

I-10 Pavement Rehabilitation Project

RIVERSIDE COUNTY, CALIFORNIA
DISTRICT 8 – RIV – 10 (PM R104.9/R134.0)
1C082/0816000087

Draft Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment



**Prepared by the
State of California, Department of Transportation**

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.



May 2019

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General Information about This Document

What's in this document:

The California Department of Transportation (Department), as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study/Environmental Assessment (IS/EA), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Riverside County, California. The Department is the lead agency under the National Environmental Policy Act (NEPA). The Department is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read this document.
- Additional copies of this document and related technical studies are available for review at:

Department of Transportation,
Caltrans District 8
12th Floor
464 W. 4th Street
San Bernardino, CA 92401

- This document may be downloaded at the following website:

www.dot.ca.gov/d8/
- We'd like to hear what you think. If you have any comments about the proposed project, please call (909) 806-2541, or send your written comments to Caltrans by the deadline.
- Send comments via postal mail to:
Antonia Toledo, Environmental Branch Chief
Department of Transportation
Caltrans District 8
Environmental Planning (MS 820)
464 W. 4th Street, San Bernardino, CA 92401
- Send comments via email to: D8.I-10.Rehab1C082@dot.ca.gov
- Be sure to send comments by the deadline: June 24, 2019

What happens next:

After comments are received from the public and reviewing agencies, Caltrans may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the project.

Alternative Formats:

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write Caltrans, Attn: Terri Kasinga, Chief, Public Affairs, 464 West 4th Street, San Bernardino, CA 92401; (909) 383-4646 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

SCH: _____
08-RIV-10-PM R105.0/134.0
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Rehabilitate existing pavement, ramps, and guardrail, and revegetate the median, and upgrade ADA facilities on I-10, from West of Route 10/177 Separation at PM R104.9 to 1.05 mile west of the Wiley's Well Road Overcrossing (PM R134.0), in the County of Riverside.

Draft INITIAL STUDY with Proposed Mitigated Negative Declaration/Environmental Assessment

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C), 49 USC 303, and/or 23 USC 138

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies: California Transportation Commission

Cooperating Agencies: U.S. Army Corp of Engineers (USACE)

5/17/19
Date of Approval


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Proposed Mitigated Negative Declaration Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate the existing asphalt concrete (AC) pavement on Interstate 10 (I-10) from West of the SR-177/I-10 Separation, at Post Mile (PM) R104.9, to 1.05 miles west of the Wiley's Well Road Overcrossing (PM R134.0) in the County of Riverside. Rehabilitation activities include removal and replacement of existing inside and outside shoulders, guardrails, rumble strips, drainage inlets, and dikes, and installation of oversized drains. The proposed project will also involve upgrades to ramp facilities for ADA compliance, installation of two temporary detour lanes in the existing median, extension of existing rock slope protection (RSP) at 44 bridge locations, and hydroseeding the median for erosion control and vegetation restoration.

Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a MND for this project. This does not mean that Caltrans' decision regarding the project is final. This MND is subject to change based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project, and pending public review, expects to determine that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no impact on aesthetics, agricultural and forest resources, air quality, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, tribal cultural resources, or utilities and service systems.

The proposed project would have less than significant impact on cultural resources, and hydrology and water quality.

The proposed project would have less than significant impacts with mitigation on biological resources.

To avoid and/or minimize potential impacts to biological resources, the following measures will be implemented.

WQ-1: Construction General Permit. Prior to commencement of construction activities, the contractor shall obtain coverage under the State Water Resources Control Board's *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit), Order No. 2009-0009-DWQ, as amended by 2010-0014-DWG and 2012-0006-DWQ, NPDES No. CAS000002, or any other subsequent permit. This shall include submission of Permit Registration Documents (PRDs), including Notice of Intent (NOI) for coverage under the permit to the State Water Resources Control Board via the Stormwater Multiple Application and Report

Tracking System (SMARTS). Construction activities shall not commence until a Waste Discharge Identification Number (WDID) is obtained from SMARTS. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to impact water quality.

- WQ-2: Caltrans MS4 Permit.** The contractor shall comply with the provisions of the *National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit, Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation Order No. 2012-0011-DWQ (Caltrans MS4 Permit)*, as amended by Order No. 2014-0006-EXEC, Order No. 2014-0077-DWQ, and Order No. 2015-0036-EXEC, *NPDES No. CAS000003*, or any subsequent permit. Caltrans-approved Design Pollution Prevention BMPs and Treatment BMPs shall be implemented to the maximum extent practicable (MEP), consistent with the requirements of the Caltrans MS4 Permit.
- BIO-1: Biological Monitor.** An authorized contractor supplied biologist will be designated to oversee compliance of all protective measures and will monitor all construction-related activities. The biological monitor will notify the resident engineer of project activities that may not be in compliance. The resident engineer will stop work until the protective measures are implemented fully.
- BIO-2: Worker Environmental Awareness Training.** A qualified biologist will present to each employee (including temporary, contractors, and subcontractors) a worker environmental awareness training, prior to the initiation of work. They will be advised of the special status species in the project area, the steps to avoid impacts to the species and the potential penalties for taking such species. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area environs. Included in this program will be color photos of the listed species, which will be shown to the employees. Following the education program, the photos will be posted in the contractor and resident engineer office, where they will remain through the duration of the project. The contractor, resident engineer, and the qualified biologist will be responsible for ensuring that employees are aware of the listed species. If additional employees are added to the project after initiation, they will receive instruction prior to working on the project.
- BIO-3: Materials and Spoils.** Project materials will not be cast from the project site into nearby habitats and project related debris, spoils, and trash will be contained and removed to a proper disposal facility.
- BIO-4: Equipment Staging.** Equipment, vehicles, and materials staged and stored in Caltrans right-of-way will be sited in previously paved or previously disturbed areas only and will avoid native vegetation.
- BIO-5: De-Watering Plan.** For all bridges that cross jurisdictional drainages and are susceptible to running water, a de-watering/water control plan must be created and implemented in accordance with Caltrans Water Control Standard Specifications

(Standard Specification 13-4.03G) if water is present or could be present during construction activities.

- BIO-6: Dust Control.** The contractor shall implement dust control measures during construction activities to avoid inundating surrounding vegetation and to ensure biological monitors on the project site have visibility for monitoring the covered species.
- BIO-7: Rare Plant Pre-Construction Clearance Survey, Flagging, and Fencing.** No more than one week prior to ground breaking activities, a qualified biologist must perform a pre-construction plant survey. Should any rare plants be found, individuals will be flagged for clear identification to ensure they are visible to construction personnel for avoidance. Should multiple plants in a single location be found, the groupings will be fenced with environmental sensitive temporary fencing.
- BIO-8: Rare Plant Translocation.** If a special status plant species is found within the work area, the authorized, contractor-supplied biologist will contact the appropriate resource agency(s), to determine the time and suitable translocation area for the plant species to be moved. Additional requirements and actions will be determined at the time in which such an action arises.
- BIO-9: Pre-construction Nesting Bird Survey.** If construction occurs within the bird nesting season (February 15 to September 1), then pre-construction surveys will be conducted by a qualified biologist to locate and avoid nesting birds. If an active nest is located, a 300-foot no-construction buffer (500-foot buffer for raptors) will be put in place until nesting has ceased or the young have fledged.
- BIO-10: Pre-Construction Desert Tortoise Survey.** Immediately prior to the start of ground disturbing activities, and prior to the installation of any desert tortoise exclusion fencing, clearance surveys for the desert tortoise will be conducted by the biologist. The entire project area will be surveyed for desert tortoise and their burrows by the contractor supplied biologist prior to the start of any ground disturbing activities.
- BIO-11: Temporary Desert Tortoise Fencing.** Temporary exclusion fencing will be installed outlining the perimeter of any construction staging, storage, or batch plant areas to prevent entry by desert tortoises into the work site. Exclusion fencing will be installed following Service guidelines (2017) or more current protocol. The biologist must check the fencing daily and make any necessary repairs should it become damaged.
- BIO-12: Desert Tortoise Under Vehicles and/or Equipment.** The contractor supplied biologist and project personnel shall carefully check under parked vehicles and equipment for desert tortoises before any of the vehicles or equipment can be moved.
- BIO-13: Desert Tortoise in Work Area.** If at any time a desert tortoise is observed in the project area, the contractor supplied biologist will have the authority to halt any activities, through the Resident Engineer or any other identified authority in charge of implementation, that may pose a threat to desert tortoises and to direct movements of equipment and personnel to avoid injury to mortality to desert tortoises. Desert tortoises will be removed by the authorized biologist according to guidelines

set forth by USFWS in the Biological Opinion to a translocation site pre-approved by the appropriate wildlife/resource agency(s). Should a tortoise require removal from the work site, USFWS will be contacted.

- BIO-14: Injured or Dead Desert Tortoise.** The contractor supplied biologist will inform USFWS and CDFW of any injured or dead desert tortoises (and other special status species) found on site (verbal notification within 24 hours and written notification within 5 days).
- BIO-15: Desert Tortoise Monitoring Reports.** The contractor supplied biologist will conduct daily on-site monitoring and submit a weekly monitoring report for desert tortoises (and additional special status species) during construction.
- BIO-16: Speed Limits in Desert Tortoise Habitat.** Except on maintained public roads designated for higher speeds or within desert tortoise-proof fenced areas, driving speeds will not exceed 20 miles per hour through potential desert tortoise habitat on unpaved roads.
- BIO-17: Desert Tortoise Predation Prevention.** To preclude attracting predators, such as the common raven (*Corvus corax*) and coyotes (*Canis latrans*), food-related trash items will be placed in covered refuse cans and removed daily from the work sites and disposed of at an appropriate refuse disposal site. Workers are prohibited from feeding any and all wildlife.
- BIO-18: Identifying Burrowing Owl Burrows.** The entire project area will be surveyed for burrowing owls and their burrows by the contractor supplied biologist no more than 30 days prior to the start of any ground disturbing activities. Use bright orange environmentally sensitive area (ESA) fencing, clearly mark areas supporting burrows and a buffer zone setback area.
- BIO-19: Burrowing Owl Nesting Season Avoidance.** Occupied burrowing owl burrows and the established buffer zone setback area surrounding each of the occupied burrows shall not be disturbed during the nesting season (February 1 to August 31), unless a biologist can verify through noninvasive methods that either the owls have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent flight.
- BIO-20: Burrowing Owl Burrow Exclusion.** For unavoidable impacts to occupied burrowing owl burrows, the burrows must be excluded and closed by a qualified biologist to permanently exclude burrowing owls. One-way doors would need to be temporarily installed in burrow openings during the non-breeding season (September 1 to January 31) and before breeding behavior has begun. Suitable habitat (including suitable burrows) must be available adjacent or near the disturbance site or artificial burrows shall need to be provided nearby. Once the biologist has confirmed that the owls have left the burrow, burrows shall be excavated using hand tools and filled to prevent reoccupation. All burrowing owls associated with occupied burrows, that shall be directly impacted (temporarily or permanently) by the Project shall be passively relocated.
- BIO-21: Burrowing Owl Relocation.** All burrowing owl relocation shall be approved by CDFW. The permitted biologist shall monitor the relocated owls a minimum of three

days per week for a minimum of three weeks. A report summarizing the results of the relocation and monitoring shall be submitted to CDFW within 30 days following completion of the relocation and monitoring of the owls.

- BIO-22: Desert Kit Fox Pre-Construction Survey.** A qualified contractor supplied biologist will conduct pre-construction surveys for desert kit fox within the project site and biological study area boundaries no more than 30 days prior to the commencement of ground-breaking activities. Dens will be classified as inactive, potentially active, or definitely active. Should dens be deemed active, additional surveys will be required (see BIO-23).
- BIO-23: Desert Kit Fox Den Complex Monitoring.** All desert kit fox den complexes in the project site identified as potentially active or definitely active will be monitored in accordance to CDFW guidelines. If once the monitoring is concluded, no desert kit fox tracks are found at the burrow entrance, or no photos of the target species using the den are observed, the den can be excavated and backfilled by hand. If a den is identified as being active, it must further be classified as non-natal or natal den. Potential natal den complexes are to be monitored for a minimum of 3 additional days using infrared wildlife cameras and/or tracking medium to determine their status. If the den complex is determined to be natal during the denning period (February - June), a 200-foot non-disturbance buffer zone will be established surrounding natal dens, and monitoring by infrared cameras or weekly visits by a qualified contractor supplied biologist will continue until it has been determined that the young have dispersed. The final buffer distance will be determined in consultation with the BLM and CDFW. If the den complex within the project site is determined to be non-natal, passive hazing techniques will be used to discourage desert kit fox from using the den complex.
- BIO-24: Desert Kit Fox Passive Relocation.** Desert kit fox must be excluded from all den complexes within the project site portion of the Project disturbance area. Inactive dens that are within the project site, will immediately be excavated by hand and backfilled to prevent reuse by desert kit fox. If tracks or desert kit fox is captured in camera photos, then various passive hazing techniques will be implemented to deter desert kit fox from using the den complex. If desert kit fox are present and passive relocation techniques fail, CDFW will be contacted to explore other relocation options such as trapping, in consultation with the BLM.
- BIO-25: Stop Work Restrictions for Desert Kit Fox Presence.** If during construction activities a desert kit fox is within the project site, all construction activities shall stop, and the contracted supplied biologist shall be notified. Consultation with resource agencies may be required, as appropriate.
- BIO-26: Animal Entrapment Avoidance.** To prevent inadvertent entrapment of desert kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2 feet deep should be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals.
- BIO-27: Pre-Construction Survey and Monitoring by a Qualified Bat Biologist.** Prior to construction start, a qualified biologist will conduct a survey to determine if bats are

roosting in any of the bridges. If work on bridges that support bat roosting during the bat maternity season (April 1–August 31) cannot be avoided, a qualified bat biologist will perform a humane eviction/exclusion of roosting bats from the bridges in the fall (September or October) before initiation of construction. The exclusionary material will be inspected regularly and maintained during construction activities and will be removed at the completion of construction.

- BIO-28: Wildlife Fencing.** Permanent fencing will be installed at key wildlife crossings in the project area (e.g., PM 132-134) to direct wildlife, including but not limited to desert tortoise, American badger, and southern mule deer, into the highway undercrossing.
- BIO-29: ACOE Coordination.** Prior to project approval, Caltrans will submit a letter requesting determination of non-jurisdiction and an approved jurisdictional delineation to USACE for concurrence.
- BIO-30: 401 Permit.** Prior to soil disturbance, a 401 permit will be obtained from the RWQCB.
- BIO-32: Median Soil Disturbance During Design.** During final design topography will be considered, and soil disturbance minimized, to lessen potential impacts to desert tortoise critical and suitable habitat.
- BIO-33: Hydroseeding.** After completion of detour-lane construction, disturbed soil will be hydroseeded with a native-plant see mix to restore the PIA.

In order to mitigate for potential impacts to desert tortoise, the following measures will be implemented.

- BIO-31: 1602 Permit.** Pursuant to Section 1600 of the California Fish and Game Code, an LSA would be obtained from the CDFW. Permanent impacts to drainages would be mitigated by land purchase, at a 1:1 ratio, in-lieu fee credit purchase, or habitat restoration.
- BIO-34: Desert Tortoise Mitigation.** Permanent impacts to DTCH and desert tortoise suitable habitat will be mitigated at a minimum 1:1 ratio by land purchase or in-lieu fee credit purchase. Caltrans will submit a 2081 Incidental Take Permit application and translocation plan for potential impacts to desert tortoise and desert tortoise suitable habitat.

David Bricker
Deputy District Director
District 8 Division of Environmental Planning
California Department of Transportation

Date

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Chapter 1 – Proposed Project

1.1 Introduction

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the Department entered into a Memorandum of Understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016 for a term of five years. In summary, the Department continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and the Department assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to the Department under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), is the lead agency under the National Environmental Policy Act (NEPA). The Department is also the lead agency under the California Environmental Quality Act (CEQA).

