
SURFACING: EXISTING THICKNESS; OR 3" MIN. A.C., TYPE B.
BASE: CLASS 2 A.B. IN SAME THICKNESS AS EXISTING
BASE MATERIAL, 6" MIN. AS DIRECTED BY THE INSPECTOR.
2. MAXIMUM LIFT THICKNESS IS 8 INCHES; MAXIMUM LIFT THICKNESS WHEN PONDING AND JETTING IS 4 FEET.
3. WHEN A FIRM FOUNDATION IS NOT ENCOUNTERED, DUE TO SOFT, SPONGY OR OTHER UNSUITABLE MATERIAL, SUCH MATERIAL SHALL BE REMOVED TO THE LIMITS DIRECTED BY THE DIRECTOR OF TRANSPORTATION OR AFFECTED UTILITY COMPANY AND THE RESULTING EXCAVATION BACKFILLED WITH PIPE BEDDING MATERIAL.

**NON-ASPHALT
SURFACED AREAS
CASE 1**



**ASPHALT SURFACED STREET WITHOUT
OVERLAY PERPENDICULAR INSTALLATION
CASE 3**

APPENDIX F

LANDMARK CONSULTANTS, INC

| | | | | | |
|--------------------------------------|----------------|---------------------------|---------|-------|----------|
| Project: | Fire Station49 | Project No: | LP21057 | Date: | 03/23/21 |
| Test Hole No: | I-1 | Tested By: | Alex A | | |
| Depth of Test Hole, D _T : | 5' | USCS Soil Classification: | SM | | |
| Test Hole Dimensions (inches) | | | Length | Width | |
| Diameter (if round)= | 6" | Sides (if rectangular)= | | | |

Sandy Soil Criteria Test*

| Trial No. | Start Time | Stop Time | Time Interval, (min.) | Initial Depth to Water (in.) | Final Depth to Water (in.) | Change in Water Level (in.) | Greater than or Equal to 6"?(y/n) |
|-----------|------------|-----------|-----------------------|------------------------------|----------------------------|-----------------------------|-----------------------------------|
| 1 | 8:50 | 9:15 | 25.00 | 10.00 | 0.00 | 10.00 | y |
| 2 | 9:15 | 9:40 | 25.00 | 12.00 | 1.00 | 11.00 | y |

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Other wise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

| Trial No. | Start Time | Stop Time | At Time Interval (min.) | D _i Initial Depth to Water (in.) | D _f Final Depth to Water (in.) | AD Change in Water Level (in.) | Percolation Rate (min./in.) |
|-----------|------------|-----------|-------------------------|---|---|--------------------------------|-----------------------------|
| 1 | 9:42 | 9:52 | 10.00 | 22.00 | 30.00 | 8.00 | 1.25 |
| 2 | 9:52 | 10:02 | 10.00 | 30.00 | 38.00 | 8.00 | 1.25 |
| 3 | 10:02 | 10:12 | 10.00 | 38.00 | 45.00 | 7.00 | 1.43 |
| 4 | 10:12 | 10:22 | 10.00 | 24.00 | 31.00 | 7.00 | 1.43 |
| 5 | 10:22 | 10:32 | 10.00 | 31.00 | 37.00 | 6.00 | 1.67 |
| 6 | 10:32 | 10:42 | 10.00 | 37.00 | 43.00 | 6.00 | 1.67 |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |

COMMENTS:



Project No.: LP21057

Percolation Test Results

Plate F-1

PERCOLATION RATE CONVERSION

CLIENT: County of Riverside
PROJECT: Fire Station 49
PROJECT NO.: LP21057
DATE: 4/2/2021

TEST HOLE NO: I-1

Time interval, $\Delta t = 10$ inches Initial Depth to Water, $D_0 = 37$ inches
Final Depth to Water, $D_f = 43$ inches Total Depth of Test Hole, $D_T = 60$ inches
²Test Hole Radius, $r = 3$ inches

The conversion equation is used:

$$I_t = \frac{\Delta H \ 60 \ r}{\Delta t (r + 2H_{avg})}$$

" H_0 " is the initial height of water at the selected time interval

$$H_0 = D_T - D_0 = 60 - 37 = 23 \text{ inches}$$

" H_f " is the final height of water at the selected time interval

$$H_f = D_T - D_f = 60 - 43 = 17 \text{ inches}$$

" ΔH " is the change in height over the time interval

$$\Delta H = \Delta D = H_0 - H_f = 23 - 17 = 6 \text{ inches}$$

" H_{avg} " is the average head height over the time interval

$$H_{avg} = (H_0 + H_f) / 2 = (23 + 17) / 2 = 20 \text{ inches}$$

" I_t " is the tested infiltration rate

$$I_t = \frac{\Delta H \ 60 \ r}{\Delta t (r + 2H_{avg})} = \frac{(6 \text{ in})(60 \text{ min/hr})(3 \text{ in})}{(10 \text{ min})((3 \text{ in}) + 2(20 \text{ in}))} = 2.5 \text{ in/hr}$$

LANDMARK
Geo-Engineers and Geologists

Project No.: LP21057

Percolation Rate Conversion

Plate
F-2

LANDMARK CONSULTANTS, INC

| | | | | | |
|--------------------------------------|-----------------|---------------------------|---------|--------|----------|
| Project: | Fire Station 49 | Project No: | LP21057 | Date: | 03/23/21 |
| Test Hole No: | I-2 | Tested By: | Alex A | | |
| Depth of Test Hole, D _T : | 5' | USCS Soil Classification: | SM | | |
| Test Hole Dimensions (inches) | | | | Length | Width |
| Diameter (if round)= | 6" | Sides (if rectangular)= | | | |

Sandy Soil Criteria Test*

| Trial No. | Start Time | Stop Time | Time Interval, (min.) | Initial Depth to Water (in.) | Final Depth to Water (in.) | Change in Water Level (in.) | Greater than or Equal to 6"?(y/n) |
|-----------|------------|-----------|-----------------------|------------------------------|----------------------------|-----------------------------|-----------------------------------|
| 1 | 10:51 | 11:16 | 25.00 | 12.00 | 3.00 | 9.00 | y |
| 2 | 11:16 | 11:41 | 25.00 | 12.00 | 4.00 | 8.00 | y |

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Other wise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

| Trial No. | Start Time | Stop Time | A _T Time Interval (min.) | D _i Initial Depth to Water (in.) | D _f Final Depth to Water (in.) | AD Change in Water Level (in.) | Percolation Rate (min./in.) |
|-----------|------------|-----------|-------------------------------------|---|---|--------------------------------|-----------------------------|
| 1 | 11:43 | 11:53 | 10.00 | 12.00 | 19.00 | 7.00 | 1.43 |
| 2 | 11:53 | 12:03 | 10.00 | 19.00 | 26.00 | 7.00 | 1.43 |
| 3 | 12:03 | 12:13 | 10.00 | 26.00 | 33.00 | 7.00 | 1.43 |
| 4 | 12:13 | 12:23 | 10.00 | 33.00 | 39.50 | 6.50 | 1.54 |
| 5 | 12:23 | 12:33 | 10.00 | 39.50 | 45.50 | 6.00 | 1.67 |
| 6 | 12:33 | 12:43 | 10.00 | 45.50 | 51.50 | 6.00 | 1.67 |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |

COMMENTS:



Project No.: LP21057

Percolation Test Results

Plate
F-3

PERCOLATION RATE CONVERSION

CLIENT: County of Riverside
PROJECT: Fire Station 49
PROJECT NO.: LP21057
DATE: 4/2/2021

TEST HOLE NO: I-2

Time interval, $\Delta t = 10$ inches Initial Depth to Water, $D_0 = 45.5$ inches
Final Depth to Water, $D_f = 51.5$ inches Total Depth of Test Hole, $D_T = 60$ inches
²Test Hole Radius, $r = 3$ inches

The conversion equation is used:

$$I_t = \frac{\Delta H 60 r}{\Delta t (r + 2H_{avg})}$$

" H_0 " is the initial height of water at the selected time interval

$$H_0 = D_T - D_0 = 60 - 45.5 = 14.5 \text{ inches}$$

" H_f " is the final height of water at the selected time interval

$$H_f = D_T - D_f = 60 - 51.5 = 8.5 \text{ inches}$$

" ΔH " is the change in height over the time interval

$$\Delta H = \Delta D = H_0 - H_f = 14.5 - 8.5 = 6 \text{ inches}$$

" H_{avg} " is the average head height over the time interval

$$H_{avg} = (H_0 + H_f) / 2 = (14.5 + 8.5) / 2 = 11.5 \text{ inches}$$

" I_t " is the tested infiltration rate

$$I_t = \frac{\Delta H 60 r}{\Delta t (r + 2H_{avg})} = \frac{(6 \text{ in})(60 \text{ min/hr})(3 \text{ in})}{(10 \text{ min})((3 \text{ in}) + 2(11.5 \text{ in}))} = 4.15 \text{ in/hr}$$

LANDMARK
Geo-Engineers and Geologists

Project No.: LP21057

Percolation Rate Conversion

Plate
F-4



Appendix E

Phase I Environmental Site Assessment

FIRE STATION #49 PROJECT
Community of Lake Tamarisk,
Riverside County, California



April 2022



PHASE I ENVIRONMENTAL SITE ASSESSMENT

**COUNTY OF RIVERSIDE
ECONOMIC DEVELOPMENT AGENCY**

**Lake Tamarisk Property – 5.11-Acres
APN 808-170-006
Northeast of Lake Tamarisk Drive and Parkview Drive
Community of Desert Center, Riverside County, California 92239**

October 28, 2013

EEI Project Number COR-71759.1

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Prepared for:

Ms. Vikki Kuntz

Environmental Planner II

County of Riverside Economic Development Agency

3403 10th Street, Suite 500

Riverside, California 92501

Site location:

Lake Tamarisk Property -5.11-Acres

APNs 808-170-006

Northeast of Lake Tamarisk Drive and Parkview Drive

Community of Desert Center, Riverside County California 92239

Prepared and edited by:



Daniel Phelps

Staff Scientist

Reviewed By:



Bernard A. Sentianin, PG 5530

Principal Geologist

EEI

2195 Faraday Avenue, Suite K

Carlsbad, California 92008

(760) 431-3747

EEI Project No.: COR-71759.1

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EXECUTIVE SUMMARY

At the request and authorization of the County of Riverside Economic Development Agency (hereinafter referred to as “Client”), EEI conducted a Phase I Environmental Site Assessment (ESA) for the undeveloped property generally located northeast of Lake Tamarisk Drive and Parkview Drive, in the unincorporated community of Lake Tamarisk, north of Desert Center, Riverside County, California. The purpose of this Phase I ESA was to assess the presence or likely presence of an existing, historical, or threatened release of any hazardous substances or petroleum products into structures, soil, and/or groundwater beneath the subject property, to the extent practical (i.e., *recognized environmental conditions* as delineated in ASTM E1527-05).

The trapezoidal shaped subject property is located north of Lake Tamarisk Drive, east of Parkview Drive, and west of Catalina Drive, in the resort community of Lake Tamarisk, north of Desert Center, in unincorporated Riverside County, California. The subject property totals 5.11-acres on a single parcel identified by Assessors Parcel Number (APN): APN 808-170-006. The subject property does not have a physical address and consists of undeveloped land.

In general, the subject property is located on the east side of Lake Tamarisk, a small resort community consisting of residential development and a golf course surrounding Lake Tamarisk, which is located approximately two miles north of the community Desert Center. The subject property is immediately bound by a park to the north, followed by a mobile home development, Lake Tamarisk Drive to the south, followed by residential development, residential development to the east along Catalina Way, and undeveloped land followed by Parkview Drive to the west. Adjacent to the southwest corner of the subject property, is a concrete block structure and transmission dish; operated by Verizon Wireless. According to the Riverside County Land Information System (RCLIS) the subject property is zoned for residential use (R-2-5000) and is intended to be used for multiple family residences. Based on historical records such as aerial photographs, topographic maps, and County records, the subject property has been historically undeveloped.

EEI contacted the County of Riverside Department of Environmental Health, California Department of Toxic Substances Control (DTSC), State Water Resources Control Board (SWRCB), and reviewed other state and federal databases to determine if the subject property, or any adjacent properties, were listed as hazardous waste generators, underground storage tank (UST) releases, or as having other environmental concerns (i.e., spill, leak, or aboveground storage tank [AST]). Neither the subject property nor any immediately adjacent properties with reported open cases associated with spills, soil and/or groundwater issues were listed on any of the databases researched.

On October 7, 2013, EEI personnel conducted a reconnaissance of the subject property to physically observe the site and adjoining properties for conditions indicating a potential environmental concern. Concerns would include any evidence of contamination, distressed vegetation, petroleum-hydrocarbon staining, waste drums, illegal dumping, or improper waste storage and/or handling. No evidence of an environmental concern was noted on the subject property during our site reconnaissance efforts.

We have performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Designation E1527-05 of APN 808-170-006, the *property*. Any exceptions to, or deletions from, this practice are described in Section 6.0 of this report. This assessment has revealed **no evidence of recognized environmental conditions** in connection with the *property*.

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment (ESA) was to assess the possible presence of *recognized environmental conditions* at the undeveloped subject property located northeast of Lake Tamarisk Drive and Parkview Drive, in the unincorporated community of Lake Tamarisk, north of Desert Center, Riverside County, California (**Figure 1**). *Recognized environmental conditions* include those property uses that may indicate the presence or likely presence of an existing, historical, or threatened release of any hazardous substances or petroleum products into structures, soil, and/or groundwater beneath the property. The term *recognized environmental conditions* are not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that would not be subject to enforcement actions by a regulatory agency.

This ESA was performed in general conformance with the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, Designation E1527-05.

1.2 Scope of Services

The following scope of services was conducted by EEI:

- A review of readily available documents which included topographic, geologic, and hydrogeologic conditions associated with the subject site.
- A review of readily available maps, aerial photographs, and other documents relative to historical subject site usage and development.
- A review of previous environmental reports and regulatory file information pertaining to both existing and historic site conditions.
- A review of readily available federal, state, county, and city documents and database files concerning hazardous material storage, generation and disposal, active and inactive landfills, existing environmental concerns, and associated permits related to the subject property and/or immediately adjacent sites.
- A site reconnaissance to ascertain current conditions on the subject property.
- Interviews with person(s) knowledgeable of the subject property.
- The preparation of this report which presents our findings, conclusions, and recommendations.

1.3 Reliance

This ESA has been prepared for the sole use of the County of Riverside Economic Development Agency (EDA). This assessment should not be relied upon by other parties without the express written consent of EEI and the EDA. Any use or reliance upon this assessment by a party other than the EDA; therefore, shall be solely at the risk of such third party and without legal recourse against EEI, its employees, officers, or directors, regardless of whether the action in which recovery of damages is brought or based upon contract, tort, statute or otherwise.

This assessment should not be interpreted as a statistical evaluation of the subject property, but rather is intended to provide a preliminary indication of onsite impacts from previous site usage and/or the release of hazardous materials. If no significant indicators of the presence of hazardous materials and/or petroleum contamination are encountered during this search, this does not preclude their presence. The findings in this report are based upon published geologic and hydrogeologic information, and information (both documentary and oral) provided by the county of Riverside, Environmental Data Resources, Inc. (EDR®) (i.e., agency database search), various state and federal agencies, and EEI's field observations. Some of these data are subject to change over time. Some of these data are based on information not currently observable or measurable, but recorded by documents or orally reported by individuals.

2.0 PHYSIOGRAPHIC SETTING

2.1 Site Description

The trapezoidal shaped subject property is located north of Lake Tamarisk Drive, east of Parkview Drive, and west of Catalina Way, in the resort community of Lake Tamarisk, north of Desert Center, in unincorporated Riverside County, California. The subject property totals 5.11-acres on a single parcel identified by Assessor's Parcel Number (APN): APN 808-170-006 (**Appendix B**). The subject property does not have a physical address and consists of undeveloped land (**Figure 2**).

In general, the subject property is located on the east side of Lake Tamarisk, a small resort community consisting of residential development and a golf course surrounding Lake Tamarisk, which is located approximately two miles north of the community Desert Center. The subject property is immediately bound by a park to the north, followed by a mobile home development, Lake Tamarisk Drive to the south, followed by residential development, residential development to the east along Catalina Way, and undeveloped land followed by Parkview Drive to the west. Adjacent to the southwest corner of the subject property, is a concrete block structure and transmission dish; operated by Verizon Wireless. According to the Riverside County Land Information System (RCLIS) the subject property is zoned for residential use (R-2-5000) and is intended to be used for multiple family residences. Based on historical records such as aerial photographs, topographic maps, and County records, the subject property has been historically undeveloped.

2.2 Topography

Based on our site visit and a review of online aerial photographs (GoogleEarth®), the subject property appears to consist of land with relatively low topographical relief. Our review of the topographic map of the 7.5-minute East of Victory Pass Quadrangle, California (USGS, 2012) indicates that the elevation at the subject property is approximately 725 feet above mean sea level. Regional topography appears to consist of an alluvial fan with slight gradients to the northeast and east.

2.3 Regional and Local Geology

The subject property is located within the Mojave Desert Geomorphic Province of California. The province is a broad interior region of isolated mountain ranges separated by large desert plains. The Garlock Fault and the San Andreas Fault control topography in the area, bounding the province on the north and west boundaries, respectively. Locally, the subject property lies within the northwest-end of the generally northwest-southeast orientated Chuckawalla Valley. Regional geologic mapping indicates that the site is underlain Quaternary (Holocene) aged non-marine alluvium deposits, these deposits are described as being unconsolidated and semi-consolidated alluvial sand, silt, clay and gravel, including locally some older alluvium (CGS, 2010, CDMG 1967).

The subject property is located within an area of California known to contain a number of active and potentially active faults. The active San Andreas Fault zone is located approximately 35 miles to the southwest of the site and separates two tectonic plates (i.e., the Pacific Plate on the west from the American Plate on the east) along a northwest trend extending from Mexico to offshore northern California. While the area is not within a State of California liquefaction zone, it is generally recognized that seismically induced settlement or liquefaction can be a potential design issue within the Mojave Desert Geomorphic Province, due to some of its areas characterized by granular sediments.

Soils in the vicinity of the subject property have been identified by the United States Department of Agriculture – Natural Resources Conservation Service, Web Soil Survey as fine to medium grained sandy alluvium of the Cajon Series (USDA, 2013). These soils occur on alluvial fans and terraces on 0-15 percent slopes and are considered to be well or excessively drained and are mostly barren except for the presence of some desert shrubs.

2.4 Regional and Local Hydrogeology

Regional groundwater in the general vicinity is anticipated to be more than 50 feet in depth below the existing ground surface. A review of the available references indicate that in an irrigation well, located approximately four miles to the northeast of the subject property, groundwater was measured at approximately 112 feet below the site casing elevation (West Yost Associates, 2012). The well is located at an approximate elevation of 580 feet amsl, with a gentle gradient to the southeast. As noted previously, the elevation at the subject property is approximately 725 feet amsl, with a slight gradient to the east and northeast. This information suggests that regional groundwater in the site vicinity can be inferred to flow generally to the southeast.

2.5 Hydrologic Flood Plain Information

EEI reviewed the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) online database and the Riverside County Land Information System (RCLIS) to determine if the subject property was in a flood zone. According to the FEMA database, the subject property is located on FIRM map No. 0605C1800G; however, a printed map was unavailable. According to RCLIS, the subject property is located within an area of flood sensitivity (**Appendix B**). EEI contacted the Riverside County Flood Plain Management Section for additional information. According to department staff, the subject parcel is located within a Flood Zone as recognized by the County; therefore, if future development is proposed on the subject parcel, it would be subject to the Department of Water Resources development requirements.

3.0 SITE BACKGROUND

3.1 Site Ownership

Information regarding site ownership was obtained from a Preliminary Title Report (PTR) prepared by Commonwealth Land Title Company, dated September 5, 2013. According to the information reviewed, the current owner of the subject property is listed as Lake Tamarisk Development, LLC, a Delaware limited liability company, which acquired title as Lake Tamarisk Development Corporation, a California Corporation. A copy of the PTR is included in **Appendix B**.

3.2 Site History

EEI reviewed readily available information sources to evaluate historic land use in and around the subject property. These information sources include information from aerial photographs, USGS maps, and the county of Riverside. The information sources reviewed are summarized in the following sections.

3.2.1 Aerial Photograph and Historical Map Review

Aerial photographs and historical topographical maps were reviewed to identify historical land development and any surface conditions which may have impacted the subject property. Photographs and historical topographic maps dating from 1947 through 2005 were obtained and reviewed from (EDR®), an environmental information/database retrieval service. A 2012 aerial photograph was obtained from Google Earth®, a copy of which is included herein (Figure 2).