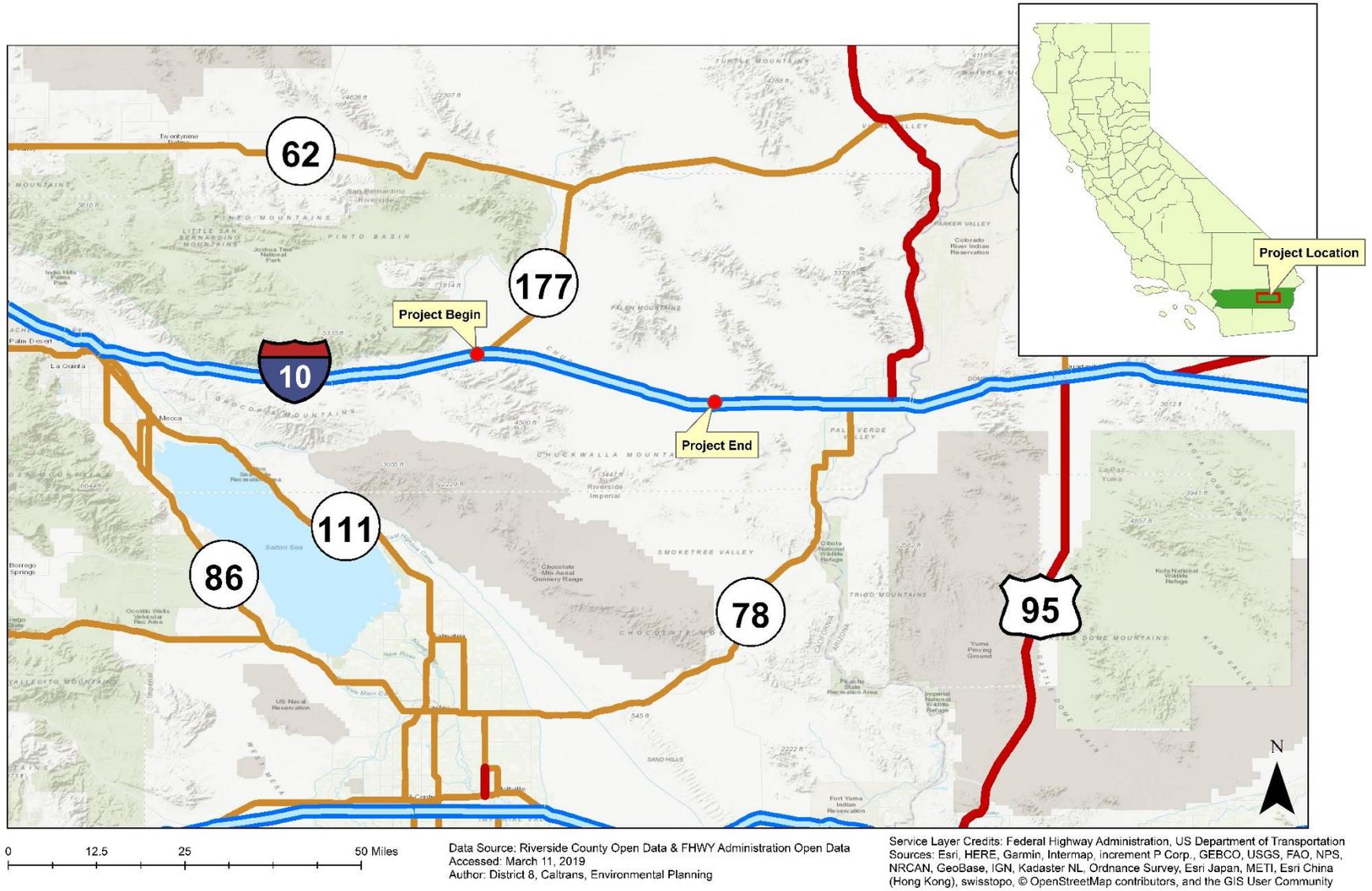
As a transcontinental west-east route, I-10 begins in District 7 in Los Angeles County from the Pacific Coast and traverses across eight states to Florida's Atlantic Coast along nearly 2,500 miles of flat and rolling terrain. In California, I-10 traverses 244 miles across three counties within Districts 7 and 8. Within District 8, I-10 is 196 miles long, ranging from four mixed-flow lanes to eight mixed-flow and two HOV lanes across the Inland Empire and desert regions of both Riverside and San Bernardino counties. In District 8, it begins in Montclair and travels through 20 different cities in both counties.

I-10 serves as a primary connection for commuter traffic and goods movement from seaports in neighboring District 7 to the rest of the country. Although I-10 does not directly link to the ports of Los Angeles and Long Beach, the combined ports have the highest twenty-foot equivalent unit (TEU) of shipping container traffic of any point of entry in the United States. Offloaded container traffic from both ports funnel from District 7 towards the Inland Empire via I-10. From the Los Angeles metropolitan area into the Coachella Valley, the route provides a means for regional commuter trips. East of the Coachella Valley, most trips are interstate, along with a substantial increase of trips related to goods movement. (Caltrans, 2017 [TCR])

According to the Caltrans 2017 Transportation Concept (TCR), the proposed project lies within Segment 14 which contains four (4) general purpose lanes – two in each direction – and no HOV lanes. By 2040, this stretch of I-10 is expected to remain at four lanes. Figure 1.1 and Figure 1.2 provide the project location and vicinity.

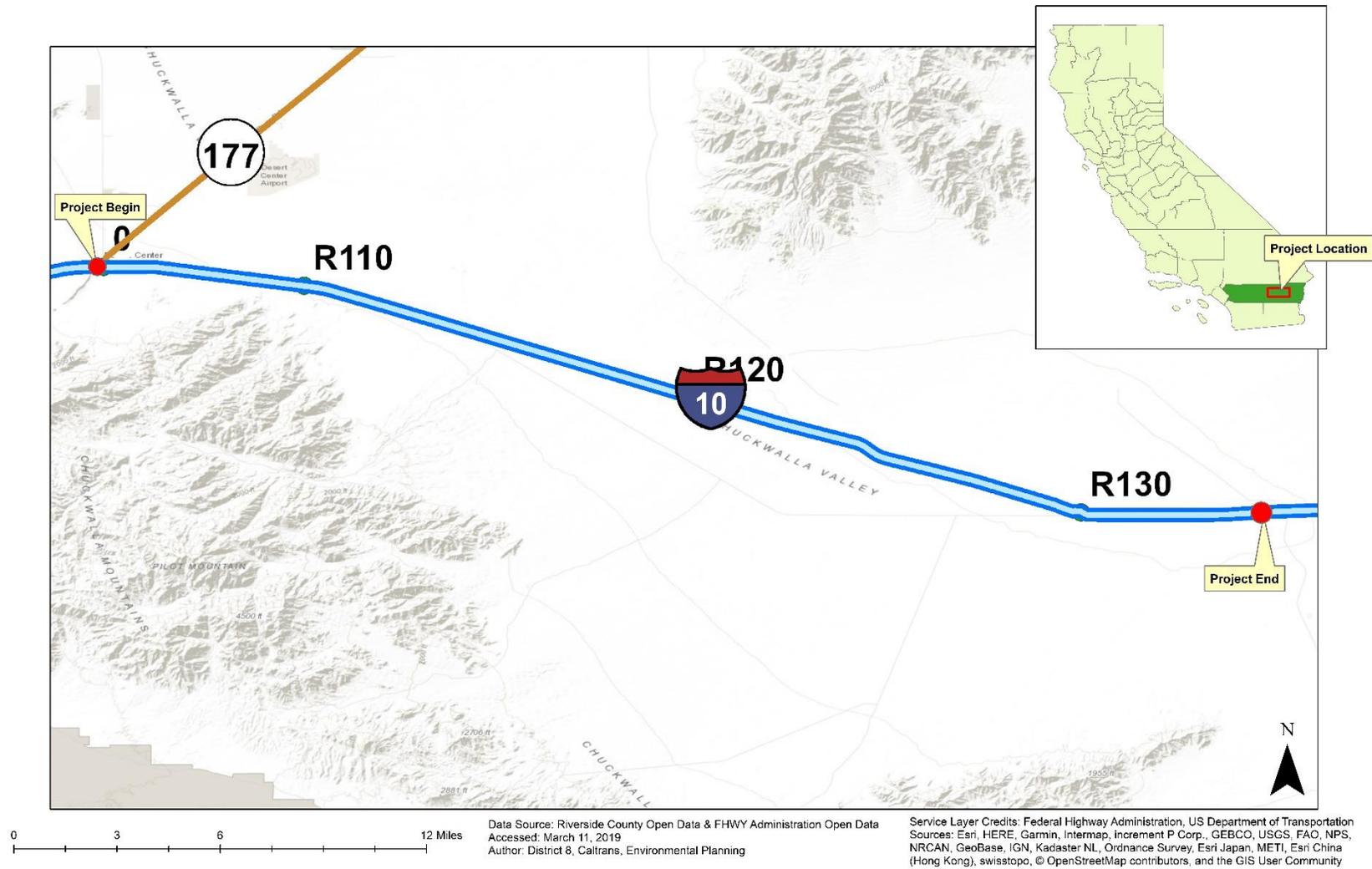
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Figure 1.1-1: Project Region



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Figure 1.1-2: Project Vicinity



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This project is included in the 2017 Federal Transportation Improvement Program (FTIP) Amendment Modification #17-16 and is proposed for funding from the State Highway Operation and Protection Program (SHOPP) Roadway Preservation Program (FTIP ID: RIVLS02). The proposed project is programmed for the 2019-20 program year.

The scope of the U.S. Army Corps of Engineers for the proposed project includes only within the footprint of the regulated activity within the delineated water, but also including an area out to 300 feet to account for noise impacts.

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1.2 Purpose and Need

1.2.1 Project Purpose

The primary purpose of this project is to restore and extend the service life of existing pavement for a minimum of forty (40) years, enhance trip reliability, and consequently minimize expenditures associated with future maintenance. The secondary purpose is to improve safety and mobility for the traveling public by upgrading existing features to current design standards such as Metal Beam Guardrail (MBGR), bridge rails, and drainage facilities.

1.2.2 Project Need

Caltrans District 8, Office of Maintenance Engineering identified the need to rehabilitate the existing pavement. This project is needed to address current and future deficiencies of the existing pavement and extend the service life within the project limits and minimize maintenance frequency and consequently worker exposure.

1.3 Independent Utility and Logical Termini

Although two other projects with similar scope are proposed along this route, the project limits extend a sufficient length to have independent utility in addressing route maintenance concerns. These rehabilitation efforts have been broken down for ease of delivery in terms of funding, but also to lessen impacts to traveling public. Rehabilitation activities are of sufficient scope to improve the travel experience of motorists through this stretch of I-10 without the need for additional improvements. The project being close to 30 miles long, with a detailed scope, also allows for an effective analysis of potential environmental impacts.

This project is a portion of a total of three future rehabilitation projects. Cumulative impacts are addressed in Section 2.4. Past projects, as well as smaller projects that have been added to the scope of this project, are also discussed in the Cumulative Impacts section.

1.4 Project Description

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. Two alternatives are considered, including the No-Build Alternative and one Build Alternative. The proposed I-10 rehabilitation build alternative extends about 29 miles from Post Mile 104.9 to Post Mile R134.0 and includes rehabilitation of existing pavement on both the eastbound (EB) and westbound (WB) sides as described in Section 1.5.2 below. The proposed rehabilitation activities would occur within the existing right of way limits and would meet current transportation design standards, while avoiding and/or minimizing impacts to the environment.

1.5 Project Alternatives

One no-build and one build alternative are considered for this project. This section describes the proposed alternatives.

1.5.1 Alternative 1: No-Build Alternative

The No-Build Alternative fails to address the project purpose and need, and it provides none of the project benefits cited for Alternative 2. The No-Build Alternative would maintain existing pavement condition of I-10 within the project limits with no rehabilitation on the mainline lanes and ramps or associated improvements.

Without pavement rehabilitation, the existing pavement condition will deteriorate further along the corridor resulting in operational deficiencies and will necessitate future costly maintenance measures. With no capital improvements, there is no capital cost for this alternative. There would be continued costs associated with maintenance, periodic rehabilitation, and any safety and operational improvements to the existing facility.

1.5.2 Alternative 2: Build Alternative

The Build Alternative would include the following improvements to the identified portion of the I-10 Corridor:

- Cold plane existing Asphalt Concrete (AC) pavement on the mainline and shoulders.
- Raise the profile grade by approximately one foot to achieve the recommended structural section. Raising the profile by one foot requires additional grading on the outside, beyond the existing hinge point, which in turn results in a wider area of environmental impact. To minimize the potential environmental impact, the proposed outside edge of travel way and shoulders would be shifted – in effect shifting the facility – four feet towards the median.
- In order to conform and transition to the existing structures profile grade, the existing AC pavement and base of the mainline and shoulders will be removed at approaches and departures for a length of 1000 feet and will be replaced with a full depth structural section (reconstruction).
- Construct two temporary detour lanes and crossover lanes in the existing median for traffic handling during construction.
- The detour lanes will remain in place after completion of the project and will be striped, signaling to the public that they are not available for use.
- Extend existing culverts in the median outside the Clear Recovery Zone.
- Remove existing AC on all bridges and treat the exposed deck.
- Remove and replace all existing bridge railings.
- Replace existing inlets in the median.
- Remove and replace existing dikes.
- Remove existing MBGR and replace with Midwest Guardrail System.
- Remove and reinstall rumble strips.
- Widen existing bridges towards the median for the sole purpose of construction traffic handling.
- Construct approach and departure slabs at all bridges.
- Remove/replace/repair existing Rock Slope Protection (RSP) under existing and widened bridges.
- Hydroseed the median for erosion control and attempted vegetation restoration as part of environmental palliative.
- Cold plane and overlay existing ramps with Rubberized Hot Mix Asphalt.
- Install Inventory Marker Signs (G-11) at both bridge approaches facing traffic.

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This project contains a number of standardized project measures which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2.

After the public circulation period, all comments will be considered, and the Department will select a preferred alternative and make the final determination of the project’s effect on the environment. Under the California Environmental Quality Act (CEQA), if no unmitigable significant adverse impacts are identified, the Department will prepare a Negative Declaration (ND) or Mitigated ND.

Similarly, if the Department, as assigned by the Federal Highway Administration (FHWA), determines the National Environmental Policy Act (NEPA) action does not significantly impact the environment, the Department will issue a Finding of No Significant Impact (FONSI).

1.6 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications (PLACs) are required for project construction:

Table 1-1: Permits and Approvals

Agency	PLAC	Status
United States Army Corps of Engineers (USACOE)	Request to participate as a Cooperating Agency	Accepted Cooperating Agency status on March 28, 2019.
United States Fish and Wildlife Service (USFWS)	Section 7 Consultation for Threatened and Endangered Species	In progress.
California Department of Fish and Wildlife (CDFW)	1602 Agreement for Streambed Alteration Section 2080.1 Agreement for Threatened and Endangered Species	Applications for 1602 permit and Section 2080.1 would be submitted after project approval.
California Water Resources Board	Water Discharge Permit	Application for Section 401 permit would be submitted after project approval.

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Chapter 2 – Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This project is located outside of National Marine Fisheries Service (NMFS) jurisdiction; therefore, an NMFS species list is not required and no effects to NMFS species are anticipated.

A demographic analysis was conducted and discussed in Section 2.1.5 Community Impacts. No minority or low-income populations that would be adversely affected by the proposed project have been identified as determined above. Therefore, this project is not subject to the provisions of Executive Order 12898.

The project is not located in a 100-year floodplain. Therefore, no effects to floodplains will occur.

2.1 Human Environment

2.1.1 LAND USE

2.1.1.1 Affected Environment

The project is located in an unincorporated area of Riverside County. This section is based on information from the *Riverside County General Plan* (December 2015). The study area for land use analysis is within the project footprint and properties adjacent and surrounding the Project area. For this Project, the study area includes the Desert Center Area and the Palo Verde Valley Area, both of which have relatively low populations and large open space. Desert Center and Palo Verde Valley are on the western and eastern extremities of this project, respectively.

Existing Land Use

The study area is located in the Riverside County, with the majority of work being performed between the State Route 177 (SR-177)/I-10 junction, in Desert Center, and the Palo Verde Valley area – a 29-mile stretch. The existing land uses in the study area, adjacent to this stretch of I-10 in Riverside County, include open space, rural residential, and retail commercial/tourist commercial.

Desert Center

As stated within the County of Riverside General Desert Center Area Plan, Desert Center is seen in the public's mind as a small oasis. It is a center primarily focused on serving the commercial needs of the highway traveler. A variety of other uses including mobile home parks, industrial/storage facilities, an airport, and a Caltrans equipment yard. The vast majority of acreage within the area plan is designated as Open Space-Rural. These lands are generally remote, inaccessible, subject to natural hazards, or unable to support more intense development due to the lack of public facilities and services. The uninhabited and natural character of the open space lands is expected to continue throughout the life of the plan. (Area of Desert Center General Plan, 2015)

Palo Verde Valley

According to the County of Riverside General Palo Verde Valley Area Plan, the City of Blythe represents the only significant urban area in the region. The Chuckwalla and Ironwood State Prisons, located near the east end of the project limits, approximately 15 miles west of Blythe and 3 miles south of I-10, are a non-contiguous island of the City of Blythe. The prisons are one of the major sources of employment in the Palo Verde Valley community; and when, combined, house approximately 5,800 inmates and employ a staff of approximately 1,800. (Area of Palo Verde Valley, 2015)

Future Land Use

The proposed project falls within the Desert Center and Palo Verde Valley Area Plans under the Fourth District of unincorporated Riverside County. The Fourth District of Riverside County provides information regarding completed and current projects. According to the County of

Riverside General Plan¹, the General Plan Land Use Map is intended to communicate Riverside County's goals for future land use and development of the land. Future land use will be focused into strategically located centers or into existing developed areas, thus minimizing development pressures on rural, agricultural, and open space areas.

The project is located in the eastern portion of Riverside county and surrounding land uses regulated by the County's General Plan and the Desert Center and Palo Verde Valley Area Plans as shown in Figure 2.1-1. Figure 2.1-2 and Figure 2.1-3 provide a zoomed-in version of the land uses in the two cluster areas within the project limits. According to the corresponding Area Plan Volumes², the Desert Center Area reflects the limited development potential due to the remoteness of the land. Palo Verde Valley possess potential for commercial uses at the intersection of I-10 and Wiley's Well Road, which is the main access to the prisons. Future land use will be focused into strategically located centers or into existing developed areas, thus minimizing development pressures on rural, agricultural, and open space areas.

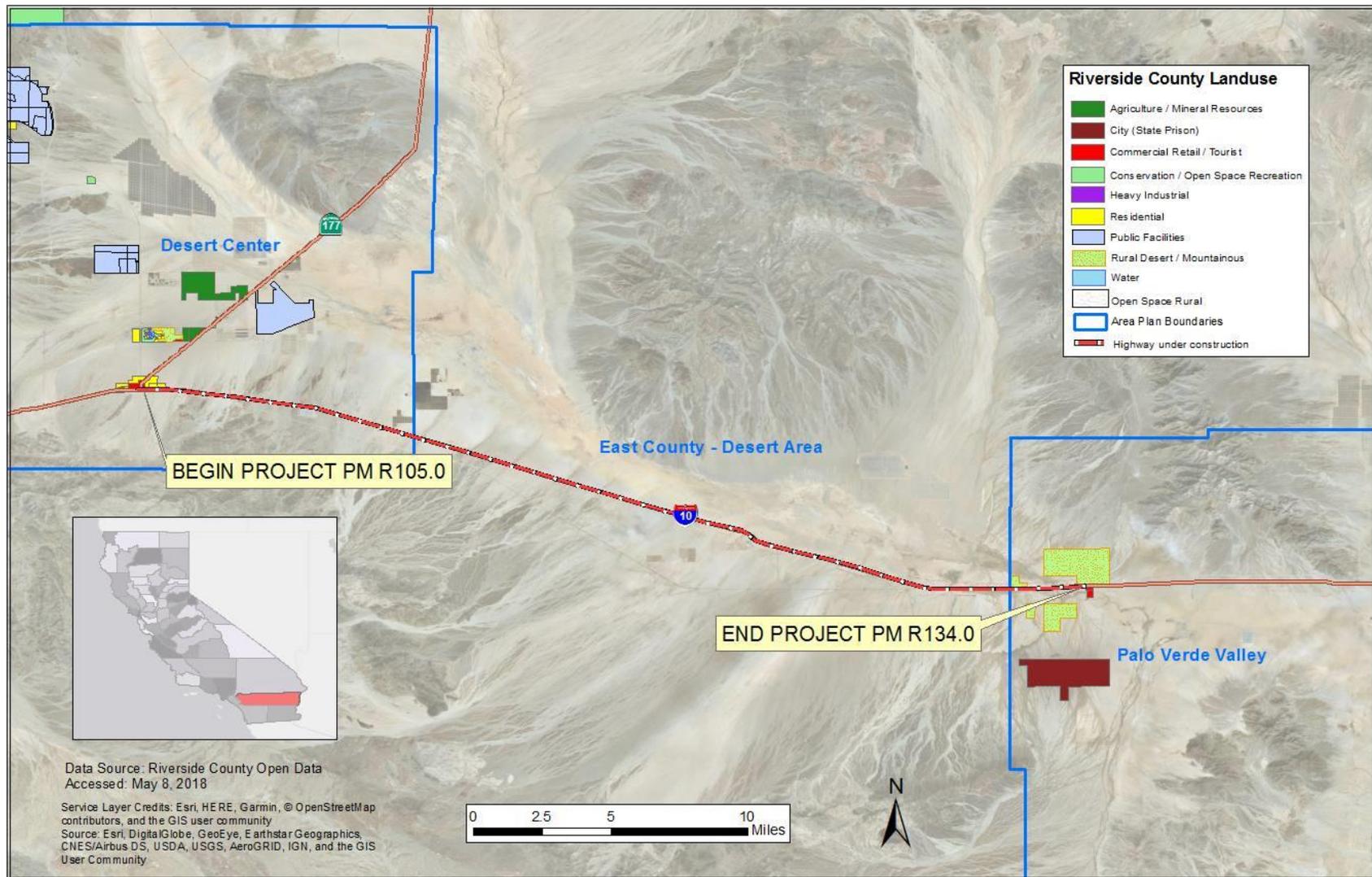
¹ County of Riverside General Plan, Chapter 3, July 11, 2017, accessed June 4, 2018: <http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx>

² County of Riverside General Plan Documents, Area Plan Volume 2, December 8, 2015, accessed June 4, 2018: <http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx>

Table 2-1: Proposed Development and Other Projects in the Area

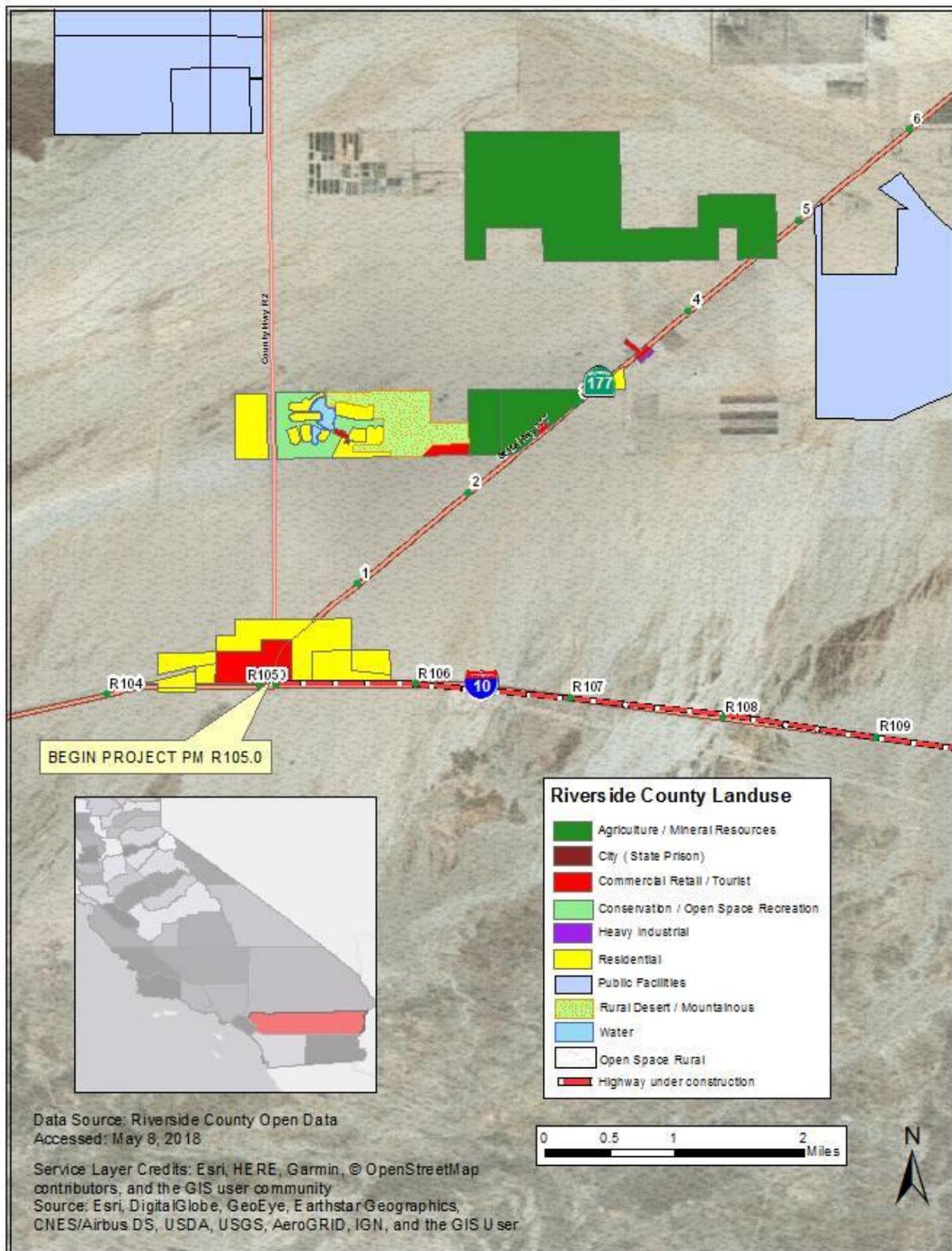
	Name	Sponsor	Proposed Uses	Status
1	Replace Existing Guide Signs ³	California Department of Transportation	Existing sign panels will be replaced with high-performance retroreflective sheeting Type XI to improve nighttime visibility	Approved September 2017. Award contract anticipated for November 2019
2	Install Changeable Message Signs ³	California Department of Transportation	Install Changeable Message Signs (CMS) to inform traveling motorists about road conditions. I-10 Eastbound at PM R101.2 and I-10 Eastbound at PM R145.1	Approved August 2017. Award contract anticipated for February 2019
3	Pavement Rehabilitation ³	California Department of Transportation	Replace asphalt concrete surfacing and upgrade traffic striping	In Design
4	RIV-10 Blythe pavement rehabilitation: mainline, shoulders, and ramps ³	California Department of Transportation	Restore and extend life of existing pavements for a minimum of twenty years. Improve safety and mobility for the traveling public by upgrading guardrails, bridge rails, and drainage facilities	Conducting environmental technical studies
5	Rice Solar Energy Project ¹	Rice Solar Energy LLC	Solar energy project using large circular field of mirrors (heliostats) to reflect sun’s energy onto central receiver tower to generate and power steam turbines.	Approved and on hold – not under construction
6	Sonoran Energy Project ²	AltaGas Sonoran Energy	Formerly known as Blythe Energy Project Phase II (BEP II). Natural Gas-fired power plant within existing AltaGas Blythe facility.	Licensed, in compliance phase. Construction on hold
California Energy Commission, accessed May 17, 2018, website http://www.energy.ca.gov/sitingcases/ricesolar/index.html ² California Energy Commission, accessed May 17, 2018, website http://www.energy.ca.gov/sitingcases/sonoran/ ³ Caltrans District 8 GIS Flex maps for District 8 Projects, accessed May 14, 2018, Caltrans internal database				

Figure 2.1-1: Project Area Land Use



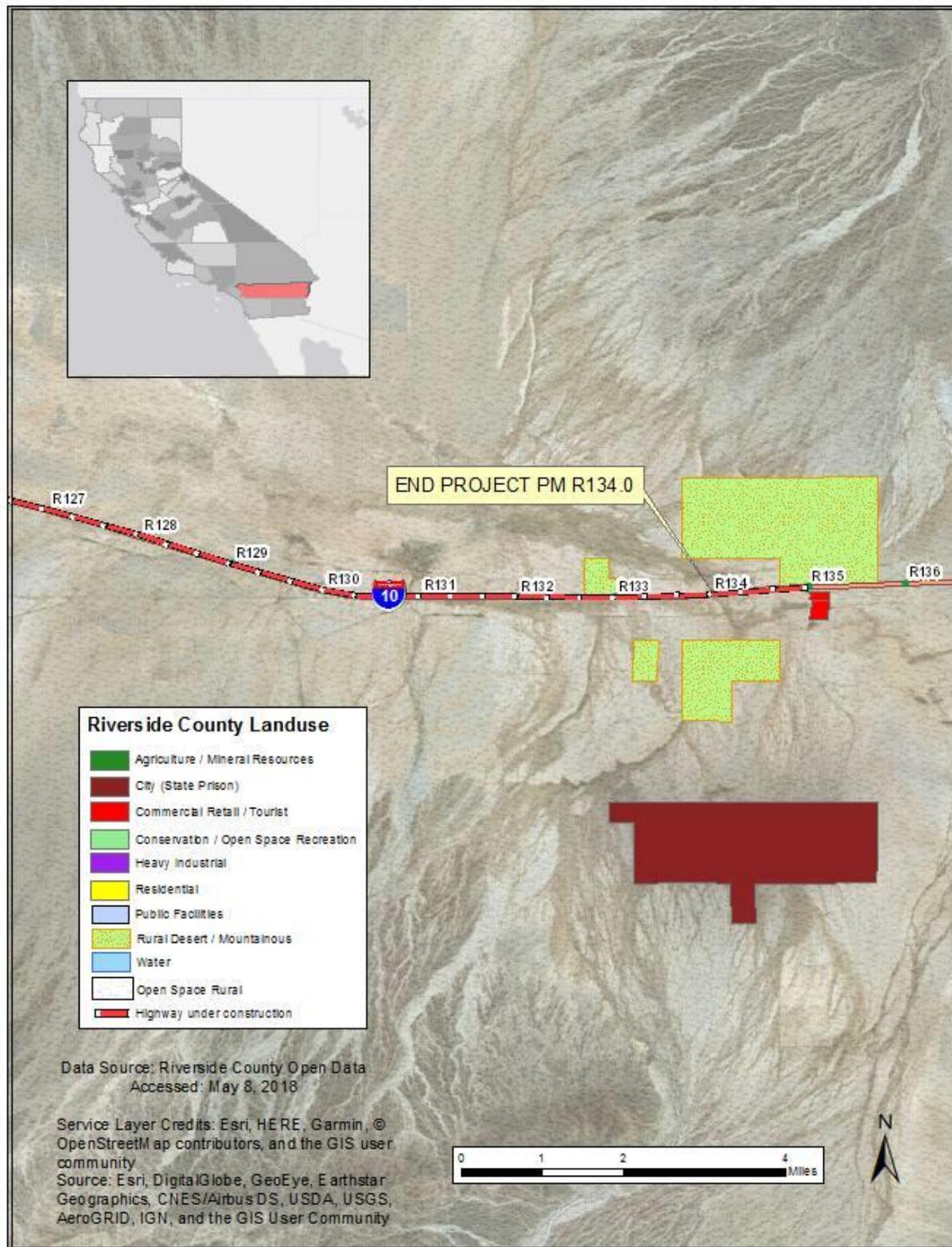
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Figure 2.1-2: Desert Center Area Land Use



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Figure 2.1-3: Palo Verde Valley Area Land Use



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Consistency with State, Regional, and Local Plans and Programs

Riverside County General Plan

Development in the project area is guided by the Riverside General Plan. The thrust of the General Plan is to manage the overall pattern of development more effectively. It determines how the land will be used for the next 20 years. It addresses regional issues and policies to address the specific needs of each community within the County.