Table 1 summarizes the results of the aerial photograph and historical topographic map review. Copies of the aerial photographs and historical topographic maps provided by Environmental Data Resources, Inc. (EDR®) are included in Appendix C. Based on the data reviewed, the subject property has been historically undeveloped land.

| TABLE 1 Summary of Historical Use Review | | |
|---|--|---|
| Year | Source and Scale | Comments |
| 1947 | Topographic Map 1:50000 | No developed structures were noted on the subject property or adjacent property. The community of Lake Tamarisk did not yet exist at this time. Desert Center Rice Road (aka Highway 77) is shown as an unimproved dirt road to the east of the subject property and several residential structures are shown to the south of the subject property in the community of Desert Center. |
| 1953 | Aerial Photo 1"=500' | No developed structures were noted on subject property or adjacent properties. Lake Tamarisk didn't exist yet as a community and Desert Center Rice Road existed as an undeveloped dirt road. |
| 1963 | Topographic Map 1:62500 | Subject property appeared as undeveloped land. Kaiser Road appeared as an unimproved road directly to the east of the subject property. There is increased residential development to the south, in the community of Desert Center. The balance of the surrounding area appeared to be undeveloped. |
| 1979, 1984, 1986, 1996 | Aerial Photos and Topographic Map 1"=500' (photos) & 1:24000 (map, 1986) | The subject property appeared as undeveloped land with no structures. Lake Tamarisk first appeared as a residential/resort development. Kaiser Road is now paved and the map showed the appearance of Lake Tamarisk Drive, Parkview Drive and Catalina Drive in the immediate vicinity of the subject property. Residential development existed to the east, south and north. Lake Tamarisk existed to the northwest. A structure appeared to the immediate southwest of the subject property. A golf course is clearly visible to the southwest of the subject property. |
| 2002, 2005 | Aerial Photos, Topo Map 1"=500' (photos) 1:50000 (map) | No apparent changes were noted to the subject property or adjacent and surrounding property since the 1996 photo. |
| May 27, 2012 | Aerial Photograph, Google Earth®, 2013 | The subject property appeared as its current configuration, which consisted of undeveloped land covered by native vegetation. Residential development is present in the surrounding area to the north, south, east and west. Lake Tamarisk existed to the northwest of the property. The Verizon transmission station is present immediately southwest of the subject property. |

3.2.2 Sanborn Fire Insurance Maps

Sanborn Fire Insurance maps were developed in the late 1800's and early 1900's for use as an assessment tool for fire insurance rates in urbanized areas. An on-line search was made at the Los Angeles County Public Library's collection of Sanborn Fire Insurance maps (LAPL, 2013). Sanborn map coverage was not available for the subject property and/or surrounding area; therefore, indicating little or no development prior to the 1950s.

3.2.3 Riverside County Planning and Building and Safety Department Files

EEI contacted the Riverside County Planning Department to review any existing files related to the subject property. Personnel stated that a search of the subject APN revealed that there are no planning cases associated with the property. In addition, according to the Building and Safety Department personnel, no building permits have been issued to the subject property.

3.3 Regulatory Database Search

EEI reviewed known electronic database listings for possible hazardous waste generating establishments in the vicinity of the subject property, as well as adjacent sites with known environmental concerns. Facilities were identified by county, state, or federal agencies that generate, store, or dispose of hazardous materials. The majority of information in this section was obtained from EDR®, an environmental information/database retrieval service. A copy of the EDR® report is provided in **Appendix D**, along with a description of the individual databases.

For discussion purposes, the term “non-geocoded” is applied to sites that either have non-existent or incomplete addresses. EEI has located these sites, based on the location description provided in the records search. Following is a list of databases that were reviewed in the preparation of this report.

3.3.1 Federal Databases

National Priority List (NPL) – No listings were reported within one mile of the subject property.

NPL Delisted – No listings were reported within one-half mile of the subject property.

Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) – No listings were reported within one-half mile of the subject property.

CERCLIS No Further Remedial Action Planned (NFRAP) Archive – No listings were reported within one-half mile of the subject property. One non-geocoded site was listed. Upon further review the site was determined to be greater than one mile from the subject property; therefore, is not considered to be an environmental concern.

Resource Conservation and Recovery Information System (RCRA) Corrective Action Sites (COR) – No listings were reported within one mile of the subject property.

RCRA TSD Facility List (RCRA-D) – No listings were reported within one-half mile of the subject property.

RCRA Generators (RCRA-G) – No listings were reported within one-quarter mile of the subject property. One non-geocoded site was listed. Upon further review the site was determined to be greater than one mile from the subject property; therefore, is not considered to be an environmental concern.

RCRA No Longer Regulated (NLR) – No listings were reported within one-eighth mile of the subject property.

Federal IC/EC – No listings were reported within one-quarter mile of the subject property.

Emergency Response Notification System (ERNS) – No listings were reported within one-eighth mile of the subject property.

The subject property was not identified on any of the above-referenced databases researched.

3.3.2 State and Regional Sources

State/Tribal NPL – No listings were reported within one mile of the subject property.

State/Tribal CERCLIS – No listings were reported within one mile of the subject property.

State/Tribal Solid Waste Landfill (SWL) Sites – No listings were reported within one-half mile of the subject property.

State/Tribal California State Leaking Underground Storage Tanks (LUST) – No listings were reported within one-half mile of the subject property.

State/Tribal Permitted Underground Storage Tanks (UST)/Aboveground Storage Tanks (AST) – No listings were reported within one-half mile of the subject property.

State/Tribal Voluntary Cleanup Program Properties (VCP) – No listings were reported within one-half mile of the subject property.

State/Tribal Brownfields – No listings were reported within one-half mile of the subject property.

Other Solid Waste Facilities (SWF) – No listings were reported within one-half mile of the subject property.

State Other Hazardous Sites – No listings were reported for the subject property.

State Other Tanks – No listings were reported for the subject property.

Local Land Records – No listings were reported within one-half mile of the subject property.

Spills – No listings were reported for the subject property.

Other – Two (2) listings were reported within a one-quarter mile radius of the subject property, and nine (9) non-geocoded sites were listed. Inclusion on the other database does not necessarily indicate the existence of an environmental concern, such as a release or spill incident. None of the aforementioned listings have reported a release, and/or are located greater than one eighth of a mile from the subject property; therefore, are not considered an environmental concern.

The subject property was not identified on any of the above-referenced databases researched.

3.4 Regulatory Agency Review

3.4.1 Riverside County Fire Department

EEI contacted the Riverside County Fire Department (RCFD) concerning any permit, inspection, UST, or cleanup information available for the subject site. According to RCFD staff, they do not hold or track permits regarding hazardous materials. This information is regulated by the County of Riverside Department of Environmental Health (see below). No other pertinent information was available with the RCFD.

3.4.2 County of Riverside Department of Environmental Health

EEI reviewed County of Riverside Department of Environmental Health's (RCDEH) Underground Storage Tank (UST) List, UST Sites to be Upgraded List, LUST List, LUST Disclosure List, Hazardous Waste Generator/Materials Storage Disclosure List, Emergency Response, Complaint and Investigation (ERCI) List, DTSC Calsite List, and Superfund Site List, for information pertaining to the subject property. All of the aforementioned database lists are updated on a quarterly basis and were last updated in October 2013. The adjacent Verizon Wireless site was listed on the Hazardous Materials Disclosure database. The subject property was not listed on any of the databases.

3.4.3 Department of Toxic Substances Control

EEI contacted the Department of Toxic Substances Control (DTSC, 2013) regarding any records for the subject property. EEI also researched the DTSC online database EnviroStor for listings on or adjacent to the subject property. Neither the subject property nor any adjacent properties were listed on any of the databases researched.

3.4.4 State Water Resources Control Board

EEI reviewed the Spills, Leaks, Investigations, and Cleanup (SLIC) list, as well as the online database GeoTracker, which provides records on LUSTs, both maintained by the State Water Resources Control Board (SWRCB, 2013). Neither the subject property nor any adjacent properties were listed on any of the databases researched.

3.4.5 Review of Division of Oil, Gas, and Geothermal Resources Files

Oil and gas wells were not observed on the subject property during our site reconnaissance. A review of the California Division of Oil, Gas, and Geothermal Resources Website for oil and gas fields in California and Alaska (CDOGGR, 2013) indicated no petroleum exploration or production has occurred on or immediately adjacent to the subject property (identified as within Township 05 South, Range 15 East Section 14).

3.4.6 National Pipeline Mapping System

EEI reviewed the National Pipeline Mapping System (NPMS, 2013) public viewer website for gas transmission pipelines and hazardous liquid trunklines on or close to the subject property. According to the information reviewed, no pipelines are located on or in close proximity to the subject property.

3.5 Interview with Current Property Owner

EEI provided the current property owner, Lake Tamarisk Development, LLC, as represented by Jeannette Roberts, a copy of a Phase I ESA Owner questionnaire. Key items described by Ms. Roberts from the questionnaire are summarized below.

3.5.1 Past or Present Uses Indicating Environmental Concern

Ms. Roberts stated that, to the best of her knowledge, the subject property is has only been used as vacant land. Ms. Roberts was not unaware of any past or present uses indicating environmental concern.

3.5.2 Environmental Liens or Governmental Notification

Ms. Roberts stated that she has no knowledge of any environmental liens or governmental notification relating to past or recurrent violations of environmental laws with respect to the property.

3.5.3 Presence of Hazardous Substances or Environmental Violations

Ms. Roberts was not aware of any hazardous substances being used or stored on-site, and was not aware of any environmental violations related to the property.

3.5.4 Previous Environmental Cleanups

Ms. Roberts was not aware of any of any previous environmental cleanups conducted on the subject property.

3.5.5 Legal Proceedings

Ms. Roberts was not aware of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substance or petroleum products involving the property by any owner or occupant of the property.

3.6 User Provided Information

Pursuant to ASTM E1527-05, EEI provided a Phase I ESA User Specific Questionnaire to the “user” (the person on whose behalf the Phase I ESA is being conducted), in this case, Riverside County EDA. Mr. Craig Olsen of the Riverside County EDA, completed the questionnaire. The User Specific Information provided by Mr. Olsen is documented below. A copy of the user specific questions (per ASTM E1527-05) with the associated responses is included in **Appendix E**.

3.6.1 Environmental Liens or Activity and Use Limitations

Mr. Olsen stated that he is not aware of any environmental liens, land use limitations, deed restrictions or governmental notifications relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the property. The Client provided EEI with a PTR prepared for the subject property by Commonwealth Land Title Company, dated September 5, 2013. A review of the PTR confirmed the absence of any environmental liens or land use limitations associated with the subject property.

3.6.2 Specialized Knowledge

Mr. Olsen stated that he has no specialized knowledge of the subject property.

3.6.3 Valuation Reduction for Environmental Issues

Mr. Olsen stated that the purchase price being paid for this property reasonably reflects the fair market value of the property.

3.6.4 Presence or Likely Presence of Contamination

Mr. Olsen indicated that he is not aware of any specific issues related to spills, releases, or cleanups which may have occurred on the property.

3.6.5 Other

Mr. Olsen noted that the Phase I ESA is required for due diligence purposes associated with the purchase of the property. In addition, according to the Client representative, Mr. Olsen, no previous assessment documents associated with the subject property have been made available by the seller.

3.7 Other Environmental Issues

3.7.1 Asbestos-Containing Materials

Asbestos, a natural fiber used in the manufacturing of a number of different building materials, has been identified as a human carcinogen. Most friable (i.e., easily broken or crushed) Asbestos-Containing Materials (ACM) were banned in building materials by 1978. By 1989, most major manufacturers had voluntarily removed non-friable ACM (i.e., flooring, roofing, and mastics/sealants) from the market. These materials, however, were not banned completely.

In October 1995, the Federal Occupational Safety and Health Administration (OSHA) redefined the manner by which building materials are classified in regards to asbestos and the also the way these materials are to be handled. Under this ruling, “thermal system insulation and sprayed-on or troweled on or otherwise applied surfacing materials” applied before 1980 are considered presumed Asbestos-Containing Materials (PACM). Other building materials such as “floor or ceiling tiles, siding, roofing, transite panels” (i.e., non-friable) are also considered PACM unless tested.

No developed structures are located on the subject property; therefore, the presence of ACM is not considered to be an environmental concern at this time.

3.7.2 Lead-Based Paint

Lead-Based Paint (LBP) is identified by OSHA, the Environmental Protection Agency (EPA) and the Department Housing and Urban Development Department (HUD) as being a potential health risk to humans, particularly children, based upon its effects to the central nervous system, kidneys, and bloodstream. The risk of Lead-Based Paint has been classified by HUD based upon the age and condition of the painted surface. This classification includes the following:

- maximum risk is from paint applied before 1950;
- a severe risk is present from paint applied before 1960;
- a moderate risk is present from paint applied before 1970;
- a slight risk is present from paint applied before 1977, and;
- paint applied after 1977 is not expected to contain lead.

No developed structures are located on the subject property; therefore, the presence of LBP is not considered to be an environmental concern at this time.

3.7.3 Radon

Radon is a radioactive gas which has been identified as a human carcinogen. Radon gas is typically associated with fine-grained rock and soil, and results from the radioactive decay of radium. The U.S. EPA recommends that homeowners in areas with radon screening levels greater than 4 Picocuries per liter (pCi/L) conduct mitigation of radon gas to reduce exposure.

Sections 307 and 309 of the Indoor Radon Abatement Act of 1988 (IRAA) directed the U.S. EPA to list and identify areas of the U.S. with the potential for elevated indoor radon levels. U.S. EPA's Map of Radon Zones (EPA-402-R-93-071) assigns each of the 3,141 counties in the U.S. to one of three zones based on radon potential:

- Zone 1 counties have a predicted average indoor radon screening level greater than 4 pCi/L.
- Zone 2 counties have a predicted average indoor radon screening level between 2 and 4 pCi/L.
- Zone 3 counties have a predicted average indoor radon screening level less than 2 pCi/L.

Based on such factors as indoor radon measurements; geology; aerial radioactivity; and soil permeability, the U.S. EPA has identified the County of Riverside as Zone 2 (i.e., a predicted average indoor radon screening level between 2 and 4 pCi/L). EEI does not consider radon as a significant environmental concern at this time.

3.7.4 Polychlorinated Biphenyls

Polychlorinated biphenyls (PCB's) are used in electrical equipment, particularly in capacitors and transformers, because they are electrically nonconductive and stable at high temperatures. PCB's persist in the environment, accumulate in organisms, and concentrate in the food chain.

The disposal of these compounds is regulated under the Toxic Substances Control Act, which banned the manufacture and distribution of PCB's. By Federal definition, PCB equipment contains 500 parts per million (ppm) or more of PCB's, where PCB-contaminated equipment contains PCB concentrations greater than 50 ppm but less than 500 ppm. The US Environmental Protection Agency (EPA), under TSCA guidance, regulates the removal and disposal of all sources of PCB's containing 50 ppm or more. Any electrical equipment containing dielectric insulating fluids or coolants, manufactured prior to 1976, should be considered as potentially PCB-containing. This includes transformers, capacitors, and fluorescent light fittings. In addition, PCB's may also be found as a stabilizer in older lubricating oils, pesticide extenders, cutting oils, hydraulic fluids, paints, sealants, and flame retardants (UNEP, 1999).

No developed structures or electrical equipment are located on the subject property; therefore, the presence of PCB-containing equipment is not considered to be an environmental concern at this time.

4.0 SITE RECONNAISSANCE

4.1 Purpose

The purpose of our site reconnaissance was to physically observe the subject site, site structures, and adjoining properties for conditions indicating an existing release, past release, or threatened release of any hazardous substances or petroleum products into structures on the subject site, or into soil and/or groundwater beneath the subject property. This would include any evidence of contamination, distressed vegetation, petroleum-hydrocarbon surface staining, waste drums, USTs, ASTs, illegal dumping, or improper waste storage/handling. Detailed information pertaining to our site reconnaissance is provided in the text below.

4.2 Subject Site

On October 7, 2013, EEI personnel conducted a site reconnaissance to visually observe the subject property and adjoining properties for conditions indicating a potential environmental concern. Visual conditions present during the site reconnaissance are documented in the Photographic Log (**Appendix F**), and summarized in **Table 2**.

The trapezoidal shaped subject property is located north of Lake Tamarisk Drive east of Parkview Drive and west of Catalina Way, in the resort community of Lake Tamarisk, north of Desert Center, Riverside County, California. The subject property totals 5.11-acres on a single parcel. The subject property does not have a physical address and is currently undeveloped (**Figure 2**).

EEI accessed the subject property from Lake Tamarisk Drive and traversed the entire property by foot. In general the subject property consists of undeveloped, level terrain and is covered with relatively sparse native vegetation including shrubs and trees. The subject property is located within a residential resort community that consists of single-family residences to the south and east, a park and mobile home community to the north. Lake Tamarisk and a surrounding golf course are located approximately one-eighth mile to the west and southwest of the subject property.

There were no access limitations as the subject property was open and unfenced to the north, south, west and along portions of its eastern boundary. A dirt access drive forms the northern property border and allows vehicles to enter the subject property from the east or west. The ground surface appeared to exist in its natural state and consisted of rocky, coarse sand.

EEI observed several areas along the eastern property boundary, where the subject property borders several homes, where minor amounts of trash and debris had been dumped. The debris consisted mainly of yard waste (cut branches and tree stumps), metal fencing materials and other miscellaneous trash. EEI staff also observed several areas throughout the property where yard waste (mostly cut tree branches) had been piled and burned. The burn areas were characterized by blackened soil, and bits of burnt wood and ash. It appeared that no construction materials, plastics or other types of trash were burned in these areas, but the exact makeup of burn materials could not be identified.

Adjacent to the southwest corner of the subject property, EEI staff noted the presence of a barbed wire enclosed structure. This area consisted of a concrete block structure and a large, pole mounted transmission dish; signage on the building indicated it was operated by Verizon Wireless.

With the exception of the minor debris mentioned above, the site was clear of any significant debris or dumping. No evidence of contamination, distressed vegetation, petroleum-hydrocarbon surface staining, waste drums, USTs, ASTs, or improper waste storage/handling was noted during the site reconnaissance.

| TABLE 2 Summary of Site Reconnaissance | | |
|---|----------|---|
| Item | Concerns | Comments |
| General Housekeeping | No | No concerns observed. Subject property is undeveloped land. |
| Surface Spills | No | No concerns observed. |
| Stained Surfaces | No | No concerns observed. |
| Fill Materials | No | No concerns observed. |
| Pits/Ponds/Lagoons | No | No concerns observed. |
| Surface Impoundments | No | No concerns observed. |
| ASTs/USTs | No | No concerns observed. |
| Distressed Vegetation | No | No concerns observed. |
| Wetlands | No | No concerns observed. |
| Electrical Substations | No | No concerns observed. |
| Areas of Dumping | No | Piled yard waste with miscellaneous trash was scattered throughout the property and along the eastern property boundary near adjacent residences. No concerns observed. |
| Transformers | No | No concerns observed. |
| Waste/Scrap Storage | No | No concerns observed. |
| Chemical Use/Storage | No | No concerns observed. |

4.3 Adjacent Properties

EEI conducted a visual and auto reconnaissance of the adjoining neighborhoods (to the extent practical) to evaluate the potential for offsite impacts that may affect the subject property. These would include evidence of chemical storage or usage, surface staining or leakage, distressed vegetation, or evidence of illegal dumping. In general, the subject property is located in the community of Lake Tamarisk, north of the community of Desert Center, among a mix of residential, resort type development and vacant land. The subject property is immediately bound by Lake Tamarisk Drive followed by single-family residences to the south; single-family residences followed by Catalina Way to the east; a community park followed by a mobile home community to the north; undeveloped land followed by Parkview Drive to the west.

The adjacent property to the southwest corner of the subject property contains a Verizon wireless transmission station and pole mounted dish. Lake Tamarisk and a surrounding golf course are located approximately one-eighth mile to the west and southwest of the subject property.

Adjacent properties were not identified as having environmental related issues on any of the databases researched, and are not considered as an environmental concern at this time. No service stations, dry cleaners, or industrial properties were located in the immediate vicinity.

5.0 FINDINGS AND OPINIONS

Based on the information obtained in this ESA, EEI has the following findings and opinions:

- Known or suspected REC's – No known or suspected REC's have been revealed during the preparation of this ESA.
- Historical REC's – No historical REC's have been revealed during the preparation of this ESA.
- *De Minimis* Conditions – No de minimis conditions were noted during the preparation of this ESA.

6.0 DATA GAPS AND DEVIATIONS FROM ASTM PRACTICES

Section 3.2.20 (ASTM 1527-05) defines a data gap as “a lack or inability to obtain information required by the practice despite good faith efforts of the environmental professional to gather such information.”

6.1 Historical Data Gaps

No historical data gaps were identified during our research efforts.

6.2 Regulatory Data Gaps

No regulatory data gaps were identified during our research efforts.

6.3 Onsite Data Gaps

No onsite data gaps were identified during our research efforts.

6.4 Deviations

Section 12.10 (ASTM 1527-05), states that all deletions and deviations from this practice shall be listed individually and in detail, including Client imposed constraints, and all additions should be listed.

EEI believes that there are no exceptions to, or deletions from, the ASTM Designation E1527-05 Guidelines.

7.0 CONCLUSIONS

We have performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Designation E1527-05 of APN 808-170-006, the *property*. Any exceptions to, or deletions from, this practice are described in Section 6.0 of this report. This assessment has revealed **no evidence of recognized environmental conditions** in connection with the *property*.