Goals, Policies, and Programs

County General Plan – Circulation Element³

- C 3.1 Maintain the existing transportation network, while providing for future expansion and improvement based on travel demand, and the development of alternative travel modes.
- C 7.4 Coordinate with transportation planning, programming and implementation agencies such as Caltrans, Riverside County Transportation Commission, Western Riverside Council of Governments, Coachella Valley Association of Governments, and the cities of Riverside County on various studies relating to freeway, high occupancy vehicle/high occupancy toll lanes, and transportation corridor planning, construction, and improvements in order to facilitate the planning and implementation of an integrated circulation system.
- C 20.6 Control dust and mitigate other environmental impacts during all stages of roadway construction.
- C 20.15 Implement National Pollutant Discharge Elimination System Best Management Practices relating to construction of roadways to control runoff contamination from affecting the groundwater supply.
- C 23.1 Implement street and highway projects to provide safe, sustainable, and economical goods movement in areas where large concentration of truck traffic exist or are anticipated to exist.
- C 23.7 Identify economically feasible street and highway improvement and maintenance projects that will improve goods movements.
- C 23.14 The County should develop best practices and standards for design of distribution facilities and supporting infrastructure to promote environmental sustainability, safety, long-term maintenance cost reduction, and general quality of life.

Regional Plans

The Southern California Association of Governments (SCAG) develops and maintains the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP) for the counties of San Bernardino, Imperial, Los Angeles, Orange, Riverside, and

³ Riverside County General Plan, Chapter 4 Circulation Element,
http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/elements/Ch04_Circulation_120815.pdf?ver=2016-04-01-100756-397

Ventura. SCAG is mandated by federal law to research and develop plans for transportation, growth management, hazardous waste management, and air quality.

Goals in the 2012-2035 RTP (Table 1.1, pg. 13)⁴ include:

- Maximize mobility and accessibility for all people and goods in the region;
- Ensure travel safety and reliability for all people and goods in the region;
- Preserve and ensure a sustainable regional transportation system;
- Maximize the productivity of our transportation system;
- Protect the environment, improve air quality, and promote energy efficiency; and
- Encourage land use and growth patterns that complement our transportation investments.

2.1.1.2 Environmental Consequences

No-Build Alternative

The No Build Alternative would not support the goals of the RTIP or RTP or be consistent with local policies. The 2012-2035 RTP recognizes that a significant number of our roadways and bridges are in a state of disrepair due to years of underinvestment⁵. The region's aging transportation system is encountering diminishing revenues with increasing preservation costs and the delay in pavement maintenance will lead to deficient road pavement conditions⁶. The pavement along this stretch of I-10 is in need of maintenance and rehabilitation and the No Build Alternative will not address this need. The No Build Alternative would not impact existing or future land use in the project vicinity but it would not be consistent with the goals and policies of the local and regional plans.

Build Alternative

The Build Alternative would rehabilitate an existing section of one of the main transportation corridors in the western region of the United States. This alternative is consistent with the goals and policies of local, regional, and state transportation plans and policies. Rehabilitating the mainline pavement, shoulders, and ramps will allow for reliable travel for all goods and people in the region. There will be no conflict with existing land uses due to the scope of activities of the project. The proposed project will not result in increased capacity which would have the potential to promote growth (for a more detailed discussion on growth, please refer to section 2.1.4). Further, the project would not improve access; which has the potential to cause land use changes. Therefore, the Build Alternative would not result in land use impacts to the area.

⁴ SCAG 2012-2035 Regional Transportation Plan
<http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf>

⁵ SCAG 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy, RTP/SCS Adopted April 2012, Executive Summary, Page 4, accessed June 4, 2018.

⁶ SCAG 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy, RTP/SCS Adopted April 2012, Chapter 1, Page 26, System Preservation, accessed June 4, 2018.

2.1.1.3 Avoidance Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are proposed because the project would not result in any land use impacts.

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2.1.2 PARKS AND RECREATION FACILITIES

There are no parks or recreational facilities within approximately 0.5 mile of the project vicinity, including equestrian trails, recreational bikeways, or other recreational trails protected by the Park Preservation Act. There are no Section 4(f) resource types within the project vicinity. As part of the scoping and environmental analysis carried out for the project, this environmental topic was considered but no adverse impacts have been identified since there are no Section 4(f) resources located near the project.

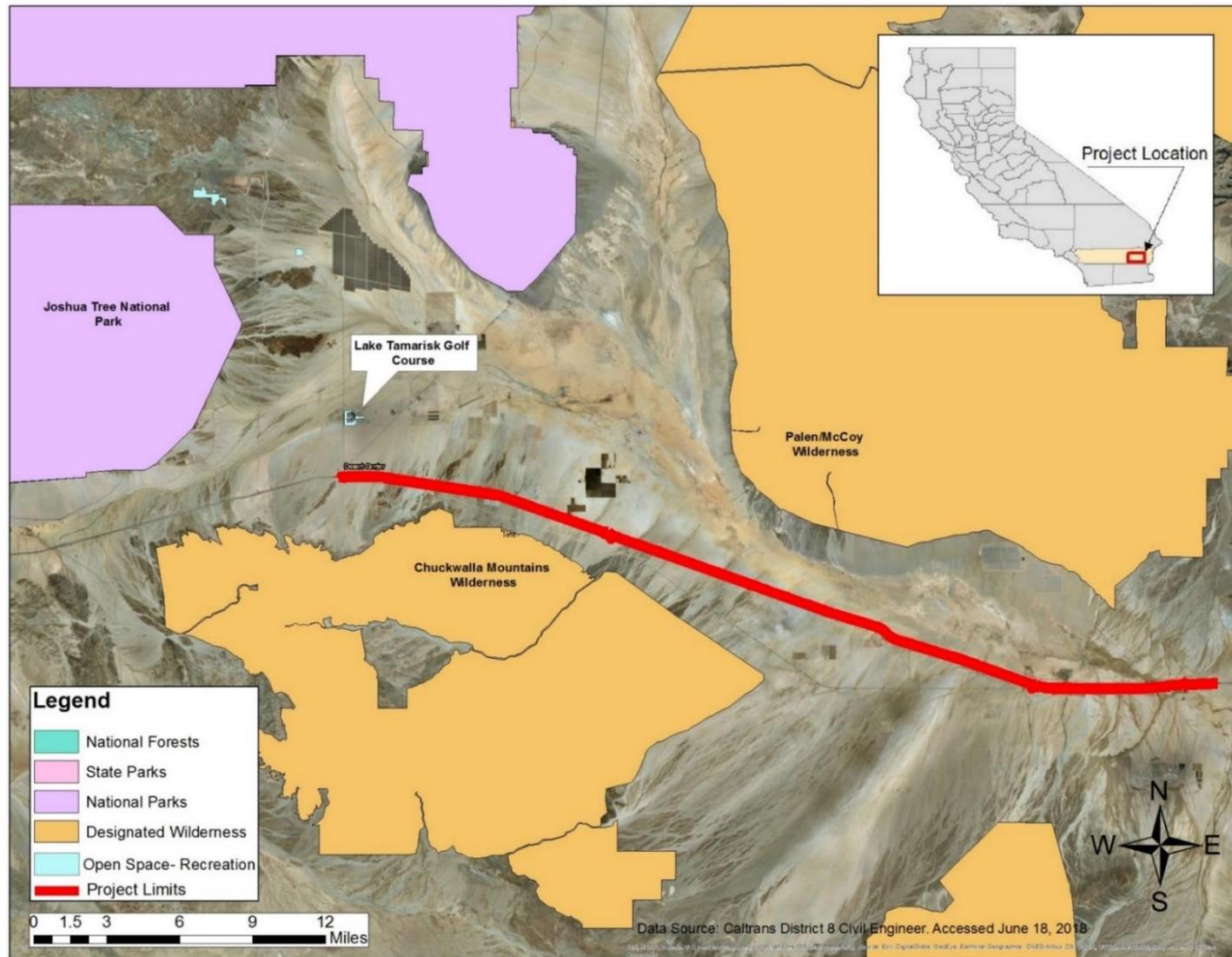
During analysis the nearest recreational facilities were considered as listed in Table 2.1.2 and depicted in Figure 2.1.2.

Table 2-2: Parks and Recreational Areas Near Project Limits

Jurisdiction	Name	Location	Approximate Distance from the Project	Type	Amenities
National Park Service	Joshua Tree National Park	74485 National Park Drive Twentynine Palms, CA 92277-3597	5.5 miles from nearest point of park, but 25 miles from an entrance to park.	National Park	792,510 acres with approximately 1.4 million visitors per year. Includes hiking, camping, rock climbing, etc.
Bureau of Land Management	Chuckwalla Mountains Wilderness	33.637416, -115.278350, Corn Springs Rd, California	5 miles	Designated Wilderness Area	Campground, palm oasis, prehistoric Native American petroglyphs, hiking, etc.
	Palen/McCoy Wilderness	33.716872, -115.114539, Palen Pass Rd., California	3 miles, but no entrance to wilderness area near project area.	Designated Wilderness Area	Hiking, camping, horseback riding, and wildlife viewing.
Private Land	Lake Tamarisk Golf Course	26250 Parkview Dr, Desert Center, CA 92239	2 miles away from entrance	Open Space—Recreation	Resort and Golf Course.
Source: BLM website, Google Maps, and NPS Joshua Tree website.					

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Figure 2.1-4: Parks and Recreational Areas Near the Project Limits



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2.1.2.1 Environmental Consequences

After scoping of a 3-mile radius around the project limits was performed, it was determined that no parks would be affected, and no further analysis is needed. The parks that were outside the 3-mile radius that surround the project area are shown in the map and table above. Both were used to consider the potential impacts this project could have on the parks and recreational areas listed and shown above and it was confirmed that there will be no potential impacts to these areas.

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2.1.3 FARMLANDS AND TIMBERLANDS

2.1.3.1 Regulatory Setting

Federal Regulations

NEPA and the Farmland Protection Policy Act (FPPA, 7 U.S.C. 4201-4209; and its regulations, 7 CFR Part 658) require federal agencies, such as FHWA, to coordinate with the Natural Resources Conservation Service (NRCS) if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

State Regulations

CEQA requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

Impacts to timberland are analyzed as required by the California Timberland Productivity Act of 1982 (CA Government Code Sections 51100 et seq.), which was enacted to preserve forest resources. Similar to the Williamson Act, this program gives landowners tax incentives to keep their land in timber production. Contracts involving Timber Production Zones (TPZs) are on 10-year cycles. Although state highways are exempt from provisions of the Act, the California Secretary of Resources and the local governing body are notified in writing if new or additional right-of-way from a TPZ will be required for a transportation project.

Local Regulations

The Conservation Element of the County General Plan provides direction regarding the conservation, development, and utilization of the County's natural resources, including soils that have the potential to be used for agriculture such as prime farmland. The Conservation Element for Agricultural land policies and statistics relevant to the proposed project are listed below.

2.1.3.2 Affected Environment

Information sources used in the preparation of this section include the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program, and the DOC 2006-2008 Land Use Conversion Report (2014-2016 LUCR⁷). The DOC and the NRCS classify agricultural lands into four categories: prime farmlands, farmlands of statewide importance, unique farmland, and farmland of local importance (DOC 2016)⁸.

- *Prime farmland* is rural land with the best combination of physical and soil characteristics for the production of crops and used for irrigated agricultural production at some point during the four years prior to the mapping date.

⁷ Riverside County 2014-2016 Land Use Conversion Table, (COD), <http://www.conservation.ca.gov/dlrp/fmmp>, accessed June 2018.

⁸ Important Farmland Mapping Categories and Soil Taxonomy Terms, DOC, http://www.conservation.ca.gov/dlrp/fmmp/Documents/soil_criteria.pdf, accessed June 2018.

- *Unique farmland* is land other than prime farmland that has lesser quality soils that are used for the production of high-value specialty crops (e.g., citrus and nuts) that has been cropped at some time during the four years prior to mapping.
- *Farmland of statewide importance* is land that does not qualify as prime or unique farmland and has been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- *Farmland of local importance* is defined by, and under the authority of, the Board of Supervisors of each county. Riverside county defines farmland of local importance as, “Soils that would be classified as Prime and Statewide but lack available irrigation water. Lands planted to dryland crops of barley, oats, and wheat. Lands producing major crops for Riverside County but that are no listed as Unique crops. These crops are identified as returning one million or more dollars on the 1980 Riverside County Agriculture Crop Report. Crops identified are permanent pasture (irrigated), summer squash, okra, eggplant, radishes, and watermelons. Dairylands, including corrals, pasture, milking facilities, hay and manure storage areas if accompanied with permanent pasture or hayland of 10 acres or more. Lands identified by City or County ordinances as Agricultural Zones or Contracts, which includes Riverside City ‘Proposition R’ Lands. Lands planted to jojoba which are under cultivation and are of producing age.”⁹

According to the 2016 California Department of Conservation Division of Land Resource Protection, Riverside County has approximately 419,835 acres of important agricultural land. Approximately 117,484 acres of prime farmland were inventoried in 2016, a decrease from 118,077 acres in 2014. 267 acres were converted for urban uses, and 183 acres were converted for other purposes.¹⁰ However, within the project limits there is no agricultural land.

Although existing state highways are exempt from the TPA, if new or additional right-of-way will be required from a TPZ for the project, the California Secretary of Resources and the local governing body should be notified in writing. There will be no new or additional ROW requirements from TPZ for the proposed project.

2.1.3.3 Environmental Consequences

The proposed build alternative would require the no acquisition of farmland or vacant land. This alternative seeks to rehabilitate the existing corridor through an area of Riverside county where no farmland of defined by DOC as being within the protected categories exists. Rehabilitating the mainline pavement, shoulders, and ramps will allow for reliable travel for all goods and people in the region. There will be no conflict with agricultural land uses due to the scope of activities of the project.

In addition, the project will not involve timberland conversion because it is not located within a TPZ.

⁹ *Farmland of Local Importance*, California Department of Conservation, available at: https://www.conservation.ca.gov/dlrp/fmmp/Documents/Farmland_of_Local_Importance_2016.pdf. Accessed May 2019.

¹⁰ 2014-2016 Land Use Conversion Table, California Department of Conservation, available at: <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Riverside.aspx>. Accessed July 2018.

2.1.3.4 Avoidance, Minimization, and Mitigation

Within the project scope, there are no impacts to farmlands or timberlands. Therefore, no measures are required.

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2.1.4 GROWTH

2.1.4.1 Regulatory Setting

The Council on Environmental Quality (CEQ) regulations, which established the steps necessary to comply with the National Environmental Policy Act (NEPA) of 1969, require evaluation of the potential environmental effects of all proposed federal activities and programs. This provision includes a requirement to examine indirect effects, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations (40 Code of Federal Regulations [CFR] 1508.8) refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. The CEQA guidelines (Section 15126.2[d]) require that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

2.1.4.2 First-Cut Screening

There is a continuum of transportation projects that range from those having little likelihood of growth-related impacts to those having a high likelihood of growth-related impacts. The first-cut screening is used to determine whether the potential for growth-related impacts is a project issue that needs to be evaluated in the environmental document. The first-cut screening asks the following questions to determine whether: (1) growth-related impacts as a result of the project are not reasonably foreseeable; or (2) further investigation or analysis is required.

1. *To what extent would travel times, travel cost, or accessibility to employment, shopping, or other destinations be changed? Would this change affect travel behavior, trip patterns, or the attractiveness of some areas to development over others?*

The proposed project involves rehabilitation of an existing facility. Therefore, the project does not anticipate any changes in travel times, travel cost, or accessibility to employment, shopping, or other destinations. In addition, the project does not anticipate any affect to existing trip patterns, or the attractiveness of some areas in the vicinity to development over others.

2. *To what extent would change in accessibility affect growth or land use change - its location, rate, type, or amount?*

The proposed project does not anticipate any changes to the existing accessibility to I-10 or any surrounding areas. The project does not require any permanent right of way acquisitions since the proposed work is only to rehabilitate the existing transportation facility.

3. *To what extent would resources of concern be affected by this growth or land use change?*

The proposed rehabilitation efforts would require soil disturbance and, therefore, temporarily affect biological resources of concern. Although the project does not require acquisition of new right of way, construction activities are anticipated to require vegetation removal. For an extended discussion regarding impacts to biological resources of concern, please see Section

2.3.1– Section 2.3.6. However, because the project does not improve accessibility, nor would it require land use changes, growth-related impacts are not reasonably foreseeable.

2.1.4.3 Avoidance, Minimization, and Mitigation

Considering the project scope and the results of the First Cut Screening; because growth is not reasonably foreseeable no measures are required.

2.1.5 COMMUNITY IMPACTS

REGULATORY SETTING

The National Environmental Policy Act (NEPA) of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions on projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act (CEQA), an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

2.1.5.1 Affected Environment

Land Use Characteristic

The project limits fall within three different area plans: East County—Desert Areas, Desert Center, and Palo Verde area plans.

East County – Desert Areas, Riverside County¹¹

The majority of the project limits, approximately 20 miles, are within the sparsely and populated area of East County – Desert Areas. Because East County – Desert Areas does not fall under an Area Plan there is no specific Land Use Element nor a general plan to reference. The County of Riverside General Plan Land Use Element last updated on July 11, 2017 designates the East – County Desert Areas as Non-Area Plan areas. As described in the County of Riverside General Plan, the portion of Riverside County located easterly of the Coachella Valley can be described as expansive, primarily undeveloped desert and mountainous areas. The purpose of the land use plan for East County – Desert Areas is to preserve the open space character of the desert region and to maintain existing rural and mineral resource land uses.

Residential development in the East County – Desert Areas is prohibited except for construction of single-family dwellings on legal residential lot of record that is within 60 dB CNEL contours of the Chocolate Mountain Aerial Gunnery Range (Land Use Policy LU-36.3, Riverside County General Plan, Land Use Element). As mentioned, the purpose of the land use plan in this area is for preservation. Therefore, the potential for residential development is limited throughout the area to only a short distance from the Chocolate Mountain Aerial Gunnery Range.

¹¹ County of Riverside General Plan, Chapter 3, Land Use Element, last updated July 11, 2017

Desert Center Area Plan¹²

The first 8.5 miles of the project limits beginning in Desert Center traveling eastbound on the I-10 falls within the Desert Center Area Plan boundary. The Desert Center Area Plan last updated on December 8, 2015 comes from the County of Riverside General Plan. The Desert Center Land Use Plan designates the vast majority of land use space within the plan area as Open Space-Rural. In this area plan there are four identified communities: Eagle Mountain, Chuckwalla, Lake Tamarisk, and Desert Center. Following land use policies identified in the area plan, the area is unable to support more intense development due to: lack of public facilities and services in the area, area subject to natural hazards, and the area is remote or inaccessible. Of the total 186,841 acres of land in the Desert Area Plan boundary, only 10,417 acres (5.5% of total acreage) are designated for the Community Development Foundation Component (i.e. residential, commercial retail, industrial, public facilities, mixed use planning). The designated land use for Open Space Foundation Component totals to 174,358 acres (93.3% of total acreage) in this area. It is expected that the uninhabited and natural character of the open space will continue throughout the life of the plan.

Palo Verde Valley Area Plan¹³

The remaining 1.5 miles of the eastern project limits ending at Wiley's Well Road on the I-10 falls within the Palo Verde Valley Area Plan. The Palo Verde Valley Area Plan last updated on December 2015 is part of the County of Riverside General Plan. The land use plan for this area intends to accommodate future growth while preserving unique features indigenous to the area plan boundary. In comparison to the County of Riverside General Plan, the Palo Verde Valley Area Plan has more detailed land use designations and provides more direction than the five General Plan Foundation Component land uses. The Palo Verde Valley encompasses the City of Blythe, Blythe Airport, and the Chuckwalla and Ironwood State Prisons.

The majority of the land use designated in the eastern portion of Palo Verde Valley is for agriculture. Because agriculture is the major economic activity in this area, land use policies protect farmland and agricultural resources. In addition, there is considerable amount of land designated for Light Industrial uses. Identified in the area plan, there is a potential for development along the Colorado River to accommodate tourism and recreation. The eastern portion of the area plan also has designated residential land uses along highway I-10.

The western portion of Palo Verde Valley is characterized by sparse population, rugged desert, and mountains. Opportunities for development is limited to the surrounding areas near the Blythe Airport and Wiley's Well Road.

Total acreage for all lands within the Palo Verde Valley is 300,029 acres. Similar to the Desert Center area plan in designating a great portion of the land use for Open Space, Palo Verde Valley designates 155,438 acres (51.8% of total acreage) to Open Space. Consistent with the purpose of the area plan and Riverside County's General Plan, preservation of agricultural lands is a priority. In this area plan, designated agricultural lands

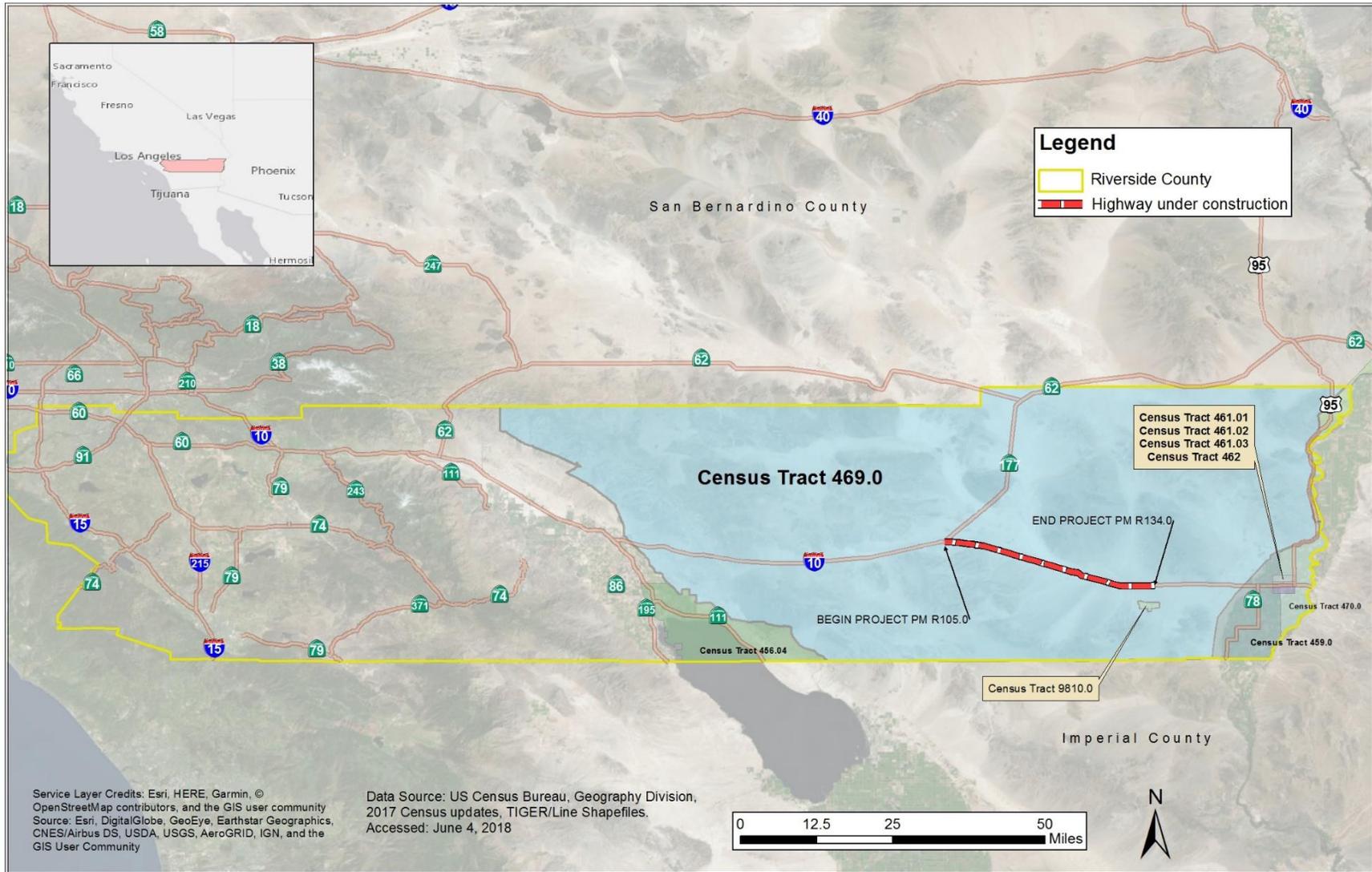
¹² County of Riverside General Plan, Desert Center Area Plan, last updated December 8, 2015

¹³ County of Riverside General Plan, Palo Verde Valley Area Plan, last updated December 8, 2015
1C082 Draft IS/EA 2.1-27
I-10 Pavement Rehabilitation Project

equate to 113,352 acres (37.7% of total acreage). Additionally, there are 5,849 acres (1.9% of total acreage) designated under the Community Development Foundation Component. Of this Community Development Foundation Component, 3,849 acres are designated for Public Facilities and 712 acres (0.23 % of total acreage) designated for various residential land uses.

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Figure 2.1-5: Census Tracts



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Race and Ethnicity

The U.S. Census Bureau, in the Year 2012-2016 American Community Survey 5-Year Estimates, provides race and ethnicity data for California, Riverside County, and for the census tract level.

Table 2-3 shows both race and ethnicity characteristics for California, County of Riverside, and for Census Tract 469.0. It is noted that “Hispanic” is considered an ethnic group, not a race category. Thus, if a person is identified as “Hispanic,” they must also be identified by at least one of the six race categories, not including the “Two or more races” category. The numbers provided in the Percent column have been rounded up to the nearest tenth, which may cause for some columns to add up to a number greater than 100 percent.

Base on the information in Table 2-3, approximately 95 percent of individuals in California identify themselves in one of the six race categories listed in the table. Furthermore, 96 percent of individuals in Riverside County and 97 percent of individuals in Census Tract 469.0 identify themselves in one of the six race categories listed in the table. The remaining population in California, County of Riverside, and Census Tract 469.0 identify themselves in the category of “Two or more races.”

Depicted in Table 2.1, as the demographic data level scales down from the state to the census tract, the percent of individuals classified as Hispanic or Latino increases. The population in California with individuals classifying as Hispanic or Latino is estimated to be 39 percent, whereas the Riverside County estimates are higher at 47 percent. Census Tract 469.0 estimates show that more than half, approximately 56.9 percent, of individuals classify as Hispanic or Latino. Of the three levels of demographic data presented in Table 2-3, Census Tract 469.0 shows the highest percent of individuals’ ethnicity classified as Hispanic or Latino.

Table 2-3: Race and Ethnicity Characteristics

	California		Riverside County		Census Tract 469.0	
	No.	Percent	No.	Percent	No.	Percent
Total:	38,654,206	100%	2,323,892	100%	1,632	100%
White	23,680,584	61%	1,470,294	63%	1,048	64%
Black or African American	2,261,835	6%	145,025	6%	109	7%
American Indian and Alaska Native	285,512	1%	20,205	1%	6	0%
Asian	5,354,608	14%	143,067	6%	7	0%
Native Hawaiian and Other Pacific Islander	150,908	0%	6,915	0%	0	0%
Some other race	5,133,600	13%	436,022	19%	410	25%

Two or more races	1,787,159	5%	102,364	4%	52	3%
Ethnicity:						
Hispanic or Latino	14,903,982	39%	1,102,968	47%	929	57%
Note: Percentages may not add to 100 due to rounding.						
Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, B02001 Race - Universe: Total Population.						

Age Distribution

Based on the U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Table 2-4 provides age distribution data for California, Riverside County, and Census Tract 469.0.

The age distribution in Table 2-4 is categorized in three age groups: School Age (0-17), Labor Force (18-54), and Retired (55-85+). The data shows that the Labor Force age group makes up the largest percentage of individuals within California, County of Riverside, and Census Tract 469.0. The percentage of individuals in the retired age group for Census Tract 469.0 is slightly higher at 31 percent compared to California and Riverside County at 25 percent and 24 percent. The age distribution data in Table 2.2 for the state, county, and census tract are fairly similar to each other. From the data provided, the age distribution of the three demographic data levels resemble a similar pattern.

Table 2-4: Age Distribution Data for California, Riverside County, Census Tract 469.0

Age	California		Riverside County		Census Tract 469.0	
	No.	Percent	No.	Percent	No.	Percent
0-17 years	9,140,283	24%	613,547	26%	412	25%
18-54 years	20,034,903	52%	1,154,776	50%	713	44%
55-85+ years	9,479,020	25%	555,569	24%	507	31%
Total	38,654,206	100%	2,323,892	100%	1,632	100%
Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, S0101.						

Gender Distribution

Table 2-5 provides gender demographic information for California, County of Riverside, and Census Tract 469.0. The state and county show a similar distribution with only a 0.6 percent difference between male and females. Census Tract 469.0 shows a greater female population representing 54.1 percent of the overall population in the census tract. In all cases, the female population is greater than the male population, representing consistency between the three demographic data levels.

Table 2-5: Gender Population Demographics

	California		Riverside County		Census Tract 469.0	
	No.	Percent	No.	Percent	No.	Percent
Male:	19,200,970	49.7%	1,156,126	49.7%	749	45.9%
Female:	19,453,236	50.3%	1,167,766	50.3%	883	54.1%
Total:	38,654,206	100.0%	2,323,892	100.0%	1,632	100.0%

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, S0101.

Income Distribution

The official State of California income limits are based on the limits established by the federal Department of Housing and Urban Development (HUD). The Adopted October 3, 2017 County of Riverside General Plan Housing Element chapter (H-45)¹⁴ uses five income categories that are consistent with various federal and state housing programs as shown below:

- Extremely Low <30 percent of the median income
- Very Low 31-50 percent of the median income
- Low 51-80 percent of the median income
- Moderate 80–120 percent of the median income
- Above Moderate 120+ percent of the median income

The very low and low-income limits are the same as those used by the U.S. Department of Housing and Urban Development (HUD)¹⁵ to determine eligibility for federally assisted housing programs.

Table 2-6 provides income demographics for the State of California, County of Riverside, and for Census Tract 469.0. The data indicates the household median income for the county and census tract are lower than the State of California. Shown in Table 2-6, the greatest number of households of all the comparable income brackets for the State of California and the County of Riverside fall within \$50,000 and \$74,999, which the median income for the corresponding demographic area falls within. Whereas for Census Tract 469.0, the greatest number of households of all the income brackets fall within \$25,000 to \$34,999, which is below the median income (\$40,809) for the designated area.

Table 2-6: Annual Household Income (dollars)

	California		Riverside County		Census Tract 469.0	
	No.	Percent	No.	Percent	No.	Percent
Total Households	12,807,387	100.0%	705,716	100.00%	567	99.9%
Less than \$10,000	730,021	5.7%	39,520	5.6%	51	9.0%
\$10,000 to \$14,999	627,561	4.9%	33,874	4.8%	36	6.3%
\$15,000 to \$24,999	1,165,472	9.1%	70,572	10.0%	75	13.2%
\$25,000 to \$34,999	1,114,242	8.7%	69,866	9.9%	94	16.6%
\$35,000 to \$49,999	1,511,271	11.8%	93,860	13.3%	83	14.6%
\$50,000 to \$74,999	2,113,218	16.5%	128,440	18.2%	67	11.8%
\$75,000 to \$99,999	1,549,693	12.1%	91,743	13.0%	61	10.8%
\$100,000 to \$149,999	1,946,722	15.2%	103,035	14.6%	84	14.8%
\$150,000 to \$199,999	934,939	7.3%	42,343	6.0%	16	2.8%
\$200,000 or more	1,114,242	8.7%	32,463	4.6%	0	0.0%
Total Households	12,807,387	100.0%	705,716	100.00%	567	99.9%
Median income (dollars)	\$ 63,783		\$ 57,972		\$ 40,809	
Note: Percentages may not add to 100 due to rounding.						
Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, S1903.						

Table 2-7 shows the income limit categories in conjunction to the area median income. Because the median income of the State of California is higher than the median income for both the County of Riverside and Census Tract 469.0, the income limits are higher for all respective income categories. Thus, the household incomes under the State of California represent values that would be in a higher income limit category for Riverside County and Census Tract 469.0. For example, California’s low-income limit of \$51,026 would fall within the median income limit for Riverside County and within the Above Moderate income limit category under Census Tract 469.0. Also, the Census Tract 469.0 Moderate median income of \$48,971 would be considered a very low to low median income category under the State of California as a whole.

Table 2-7: Calculated Income Limits

	California	Riverside County	Census Tract 469.0
Extremely Low (<30 percent)	\$ 19,135	\$ 17,392	\$ 12,243
Very Low (31-50 percent)	\$ 31,892	\$ 28,986	\$ 20,405
Low (50-80 percent)	\$ 51,026	\$ 46,378	\$ 32,647
Median	\$ 63,783	\$ 57,972	\$ 40,809
Moderate (81-120 percent)	\$ 76,540	\$ 69,566	\$ 48,971

Note: (1) Calculated data represent the upper limit of each 'Income Limit' in reference to the area median income. (2) Median income referenced from Table 2.4 – Annual Household Income.