8.0 REFERENCES

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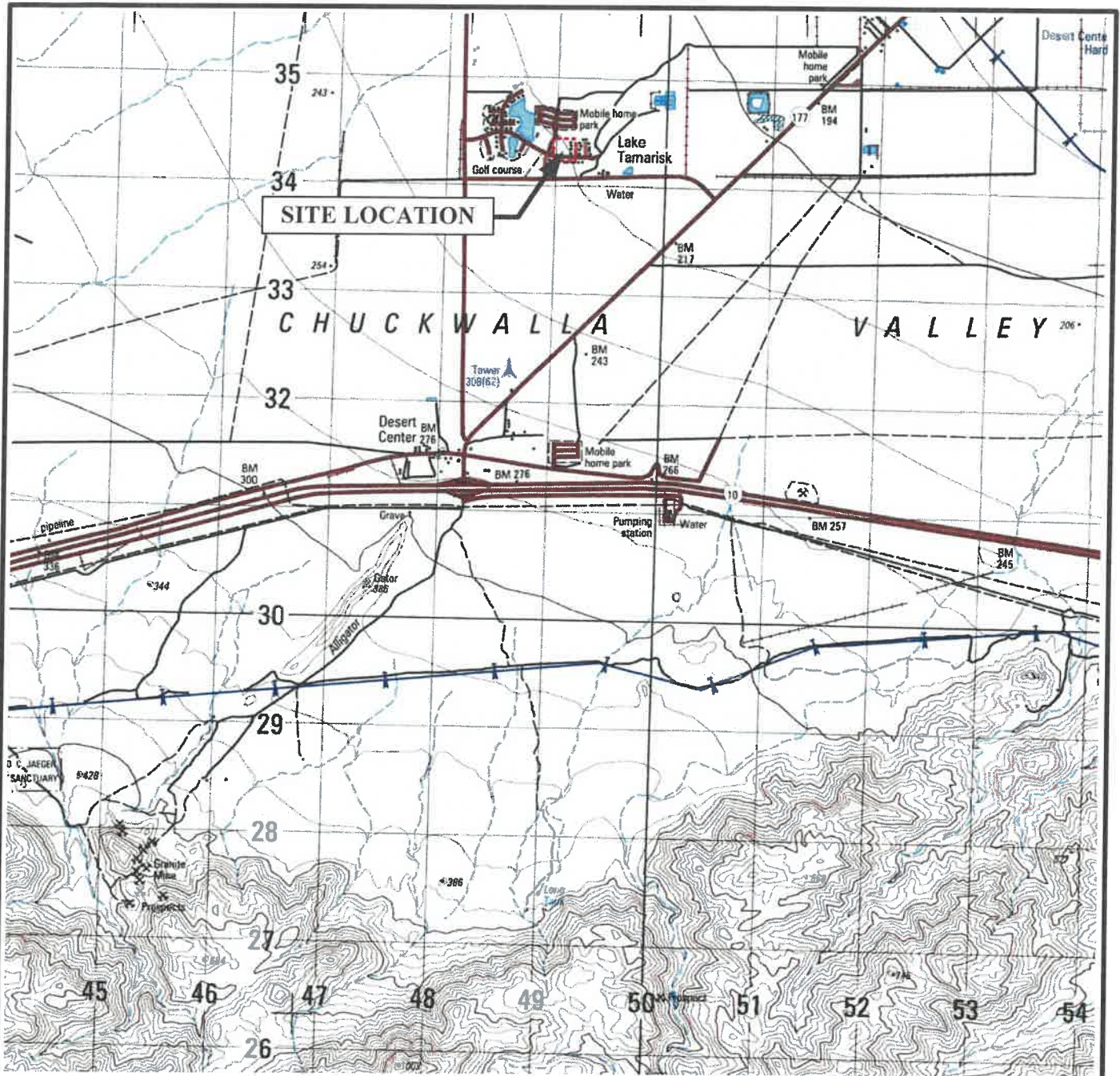
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State Water Resources Control Board, GeoTracker database, Website (<http://www.geotracker.swrcb.ca.gov/>), accessed October, 2013.

United States Geological Survey (USGS), 2012, 7.5' Topographic Map, East of Victory Pass, CA, California Quadrangle, Scale 1:24,000.

West Yost Associates, 2012, Third Quarter 2012 Groundwater Level Monitoring Report. Project No. 367-00-11-06, dated October 2012.

FIGURES



Map Source: USGS, Chuckwalla Mountains, California 7.5 Minute Quadrangle map (USGS, 2002)

LEGEND



Scale: 1" = 1,800'



Note: All Locations Are Approximate

SITE LOCATION MAP

COUNTY OF RIVERSIDE
 ECONOMIC DEVELOPMENT AGENCY
Desert Center Property
 APN 808-170-006
 NEC Lake Tamarisk Drive and Parkview Drive
 Desert Center, Riverside County, California 92239
 EEI Project No. COR-71759.1
 Created October 2013



FIGURE 1



Source: Google Earth, Accessed October 2013; Image Date: May 27, 2012

LEGEND



Scale: 1" = 300'



Note: All Locations Are Approximate

AERIAL SITE MAP
 COUNTY OF RIVERSIDE
 ECONOMIC DEVELOPMENT AGENCY
Desert Center Property
 APN 808-170-006
 NEC Lake Tamarisk Drive and Parkview Drive
 Desert Center, Riverside County, California 92239
 EEI Project No. COR-71759.1
 Created October 2013



FIGURE 2

**APPENDIX A
RESUME OF ENVIRONMENTAL PROFESSIONAL**



BERNARD A. SENTIANIN, CPG, RG, REA

Principal Geologist

SUMMARY

As Principal Geologist of EEI since 1997, Mr. Sentianin provides consulting and technical services as a project manager, expert witness, and senior geologist for investigation and cleanup efforts at sites impacted by Petroleum Hydrocarbons, heavy metals, pesticides, and chlorinated solvents. As a remediation specialist, he has hands on experience designing, installing, and managing large scale projects involving above ground and in-situ bioremediation, soil vapor extraction, sparging, and groundwater extraction/treatment. He has over 22 years of environmental project management experience, and 25 years professional geologic experience. Mr. Sentianin has extensive experience in planning, implementing and evaluating Phase I and Phase II environmental assessments in commercial real estate transactions following ASTM E1527-05, E1903-97 (-02), E2600-10, and 40 CFR Part 312 (AAI).

EDUCATION

1985 Bachelor of Science, Geology, California State University, Bakersfield
1989 Master of Science, Geological Sciences, San Diego State University

REGISTRATIONS/CERTIFICATIONS

Registered Environmental Assessor I No. 3477, State of California.
Professional Geologist No. 5530, State of California.
Certified Professional Geologist No. 9059, American Institute of Professional Geologists
OSHA 40-Hour HAZWOPER Training and 8-Hour Refreshers

WORK HISTORY

1991 TO 1997 Senior Geologist, Senior Project Manager

PW Environmental

Established in-house engineering and consulting services for mid-sized environmental contractor. Established regulatory, vendor, and client contacts. Initiated policies governing technical report content and format and instituted in-house training program for new technical staff. Selected prioritized and procured required support equipment. Actively managed Phase I and Phase II investigation and remediation projects. Reviewed assessment data, prepared feasibility studies, and evaluated remedial alternatives while preparing Remedial Action Plans (RAP) for fuel, heavy metal, and solvent-impacted sites. Prepared health-based risk assessment on large cleanup site adjacent to health care facility. Permitted, implemented, and successfully completed the first in-situ groundwater bioremediation system in Ventura County. Reviewed and implemented numerous Phase I and Phase II environmental site assessments throughout Central and Southern California.

1989 TO 1991 Staff/Project Geologist

Nachant Environmental, Inc.

Planned, implemented, and managed environmental site investigations and remediation projects following appropriate regulatory and professional guidelines. Prepared and reviewed project cost proposals, correspondence, regulatory permits, assessment and investigation reports, and remedial action plans.

1987 TO 1989 Teaching Assistant

**San Diego State University – Department of Geological Sciences and
Department of Engineering**

REPRESENTATIVE PROJECTS

Globe Mills, Sacramento CA - Conducted Phase I and Phase II environmental site assessment, evaluated environmental concerns for adaptive reuse project on behalf of Sacramento Housing and Redevelopment Agency. Managed and coordinated site cleanup, obtaining regulatory closure from the Sacramento County Environmental Management Division.

K Street Corridor – Sacramento, CA. Evaluated and conducted Phase I environmental site assessments on a multi-block area of downtown Sacramento, as well as a number of individual properties in other areas within the K Street Corridor, on behalf of the City of Sacramento Downtown Development Group.

Southside Garden and Fremont Mews, Sacramento, CA – Conducted Phase I/Phase II environmental site assessments and evaluated environmental concerns on three community garden projects on behalf of the Capitol Area Development Authority. Coordinated regulatory oversight with Sacramento County Environmental Management Division and the State Office of Environmental Health Hazard Assessment. Prepared an SAP and facilitated compliance with a Brownfield Grant from EPA Region 9. Prepared and evaluated RFP's from cleanup contractors and provided remediation oversight and management. Prepared closure documentation and obtained regulatory concurrence for both the Southside Garden and Fremont Mews projects.

Electronics Manufacturing Facility/Fueling Depot, Santa Monica, CA. Performed soil and groundwater investigation, feasibility testing and evaluation of fuel hydrocarbon and chlorinated solvent plumes. Prepared RAP with design criteria for soil vapor extraction. After approval of RAP by State regulators, implemented and successfully completed remediation at site, obtaining closure.

Former Aerospace Facility, Santa Ana, CA. Evaluated existing Phase I and Phase II assessments. Performed soil, soil vapor, and groundwater investigations of chlorinated solvent plumes at multiple locations on site. Modeled and evaluated potential plume source areas. Initiated site specific sampling protocol for chlorinated solvents. Negotiated with lead regulatory agency regarding regional contamination issues and site closure requirements.

Major Land Owner/Developer, San Juan Capistrano, CA. Conducted Phase I and Phase II environmental site assessments at multiple sites in southern Orange County. Evaluated potential environmental concerns related to sand & gravel operations, fueling facilities, ordinance testing facilities, aerospace engineering labs, vehicle maintenance and repair facilities, agricultural operations, and illicit dump sites.

Major Fast Food Restaurant Chain, Multiple Locations, CA. Conducted Phase I and Phase II environmental site assessments at multiple sites throughout California. Evaluated potential environmental concerns related to historic property uses and potential effects on site operations.

**APPENDIX B
COUNTY OF RIVERSIDE PROPERTY INFORMATION/PRELIMINARY TITLE REPORT**

RIVERSIDE COUNTY GIS



Riverside County TLMA GIS

Selected parcel(s):

IMPORTANT

Maps and data are to be used for reference purposes only. Map features are approximate, and are not necessarily accurate to surveying or engineering standards. The County of Riverside makes no warranty or guarantee as to the content (the source is often third party), accuracy, timeliness, or completeness of any of the data provided, and assumes no legal responsibility for the information contained on this map. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user.

STANDARD WITH PERMITS REPORT

APNs

808-170-006-6

OWNER NAME

NOT AVAILABLE ONLINE

ADDRESS

808-170-006
ADDRESS NOT AVAILABLE

MAILING ADDRESS

(SEE OWNER)
337 N VINEYARD AVE 4TH FL
ONTARIO CA. 91764

LEGAL DESCRIPTION

RECORDED BOOK/PAGE: MB 58/22
SUBDIVISION NAME: TR 3662
LOT/PARCEL: 104. BLOCK: NOT AVAILABLE
TRACT NUMBER: 3662

LOT SIZE

RECORDED LOT SIZE IS 5.11 ACRES

PROPERTY CHARACTERISTICS

NO PROPERTY DESCRIPTION AVAILABLE

THOMAS BROS. MAPS PAGE/GRID

PAGE: 5421 GRID: C1

CITY BOUNDARY/SPHERE

NOT WITHIN A CITY
NOT WITHIN A CITY SPHERE
ANNEXATION DATE: NOT APPLICABLE
NO LAFCO CASE # AVAILABLE
NO PROPOSALS

MARCH JOINT POWERS AUTHORITY

NOT IN THE JURISDICTION OF THE MARCH JOINT POWERS AUTHORITY

INDIAN TRIBAL LAND

NOT IN A TRIBAL LAND

SUPERVISORIAL DISTRICT 2011 (ORD. 813)

JOHN BENOIT, DISTRICT 4

SUPERVISORIAL DISTRICT (2001 BOUNDARIES)

ROY WILSON, DISTRICT 4

TOWNSHIP/RANGE

T5SR15E SEC 14

ELEVATION RANGE

724/728 FEET

PREVIOUS APN

NO DATA AVAILABLE

PLANNING

LAND USE DESIGNATIONS

MHDR

SANTA ROSA ESCARPMENT BOUNDARY

NOT IN THE SANTA ROSA ESCARPMENT BOUNDARY

AREA PLAN (RCIP)

DESERT CENTER

COMMUNITY ADVISORY COUNCILS

NOT IN A COMMUNITY ADVISORY COUNCIL AREA

GENERAL PLAN POLICY OVERLAYS

NOT IN A GENERAL PLAN POLICY OVERLAY AREA

GENERAL PLAN POLICY AREAS

NONE

ZONING CLASSIFICATIONS (ORD. 348)

R-2-5000

ZONING DISTRICTS AND ZONING AREAS

CHUCKAWALLA AREA

ZONING OVERLAYS

NOT IN A ZONING OVERLAY

HISTORIC PRESERVATION DISTRICTS

NOT IN AN HISTORIC PRESERVATION DISTRICT

SPECIFIC PLANS

NOT WITHIN A SPECIFIC PLAN

AGRICULTURAL PRESERVE
NOT IN AN AGRICULTURAL PRESERVE

REDEVELOPMENT AREAS
PROJECT AREA NAME: DCPA
SUBAREA NAME: DESERT CENTER
AMENDMENT NUMBER: 0
ADOPTION DATE: DEC. 22, 1987
ACREAGE: 378 ACRES

AIRPORT INFLUENCE AREAS
NOT IN AN AIRPORT INFLUENCE AREA

AIRPORT COMPATIBILITY ZONES
NOT IN AN AIRPORT COMPATIBILITY ZONE

ENVIRONMENTAL

CVMSHCP (COACHELLA VALLEY MULTI-SPECIES HABITAT CONSERVATION PLAN) CONSERVATION AREA
NOT IN A CONSERVATION AREA

CVMSHCP FLUVIAL SAND TRANSPORT SPECIAL PROVISION AREAS
NOT IN A FLUVIAL SAND TRANSPORT SPECIAL PROVISION AREA

WRMSHCP (WESTERN RIVERSIDE COUNTY MULTI-SPECIES HABITAT CONSERVATION PLAN) CELL GROUP
NOT IN A CELL GROUP

WRMSHCP CELL NUMBER
NOT IN A CELL

HANS/ERP (HABITAT ACQUISITION AND NEGOTIATION STRATEGY/EXPEDITED REVIEW PROCESS)
NONE

VEGETATION (2005)
NO DATA AVAILABLE

FIRE

HIGH FIRE AREA (ORD. 787)
NOT IN A HIGH FIRE AREA

FIRE RESPONSIBILITY AREA
NOT IN A FIRE RESPONSIBILITY AREA

DEVELOPMENT FEES

CVMSHCP FEE AREA (ORD. 875)

NOT WITHIN THE COACHELLA VALLEY MSHCP FEE AREA

WRMSHCP FEE AREA (ORD. 810)

NOT WITHIN THE WESTERN RIVERSIDE COUNTY MSHCP FEE AREA

ROAD & BRIDGE DISTRICT

NOT IN A DISTRICT

EASTERN TUMF (TRANSPORTATION UNIFORM MITIGATION FEE ORD. 673)

NOT WITHIN THE EASTERN TUMF FEE AREA

WESTERN TUMF (TRANSPORTATION UNIFORM MITIGATION FEE ORD. 824)

NOT WITHIN THE WESTERN TUMF FEE AREA

DIF (DEVELOPMENT IMPACT FEE AREA ORD. 659)

DESERT CENTER

SKR FEE AREA (STEPHEN'S KANGAROO RAT ORD. 663.10)

NOT WITHIN AN SKR FEE AREA.

DEVELOPMENT AGREEMENTS

NOT IN A DEVELOPMENT AGREEMENT AREA

TRANSPORTATION

CIRCULATION ELEMENT ULTIMATE RIGHT-OF-WAY

NOT IN A CIRCULATION ELEMENT RIGHT-OF-WAY

ROAD BOOK PAGE

255A

TRANSPORTATION AGREEMENTS

NOT IN A TRANSPORTATION AGREEMENT

CETAP (COMMUNITY AND ENVIRONMENTAL TRANSPORTATION ACCEPTABILITY PROCESS) CORRIDORS

NOT IN A CETAP CORRIDOR.

HYDROLOGY

FLOOD PLAIN REVIEW

WITHIN AREAS OF FLOODING SENSITIVITY. CONTACT THE FLOOD PLAIN MANAGEMENT SECTION AT (951) 955-1200 FOR INFORMATION

WATER DISTRICT

DATA NOT AVAILABLE

FLOOD CONTROL DISTRICT

NOT IN A FLOOD DISTRICT

WATERSHED
CHUCKWALLA

GEOLOGIC

FAULT ZONE
NOT IN A FAULT ZONE

FAULTS
NOT WITHIN A 1/2 MILE OF A FAULT

LIQUEFACTION POTENTIAL
MODERATE

SUBSIDENCE
SUSCEPTIBLE

PALEONTOLOGICAL SENSITIVITY
LOW POTENTIAL.
FOLLOWING A LITERATURE SEARCH, RECORDS CHECK AND A FIELD SURVEY, AREAS MAY BE DETERMINED BY A QUALIFIED VERTEBRATE PALEONTOLOGIST AS HAVING LOW POTENTIAL FOR CONTAINING SIGNIFICANT PALEONTOLOGICAL RESOURCES SUBJECT TO ADVERSE IMPACTS.

MISCELLANEOUS

SCHOOL DISTRICT
DESERT CENTER UNIFIED

COMMUNITIES
DESERT CENTER

COUNTY SERVICE AREA
IN OR PARTIALLY WITHIN
DESERT CENTER/LAKE TAMARISK #51 -
STREET LIGHTING
SEWER
WATER

LIGHTING (ORD. 655)
NOT APPLICABLE; 88.97 MILES FROM MT. PALOMAR OBSERVATORY

2000 CENSUS TRACT
045800

FARMLAND
NOT MAPPED

TAX RATE AREAS

- 062006
- 4-87 DESERT CTR
- COACHELLA VALLEY PUBLIC CEMETERY
- COUNTY FREE LIBRARY
- COUNTY SERVICE AREA 51
- COUNTY STRUCTURE FIRE PROTECTION
- COUNTY WASTE RESOURCE MGMT DIST
- CSA 152.
- DESERT CENTER UNIFIED SCHOOL
- DESERT COMMUNITY COLLEGE
- GENERAL
- GENERAL PURPOSE
- RIV. CO. OFFICE OF EDUCATION
- SUPERVISORIAL ROAD DISTRICT 4

SPECIAL NOTES

PLEASE REFER TO ORDINANCE 457.96 FOR COACHELLA VALLEY AGRICULTURAL GRADING EXEMPTIONS.

BUILDING PERMITS

| Case # | Description | Status |
|---------------------|----------------|----------------|
| NO PLANNING PERMITS | NOT APPLICABLE | NOT APPLICABLE |

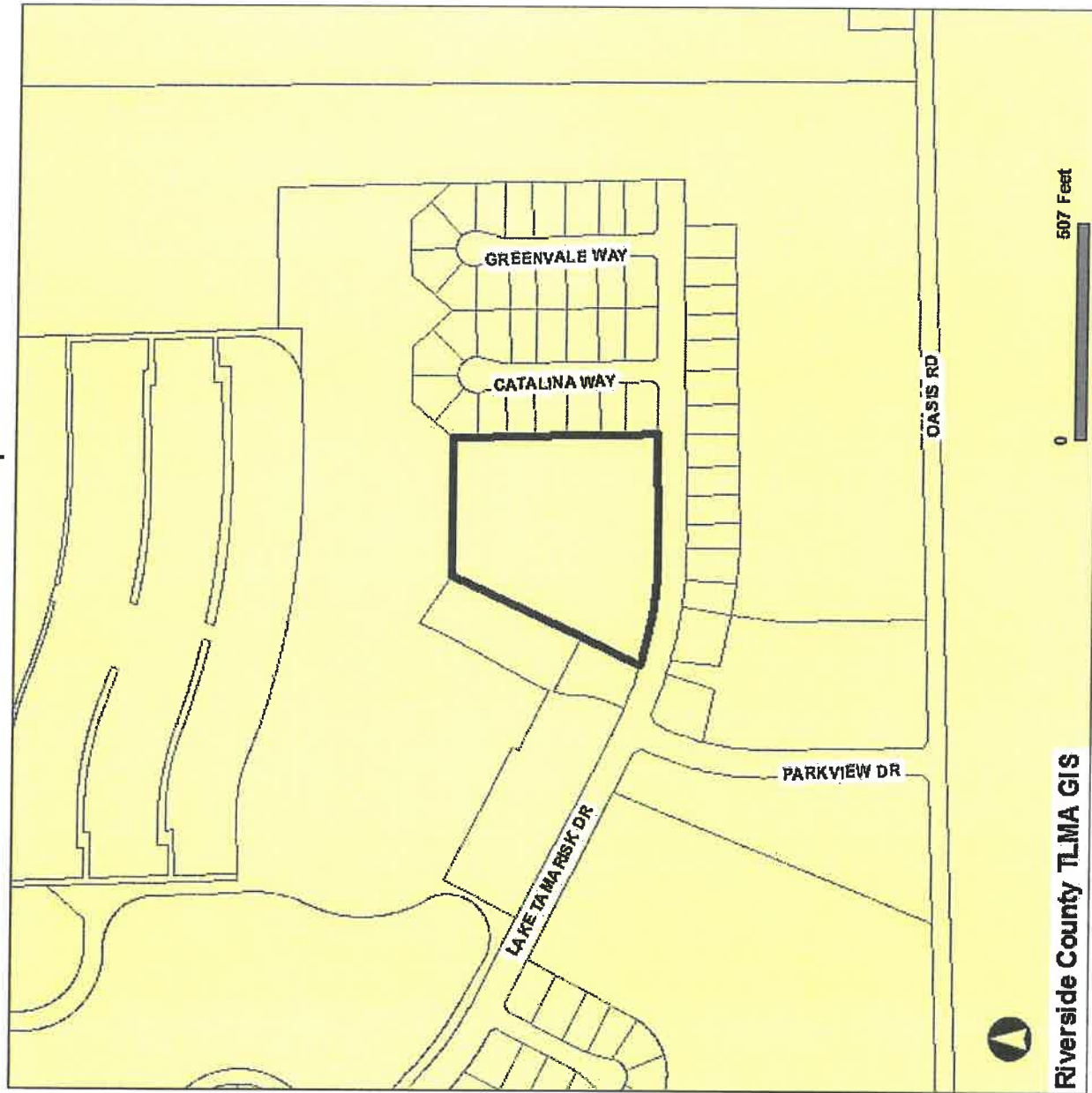
ENVIRONMENTAL HEALTH PERMITS

| Case # | Description | Status |
|--------------------------|----------------|----------------|
| NO ENVIRONMENTAL PERMITS | NOT APPLICABLE | NOT APPLICABLE |

PLANNING PERMITS

| Case # | Description | Status |
|---------------------|----------------|----------------|
| NO PLANNING PERMITS | NOT APPLICABLE | NOT APPLICABLE |

Flood Zone Map



Selected parcel(s):

808-170-006

FLOOD ZONES

SELECTED PARCEL
FLOOD ZONES

 INTERSTATES

 HIGHWAYS

PARCELS

IMPORTANT

Maps and data are to be used for reference purposes only. Map features are approximate, and are not necessarily accurate to surveying or engineering standards. The County of Riverside makes no warranty or guarantee as to the content (the source is often third party), accuracy, timeliness, or completeness of any of the data provided, and assumes no legal responsibility for the information contained on this map. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user.