Community Services and Facilities

The majority of the project limits fall within the area of East County – Desert Areas. Under this plan area, community services and facilities will be provided by the County of Riverside. Police services are provided by the County of Riverside's Colorado River Sheriff's Station serving communities in the eastern portion of the county. Service area of the Colorado River Station serves unincorporated areas from Red Cloud Road on the west, to the California/Arizona state line on the east, and county line to county line from the north and south¹⁶.

Desert Center serves as the central destination where the communities in the Desert Center Area Plan must travel to for commercial services and convenience stores. The remoteness of the area makes Desert Center a specialty center serving highway traveler needs. Desert Center also serves the local community and highway travelers with two mobile home parks, storage facilities, an airport, a United States Post Office, and a Caltrans equipment yard. Two miles north of Desert Center off the I-10, the Lake Tamarisk retirement community includes single family homes as well as duplexes and mobile homes. The Lake Tamarisk community must travel to Desert Center for commercial services and for convenience stores. Lake Tamarisk is not located within the project limits.

East of the Palo Verde Valley area plan is the City of Blythe. Blythe was incorporated in 1916¹⁷ and has general public services and facilities as any city would provide to its residents and constituents. However, the City of Blythe is not within the project limits and is located approximately 17 miles east of Wiley's Well Road where the project limits end.

2.1.5.2 Environmental Consequences

No-Build Alternative

The No Action Alternative would not impact community cohesion or create a social impact on existing communities. There will be no changes to access community services or facilities.

Avoidance, Minimization, and/or Mitigation Measures

The proposed project would not result in any social impacts affecting community character or cohesion. No minimization and/or mitigation measures would be required.

Build Alternative

Community impacts address multiple topics that may be impacted by the project. Land Use and Growth are discussed in Section 2.1.1 and Section 2.1.4 of this document. Utilities and Emergency Services are discussed in Section 2.1.8. The discussion on social impacts can

best be understood from the definition in the Department's Community Impact Assessment Handbook which states:

Social impacts are the effects of the project that disrupt the normal daily functions of a community or neighborhood. Effects generally analyzed under the heading of social impacts include effects on community cohesion, including community facilities and services, access and circulation, and parking.

Analyzing social impacts require the understanding of what defines community cohesion. Community cohesion as described in the Department's Community Impact Assessment Handbook:

Community cohesion is the degree to which residents have a 'sense of belonging' to their neighborhood, a level of commitment, or a strong attachment to neighbors, groups, and institutions, usually a result of continued association over time. Cohesion refers to the degree of interaction among the individuals, groups, and institutions that make up a community. Cohesive communities are associated with specific social characteristics which may include long average lengths of residency, frequent personal contact, ethnic homogeneity, high levels of community activity, and shared goals

Community Services and Facilities

The proposed project and all improvements will be completed within the existing right-of-way of the transportation facilities. Therefore, temporary easements for construction and any property acquisitions will not be needed for this project. To handle traffic during project construction, a two-lane temporary detour will be constructed by widening the median in the eastbound direction of the I-10. The existing sparse communities outside and adjacent to the project limits would not be re-directed nor have limited access to highway I-10, facilities, and community services. The project will not decrease public access nor separate residences from community services or facilities. No impacts to community facilities and community services that would affect community cohesion would occur.

Neighborhoods

The entirety of the project is within Census Tract 469.0. Because there is no right-of-way acquisition and the construction activities will all be within the existing right-of-way of the transportation facility, there will be no impacts to parcels or neighborhoods. The remoteness of the project location and the ample Open-Space Rural land use designation in the area provide that there are no existing communities or neighborhoods that will be impacted. Thus, there will be no long-term impacts to neighborhoods contributing to community character and cohesion.

2.1.5.3 Avoidance, Minimization, and/or Mitigation Measures

The proposed project would not result in any social impacts affecting community character or cohesion. No avoidance, minimization, and/or mitigation measures are required.

2.1.6 RELOCATIONS AND REAL PROPERTY ACQUISITIONS

2.1.6.1 Regulatory Setting

The Department's Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), and Title 49 Code of Federal Regulations (CFR) Part 24. The purpose of the RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix C for a copy of the Department's Title VI Policy Statement.

2.1.6.2 Affected Environment

The proposed rehabilitation activities will occur within existing right of way. Further, neighboring properties are generally undeveloped or vacant. However, the Bureau of Land Management (BLM) currently holds title at several locations through this stretch of I-10. Although the Department holds an easement, for transportation use, coordination with BLM is needed to confirm easement rights and limitations.

Improvements at ramp locations, such as Corn Spring Road and Ford Dray Lake Road overcrossings where merging portion of the ramps requires realignment, would remain within the existing right of way but temporary access may be needed during construction.

2.1.6.3 Environmental Consequences

No-Build Alternative

No property would be acquired not would temporary construction easements be necessary.

Build Alternative

Because the project area and adjacent properties are vacant, no relocations would be necessary. Further, since the project scope is within the existing right of way, additional property acquisition would not be required. Staging and storage areas have not been identified but may be needed during construction. A re-evaluation would be completed if proposed locations lie outside the proposed project footprint.

2.1.6.4 Avoidance, Minimization, and/or Mitigation Measures

Since all proposed work is to be completed within the existing right of way and no property acquisition will be necessary, no relocation measures are required.

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2.1.7 ENVIRONMENTAL JUSTICE

2.1.7.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services (HHS) poverty guidelines. For 2016, this was \$24,300 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this project. The Department’s commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in Appendix B of this document.

2.1.7.2 Affected Environment

The HHS 2016 poverty guidelines, versus the 2018 numbers, are used for a better comparison with the most recent Census data available. The most recent Census numbers available are the 2016 American Community Survey (ACS) 5-Year Estimates. Using the Census income estimates, as shown in Table 2-8, by percentage alone approximately 28.5%¹⁸ of the households in Tract 469.0 lived below the HHS poverty guideline of \$24,300 in 2016. It is important to note that the HHS guideline is for a family of four; whereas the data presented in Table 2-8 is for households regardless of size.

Table 2-8: 2016 Median Household Income Estimates

	California		Riverside County		Census Tract 469.0	
	No.	Percent	No.	Percent	No.	Percent
Total Households	12,807,387	100.0%	705,716	100.00%	567	99.9%
Less than \$10,000	730,021	5.7%	39,520	5.6%	51	9.0%
\$10,000 to \$14,999	627,561	4.9%	33,874	4.8%	36	6.3%
\$15,000 to \$24,999	1,165,472	9.1%	70,572	10.0%	75	13.2%
Total Households	2,523,054	19.7%	143,966	20.4%	162	28.5%
Median income (dollars)	\$ 63,783		\$ 57,972		\$ 40,809	
Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, S1903.						

As shown in Table 2-9: Average Household Size & Percent Below Poverty, the average household size in the tract encompassing the project area is 2.83; which is close to the average household size in the state, but lower than the county average. According to the Census Bureau, the percent of those living below the poverty level in the project area, is 26.2%; which is substantially higher than the percent of those living under the poverty level in the state and county where the project is located.

Table 2-9: Average Household Size & Percent Below Poverty

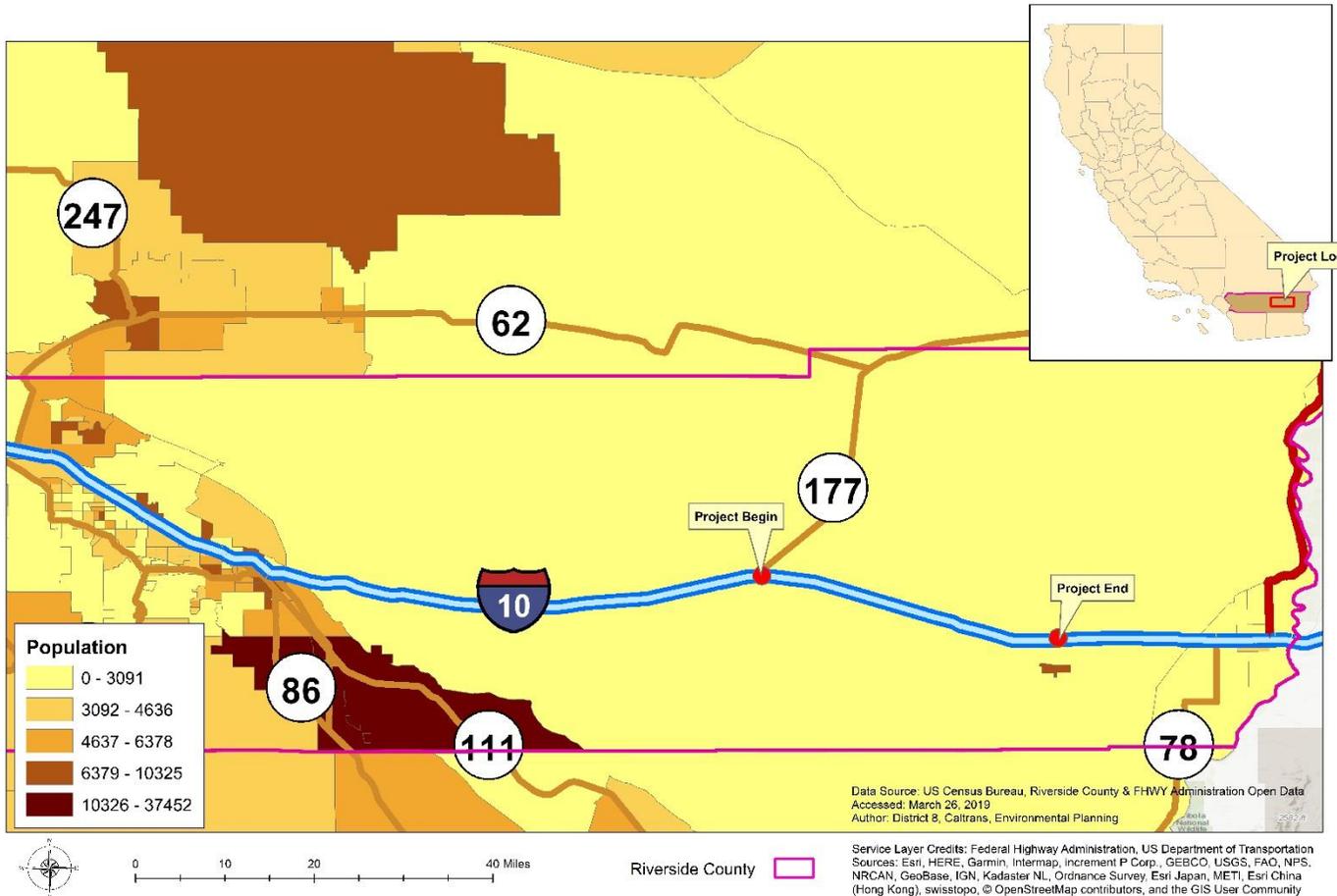
	Median Income	Average Household Size	Percent Below Poverty Level
California	\$ 63,783	2.95	15.8%
Riverside County	\$57,972	3.25	16.5%
Census Tract 469.0	\$ 40,809	2.83	26.2%
Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Tables S1903, S1101, and S1701.			

Regarding race and ethnicity, Table 2-3 Race and Ethnicity Characteristics shows that 64% of the residents within Tract 469.0 are White; with 25% of the total population identifying as being of Some Other Race. Ethnically, 57% of the population is Hispanic or Latino; which is substantially higher than the county’s 47% and the state’s 39%.

2.1.7.3 Environmental Consequences

Although the project area is within a Census tract containing a majority ethnic population (Hispanic or Latino) and a high percentage of that population living below the Census Bureau’s poverty threshold, neither is concentrated near the project footprint. As noted in section 2.1.1 Land Use, properties surrounding the project are generally undeveloped. Figure 2.1-6 depicts population concentration in Tract 469.0; which confirms these environmental justice populations (as defined under Executive Order 12898) are not located near the project limits and therefore will not be impacted by the project.

Figure 2.1-6: Human Population Counts



2.1.7.4 Avoidance, Minimization, and/or Mitigation Measures

Based on the above discussion and analysis, the Build Alternative will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of EO 12898. No further environmental justice analysis is required.

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2.1.8 UTILITIES/EMERGENCY SERVICES

2.1.8.1 Affected Environment

Utilities

Within the project limits, there are 6 electrical line crossings, one six-inch gas line, and one fiber optic line. Utility relocations are not anticipated for this project.

Emergency Services

California Highway Patrol

The California Highway Patrol (CHP) ensures safety and provides public services to those who use the State Highway System. The CHP also assists local government during emergencies when requested. The nearest CHP station is the Blythe CHP station, located at 430 S. Broadway in the City of Blythe, approximately 18 miles east of the project study area (refer to Table 2-10). This office serves the East Riverside County Region and has jurisdiction within the project study area. The CHP has mutual assistance agreements with all local and state emergency, fire, and ambulance services.

Riverside County Sheriff's Department

The Riverside County Sheriff's Department (RCSD) Colorado River Station, located at 260 N. Spring St. in the city of Blythe, is also responsible for providing law enforcement to the study area. The Colorado River Station provides service to the unincorporated area from Red Cloud on the west, to the Arizona state line on the east, including the communities of Colorado River Indian Tribes, Desert Center, Eagle Mountain, East Blythe, Midland (Long Term Visitor Area), Nicholls Warm Springs (Mesa Verde), and Ripley (Riverside County Sheriff's Department 2018).

Riverside County Fire Department

The Riverside County Fire Department (RCFD) is responsible for fire protection within the study area. The nearest fire station to the project site is the Lake Tamarisk Station 49, located at 43880 Lake Tamarisk in the community of Desert Center (Table 2-10).

Hospitals

Palo Verde Hospital is located at 250 N. First Street in the city of Blythe and is the closest hospital to the project study area. The hospital is a fully accredited 51-bed acute-care District Hospital (Palo Verde Hospital 2018), and it is located east of the project study area.

John F. Kennedy (JFK) Memorial Hospital, located west of the project study area, would also be able to serve the study area. JFK Memorial Hospital is located at 47111 Monroe Street in the

city of Indio. JFK Memorial Hospital is a 145-bed acute-care hospital and is part of Tenet Healthcare California (Desert Care Network 2018).

Table 2-10: Emergency Service Providers

Facility	Address	Direction from Desert Center	Distance from Desert Center (miles)
Fire			
Riverside County Fire Department Station 49	43880 Lake Tamarisk, Desert Center, CA 92239	NA – located in the community	N/A
Police			
California Highway Patrol	430 S. Broadway, Blythe, CA 92225	East on I-10	48
Riverside County Sheriff – Coroner Department, Colorado River Station	260 N. Spring Street, Blythe, CA 92225	East on I-10	48
Hospitals			
Palo Verde Hospital	250 N. First Street, Blythe, CA 92225	East on I-10	48
John F. Kennedy Memorial Hospital	47111 Monroe St., Indio, CA 92201	West on I-10	50

2.1.8.2 Environmental Consequences

Permanent Impacts

No-Build Alternative

The No-Build Alternative would not involve any modifications to the current highway or surrounding roadways. Due to the absence of improvements to I-10, safety and mobility for the traveling public would not be improved; therefore, potential benefits to emergency response services associated with access and circulation improvements would not occur. The absence of benefits under the No-Build Alternative, however, would not constitute an adverse impact on community facilities and/or services. No long-term impacts to utilities are anticipated under the No-Build Alternative.

Build Alternative

Under this alternative utility relocations are not anticipated. Therefore, no permanent impacts to utilities are expected. The Utility Notification Center would be contacted before beginning any excavation to prevent damage to underground facilities, service interruptions, and bodily injury.

Safety and mobility to the traveling public, including to emergency service vehicles, would be enhanced due to the upgrade of guardrail, bridge rails, and drainage facilities.

Alternative 2 would not involve construction of any habitable structures, nor would it increase population growth in the project area. Therefore, no impacts would occur as there would be no demand for new or expanded emergency facilities or services.

Temporary Impacts

No-Build Alternative

This alternative would not involve construction activities, therefore adverse impacts on community facilities and services are not anticipated.

Build Alternative

Although limited due to the rural setting, construction activities would result in temporary, localized, site-specific disruptions to the utilities and emergency services in the project area. These disruptions would be primarily related to construction-related traffic changes from trucks and equipment. In addition, non-fire-related medical emergencies could temporarily increase with the presence of construction workers and heavy machinery during construction of the project. A Construction Management Plan and Transportation Management Plan (TMP) would be prepared for the project and include measures to minimize construction-period traffic and access/circulation impacts.