REPORT PRINTED ON...Thu Oct 10 2013 17:05:08 GMT-0600 (Mountain Daylight Time)

Version 130923



Commonwealth Land Title Company
4100 Newport Place Dr.
Suite 120
Newport Beach, CA 92660
Phone: (949) 724-0706

**COUNTY OF RIVERSIDE EDA ACCOUNTING
3133 MISSION INN AVENUE
RIVERSIDE, CA 92507**

Our File No: 08020351
Title Officer: Chris Maziar
e-mail: unit10@ltic.com
Phone: (949) 724-3170
Fax: (949) 258-5740

Attn: **Accounts Payable**

Your Reference No: 808-170-006

Property Address: VACANT, Riverside Area, California

PRELIMINARY REPORT

Dated as of September 5, 2013 at 7:30 a.m.

In response to the application for a policy of title insurance referenced herein, Commonwealth Land Title Company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a policy or policies of title insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception herein or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations or Conditions of said policy forms.

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Attachment One. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitation on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Attachment One. Copies of the policy forms should be read. They are available from the office which issued this report.

The policy(s) of title insurance to be issued hereunder will be policy(s) of **Commonwealth Land Title Insurance Company**.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Attachment One of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered. It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

File No: 08020351

SCHEDULE A

The form of policy of title insurance contemplated by this report is:

ALTA Standard Owners Policy (6-17-06)

The estate or interest in the land hereinafter described or referred to covered by this report is:

A FEE

Title to said estate or interest at the date hereof is vested in:

Lake Tamarisk Development, LLC, a Delaware limited liability company, which acquired title as Lake Tamarisk Development Corporation, a California Corporation

The land referred to herein is situated in the County of RIVERSIDE, State of California, and is described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

File No: 08020351

EXHIBIT "A"

All that certain real property situated in the County of Riverside, State of California, described as follows:

Lot 104 of Tract 3662, in the County of Riverside, State of California, as shown on a Map recorded in Book 58, Pages 22 through 29 inclusive of Maps, in the office of the County Recorder of said County.

Assessor's Parcel Number: **808-170-006-6**

SCHEDULE B – Section A

The following exceptions will appear in policies when providing standard coverage as outlined below:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.

SCHEDULE B – Section B

At the date hereof Exceptions to coverage in addition to the printed exceptions and exclusions in said policy form would be as follows:

- A. Any liens or other assessments, bonds, or special district liens including without limitation, Community Facility Districts, that arise by reason of any local, City, Municipal or County Project or Special District.
- B. The lien of supplemental taxes, if any, assessed pursuant to the provisions of Chapter 3.5 (Commencing with Section 75) of the Revenue and Taxation Code of the State of California.

- 1. Water rights, claims or title to water, whether or not disclosed by the public records.
- 2. Recitals as shown on that certain Tract No. 3662

Recording No: In Book 58, Page(s) 22 through 29 of Maps

Which among other things recites the fact the 50 foot wide private road easements are retained for the benefit of the owners, their successors, assigns and lot owners, as set out on the Owner's Certificate of the Map of said Tract.

Reference is hereby made to said document for full particulars.

- 3. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Southern California Gas Company, a Corporation
Purpose: pipe lines
Recording Date: December 20, 1967
Recording No: as Instrument No. 115395 of Official Records

Reference is hereby made to said document for full particulars.

- 4. An irrevocable offer to dedicate an easement over a portion of said Land for

Purpose(s): water and sewers
Recording Date: July 3, 1968
Recording No: as Instrument No. 63445 of Official Records

Reference is hereby made to said document for full particulars.

- 5. Covenants, conditions, restrictions and easements but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

Recording Date: April 9, 1968
Recording No: as Instrument No. 32565 of Official Records

Said covenants, conditions and restrictions provide that a violation thereof shall not defeat the lien of any mortgage or deed of trust made in good faith and for value.

File No: 08020351

6. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Southern California Edison Company, a Corporation
Purpose: underground conduits
Recording Date: August 28, 1968
Recording No: as Instrument No. 83720 of Official Records

The exact location and extent of said easement is not disclosed of record.

7. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: General Telephone Company of California
Purpose: pole lines, conduits or underground facilities
Recording Date: January 31, 1969
Recording No: as Instrument No. 10238 of Official Records

Reference is hereby made to said document for full particulars.

8. The Land described herein is included within a project area of the Redevelopment Agency shown below, and that proceedings for the redevelopment of said project have been instituted under the Redevelopment Law (such redevelopment to proceed only after the adoption of the Redevelopment Plan) as disclosed by a document.

Redevelopment Agency: County of Riverside
Recording Date: December 24, 1987
Recording No: as Instrument No. 362715 of Official Records

9. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.
10. Any rights of the parties in possession of a portion of, or all of, said Land, which rights are not disclosed by the public records.
11. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other matters which a correct survey would disclose and which are not shown by the public records.
12. Any easements not disclosed by the public records as to matters affecting title to real property, whether or not said easements are visible and apparent.
13. Matters which may be disclosed by an inspection and/or by a correct ALTA/ACSM Land Title Survey of said Land that is satisfactory to the Company, and/or by inquiry of the parties in possession thereof.

END OF SCHEDULE B EXCEPTIONS

**PLEASE REFER TO THE "NOTES AND REQUIREMENTS SECTION" WHICH
FOLLOWS FOR INFORMATION NECESSARY TO COMPLETE THIS TRANSACTION**

REQUIREMENTS SECTION:

REQ NO.1: The Company will require the following documents for review prior to the issuance of any title assurance predicated upon a conveyance or encumbrance by the corporation named below:

Name of Corporation: Lake Tamarisk Development, LLC, a Delaware limited liability company, which acquired title as Lake Tamarisk Development Corporation, a California Corporation

- a) A Copy of the corporation By-laws and Articles of Incorporation
- b) An original or certified copy of a resolution authorizing the transaction contemplated herein
- c) If the Articles and/or By-laws require approval by a 'parent' organization, a copy of the Articles and By-laws of the parent

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

INFORMATIONAL NOTES SECTION

NOTE NO. 1: The information on the attached plat is provided for your convenience as a guide to the general location of the subject property. The accuracy of this plat is not guaranteed, nor is it a part of any policy, report or guarantee to which it may be attached.

NOTE NO. 2: California insurance code section 12413.1 regulates the disbursement of escrow and sub-escrow funds by title companies. The law requires that funds be deposited in the title company escrow account and available for withdrawal prior to disbursement. Funds deposited with the company by wire transfer may be disbursed upon receipt. Funds deposited with the company via cashier's check or teller's check drawn on a California based bank may be disbursed on the next business day after the day of deposit. If funds are deposited with the company by other methods, recording and/or disbursement may be delayed. All escrow and sub-escrow funds received by the company will be deposited with other escrow funds in one or more non-interest bearing escrow accounts of the company in a financial institution selected by the company. The company may receive certain direct or indirect benefits from the financial institution by reason of the deposit of such funds or the maintenance of such accounts with such financial institution, and the company shall have no obligation to account to the depositing party in any manner for the value of, or to pay to such party, any benefit received by the company. Those benefits may include, without limitation, credits allowed by such financial institution on loans to the company or its parent company and earnings on investments made with the proceeds of such loans, accounting, reporting and other services and products of such financial institution. Such benefits shall be deemed additional compensation of the company for its services in connection with the escrow or sub-escrow.

WIRING INSTRUCTIONS FOR THIS OFFICE ARE:

Wells Fargo Bank, NA
420 Montgomery St
San Francisco, CA 94104
ABA# 121000248
Credit to: Lawyers Title Company
Account #4988381182

RE: 08020351-CMM-920

PLEASE INDICATE COMMONWEALTH LAND TITLE COMPANY ESCROW OR TITLE ORDER NUMBER

NOTE NO. 3: Lawyers Title is a division of Commonwealth Land Title Insurance Company. The insurer in policies of title insurance, when issued in this transaction, will be Commonwealth Land Title Insurance Company.

NOTE NO. 4: Property taxes, including any personal property taxes and any assessments collected with taxes, are paid. For proration purposes the amounts were:

| | |
|-------------------------|---------------|
| Tax Identification No.: | 808-170-006-6 |
| Fiscal Year: | 2012-2013 |
| 1st Installment: | \$366.09 |
| 2nd Installment: | \$366.09 |
| Exemption: | Not Set Out |
| Code Area: | 062-006 |

File No: 08020351

NOTE NO. 5: The Company requires current beneficiary demands prior to closing. If the demand is expired and a current demand cannot be obtained, our requirements will be as follows:

- a) If the Company accepts a verbal update on the demand, we may hold an amount equal to one monthly mortgage payment. This hold will be in addition to the verbal hold the lender may have stipulated.
- b) If the Company cannot obtain a verbal update on the demand, we will either pay off the expired demand or wait for the amended demand, at our discretion.
- c) All payoff figures are verified at closing. If the customer's last payment was made within 15 days of closing, our Payoff Department may hold one month's payment to insure the check has cleared the bank (unless a copy of the cancelled check is provided, in which case there will be no hold).

Typist: tga

Date Typed: September 13, 2013

ATTACHMENT ONE

**CALIFORNIA LAND TITLE ASSOCIATION
STANDARD COVERAGE POLICY – 1990**

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
- (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
 - (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
 - (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
 - (c) resulting in no loss or damage to the insured claimant;
 - (d) attaching or created subsequent to Date of Policy; or
 - (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable doing business laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.

Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

**CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE (02-03-10)
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE**

EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
 - a. building;
 - b. zoning;
 - c. land use;
 - d. improvements on the Land;
 - e. land division; and
 - f. environmental protection.

This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
 - a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
 - b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
 - c. that result in no loss to You; or
 - d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
 - a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
 - b. in streets, alleys, or waterways that touch the Land.

This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:

- For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

| | <u>Your Deductible Amount</u> | <u>Our Maximum Dollar Limit of Liability</u> |
|------------------|--|--|
| Covered Risk 16: | 1.00% of Policy Amount Shown in Schedule A or \$2,500.00 (whichever is less) | \$ 10,000.00 |
| Covered Risk 18: | 1.00% of Policy Amount Shown in Schedule A or \$5,000.00 (whichever is less) | \$ 25,000.00 |
| Covered Risk 19: | 1.00% of Policy Amount Shown in Schedule A or \$5,000.00 (whichever is less) | \$ 25,000.00 |
| Covered Risk 21: | 1.00% of Policy Amount Shown in Schedule A or \$2,500.00 (whichever is less) | \$ 5,000.00 |

**AMERICAN LAND TITLE ASSOCIATION
RESIDENTIAL TITLE INSURANCE POLICY (6-1-87)**

EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
 - land use
 - improvements on the land
 - land division
 - environmental protection
- This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date. This exclusion does not limit the zoning coverage described in Items 12 and 13 of Covered Title Risks.
2. The right to take the land by condemning it, unless:
 - a notice of exercising the right appears in the public records
 - on the Policy Date
 - the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking
 3. Title Risks:
 - that are created, allowed, or agreed to by you
 - that are known to you, but not to us, on the Policy Date – unless they appeared in the public records
 - that result in no loss to you
 - that first affect your title after the Policy Date – this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
 4. Failure to pay value for your title.
 5. Lack of a right:
 - to any land outside the area specifically described and referred to in Item 3 of Schedule A

OR

- in streets, alleys, or waterways that touch your land

This exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

**2006 ALTA LOAN POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
 - (i) the occupancy, use, or enjoyment of the Land;
 - (ii) the character, dimensions, or location of any improvement erected on the Land;
 - (iii) the subdivision of land; or
 - (iv) environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
 - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
 - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - (c) resulting in no loss or damage to the Insured Claimant;
 - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13 or 14); or
 - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
 - (a) a fraudulent conveyance or fraudulent transfer, or
 - (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

- This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) that arise by reason of:
- (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
 - Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
 - Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
 - Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
 - (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
 - Any lien or right to a lien for services, labor or material not shown by the public records.

**2006 ALTA OWNER'S POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

- (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
 - the occupancy, use, or enjoyment of the Land;
 - the character, dimensions, or location of any improvement erected on the Land;
 - the subdivision of land; or
 - environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
- Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
- Defects, liens, encumbrances, adverse claims, or other matters
 - created, suffered, assumed, or agreed to by the Insured Claimant;
 - not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - resulting in no loss or damage to the Insured Claimant;
 - attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
 - resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
- Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
 - a fraudulent conveyance or fraudulent transfer; or
 - a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
- Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) that arise by reason of:

- (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
- Any facts, rights, interests, or claims that are not shown in the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
- Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
- Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and that are not shown by the Public Records.
- (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
- Any lien or right to a lien for services, labor or material not shown by the public records.

**ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (07-26-10)
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

- (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
 - the occupancy, use, or enjoyment of the Land;
 - the character, dimensions, or location of any improvement erected on the Land;
 - the subdivision of land; or
 - environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.

- (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
- 2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
- 3. Defects, liens, encumbrances, adverse claims, or other matters
 - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
 - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - (c) resulting in no loss or damage to the Insured Claimant;
 - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
 - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
- 4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
- 5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
- 6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
- 7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
- 8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.
- 9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
 - (a) a fraudulent conveyance or fraudulent transfer, or
 - (b) a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.

Notice of Available Discounts

Pursuant to Section 2355.3 in Title 10 of the California Code of Regulations Fidelity National Financial, Inc. and its subsidiaries ("FNF") must deliver a notice of each discount available under our current rate filing along with the delivery of escrow instructions, a preliminary report or commitment. Please be aware that the provision of this notice does not constitute a waiver of the consumer's right to be charged the filed rate. As such, your transaction may not qualify for the below discounts.

You are encouraged to discuss the applicability of one or more of the below discounts with a Company representative. These discounts are generally described below; consult the rate manual for a full description of the terms, conditions and requirements for such discount. These discounts only apply to transactions involving services rendered by the FNF Family of Companies. This notice only applies to transactions involving property improved with a one-to-four family residential dwelling.

FNF Underwritten Title Company

LTC – Lawyers Title Company

FNF Underwriter

CLTIC – Commonwealth Land Title Insurance Co.

Available Discounts

DISASTER LOANS (CLTIC)

The charge for a Lender's Policy (Standard or Extended coverage) covering the financing or refinancing by an owner of record, within 24 months of the date of a declaration of a disaster area by the government of the United States or the State of California on any land located in said area, which was partially or totally destroyed in the disaster, will be 50% of the appropriate title insurance rate.

EMPLOYEE RATE (LTC and CLTIC)

No charge shall be made to employees (including employees on approved retirement) of the Company or its underwritten, subsidiary or affiliated title companies for policies or escrow services in connection with financing, refinancing, sale or purchase of the employees' bona fide home property. Waiver of such charges is authorized only in connection with those costs which the employee would be obligated to pay, by established custom, as a party to the transaction.

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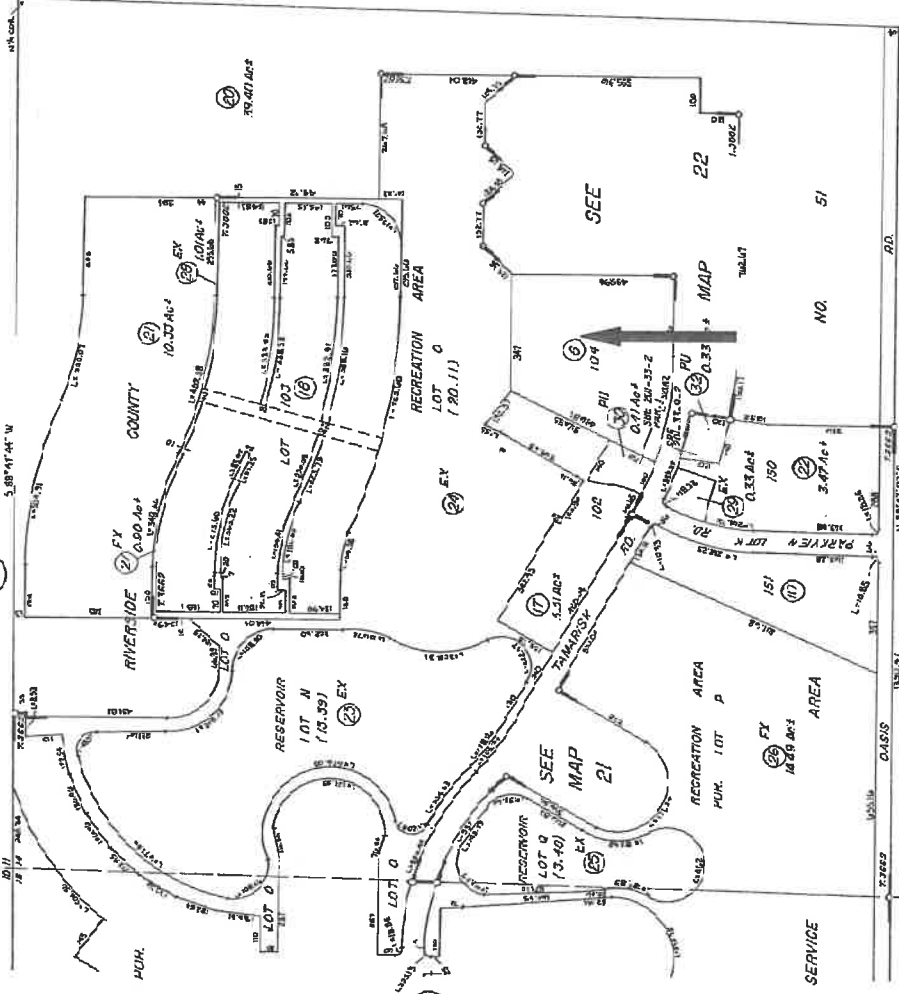
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SEC. 14

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M. B. 59/23,29 Tract No. 3662

FEB. 1960

ASSessor's MAP BY ROD. PG. 17
RIVERSIDE COUNTY, CALIF.

**APPENDIX C
HISTORICAL AERIAL PHOTOGRAPHS/TOPOGRAPHIC MAPS**

NE Of Parkview Dr And Lake Tamarisk Dr
NE Of Parkview Dr And Lake Tamarisk Dr
Desert Center, CA 92239

Inquiry Number: 3744058.4
October 03, 2013

The EDR Aerial Photo Decade Package



440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

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Please contact EDR at 1-800-352-0050
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Date EDR Searched Historical Sources:

Aerial Photography October 03, 2013

Target Property:

NE Of Parkview Dr And Lake Tamarisk Dr
Desert Center, CA 92239

| <u>Year</u> | <u>Scale</u> | <u>Details</u> | <u>Source</u> |
|-------------|-----------------------------------|---|---------------|
| 1953 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1953 | Pacific Air |
| 1979 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1979 Best Copy Available from original source | USGS |
| 1984 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1984 | USGS |
| 1996 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1996 | USGS |
| 2002 | Aerial Photograph. Scale: 1"=500' | /DOQQ - acquisition dates: 2002 | EDR |
| 2005 | Aerial Photograph. Scale: 1"=500' | Flight Year: 2005 | EDR |
| 2009 | Aerial Photograph. Scale: 1"=500' | Flight Year: 2009 | EDR |
| 2010 | Aerial Photograph. Scale: 1"=500' | Flight Year: 2010 | EDR |
| 2012 | Aerial Photograph. Scale: 1"=500' | Flight Year: 2012 | EDR |



INQUIRY #: 3744058.4

YEAR: 1953

— = 500'





INQUIRY #: 3744058.4

YEAR: 1979

| = 500'



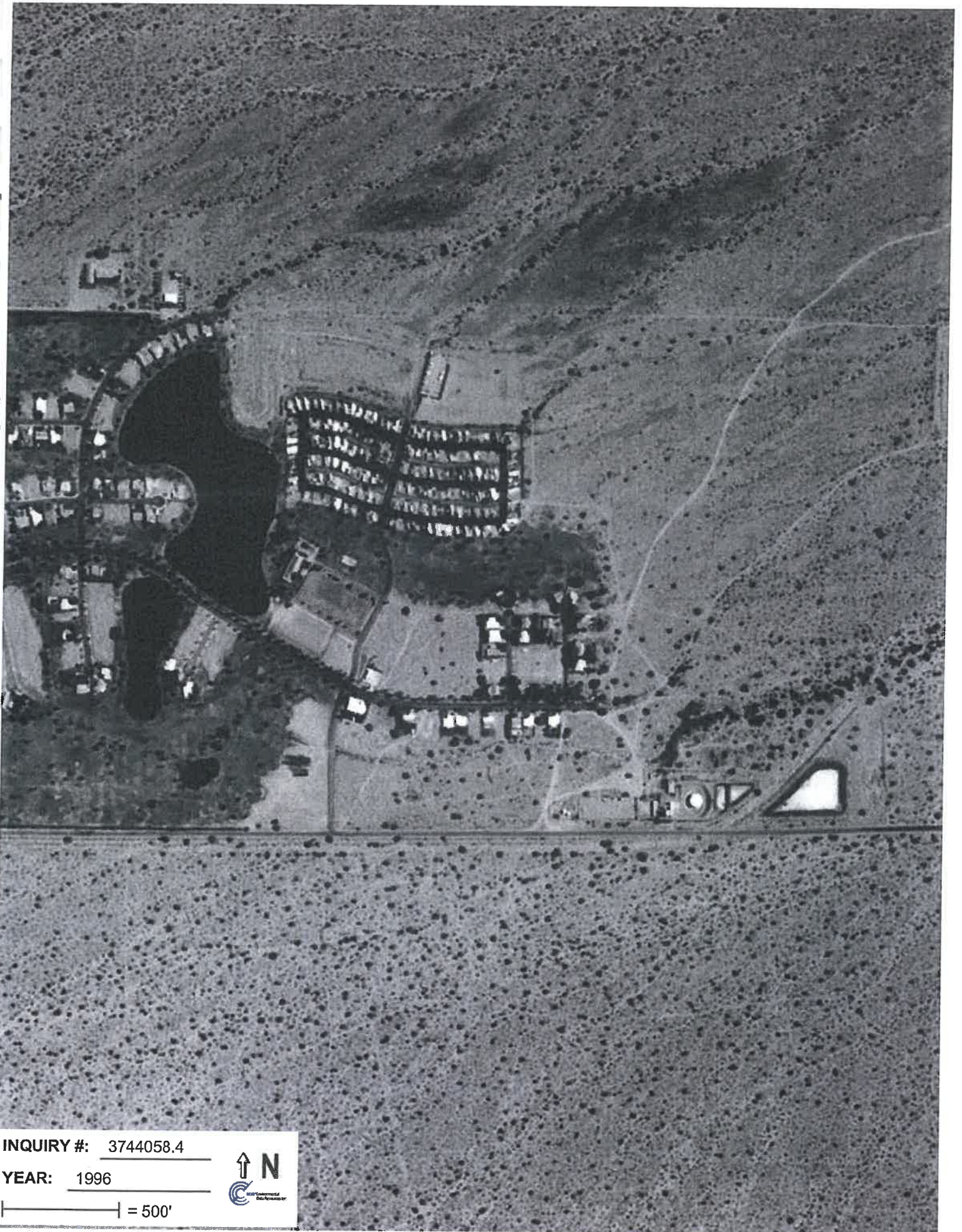


INQUIRY #: 3744058.4

YEAR: 1984

| = 500'



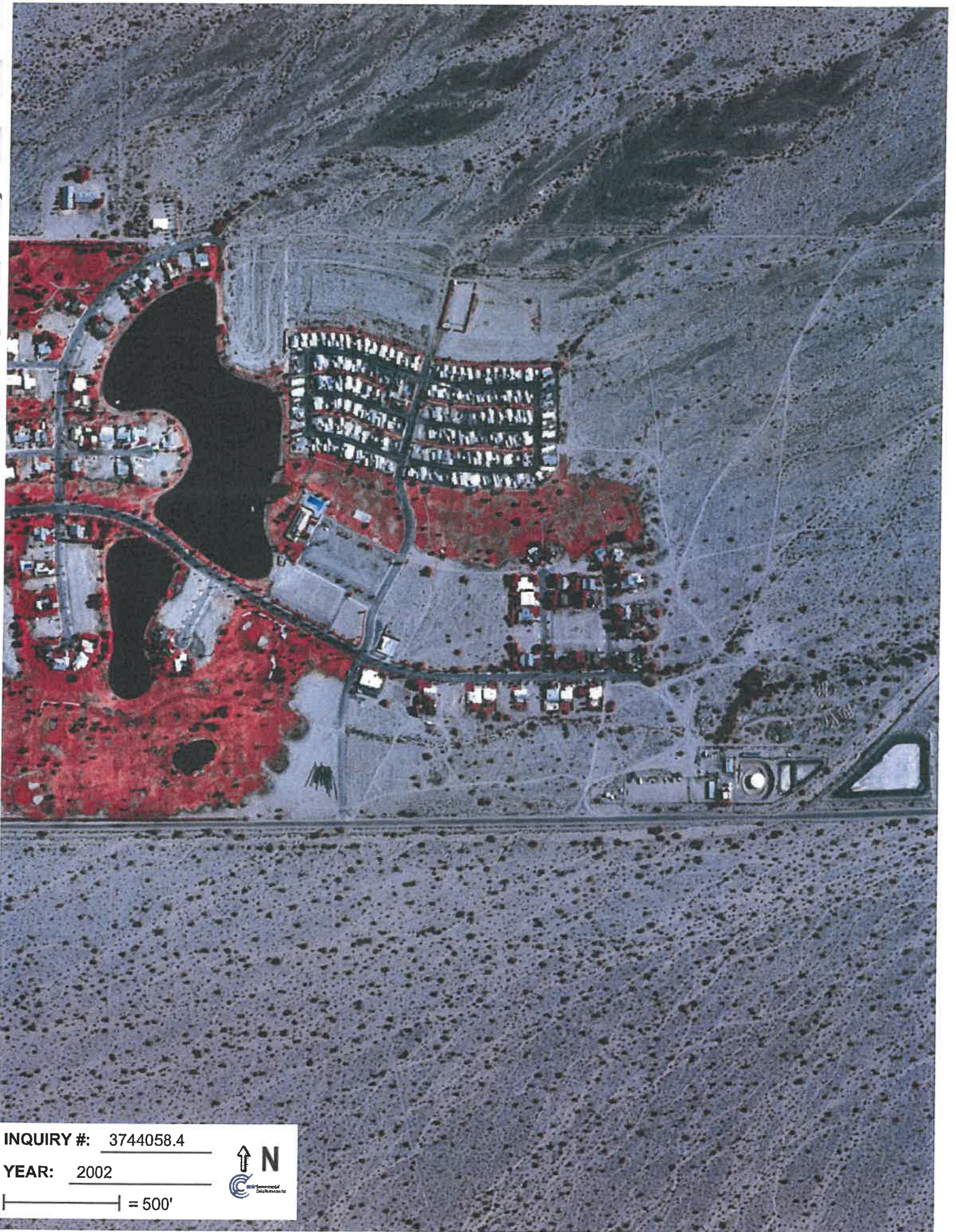


INQUIRY #: 3744058.4

YEAR: 1996

— = 500'





INQUIRY #: 3744058.4

YEAR: 2002

— = 500'





INQUIRY #: 3744058.4

YEAR: 2005

| = 500'



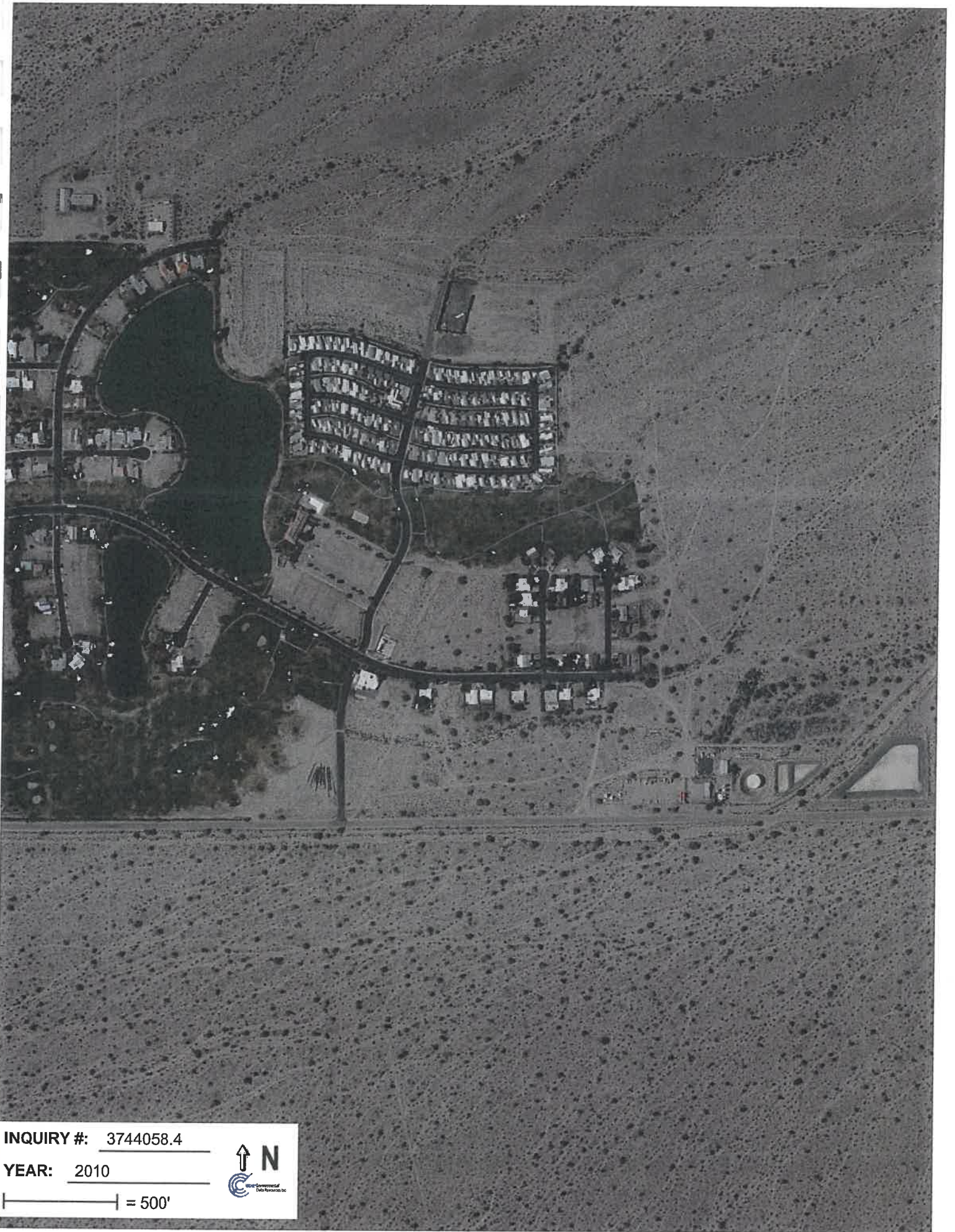


INQUIRY #: 3744058.4

YEAR: 2009


| = 500'





INQUIRY #: 3744058.4

YEAR: 2010

 = 500'





INQUIRY #: 3744058.4

YEAR: 2012

— = 500'



NE Of Parkview Dr And Lake Tamarisk Dr
NE Of Parkview Dr And Lake Tamarisk Dr
Desert Center, CA 92239

Inquiry Number: 3744058.3
September 30, 2013

EDR Historical Topographic Map Report

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

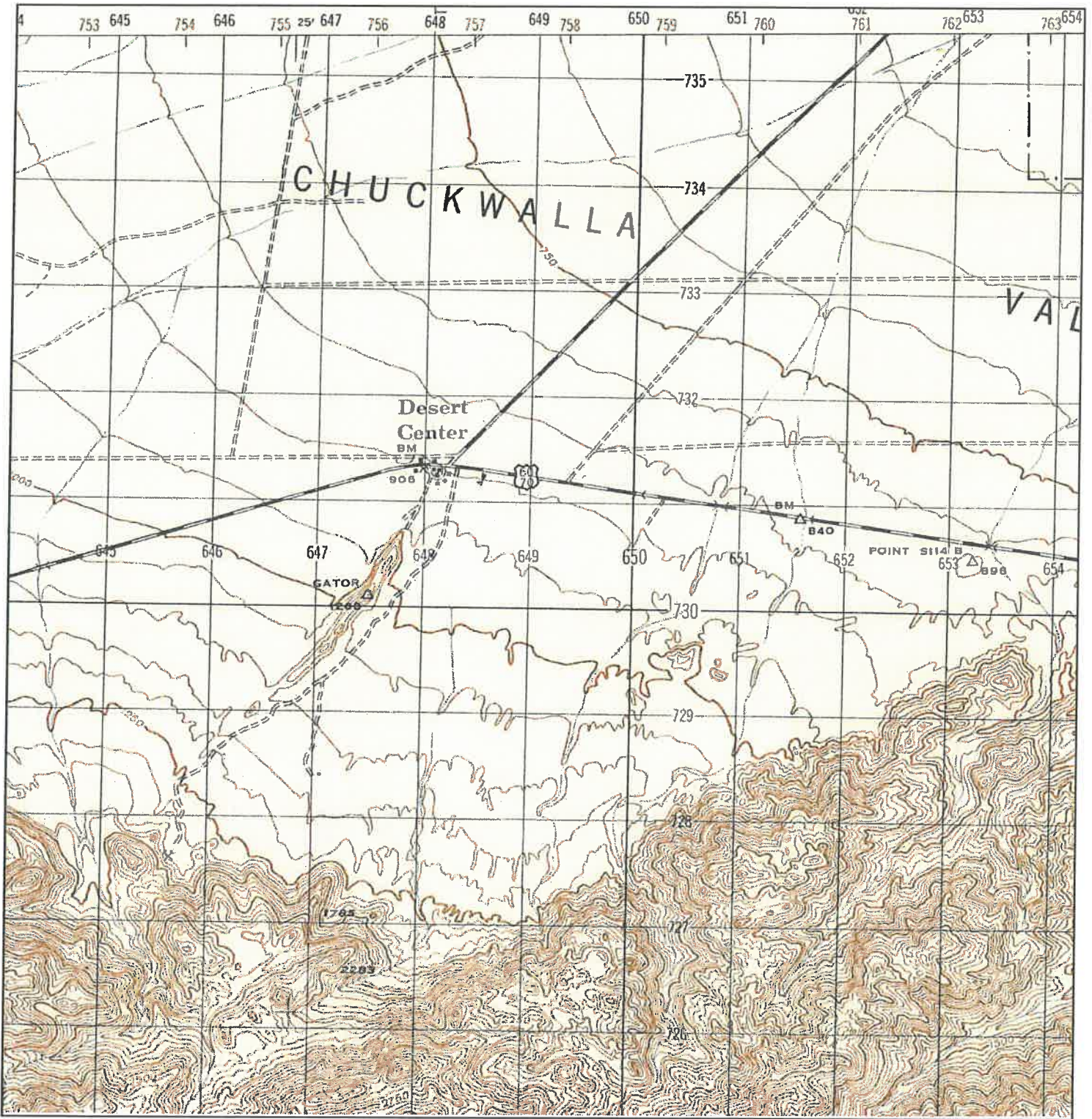
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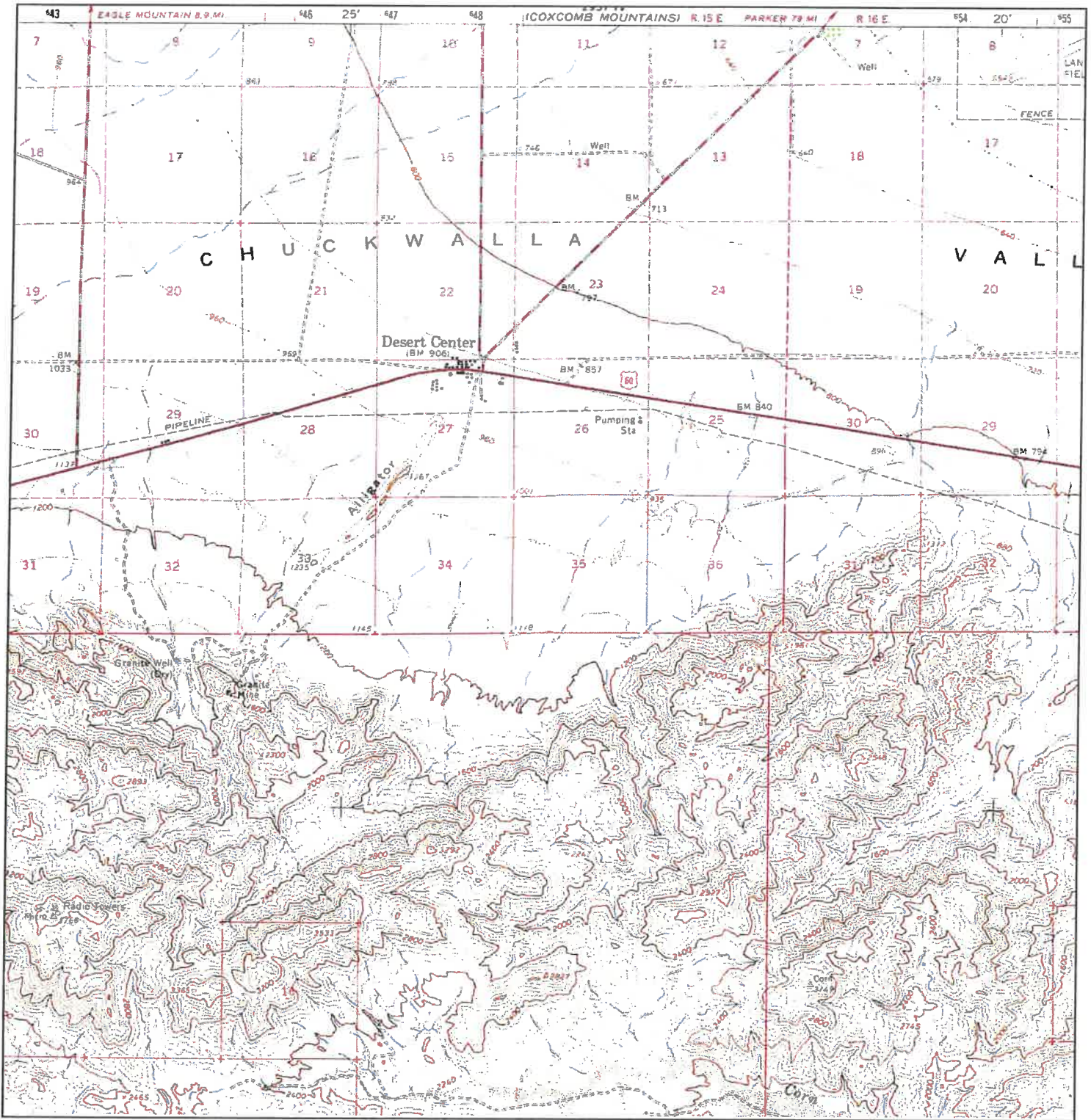
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Historical Topographic Map