To minimize construction-related impacts, two (2) detour lanes would be constructed. The detour lanes would be installed prior to rehabilitation activities of the existing system.

The project construction activities would be temporary and would be implemented in a manner that minimizes the effects on utilities and emergency services, no adverse effect is expected to result.

2.1.8.3 Avoidance, Minimization, and/or Mitigation Measures

Potential temporary impacts related to emergency services during the construction period will be minimized through the implementation of a Traffic Management Plan required by Measure T-1, which will detail efforts to minimize any temporary traffic disruptions for emergency services.

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2.1.9 TRAFFIC & TRANSPORTATION/PEDESTRIAN FACILITIES

2.1.9.1 Regulatory Setting

The Department, as assigned by the Federal Highway Administration (FHWA), directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of Federal-aid highway projects (see 23 Code of Federal Regulations [CFR] 652). It further directs that the special needs of the elderly and the disabled must be considered in all Federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the USDOT regulations (49 CFR 27) implementing Section 504 of the Rehabilitation Act (29 United States Code [USC] 794). The FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA) including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid projects, including Transportation Enhancement Activities.

2.1.9.2 Affected Environment

I-10 is a major freeway that begins at State Route 1 (SR-1) in the city of Santa Monica in Los Angeles County. Crossing the United States, I-10 terminates on the East Coast in the state of Florida. In District 8, I-10 is 194.8 miles long. Beginning as a ten-lane freeway at the San Bernardino/Los Angeles County Line, it traverses easterly through cities and terminates at the Arizona State Line. Within the project limits, I-10 is a four-lane divided highway and serves as a major corridor for commuters and goods movement.

The existing average daily traffic (ADT) and design hour volumes (DHV), as well as forecasted design hour volumes have been developed and analyzed to assess existing operating conditions and the potential impacts of the proposed improvements. Existing (2015) and forecasted (2021, 2041, and 2061) traffic data on I-10, within the project limits, are provided in Table 2-11. The average daily traffic is expected to increase by over 84% by 2041.

Table 2-11: Existing and Forecasted Traffic

Year	2015 (Existing)	2021 (Opening)	2041 (20-Year)	2061 (40-Year)
Annual Average Daily Traffic (AADT)	28,200	31,800	52,000	84,700
Design Hour Volume (DHV)	3,230	3,420	4,900	7,900
One-Way PHV	1,680	1,800	2,620	4,270
Truck % in ADT	40%	40%	40%	40%
Truck % in DHV	20%	20%	20%	20%
Directional Split	54%	54%	54%	54%

Source: Project Initiation Report, Caltrans 2017a.

There are no pedestrian facilities in this segment of I-10. Within the project limits, bicycles are allowed on the shoulders. However, there are no designated bike trails in the project area.

2.1.9.3 Environmental Consequences

Permanent Impacts

The existing two-lane configuration in each direction will remain. Proposed rehabilitation will not change existing bicycle access. Rumble strips will be installed just outside the travel lanes, but a minimum of four feet within the shoulder will allow for bicycles. Therefore, no permanent impacts to traffic are expected to result from the proposed project.

Temporary Impacts

Potential temporary impacts related to safety and traffic operations during construction may occur. To minimize impacts during construction, one detour lane along the inside shoulder of both the eastbound and westbound directions would be installed prior to rehabilitation of the mainline pavement. The full two-lane facility, in either direction, would be closed to the public during the rehabilitation activities and traffic shifted to one or both detour lanes.

2.1.9.4 Avoidance, Minimization, and/or Mitigation Measures

Potential temporary impacts related to safety and traffic operations during the construction period would be minimized through a Transportation Management Plan (TMP) and a staging plan; which would detail efforts to minimize any temporary traffic disruption to drivers.

- T-1:** A detailed TMP will be developed during the design phase and the following elements will be major components:
- Public Awareness Campaign (PAC) particularly related to the scheduling of construction activities and their impacts on the traveling public and surrounding community.
 - Construction Zone Enforcement Enhancement Program (COZEEP).
 - Utilization of Portable Changeable Message Signs (PCMS).
 - Advance information signing pertaining to date, time, and duration of intersection closure as well as detour alternatives.
- T-2:** Prior to construction start, prepare a staging and storage plan and submit to Environmental for review and approval.

2.1.10 VISUAL/AESTHETICS

2.1.10.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the Federal Highway Administration (FHWA), in its implementation of NEPA (23 USC 109[h]), directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities” (CA Public Resources Code [PRC] Section 21001[b]).

2.1.10.2 Affected Environment

The Visual and Aesthetics section was synthesized from the Visual Impacts Assessment (VIA) prepared for the proposed project (Caltrans 2019e). The project site is in the Colorado Desert section of the Sonoran Desert. This stretch of I-10 is primarily flat, open land with sparse vegetation, such as creosote bush, tamarisk, and palo verde. Twenty-two dry streams cross under the I-10 within the project limits. Remote mountain ranges are visible to the north and south from the I-10, however, the project is not within a designated State Scenic Highway.

The land use within the project corridor is primarily rural, coupled with agricultural farms and some mobile home parks. Scattered rural residential structures can be observed from aerial photography and through site field visits. The limited commercial development that can be found near I-10, in the desert portion of Riverside county, is generally clustered around freeway interchanges. Within the project limits some development is found in the SR-177/I-10 Junction. I-10 serves as a primary connection for commuter traffic and goods movement from west to east in Riverside County. It is 196 miles long within District 8 and includes four mixed-flow lanes to eight mixed-flow lanes and two HOV lanes across the Inland Empire and desert regions of both Riverside and San Bernardino counties.

Viewer groups of the proposed project are neighbors and highway users. It is anticipated that the average response of all viewer groups will be low.

2.1.10.3 Environmental Consequences

Permanent Impacts

No-Build Alternative

The existing facility would remain as is and no soil or vegetation disturbance would occur. The No-Build Alternative, however, would not preclude Caltrans from engaging in maintenance activities or implementation of other smaller rehabilitation projects, as necessary.

Build Alternative

This alternative involves substantial grading on both outside shoulders as well as the median. The project proposes a one-lane temporary detour and crossovers in each direction. Pavement for the detour within the median will remain after the completion of the project. A portion of the paving will be designated as a 10-foot inside shoulder, and the remaining portion will be striped in a chevron manner to prevent use from the traveling public. This additional pavement changes traveler's view from an earthen median to AC pavement. The visual impacts resulting from the additional pavement will be low.

All existing bridges and/or drainage crossings within the project limits will be widened towards the median. The visual impacts of the widening of the existing bridges will be low. Most of the bridges are not seen by neighbors and highway users, as they are under the I-10. The 3 bridges that are visible are interchanges (one undercrossing and two overcrossings).

The visual character of the proposed project will be compatible with the existing visual character of the corridor. The rehabilitation of the AC pavement will be in the same location of the existing pavement. The necessary widening for the detour lanes will occur within the median, and not increase the overall width of the corridor. Proposed materials for the rehabilitation and bridge widening will match the existing in like-kind, therefore providing a compatible visual character with the existing visual character of the project corridor.

The visual quality of the existing corridor will not be altered by the propose project. The alignment and elevation of I-10 will remain as exists, and not change the current views of the traveler. The proposed project improvements are primarily replacement items. The introduction of new elements has been minimized to locations where necessary to serve only the project purpose. The median would also be hydroseeded within the project limits for vegetation restoration. As a result, Resource Change (changes to visual resources as measured by changes in visual character and visual quality) will be low.

Temporary Impacts

No-Build Alternative

There would be no visual impacts associated with the No-Build Alternative because there would be no construction activities associated with this project. Therefore, the No-Build Alternative would result in no temporary visual effects.

Build Alternative

Potential temporary visual impacts would result from earth moving activities, limited removal of vegetation, and other construction activities (e.g., staging/stockpiling construction materials, the presence of construction equipment, and temporary traffic barricades). Construction activities would include grading work, bridge work, road widening, grinding, other routine construction activities, and truck shipments. The resulting temporary impact would have no adverse effect to the viewers because the proposed project location is within a sparsely populated area. There are no incorporated cities along the highway, therefore, viewer exposure and viewer sensitivity is low.

2.1.10.4 Avoidance, Minimization, and/or Mitigation Measures

The visual character of the proposed project would be compatible with the existing rural setting; therefore no visual/aesthetic specific measures are proposed. BIO-33 in Section 2.3.4 for Biological Resources, would restore disturbed vegetation.

BIO-33: Hydroseeding. After completion of detour-lane construction, disturbed soil will be hydroseeded with a native-plant see mix to restore the PIA.

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2.1.11 CULTURAL RESOURCES

2.1.11.1 Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the ACHP’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the “use” of land from historic properties (in Section 4(f) terminology—historic sites). See Appendix B for specific information about Section 4(f).

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires the Department to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed

on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU) between the Department and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

2.1.11.2 Affected Environment

Information from this section was drawn from the Historic Property Survey Report (HPSR) (Caltrans 2018c), Archaeological Survey Report (ASR) (Caltrans 2018a) and the Finding of Effect (FOE) (Caltrans 2018b) documents approved for the project by Caltrans in December 2018. Caltrans uses a single process to fulfill both its NHPA Section 106, PRC 5024 and CEQA responsibilities.

The standard industry practices were utilized to draft and complete the above referenced cultural resources studies, and to assess the effects of the Proposed Undertaking on Historic Properties. The standard industry studies and consultation completed for this Undertaking included: background research on the project area; the delineation of the Area of Potential Effects (APE); an archaeological records search including a one-half mile radius around the Project area completed at the Eastern Information Center (EIC) University of California, Riverside (April 2018); an intensive pedestrian survey of the entire APE and Caltrans right of way (May 2018); consultation with associated Native American Tribes and the Native American Heritage Commission (NAHC) (February 2018), and consultation with Caltrans Cultural Studies Office (CSO) (September 2018), and the State Historic Preservation Office (SHPO)(January 2019).

Additional sources consulted during the records search include the National Register of Historic Places (NRHP); California Register of Historic Resources (CRHR); California Historical Resources Information System (CHRIS); California Inventory of Historic Resources; California Points of Historical Interest; California Historical Landmarks; published literature, and historical topographic maps and aerial photographs depicting various time periods in Chuckwalla Valley.

Area of Potential Effects (APE)

In accordance with Section 106 PA Stipulation VIII.A, the Area of Potential Effects (APE) for the project was established in consultation with Caltrans' Co-Principal Investigator-Prehistoric Archaeology, and the Project Manager, on November 7, 2018.

The APE was established to include all direct /indirect impacts within the project's horizontal and vertical construction footprint. The projected construction foot print length consists of the proposed work between PM 104.9 to PM 134.0 totaling 29.1 miles, as described in the Environmental Study Request (ESR). The width of the APE fluctuates between 30 to 50 feet from the edge of pavement, and the entire median throughout the length of the Project. The vertical component reaches down between 2 to 12 inches below ground level, for pavement replacement and a maximum depth of 3.5 feet below grade in areas where guardrail will be replaced. The APE extends a maximum 2.5 feet above grade for replaced guard railing, and 4 inches above grade for pavement replacement. It is important to note that new guard rail posts will be placed in the same post holes previously excavated during the original guard rail installation. The project will take place within an existing transportation corridor, as such, extension of the APE, to account for indirect effects, was not warranted.

Consultation Efforts

After a review of the Caltrans Cultural Resource Database (CCRD), previous studies, and considering that the project is essentially a maintenance project through a well-established transportation corridor within Caltrans' ROW, it was determined that consultation with Local Government, Local Historical Society / Historic Preservation Groups, and Public Information Meetings were not warranted. However, consultation with associated/interested tribal groups occurred and is ongoing.

A request was made to the Native American Heritage Commission (NAHC) for a Sacred Land File (SLF) search on the February 21, 2018. The NAHC responded February 26, 2018, with negative SLF results, and provided Native American contact list.

Anthony Madrigal, Tribal Historic Preservation Officer (THPO) for Twenty-Nine Palms Band of Mission Indians, explained the tribe is aware of culturally sensitive areas within the Project area and requested the cultural documentation. Caltrans sent the requested draft documents and follow-up emails requesting comments on the cultural documentation including the Finding of No Adverse Effect to Historic Properties. Caltrans has received no further comments to date.

Brian Etsitty, THPO for the Colorado River Indian Tribe, explained that Caltrans would receive further notification should issues arise. No further response received from tribe to date.

Joseph Ontiveros, THPO for Soboba Band of Luiseno Indians, explained the Project is in proximity to known cultural resources. A government to government meeting was held to discuss these resources. Caltrans sent the draft cultural studies illustrating the lack of prehistoric resources within the APE. A follow-up email was sent requesting comments on the cultural documentation including the Finding of No Adverse Effect to Historic Properties. Caltrans has received no further comments to date.

Consultation letters were also sent to Timothy Williams, Chairperson for Fort Mojave Indian Tribe, and Charles Wood, Chairperson for the Chemehuevi Reservation along with two follow-up contacts, to which no responses have been received to date. As consultation is an ongoing process throughout the life of the Project, Caltrans will continue to consult with interested tribal entities as the project moves forward.

Identification Efforts

Record searches and background research conducted for the project identified twelve (12) previously recorded cultural resources within the APE. However, a field review during the pedestrian survey concluded that eleven (11) of these previously recorded cultural resources were no longer extant within the APE and/or Caltrans right of way. The Pedestrian survey identified five (5) new cultural resources, consisting of prehistoric and historic period isolates, a road segment, and a trash scatter, all of which were exempt from evaluation per Caltrans Section 106 PA Attachment 4 because they lacked demonstrable potential for significance. Only one property in the APE was determined by Caltrans to be an Historic Property; (CHL)-985: DTC/C-AMA.

The Desert Training Center/ California-Arizona Maneuver Area (DTC/C-AMA) is an extremely large historic landscape composed of numerous site types (i.e., maneuver areas, divisional

camp, small unit training areas, air facilities and crash sites, campsites, ranges, railroad sidings and deposits, hospitals and medical facilities depots, airfields, ranges, bivouacs) and features (i.e., anti-tank ditches, camouflage areas, foxholes, minefields, observation positions, obstacles, refuse scatter and dumps, roads, rock features, rock insignias or cairns, rock walls, slit trenches, tank tracks, and tank traps) spread out over an extensive and discontinuous 18,000 square mile area. The property was determined significant at a state level and listed on the California Register of Historic Places (CHRP) as: California Historical Landmark (CHL)-985: DTC/C-AMA on June 12, 1989 but has not been formally evaluated for the NRHP. For the purposes of this project only, on September 9, 2018, the DTC/C-AMA was assumed eligible for listing on the NRHP per Stipulation VIII.C.4 of the Caltrans Section 106 PA, with significance under Criterion A for its association with World War II; Criterion B for its association with General George S. Patton; Criterion C for the design and layout of the individual camps, tactical maneuver areas, firing ranges, and other associated features; and Criterion D for the data potential of the entirety of the DTC/C-AMA. The period of significance is 1942 to 1944.

2.1.11.3 Environmental Consequences

No-Build Alternative

The No-Build Alternative would not result in temporary or permanent impacts to cultural resources.

Build Alternative

Caltrans identification and effect finding efforts determined that tank tracks, contributing elements of the larger DTC/C-AMA, are located in the project APE. As part of its analysis of effects, Caltrans determined that further disturbances to the portion of the DTC/AMA (tank tracks) located within the I-10 right of way, which constitute only a small minute portion of the overall DTC/C-AMA (<0.01%), would not rise to the level of being considered an adverse effect. Caltrans, in applying the Criteria of Adverse Effect [36 Code of Federal Regulations (CFR) 800.5(a)(b)], has determined that a *Finding of No Adverse Effect (FNAE) without standard conditions* is appropriate for the proposed Undertaking. Pursuant to Section 106 PA Stipulation X.B.2, and 5024 MOU Stipulation X.B.2, the proposed finding was transmitted to SHPO for consultation and concurrence on December 24, 2018. SHPO concurrence regarding Caltrans' proposed finding was received January 28, 2019. (See SHPO response in Appendix G).