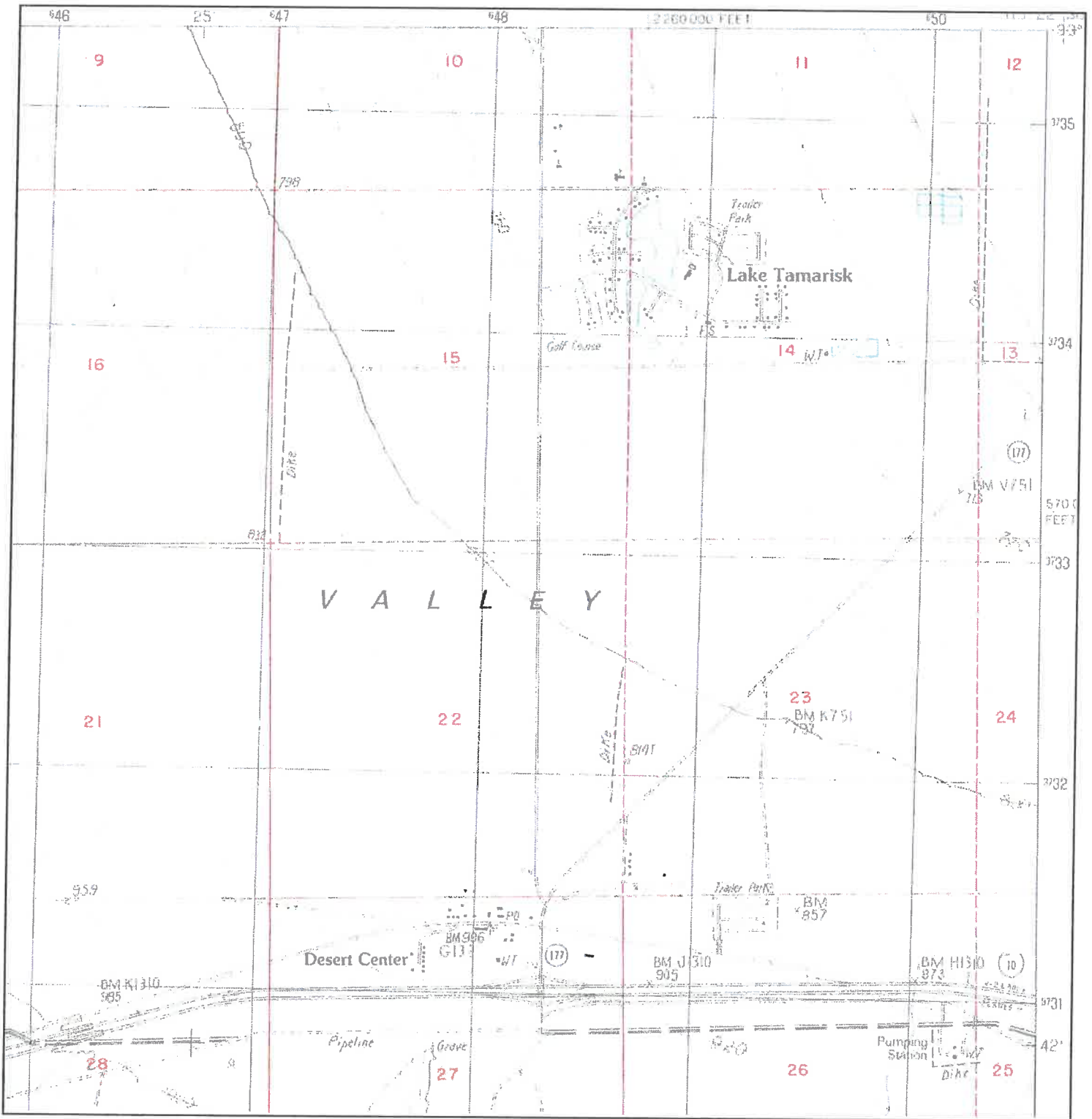
| | | | | | |
|----------------|----------------------------|------------|--|----------------|-------------|
| <p>N ↑</p> | TARGET QUAD | SITE NAME: | NE Of Parkview Dr And Lake Tamarisk Dr | CLIENT: | EEI, Inc. |
| | NAME: CHUCKWALLA MOUNTAINS | ADDRESS: | NE Of Parkview Dr And Lake Tamarisk Dr | CONTACT: | Polly Ivers |
| | MAP YEAR: 1947 | | Desert Center, CA 92239 | INQUIRY#: | 3744058.3 |
| | SERIES: 15 | LAT/LONG: | 33.7387 / -115.3908 | RESEARCH DATE: | 09/30/2013 |
| | SCALE: 1:50000 | | | | |


Historical Topographic Map



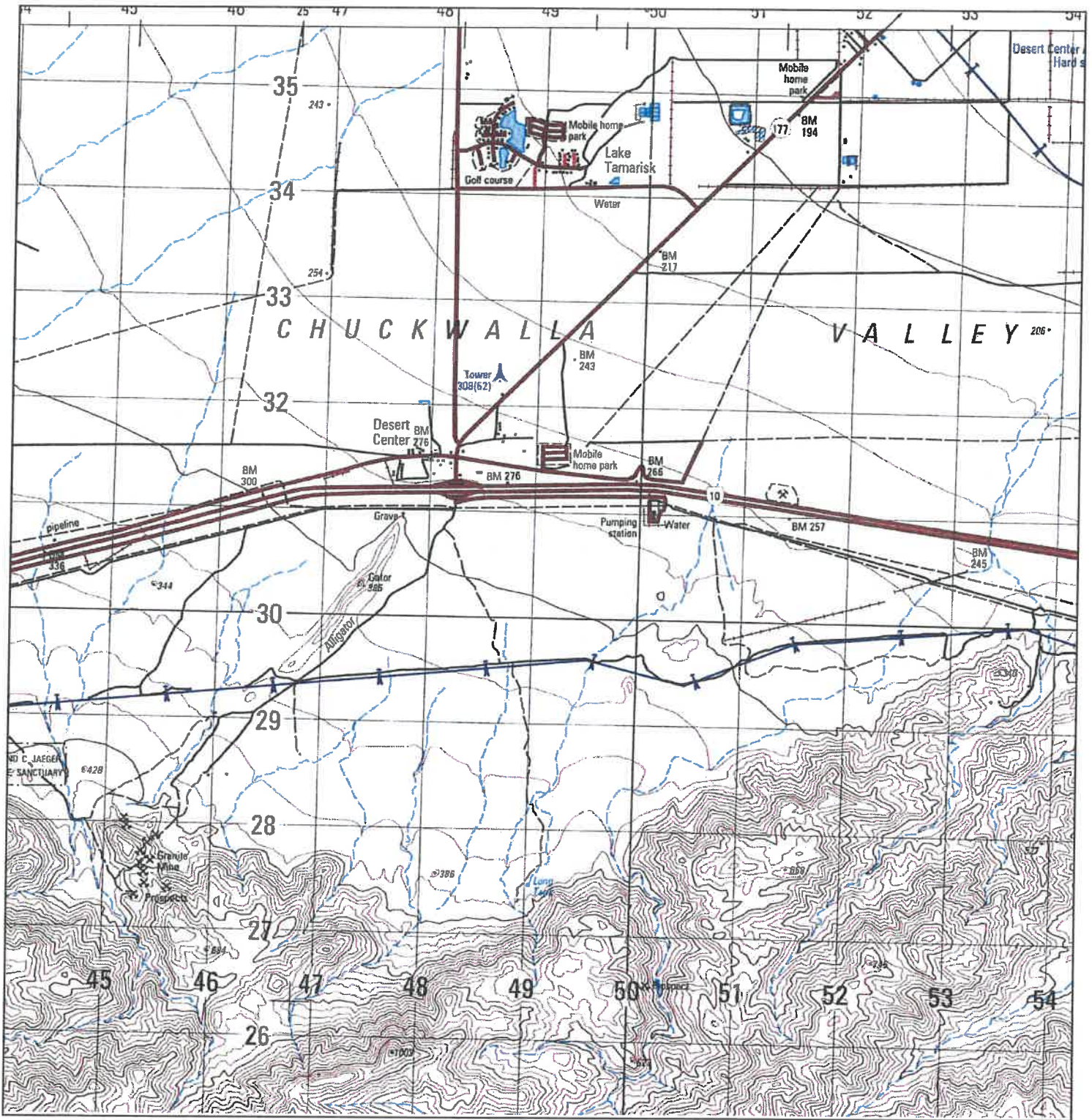
| | | | |
|-----------------------|---|--|----------------------------------|
| <p>N ↑</p> | <p>TARGET QUAD NAME: CHUCKWALLA MOUNTAINS</p> | <p>SITE NAME: NE Of Parkview Dr And Lake Tamarisk Dr</p> | <p>CLIENT: EEI, Inc.</p> |
| | <p>MAP YEAR: 1963</p> | <p>ADDRESS: NE Of Parkview Dr And Lake Tamarisk Dr Desert Center, CA 92239</p> | <p>CONTACT: Polly Ivers</p> |
| <p>SERIES: 15</p> | <p>LAT/LONG: 33.7387 / -115.3908</p> | <p>INQUIRY#: 3744058.3</p> | <p>RESEARCH DATE: 09/30/2013</p> |
| <p>SCALE: 1:62500</p> | | | |

Historical Topographic Map



| | | | |
|--|---|---|---|
| N  | TARGET QUAD NAME: DESERT CENTER MAP YEAR: 1986 PROVISIONAL SERIES: 7.5 SCALE: 1:24000 | SITE NAME: NE Of Parkview Dr And Lake Tamarisk Dr ADDRESS: NE Of Parkview Dr And Lake Tamarisk Dr Desert Center, CA 92239 LAT/LONG: 33.7387 / -115.3908 | CLIENT: EEI, Inc. CONTACT: Polly Ivers INQUIRY#: 3744058.3 RESEARCH DATE: 09/30/2013 |
| | | | |

Historical Topographic Map



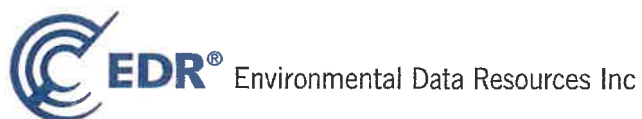
| | | | |
|----------------|--|--|---|
| <p>N ↑</p> | <p>TARGET QUAD NAME: CHUCKWALLA MOUNTAINS MAP YEAR: 2002</p> | <p>SITE NAME: NE Of Parkview Dr And Lake Tamarisk Dr ADDRESS: NE Of Parkview Dr And Lake Tamarisk Dr Desert Center, CA 92239 LAT/LONG: 33.7387 / -115.3908</p> | <p>CLIENT: EEI, Inc. CONTACT: Polly Ivers INQUIRY#: 3744058.3 RESEARCH DATE: 09/30/2013</p> |
| | <p>SERIES: 15 SCALE: 1:50000</p> | | |

**APPENDIX D
ENVIRONMENTAL RECORDS SEARCH**

NE Of Parkview Dr And Lake Tamarisk Dr
NE Of Parkview Dr And Lake Tamarisk Dr
Desert Center, CA 92239

Inquiry Number: 3744058.2s
September 30, 2013

FirstSearch Report with Topo



440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

Search Summary Report

**TARGET SITE NE OF PARKVIEW DR AND LAKE TAMARISK DR
DESERT CENTER, CA 92239**

| Category | Sel | Site | 1/8 | 1/4 | 1/2 | > 1/2 | ZIP | TOTALS |
|-----------------------------|-----|------|-----|-----|-----|-------|-----|--------|
| <i>NPL</i> | Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>NPL Delisted</i> | Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>CERCLIS</i> | Y | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>NFRAP</i> | Y | 0 | 0 | 0 | 0 | - | 1 | 1 |
| <i>RCRA COR ACT</i> | Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>RCRA TSD</i> | Y | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>RCRA GEN</i> | Y | 0 | 0 | 0 | - | - | 1 | 1 |
| <i>Federal IC / EC</i> | Y | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>ERNS</i> | Y | 0 | - | - | - | - | 0 | 0 |
| <i>State/Tribal NPL</i> | Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>State/Tribal CERCLIS</i> | Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>State/Tribal SWL</i> | Y | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>State/Tribal LTANKS</i> | Y | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>State/Tribal Tanks</i> | Y | 0 | 0 | 0 | - | - | 0 | 0 |
| <i>State/Tribal VCP</i> | Y | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>US Brownfields</i> | Y | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>Other SWF</i> | Y | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>Other Haz Sites</i> | Y | 0 | - | - | - | - | 0 | 0 |
| <i>Other Tanks</i> | Y | 0 | 0 | 0 | - | - | 0 | 0 |
| <i>Local Land Records</i> | Y | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>Spills</i> | Y | 0 | - | - | - | - | 0 | 0 |
| <i>Other</i> | Y | 0 | 1 | 1 | - | - | 7 | 9 |
| - Totals -- | | 0 | 1 | 1 | 0 | 0 | 9 | 11 |

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Search Summary Report

**TARGET SITE: NE OF PARKVIEW DR AND LAKE TAMARISK DR
DESERT CENTER, CA 92239**

| Category | Database | Update | Radius | Site | 1/8 | 1/4 | 1/2 | > 1/2 | ZIP | TOTALS |
|-----------------------------|-----------------|------------|--------|------|-----|-----|-----|-------|-----|--------|
| NPL | NPL | 04/26/2013 | 1.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Proposed NPL | 04/26/2013 | 1.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NPL Delisted | Delisted NPL | 04/26/2013 | 1.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CERCLIS | CERCLIS | 04/26/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| NFRAP | CERC-NFRAP | 04/26/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 1 | 1 |
| RCRA COR ACT | CORRACTS | 07/11/2013 | 1.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RCRA TSD | RCRA-TSDF | 07/11/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| RCRA GEN | RCRA-LQG | 07/11/2013 | 0.250 | 0 | 0 | 0 | - | - | 0 | 0 |
| | RCRA-SQG | 07/11/2013 | 0.250 | 0 | 0 | 0 | - | - | 1 | 1 |
| | RCRA-CESQG | 07/11/2013 | 0.250 | 0 | 0 | 0 | - | - | 0 | 0 |
| Federal IC / EC | US ENG CONTROLS | 03/14/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| | US INST CONTROL | 03/14/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| ERNS | ERNS | 12/31/2012 | TP | 0 | - | - | - | - | 0 | 0 |
| State/Tribal NPL | RESPONSE | 08/05/2013 | 1.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State/Tribal CERCLIS | ENVIROSTOR | 08/05/2013 | 1.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State/Tribal SWL | SWF/LF | 05/20/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| State/Tribal LTANKS | LUST | 07/26/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| | SLIC | 07/26/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| | INDIAN LUST | 09/28/2012 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| State/Tribal Tanks | UST | 07/26/2013 | 0.250 | 0 | 0 | 0 | - | - | 0 | 0 |
| | AST | 08/01/2009 | 0.250 | 0 | 0 | 0 | - | - | 0 | 0 |
| | INDIAN UST | 09/28/2012 | 0.250 | 0 | 0 | 0 | - | - | 0 | 0 |
| State/Tribal VCP | VCP | 08/05/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| US Brownfields | US BROWNFIELDS | 06/24/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |

Search Summary Report

**TARGET SITE: NE OF PARKVIEW DR AND LAKE TAMARISK DR
DESERT CENTER, CA 92239**

| Category | Database | Update | Radius | Site | 1/8 | 1/4 | 1/2 | > 1/2 | ZIP | TOTALS |
|---------------------------|-------------------|------------|--------|------|-----|-----|-----|-------|-----|--------|
| <i>Other SWF</i> | WMUDS/SWAT | 04/01/2000 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>Other Haz Sites</i> | US CDL | 03/04/2013 | TP | 0 | - | - | - | - | 0 | 0 |
| | SCH | 08/05/2013 | 0.250 | 0 | 0 | 0 | - | - | 0 | 0 |
| <i>Other Tanks</i> | CA FID UST | 10/31/1994 | 0.250 | 0 | 0 | 0 | - | - | 0 | 0 |
| | SWEEPS UST | 06/01/1994 | 0.250 | 0 | 0 | 0 | - | - | 0 | 0 |
| <i>Local Land Records</i> | DEED | 06/10/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| <i>Spills</i> | HMIRS | 12/31/2012 | TP | 0 | - | - | - | - | 0 | 0 |
| | CHMIRS | 03/12/2013 | TP | 0 | - | - | - | - | 0 | 0 |
| | SPILLS 90 | 06/06/2012 | TP | 0 | - | - | - | - | 0 | 0 |
| <i>Other</i> | RCRA NonGen / NLR | 07/11/2013 | TP | 0 | - | - | - | - | 0 | 0 |
| | TRIS | 12/31/2011 | TP | 0 | - | - | - | - | 0 | 0 |
| | TSCA | 12/31/2006 | TP | 0 | - | - | - | - | 0 | 0 |
| | FTTS | 04/09/2009 | TP | 0 | - | - | - | - | 0 | 0 |
| | SSTS | 12/31/2009 | TP | 0 | - | - | - | - | 0 | 0 |
| | ICIS | 07/20/2011 | TP | 0 | - | - | - | - | 0 | 0 |
| | PADS | 11/01/2012 | TP | 0 | - | - | - | - | 0 | 0 |
| | MLTS | 03/14/2013 | TP | 0 | - | - | - | - | 0 | 0 |
| | RADINFO | 04/09/2013 | TP | 0 | - | - | - | - | 0 | 0 |
| | FINDS | 03/08/2013 | TP | 0 | - | - | - | - | 1 | 1 |
| | RAATS | 04/17/1995 | TP | 0 | - | - | - | - | 0 | 0 |
| | Cortese | 07/05/2013 | 0.500 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| | CUPA Listings | | 0.250 | 0 | 0 | 0 | - | - | 0 | 0 |
| | HAZNET | 12/31/2012 | 0.250 | 0 | 1 | 1 | - | - | 6 | 8 |
| | INDIAN RESERV | 12/31/2005 | 1.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | US AIRS | 01/23/2013 | TP | 0 | - | - | - | - | 0 | 0 |
| | PRP | 04/15/2013 | TP | 0 | - | - | - | - | 0 | 0 |
| WDS | 06/19/2007 | TP | 0 | - | - | - | - | 0 | 0 | |
| - Totals -- | | | | 0 | 1 | 1 | 0 | 0 | 9 | 11 |

Site Information Report

Request Date: SEPTEMBER 30, 2013
Request Name: POLLY IVERS

Search Type: COORD
Job Number: COR-71759.1

Target Site: NE OF PARKVIEW DR AND LAKE TAMARISK DR
DESERT CENTER, CA 92239

Site Location

| | <u>Degrees (Decimal)</u> | <u>Degrees (Min/Sec)</u> | <u>UTMs</u> |
|------------|--------------------------|-------------------------------|---------------------|
| Longitude: | 115.390800 | 115.3908000 - 115° 23' 26.88" | Easting: 649070.5 |
| Latitude: | 33.738700 | 33.7387000 - 33° 44' 19.32" | Northing: 3734153.5 |
| Elevation: | 725 ft. above sea level | | Zone: Zone 11 |

Demographics

Sites: 2 Non-Geocoded: 9 Population: N/A

RADON

Federal EPA Radon Zone for RIVERSIDE County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.
- : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
- : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for RIVERSIDE COUNTY, CA

Number of sites tested: 12

| <u>Area</u> | <u>Average Activity</u> | <u>% <4 pCi/L</u> | <u>% 4-20 pCi/L</u> | <u>% >20 pCi/L</u> |
|-------------------------|-------------------------|----------------------|---------------------|-----------------------|
| Living Area - 1st Floor | 0.117 pCi/L | 100% | 0% | 0% |
| Living Area - 2nd Floor | 0.450 pCi/L | 100% | 0% | 0% |
| Basement | 1.700 pCi/L | 100% | 0% | 0% |

Site Information Report

RADON

State Database: CA Radon

Radon Test Results

| <u>Zipcode</u> | <u>Num Tests</u> | <u>> 4 pCi/L</u> |
|----------------|------------------|---------------------|
| 92239 | 1 | 0 |

Target Site Summary Report

Target Property: NE OF PARKVIEW DR AND LAKE TAMARISK DR JOB: COR-71759.1
DESERT CENTER, CA 92239

TOTAL: 11 GEOCODED: 2 NON GEOCODED: 9

| Map ID | DB Type --ID/Status | Site Name | Address | Dist/Dir | ElevDiff | Page No. |
|--------|------------------------|-----------|---------|----------|----------|----------|
|--------|------------------------|-----------|---------|----------|----------|----------|

No sites found for target address

Sites Summary Report

Target Property: NE OF PARKVIEW DR AND LAKE TAMARISK DR
DESERT CENTER, CA 92239

JOB: COR-71759.1

TOTAL: 11

GEOCODED: 2

NON GEOCODED: 9

| Map ID | DB Type --ID/Status | Site Name | Address | Dist/Dir | ElevDiff | Page No. |
|--------|------------------------|-------------------------------|--|-----------|----------|----------|
| 1 | HAZNET | RIVERSIDE COUNTY SERVICE AREA | 26251 PARKVIEW DR DESERT CENTER, CA 92239 | 0.09 West | + 4 | 1 |
| 2 | HAZNET | BANK OF AMERICA/FIELD SVCS | 26790 FOUNTAIN COVE DESERT CENTER, CA 92239 | 0.25 West | + 15 | 3 |

Sites Summary Report

Target Property: NE OF PARKVIEW DR AND LAKE TAMARISK DR
DESERT CENTER, CA 92239

JOB: COR-71759.1

TOTAL: 11 GEOCODED: 2 NON GEOCODED: 9

| Map ID | DB Type --ID/Status | Site Name | Address | Dist/Dir | ElevDiff | Page No. |
|--------|------------------------------|--------------------------------|--|----------|----------|----------|
| | HAZNET | CATTRAC CONSTRUCTION INC | SE CORNER OF REDBLUFF COR DESERT CENTER, CA 92239 | NON GC | N/A | N/A |
| | HAZNET | CATTRAC CONSTRUCTION INC | SE CORNER OF REDBLUFF COR DESERT CENTER, CA 92239 | NON GC | N/A | N/A |
| | FINDS | SOUTHERN CALIFORNIA GAS COMPAN | SOUTH FRONTAGE ROAD DESERT CENTER, CA | NON GC | N/A | N/A |
| | RCRA-SQG --CAD981422561 | SOUTHERN CALIFORNIA GAS COMPAN | SOUTH FRONTAGE ROAD DESERT CENTER, CA | NON GC | N/A | N/A |
| | HAZNET | RIVERSIDE CO. FIRE DEPT #49 | 43880 LAKE TAMARISK DESERT CENTER, CA 92239 | NON GC | N/A | N/A |
| | CERC-NFRAP --CA0000053090 | KAISER EAGLE MOUNTAIN | N OF HWY 10 8M OFF KAISER DESERT CENTER, CA 92239 | NON GC | N/A | N/A |
| | HAZNET | PANTHER II TRUCKING | ONRAMP OF GOLDEN EAGLE EX DESERT CENTER, CA 92239 | NON GC | N/A | N/A |
| | HAZNET | SOUTHERN CALIFORNIA EDISON | 2 MI W & 6 MI N OF DESERT DESERT CENTER, CA 92239 | NON GC | N/A | N/A |
| | HAZNET | EAGLE MOUNTAIN SUBSTATION | 2 MI W & 6 MI N OF DESERT DESERT CENTER, CA 92239 | NON GC | N/A | N/A |

Site Detail Report

Target Property: NE OF PARKVIEW DR AND LAKE TAMARISK DR
DESERT CENTER, CA 92239

JOB: COR-71759.1

HAZNET

EDR ID: S113144029 DIST/DIR: 0.087 West ELEVATION: 729 MAP ID: 1

NAME: RIVERSIDE COUNTY SERVICE AREA # 51 Rev: 12/31/2012

ADDRESS: 26251 PARKVIEW DR
DESERT CENTER, CA 92239

SOURCE: CA California Environmental Protection Agency

HAZNET:

Year: 2009

Gepaid: CAL000310505

Contact: STEVE JONES

Telephone: 7602273203

Mailing Name: Not reported

Mailing Address: PO BOX 316

Mailing City,St,Zip: DESERT CENTER, CA 922390316

Gen County: Not reported

TSD EPA ID: CAD982444481

TSD County: Not reported

Waste Category: Waste oil and mixed oil

Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)

Tons: 0.38

Facility County: Riverside

Year: 2009

Gepaid: CAL000310505

Contact: STEVE JONES

Telephone: 7602273203

Mailing Name: Not reported

Mailing Address: PO BOX 316

Mailing City,St,Zip: DESERT CENTER, CA 922390316

Gen County: Not reported

TSD EPA ID: CAD982444481

TSD County: Not reported

Waste Category: Other organic solids

Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)

Tons: 1.25

Facility County: Riverside

Year: 2006

Gepaid: CAL000310505

Contact: STEVE JONES

Telephone: 7602273203

Mailing Name: Not reported

Mailing Address: PO BOX 316

Mailing City,St,Zip: DESERT CENTER, CA 922390316

Gen County: Not reported

TSD EPA ID: CAD982444481

TSD County: Not reported

Waste Category: Waste oil and mixed oil

- Continued on next page -

Site Detail Report

Target Property: NE OF PARKVIEW DR AND LAKE TAMARISK DR
DESERT CENTER, CA 92239

JOB: COR-71759.1

HAZNET

EDR ID: S113144029 **DIST/DIR:** 0.087 West **ELEVATION:** 729 **MAP ID:** 1

NAME: RIVERSIDE COUNTY SERVICE AREA # 51

Rev: 12/31/2012

ADDRESS: 26251 PARKVIEW DR
DESERT CENTER, CA 92239

SOURCE: CA California Environmental Protection Agency

Disposal Method: Recycler
Tons: 0.91
Facility County: Riverside

Site Detail Report

Target Property: NE OF PARKVIEW DR AND LAKE TAMARISK DR
DESERT CENTER, CA 92239

JOB: COR-71759.1

HAZNET

EDR ID: S113459651 **DIST/DIR:** 0.246 West **ELEVATION:** 740 **MAP ID:** 2

NAME: BANK OF AMERICA/FIELD SVCS **Rev:** 12/31/2012
ADDRESS: 26790 FOUNTAIN COVE
DESERT CENTER, CA 92239

SOURCE: CA California Environmental Protection Agency

HAZNET:
Year: 2010
Gepaid: CAC002652494
Contact: SUMMER LAKES
Telephone: 9098052509
Mailing Name: Not reported
Mailing Address: 301 E VANDERBILT WAY STE 330
Mailing City,St,Zip: SAN BERNARDINO, CA 924083557
Gen County: Not reported
TSD EPA ID: CAD982444481
TSD County: Not reported
Waste Category: Household waste
Disposal Method: Other Treatment
Tons: 0.0417
Facility County: Riverside

Database Descriptions

NPL: NPL National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices. NPL - National Priority List Proposed NPL - Proposed National Priority List Sites.

NPL Delisted: DELISTED NPL The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. DELISTED NPL - National Priority List Deletions

CERCLIS: CERCLIS CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL. CERCLIS - Comprehensive Environmental Response, Compensation, and Liability Information System

NFRAP: CERCLIS-NFRAP Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site. CERCLIS-NFRAP - CERCLIS No Further Remedial Action Planned

RCRA COR ACT: CORRACTS CORRACTS identifies hazardous waste handlers with RCRA corrective action activity. CORRACTS - Corrective Action Report

RCRA TSD: RCRA-TSDF RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste. RCRA-TSDF - RCRA - Treatment, Storage and Disposal

RCRA GEN: RCRA-LQG RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. RCRA-LQG - RCRA - Large Quantity Generators RCRA-SQG - RCRA - Small Quantity Generators. RCRA-CESQG - RCRA - Conditionally Exempt Small Quantity Generators.

Federal IC / EC: US ENG CONTROLS A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health. US ENG CONTROLS - Engineering Controls Sites List US INST CONTROL - Sites with Institutional Controls.

ERNS: ERNS Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances. ERNS - Emergency Response Notification System

Database Descriptions

State/Tribal NPL: RESPONSE Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk. RESPONSE - State Response Sites

State/Tribal CERCLIS: ENVIROSTOR The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites. ENVIROSTOR - EnviroStor Database

State/Tribal SWL: SWF/LF (SWIS) Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites. SWF/LF (SWIS) - Solid Waste Information System

State/Tribal LTANKS: LUST REG 8 ORANGE CO. LUST - List of Underground Storage Tank Cleanups. LUST REG 1 - Active Toxic Site Investigation. RIVERSIDE CO. LUST - Listing of Underground Tank Cleanup Sites. LUST - Geotracker's Leaking Underground Fuel Tank Report. LUST REG 7 - Leaking Underground Storage Tank Case Listing. LUST REG 3 - Leaking Underground Storage Tank Database. LUST REG 5 - Leaking Underground Storage Tank Database. SONOMA CO. LUST - Leaking Underground Storage Tank Sites. LUST REG 6V - Leaking Underground Storage Tank Case Listing. LUST REG 4 - Underground Storage Tank Leak List. LUST REG 9 - Leaking Underground Storage Tank Report. LUST REG 2 - Fuel Leak List. VENTURA CO. LUST - Listing of Underground Tank Cleanup Sites. LUST REG 6L - Leaking Underground Storage Tank Case Listing. SAN MATEO CO. LUST - Fuel Leak List. LUST SANTA CLARA - LOP Listing. SAN FRANCISCO CO. LUST - Local Oversight Facilities. SOLANO CO. LUST - Leaking Underground Storage Tanks. NAPA CO. LUST - Sites With Reported Contamination. Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties. NAPA CO. LUST - Leaking Underground Storage Tank Database SLIC - Statewide SLIC Cases. SLIC REG 1 - Active Toxic Site Investigations. SLIC REG 2 - Spills, Leaks, Investigation & Cleanup Cost Recovery Listing. SLIC REG 3 - Spills, Leaks, Investigation & Cleanup Cost Recovery Listing. SLIC REG 4 - Spills, Leaks, Investigation & Cleanup Cost Recovery Listing. SLIC REG 5 - Spills, Leaks, Investigation & Cleanup Cost Recovery Listing. SLIC REG 6V - Spills, Leaks, Investigation & Cleanup Cost Recovery Listing. SLIC REG 6L - SLIC Sites. SLIC REG 7 - SLIC List. SLIC REG 8 - Spills, Leaks, Investigation & Cleanup Cost Recovery Listing. Sacramento Co. CS - Toxic Site Clean-Up List. SLIC REG 9 - Spills, Leaks, Investigation & Cleanup Cost Recovery Listing. SAN DIEGO CO. SAM - Environmental Case Listing. INDIAN LUST R8 - Leaking Underground Storage Tanks on Indian Land. INDIAN LUST R7 - Leaking Underground Storage Tanks on Indian Land. INDIAN LUST R6 - Leaking Underground Storage Tanks on Indian Land. INDIAN LUST R1 - Leaking Underground Storage Tanks on Indian Land. INDIAN LUST R10 - Leaking Underground Storage Tanks on Indian Land. INDIAN LUST R4 - Leaking Underground Storage Tanks on Indian Land.

State/Tribal Tanks: UST Active UST facilities gathered from the local regulatory agencies UST - Active UST Facilities AST - Aboveground Petroleum Storage Tank Facilities. INDIAN UST R8 - Underground Storage Tanks on Indian Land. INDIAN UST R6 - Underground Storage Tanks on Indian Land. INDIAN UST R5 - Underground Storage Tanks on Indian Land. INDIAN UST R4 - Underground Storage Tanks on Indian Land. INDIAN UST R9 - Underground Storage Tanks on Indian Land. INDIAN UST R7 - Underground Storage Tanks on Indian Land. INDIAN UST R10 - Underground Storage Tanks on Indian Land. INDIAN UST R1 - Underground Storage Tanks on Indian Land.

State/Tribal VCP: VCP Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs. VCP - Voluntary Cleanup Program Properties

Database Descriptions

US Brownfields: US BROWNFIELDS Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs. US BROWNFIELDS - A Listing of Brownfields Sites

Other SWF: VENTURA CO. LF SAN DIEGO CO. LF - Solid Waste Facilities. CA LA LF - City of Los Angeles Landfills. LOS ANGELES CO. LF - List of Solid Waste Facilities. Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites. LOS ANGELES CO. LF - Inventory of Illegal Abandoned and Inactive Sites WMUDS/SWAT - Waste Management Unit Database.

Other Haz Sites: US CDL A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments. US CDL - Clandestine Drug Labs SCH - School Property Evaluation Program. SAN DIEGO CO. HMMD - Hazardous Materials Management Division Database.

Other Tanks: CA FID UST The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data. CA FID UST - Facility Inventory Database ALAMEDA CO. UST - Underground Tanks. KERN CO. UST - Underground Storage Tank Sites & Tank Listing. MARIN CO. UST - Underground Storage Tank Sites. NAPA CO. UST - Closed and Operating Underground Storage Tank Sites. ORANGE CO. UST - List of Underground Storage Tank Facilities. RIVERSIDE CO. UST - Underground Storage Tank Tank List. SAN FRANCISCO CO. UST - Underground Storage Tank Information. SOLANO CO. UST - Underground Storage Tanks. SUTTER CO. UST - Underground Storage Tanks. VENTURA CO. UST - Underground Tank Closed Sites List. YOLO CO. UST - Underground Storage Tank Comprehensive Facility Report. EL SEGUNDO UST - City of El Segundo Underground Storage Tank. LONG BEACH UST - City of Long Beach Underground Storage Tank. UST SAN JOAQUIN - San Joaquin Co. UST. UST MENDOCINO - Mendocino County UST Database. TORRANCE UST - City of Torrance Underground Storage Tank. SWEEPS UST - SWEEPS UST Listing.

Local Land Records: DEED Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners. DEED - Deed Restriction Listing

Spills: HMIRS Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT. HMIRS - Hazardous Materials Information Reporting System CHMIRS - California Hazardous Material Incident Report System. Orange Co. Industrial Site - List of Industrial Site Cleanups. SPILLS 90 - SPILLS90 data from FirstSearch.

Database Descriptions

Other: RCRA NonGen / NLR RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste. RCRA NonGen / NLR - RCRA - Non Generators TRIS - Toxic Chemical Release Inventory System. TSCA - Toxic Substances Control Act. FTTS - FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act). FTTS INSP - FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act). SSTS - Section 7 Tracking Systems. ICIS - Integrated Compliance Information System. PADS - PCB Activity Database System. MLTS - Material Licensing Tracking System. RADINFO - Radiation Information Database. FINDS - Facility Index System/Facility Registry System. RAATS - RCRA Administrative Action Tracking System. BRS - Biennial Reporting System. CORTESE - "Cortese" Hazardous Waste & Substances Sites List. CUPA - CUPA Resources List. CUPA IMPERIAL - CUPA Facility List. CUPA MONO - CUPA Facility List. CUPA SANTA BARBARA - CUPA Facility Listing. CUPA MONTEREY - CUPA Facility Listing. CUPA SANTA CRUZ - CUPA Facility List. CUPA MERCED - CUPA Facility List. CUPA SAN LUIS OBISPO - CUPA Facility List. CUPA SHASTA - CUPA Facility List. CUPA HUMBOLDT - CUPA Facility List. CUPA INYO - CUPA Facility List. CUPA FRESNO - CUPA Resources List. CUPA DEL NORTE - CUPA Facility List. CUPA SONOMA - CUPA Facility List. CUPA TUOLUMNE - CUPA Facility List. CUPA LAKE - CUPA Facility List. CUPA SANTA CLARA - CUPA Facility List. CUPA CALVERAS - CUPA Facility Listing. CUPA AMADOR - CUPA Facility List. CUPA KINGS - CUPA Facility List. CUPA MADERA - CUPA Facility List. CUPA NEVADA - CUPA Facility List. CUPA BUTTE - CUPA Facility Listing. CUPA COLUSA - CUPA Facility List. CUPA YUBA - CUPA Facility List. CUPA EL DORADO - CUPA Facility List. LA Co. Site Mitigation - Site Mitigation List. Sacramento Co. ML - Master Hazardous Materials Facility List. San Bern. Co. Permit - Hazardous Material Permits. HAZNET - Facility and Manifest Data. INDIAN RESERV - Indian Reservations. FEDLAND - Federal and Indian Lands. WDS - Waste Discharge System. US AIRS (AFS) - Aerometric Information Retrieval System Facility Subsystem (AFS). US AIRS MINOR - Air Facility System Data. PRP - Potentially Responsible Parties.

Database Sources

NPL: EPA

Updated Quarterly

NPL Delisted: EPA

Updated Quarterly

CERCLIS: EPA

Updated Quarterly

NFRAP: EPA

Updated Quarterly

RCRA COR ACT: EPA

Updated Quarterly

RCRA TSD: Environmental Protection Agency

Updated Quarterly

RCRA GEN: Environmental Protection Agency

Updated Quarterly

Federal IC / EC: Environmental Protection Agency

Varies

ERNS: National Response Center, United States Coast Guard

Updated Annually

State/Tribal NPL: Department of Toxic Substances Control

Updated Quarterly

State/Tribal CERCLIS: Department of Toxic Substances Control

Updated Quarterly

State/Tribal SWL: Department of Resources Recycling and Recovery

Updated Quarterly

State/Tribal LTANKS: California Regional Water Quality Control Board Victorville Branch Office (6)

No Update Planned

Database Sources

State/Tribal Tanks: SWRCB

Updated Semi-Annually

State/Tribal VCP: Department of Toxic Substances Control

Updated Quarterly

US Brownfields: Environmental Protection Agency

Updated Semi-Annually

Other SWF: Environmental Health Division

Updated Annually

Other Haz Sites: Drug Enforcement Administration

Updated Quarterly

Other Tanks: California Environmental Protection Agency

No Update Planned

Local Land Records: Department of Toxic Substances Control

Updated Semi-Annually

Spills: U.S. Department of Transportation

Updated Annually

Other: Environmental Protection Agency

Varies

Street Name Report for Streets near the Target Property

Target Property: NE OF PARKVIEW DR AND LAKE TAMARISK DR
DESERT CENTER, CA 92239

JOB: COR-71759.1

| Street Name | Dist/Dir | Street Name | Dist/Dir |
|---------------|------------|-------------|----------|
| Catalina Way | 0.07 East | | |
| Fountain Cv | 0.22 West | | |
| Greenvale Way | 0.12 East | | |
| Oasis Rd | 0.18 South | | |
| Parkview Dr | 0.08 WNW | | |
| Tamarisk Dr | 0.06 South | | |

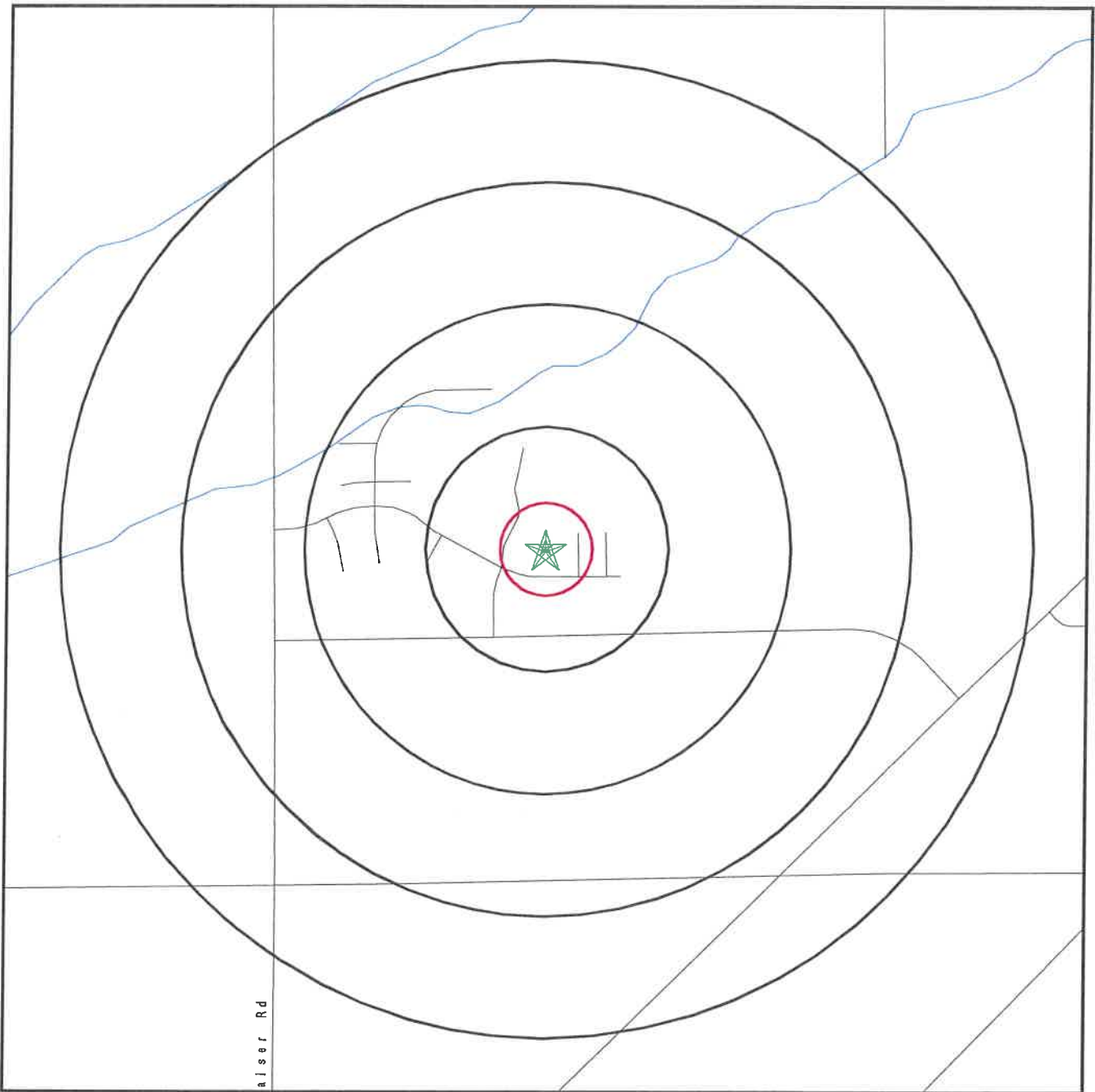
Environmental FirstSearch

1,000 Mile Radius

ASTM MAP: NPL, RCRACOR, STATES Sites



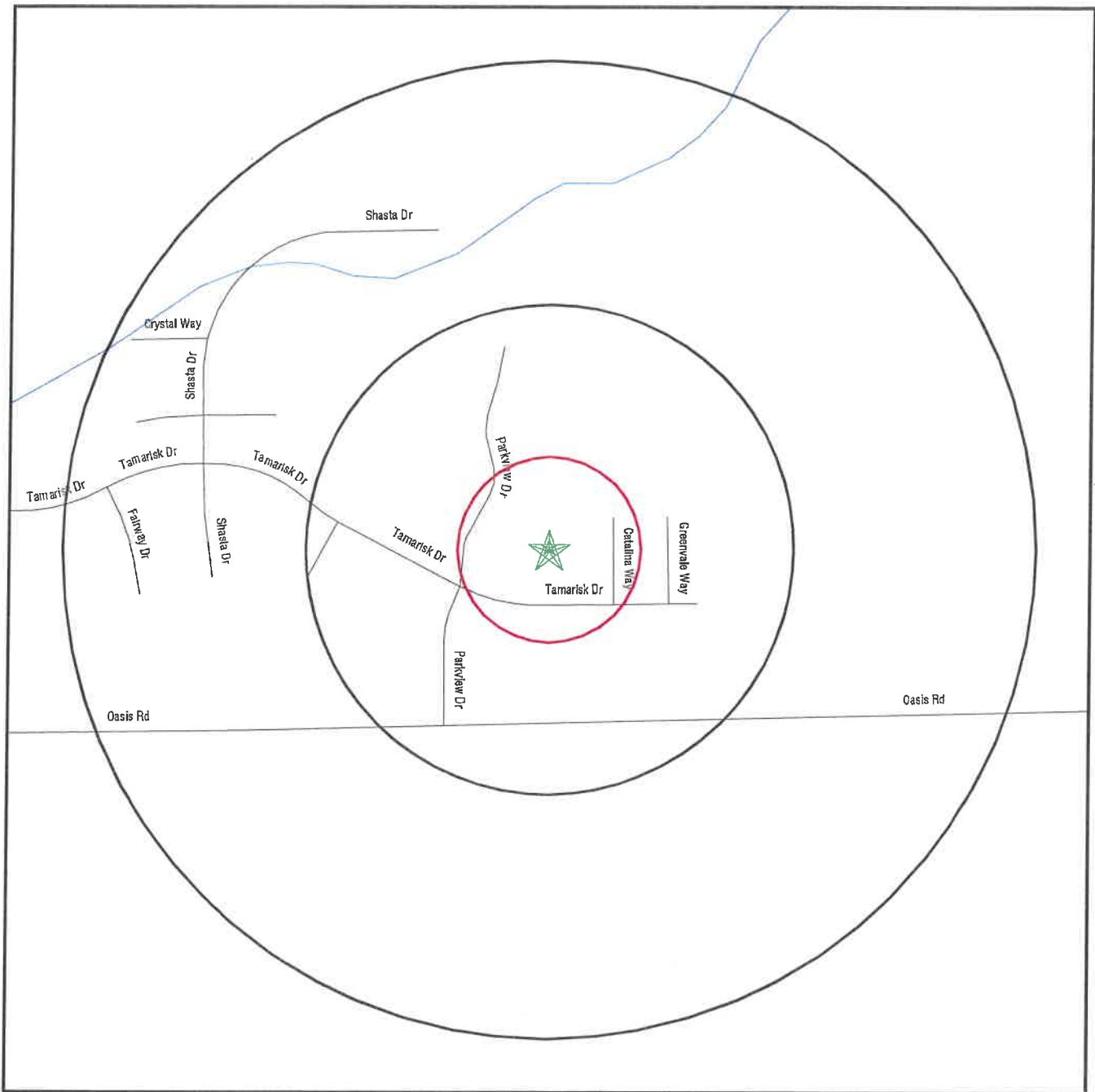
NE OF PARKVIEW DR AND LAKE TAMARISK DR DESERT CENTER, CA 92239



Black Rings Represent Qtr. Mile Radius; Red Ring Represents 500 ft. Radius

- ★ Target Property (Latitude: 33.7387 Longitude: -115.3908)
- ▲ Identified Sites
- ▨ Indian Reservations BIA
- ▣ National Priority List Sites

NE OF PARKVIEW DR AND LAKE TAMARISK DR DESERT CENTER, CA 92239



Black Rings Represent Qtr. Mile Radius; Red Ring Represents 500 ft. Radius

-  **Target Property (Latitude: 33.7387 Longitude: -115.3908)**
-  **Identified Sites**
-  **National Priority List Sites**
-  **Indian Reservations BIA**

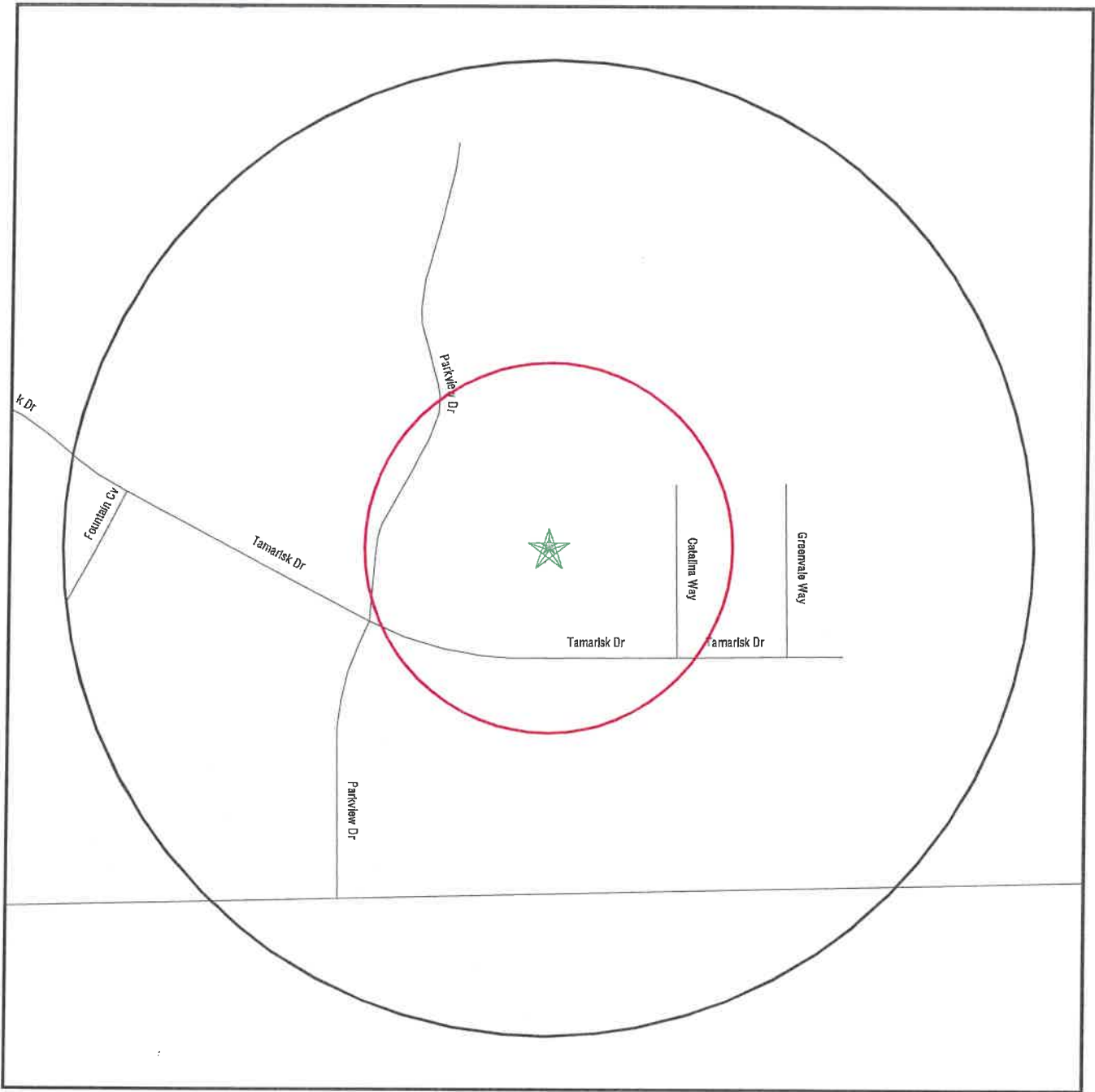
Environmental FirstSearch

0.25 Mile Radius

ASTM MAP: RCRA GEN, ERNS, UST, FED IC/EC, METH LABS



NE OF PARKVIEW DR AND LAKE TAMARISK DR DESERT CENTER, CA 92239



Black Rings Represent Qtr. Mile Radius; Red Ring Represents 500 ft. Radius

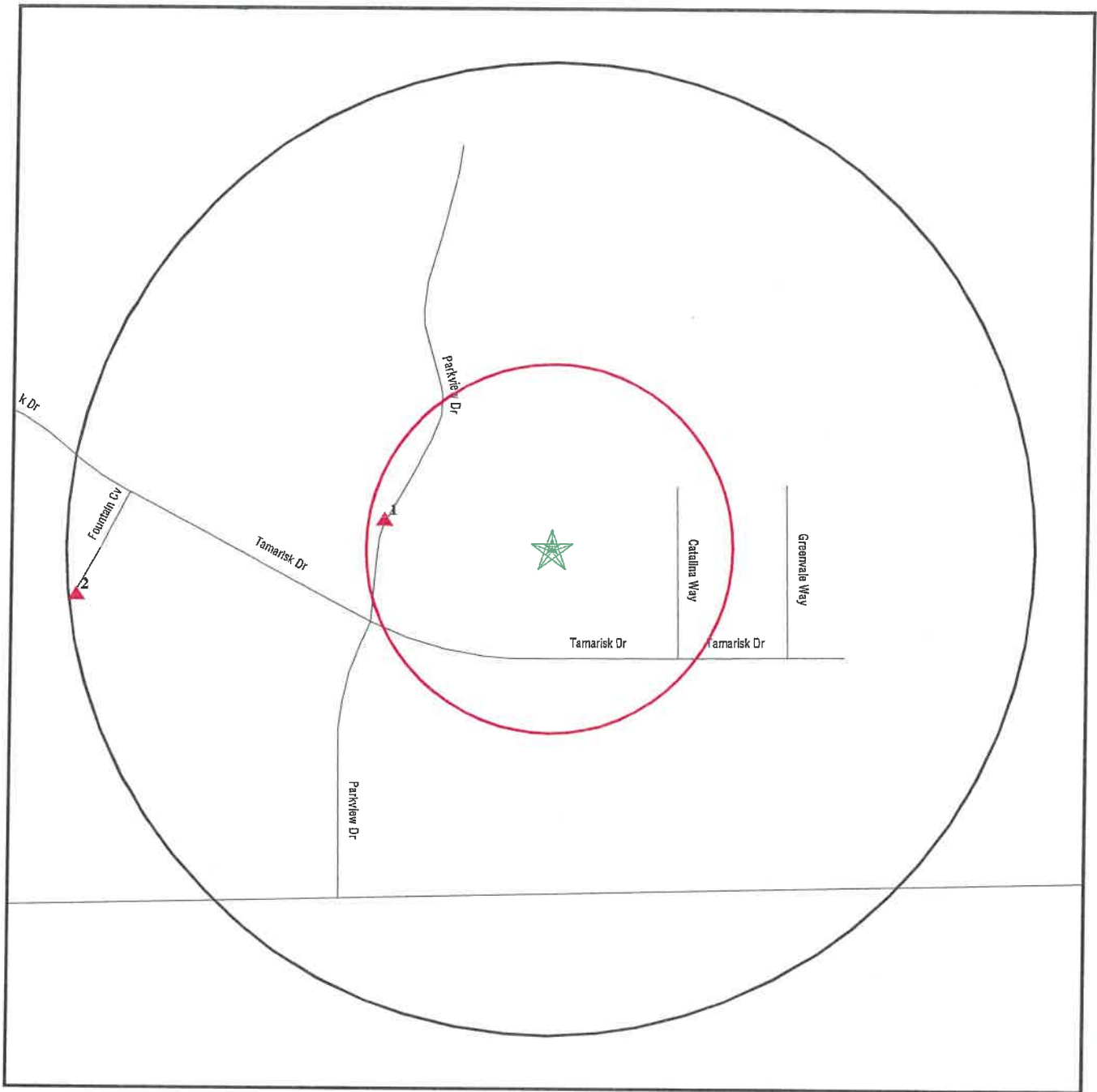
-  **Target Property (Latitude: 33.7387 Longitude: -115.3908)**
-  **Identified Sites**
-  **Indian Reservations BIA**
-  **National Priority List Sites**

Environmental FirstSearch

0.25 Mile Radius
Non ASTM Map, Spills, FINDS



NE OF PARKVIEW DR AND LAKE TAMARISK DR DESERT CENTER, CA 92239



Black Rings Represent Qtr. Mile Radius; Red Ring Represents 500 ft. Radius

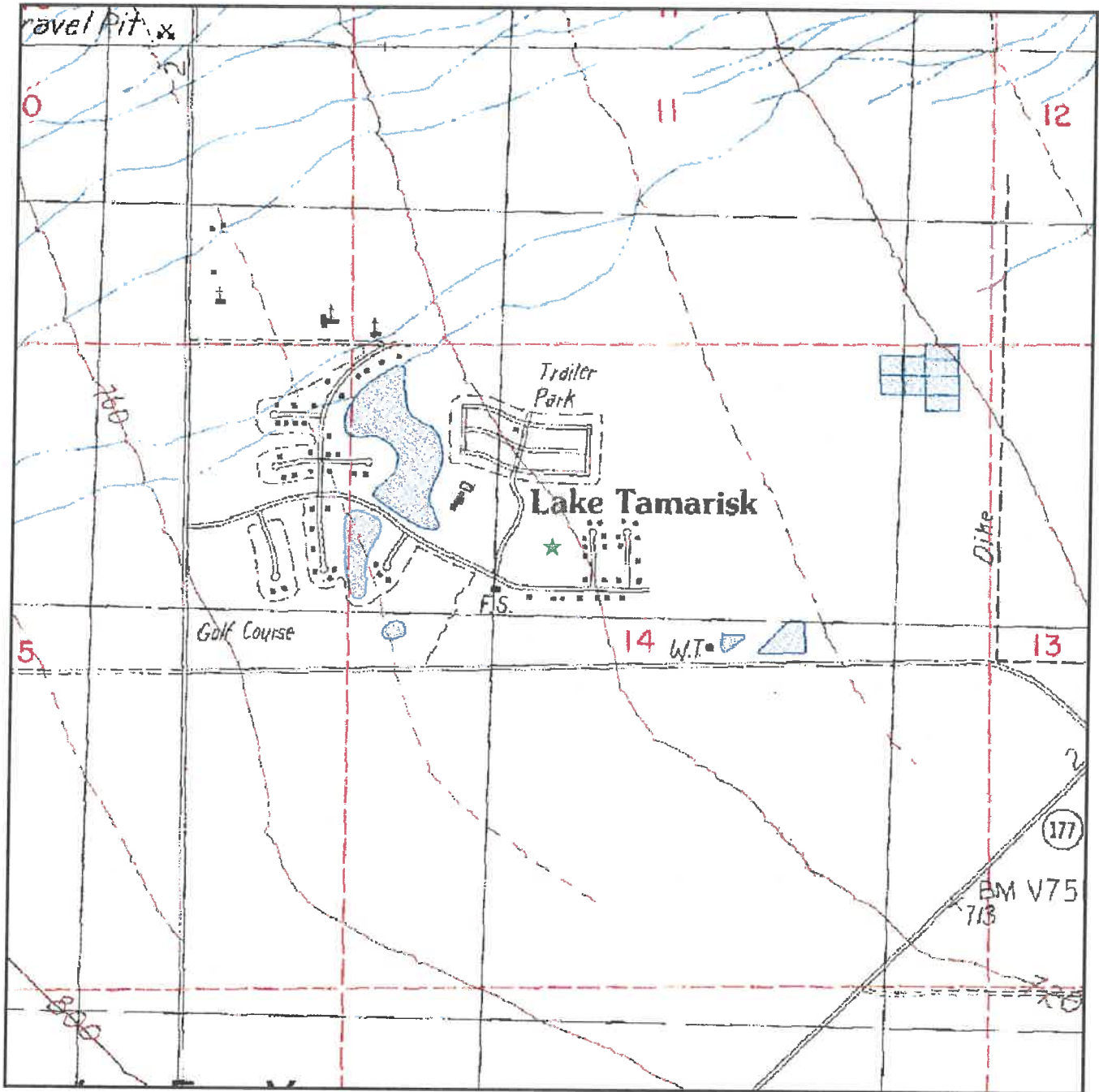
- ★ Target Property (Latitude: 33.7387 Longitude: -115.3908)
- ▲ Identified Sites
- ⚡ Sensitive Receptors
- ☒ National Priority List Sites
- ☒ Indian Reservations BIA

Site location Map

Topo: 0.75 Mile Radius



NE OF PARKVIEW DR AND LAKE TAMARISK DR DESERT CENTER, CA 92239



Map Image Position: TP
Map Reference Code & Name: 33115-F4 Desert Center
Map State(s): CA
Modified Date: 1986

**APPENDIX E
USER PROVIDED INFORMATION**



**ASTM E1597-05
USER SPECIFIC QUESTIONNAIRE**

Project Number / Name: COR-71759.1/ Desert Center Property, APN 808-170-006 (5.11- Acres)

Project Address: NEC Lake Tamarisk Dr. & Parkview Dr., Desert Center, Riverside County, CA 92239

Per the ASTM E1527 05 Standard, the *user (i.e., the entity that orders the Phase I ESA)* is required to provide the following information (if available). Your answers will be incorporated into the final Phase I ESA under the section "User-supplied Information." These questions have been incorporated into the new standard in order to ascertain the User's level of knowledge concerning any known environmental concerns or problems. Please complete these questions to the best of your knowledge and return to EEI as soon as possible.

(1.) Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).

Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law? (A copy of a recent Title Search may assist in this determination).
No.

(2.) Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).

Are you aware of any Activity and/or Land Use Limitations (AUL's), such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? (A copy of a recent Title Search may assist in this determination).
No.

(3.) Specialized knowledge or experience of the person seeking to qualify for the Landowner Liability Protections (LLP - 40 CFR 312.28).

As the *user* of this *ESA* do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an adjoining *property* so that you would have specialized knowledge of the chemicals and processes used by this type of business? (self-explanatory)
No.

(4.) Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?
Yes.

(5.) Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).
Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example, as *user*:

(a.) Do you know the past uses of the *property*?
No

(b.) Do you know of specific chemicals that are present or once were present at the *property*?
No

(c.) Do you know of spills or other chemical releases that have taken place at the *property*?
No

(d.) Do you know of any environmental cleanups that have taken place at the *property*?
No

(6.) The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).
As the *user* of this *ESA*, based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of contamination at the *property*?
No

In addition, certain information should be collected, if available, and provided to the *environmental professional* selected to conduct the Phase I. This information is intended to assist the *environmental professional* but is not necessarily required to qualify for one of the *LLPs*. The information includes:

(a) the reason why the Phase I is required, Purchasing the property

(b) the type of *property* and type of *property* transaction, for example, sale, purchase, exchange, etc.,
Purchase

(c) the complete and correct address for the *property* (a map or other documentation showing *property* location and boundaries is helpful),
808-170-006

(d) the scope of services desired for the Phase I (including whether any parties to the *property* transaction may have a required standard scope of services on whether any considerations beyond the requirements of Practice E 1527 are to be considered), Standard Scope

(e) identification of all parties who will rely on the Phase I *report*, County of Riverside

(f) identification of the site contact and how the contact can be reached, Terry Cook (terry@cild.co)
909.483.8511

(g) any special terms and conditions which must be agreed upon by the *environmental professional*, and
None

(h) any other knowledge or experience with the *property* that may be pertinent to the *environmental professional* (for example, copies of any available prior *environmental site assessment reports*, documents, correspondence, etc., concerning the *property* and its environmental condition). None

Preparer:

Name/Company: Craig Olsen / EDA County of Riverside

Address: 3403 10th Street #400 Riverside CA 92501

Signature:



Date:

10/3/2013

**APPENDIX F
PHOTOGRAPHIC LOG**



Photograph 1: View of the subject property looking southeast. View is from the northwest corner of the subject property.



Photograph 2: View of the subject property looking southwest. View is from the northeast corner of the subject property.



Photograph 3: View west along the access drive that forms the northern border of the subject property. View is from the northeast property corner. The subject property is visible to the left of the dirt drive in this photograph.



Photograph 4: A row of brush debris/yard waste located in the southeast portion of the subject property. This area of yard waste is one of several located on the subject property.



Photograph 5: View of burn area with ash in the southwestern portion of the subject property. This is one of several similar burn areas located on the subject property, where wood and/or yard debris had been burned.



Photograph 6: View of area along the southeast border of the subject property where miscellaneous debris and yard waste (several tree branches) has been dumped. View is looking towards adjacent properties to the east.





Appendix F

Noise Calculations

FIRE STATION #49 PROJECT
Community of Lake Tamarisk,
Riverside County, California



April 2022

NOISE CALCULATIONS

| | | |
|---------------------------------------|--------------------|-------------------|
| Noise Level | Reference Distance | Receptor Distance |
| 89 | 50 | 550 |
| Attenuated Noise Level (Hard surface) | | |
| 68.17 | | |

| | | |
|---------------------------------------|--------------------|-------------------|
| Noise Level | Reference Distance | Receptor Distance |
| 89 | 50 | 225 |
| Attenuated Noise Level (Hard surface) | | |
| 75.94 | | |

| | | |
|---------------------------------------|--------------------|-------------------|
| Noise Level | Reference Distance | Receptor Distance |
| 89 | 50 | 1000 |
| Attenuated Noise Level (Hard surface) | | |
| 62.98 | | |

Add Noise Levels

| | |
|-----------------|-------|
| Source 1 | 41.2 |
| Source 2 | 59.46 |
| Source 3 | |
| Source 4 | |
| Source 5 | |
| <hr/> | |
| New Noise Level | 59.52 |

| | | |
|---------------------------------------|--------------------|-------------------|
| Noise Level | Reference Distance | Receptor Distance |
| 89 | 50 | 175 |
| Attenuated Noise Level (Hard surface) | | |
| 78.12 | | |

| | | |
|---------------------------------------|--------------------|-------------------|
| Noise Level | Reference Distance | Receptor Distance |
| 89 | 50 | 100 |
| Attenuated Noise Level (Hard surface) | | |
| 82.98 | | |

Vibration impact assessment

| | | | | | |
|-------------------------------|-----------|-----------------|-------------|-----------|--------------|
| Max Impact Pile | Vibration | 0.117373975 PPV | Max Sonci | Vibration | 0.074398 PPV |
| | Distance | 1.158 | | Distance | 0.734 |
| | | 115 | | | 115 |
| Typical Impact Pile | Vibration | 0.065275337 PPV | Typical Son | Vibration | 0.017231 PPV |
| | Distance | 0.644 | | Distance | 0.17 |
| | | 115 | | | 115 |
| General Construction Activity | Vibration | 0.011125 PPV | | | |
| | Distance | 0.089 | | | |
| | | 100 | | | |

Vibration Annoyance Assessment

| | | |
|----------|-------------|--------------|
| LV= | impact | 93.9382 VdB |
| Distance | typical | 84.69642 VdB |
| | 115 sonic | 85.69642 VdB |
| | typical | 73.69642 VdB |
| | general cor | 67.69642 VdB |

| | |
|----------------------|-----|
| Pile Driver | |
| impact | 112 |
| typical | 104 |
| sonic | 105 |
| typical | 93 |
| general construction | 87 |

| |
|------------------------|
| Category 2 Residential |
| frequent=>70 |
| occasional=<70>30 |
| infrequent=<30 |