Inadvertent Discoveries

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

Discovery of Human Remains

If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner be contacted. If the remains are thought by the coroner to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, would then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Gary Jones, Principal Investigator, Prehistoric Archaeology, so that he may work with the MLD on the

respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

The procedures for the inadvertent discovery of cultural resources and/or buried human remains will be implemented to ensure that they will not be adversely affected by Project related activities. Staging areas and construction outside of the delineated APE are not permitted, as such it is unlikely that the Undertaking poses any adverse effects to cultural resources, furthermore, no effects to buried human remains are anticipated.

Section 4(f) resources

The DTC/C-AMA was assumed eligible for listing on the NRHP under Criterion A, B, C, and D, and is therefore an Historic Site necessitating evaluation relative to the requirements of a Section 4(f) resource (See Appendix B). While implementation of the Undertaking will further disturb a very minute portion of the Historic Property that has experienced previous disturbances and partial destruction by preceding projects, including US-60/70 and I-10 construction, the proposed Undertaking will not adversely affect the overall integrity or NRHP/CRHR eligibility of the DTC/C-AMA as a whole. The comprehensive finding for this Undertaking as stated previously is: ***Finding of No Adverse Effect (FNAE) without standard conditions***, thus a ***de minimus*** Section 4(f) impact finding regarding the use of the DTC/C-AMA is appropriate for this Undertaking (refer to Appendix B for Section 4(f) expanded information).

2.1.11.4 Avoidance, Minimization, and/or Mitigation Measures

CR-1 If buried cultural resources are encountered during Project Activities, it is Caltrans policy that work stop within 60 feet of the area until a qualified archaeologist can evaluate the nature and significance of the find.

CR-2: In the event that human remains are found, the county coroner shall be notified and ALL construction activities within 60 feet of the discovery shall stop. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). The person who discovered the remains will contact the District 8 Division of Environmental Planning; Andrew Walters, DEBC: (909)383-2647 and Gary Jones, DNAC: (909)383-7505. Further provisions of PRC 5097.98 are to be followed as applicable.

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2.2 Physical Environment

2.2.1 HYDROLOGY AND FLOODPLAIN

2.2.1.1 Regulatory Setting

Executive Order (EO) 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration (FHWA) requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

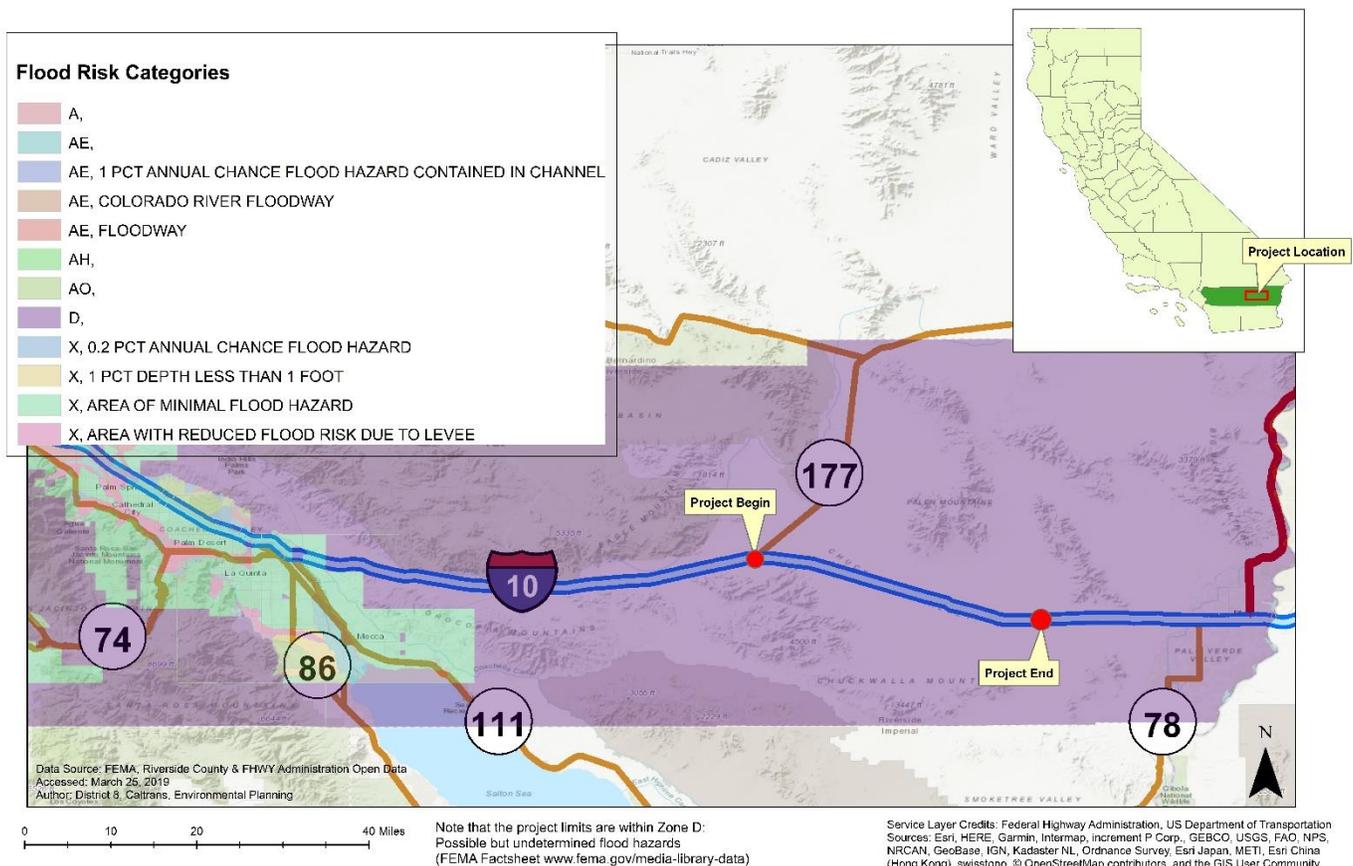
2.2.1.2 Affected Environment

Unless otherwise noted, information from the Water Quality Assessment Report Riv 10 Blythe Pavement Rehabilitation (Caltrans 2018f) was used for this section.

Regionally, this project is within the Chuckwalla Hydrologic Unit of Colorado River Hydrologic Region. The annual precipitation in the Hydrologic Sub-Areas (HSAs) is approximately 4 inches. Locally, the project is located within two undefined HSAs. The receiving water body for potential discharge from the project area is Corn Springs Wash. There are no established beneficial uses for this water body.

According to the Federal Emergency Management Agency (FEMA) records, the project area is not located within a 100-year flood zone (Figure 2.2-1). The project area is designated as Zone D—flood hazards are possible but not determined. As discussed in the Riverside County General Plan, Eastern Riverside County does not possess many major flood-prone drainages. As a result of the arid climate and sandy soils of the project area, water flows tend to pass rapidly through the region.

Figure 2.2-1: FEMA Flood Risk Areas



2.2.1.3 Environmental Consequences

Since the project is not within a flood zone and a significant encroachment, as defined in 23 CFR 650.105, would not occur.

2.2.1.4 Avoidance, Minimization, and/or Mitigation Measures

The project is not located within a flood zone, no avoidance, minimization or mitigation measures are proposed.

2.2.2 WATER QUALITY AND STORMWATER RUNOFF

2.2.2.1 Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source¹⁹ unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE’s Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency’s (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines

(Guidelines) were developed by the U.S. EPA in conjunction with the USACE and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent²⁰ standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined, and this definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are

²¹ California Water Boards, Colorado River – R7
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responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

- **National Pollutant Discharge Elimination System (NPDES) Program**

- ***Municipal Separate Storm Sewer Systems (MS4)***

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified the Department as an owner/operator of an MS4 under federal regulations. The Department’s MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The Department’s MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012 and effective on July 1, 2013), as amended by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014) and Order No. 2015-0036-EXEC (conformed and effective April 7, 2015) has three basic requirements:

1. The Department must comply with the requirements of the Construction General Permit (see below);
2. The Department must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
3. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, the Department developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within the Department for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit, Order No. 2009-0009-DWQ (adopted on September 2, 2009 and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012). The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with the Department's SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

2.2.2.2 Affected Environment

The following section is based on information in the Water Quality Assessment Report (Caltrans 2018f) prepared for the proposed project.

The proposed project lies in Region 7 and is within the Colorado River Regional Water Quality Control Board jurisdiction. The region covers approximately 13,000,000 acres (20,000 square

miles) in the southeastern portion of California. It includes all of Imperial County and portions of San Bernardino, Riverside, and San Diego Counties.²¹

Climate

The climate is arid with an annual precipitation of about less than 5 inches. The project area is not located within a 100-year floodplain.²²

Surface Water

There are no surface waters that could be potentially affected by the project. The project is within Chuckwalla Hydrologic Unit of the Colorado River Hydrologic Region. There are 30 water bodies in the Hydrologic Sub-Areas (HSAs). None of the waterbodies are listed on the 2012 Clean Water Act (CWA) section 303(d) list for being impaired. Hence no Total Maximum Daily Load (TMDL) has been proposed for any of the waterbodies. In addition, the water bodies are not sensitive to sediment.

Locally, the project is located within two undefined HSAs (717.10 and 717.20). The receiving water body for the project is Corn Springs Wash (PM R115.4), which is not on the 303(d) list of water quality limited segments. There are also many unnamed blue line streams.

Groundwater

The Chuckwalla Valley Groundwater Basin, which underlies the proposed project, has a total surface area of approximately 605,000 acres (940 square miles). The boundaries are as follows:

- **South:** Consolidated rocks of the Chuckwalla, Little Chuckwalla, and Mule Mountains;
- **East:** Mule and McCoy Mountains;
- **West:** Eagle Mountains;
- **North:** Rocks of the Coxcomb, Granite, Palen, and Little Maria Mountains bound the valley on the north and extend ridges into the valley.

The smaller intervening valleys are contiguous with and tributary to the main part of the Chuckwalla Valley (DWR 1963). There are no perennial streams in Chuckwalla Valley. Palen, Ford, and several smaller dry lakes are found in topographic low-points. Average annual precipitation in the basin ranges to 4 inches.

Surface and Groundwater Quality

As described above, there are 30 water bodies in the HSAs; however, according to the CWA Section 303(d) List, no surface waters in the project are impaired. Also, there are no established beneficial uses for the local water bodies. All the water bodies are not sensitive to sediment.

Groundwater on the south and west of Palen Lake is typically sodium chloride to sodium sulfate-chloride in character. Total Dissolved Solids (TDS) content across the basin ranges from 274 to

²¹ California Water Boards, Colorado River – R7
<https://www.waterboards.ca.gov/coloradoriver/>.

²² FEMA Flood Insurance Rate Map (FIRM), Maps Nos. 06065C2475 – 2575G
<https://msc.fema.gov/portal/search#searchresultsanchor>.

12,300 mg/L. The best water quality is found in the western portion of the basin, where TDS content ranges from 275 to 730 mg/L (DWR 1979). An analysis of water from Caltrans Desert Center Maintenance station supply well shows a TDS content of more than 1200 mg/L which would have to be treated with reverse osmosis plant prior to use.

2.2.2.3 Environmental Consequences

Permanent Impacts

No-Build Alternative

Under the No-Build Alternative, there would be no changes made to I-10 within the project limits. There would be no increase in impermeable surfaces and therefore no anticipated potential to increase runoff or adversely affect water quality in the area. This, however, would not preclude the Department from conducting other necessary maintenance.

Build Alternative

The Build Alternative could result in pollutants such as suspended solids/sediments, nutrients, pesticides, heavy metals, oil and grease, toxic organic compounds, and trash and debris to be generated during the operational life of the facility.

The build alternative proposes a one-lane temporary detour and crossovers in the EB and WB directions. This could result in 118 acres of Net New Impervious (NNI) area and 254 acres of Replaced Impervious Surface (RIS), for a total of 372 New Impervious Surface. The total New Impervious Surface (NIS) is calculated using the following equation:

- $NIS = NNI + RIS = 118 \text{ acres} + 254 \text{ acres} = 372 \text{ acres}$

NNI is the total impervious area added to a project, after reduction for any impervious areas that have been removed from the project. Replaced Impervious Surface (RIS) includes any activity that removes impervious surface and exposes the underlying soil or pervious subgrade during the construction. New Impervious Surface is the addition of the NNI and the RIS.

As discussed above, the Build Alternative would result in maximum of 118 acres of NNI area. An increase in impervious surface area would increase the volume of runoff during a storm, which would more effectively transport pollutants to receiving waters. In addition, an increase in impervious surface area could also increase the total amount of pollutants in the stormwater runoff and non-stormwater runoff, which could increase the amount of pollutants traveling to on-site drainages and downstream receiving waters.

Consistent with the Caltrans' NPDES permit and the Construction General Permit, BMPs would be incorporated into the proposed project to avoid and/or minimize the discharge of pollutants during construction and operation to the maximum extent practicable. These BMPs are described below under "Avoidance, Minimization, and/or Mitigation Measures."

Temporary Impacts

No-Build Alternative

Under the No-Build Alternative, there would be no changes made to I-10. As such, there would be no potential for construction-related impacts to adversely affect water quality in the area.

Build Alternative

The Build Alternative could create pollutants of concern during construction including sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. During construction, there is also potential for construction-related pollutants to be spilled, leaked, or transported via storm runoff into drainages adjacent to the project area and into downstream receiving ditches. In addition, construction activities often result in an increased potential for soil erosion.

During construction, there is also a potential for construction-related pollutants to be spilled, leaked, or transported via storm runoff into drainages adjacent to the project area and into downstream receiving ditches. The following construction-related pollutants have potential to impact water quality: chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste. These pollutants may be spilled or leaked and would then have the potential to be transported via storm runoff into potential receiving waters.

Construction of the proposed project would involve the use of construction equipment and associated fuels, solvents, lubricants, and other petroleum-based pollutants. There is the potential for accidental direct or indirect release of these substances into the environment where they may adversely affect surface and/or groundwater. In addition, concrete, soap, trash, and sanitary wastes are other common sources of potentially harmful materials on construction sites that could be accidentally introduced into a nearby waterway. The impact of toxic, construction-related materials on water quality varies depending on the duration and time of activities. A SWPPP will be developed and implemented to address discharges of stormwater runoff. The SWPPP includes a sampling and analysis plan for non-visible pollutants (contaminants).

The project would comply with the provisions of Statewide NPDES permit, issued to Caltrans by the SWRCB, Order No. 2012-0011-DWQ. The BMPs as described in Section 3 of the Caltrans' Statewide SWMP (Caltrans 2003b), Caltrans' Statewide Stormwater Management Plan (Caltrans 2016), and the Project Planning and Design Guide (Caltrans 2010), would be evaluated prior to completion of the Project Approval and Environmental Document phase and incorporated into the final design. Design pollution prevention BMPs are selected to reduce post-construction discharges. Treatment BMPs are designated to remove certain pollutants. Construction Site BMPs are incorporated in the SWPPP and implemented during the construction period. The SWPPP would also include post-construction erosion control measures such as re-vegetation of disturbed soil areas. At the completion of all work, Caltrans and contractor will confirm that all disturbed soil areas are stabilized.

Caltrans would identify the location of post-construction BMPs in the contract plans. The contractor would be responsible for preparing a Stormwater Pollution Prevention Plan (SWPPP) according to Caltrans' standards, incorporating all BMPs in the contract plans, and amending the SWPPP during the course of construction as necessary. Caltrans' resident engineer (Resident Engineer) reviews and approves the SWPPP. The contractor would also implement, inspect, and maintain all measures, with oversight by the Resident Engineer.

2.2.2.4 Avoidance, Minimization, and/or Mitigation Measures

- WQ-1: Construction General Permit.** Prior to commencement of construction activities, the contractor shall obtain coverage under the State Water Resources Control Board's *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit), Order No. 2009-0009-DWQ, as amended by 2010-0014-DWG and 2012-0006-DWQ, NPDES No. CAS000002, or any other subsequent permit. This shall include submission of Permit Registration Documents (PRDs), including Notice of Intent (NOI) for coverage under the permit to the State Water Resources Control Board via the Stormwater Multiple Application and Report Tracking System (SMARTS). Construction activities shall not commence until a Waste Discharge Identification Number (WDID) is obtained from SMARTS. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to impact water quality.
- WQ-2: Caltrans MS4 Permit.** This project shall comply with the provisions of the *National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit, Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation Order No. 2012-0011-DWQ* (Caltrans MS4 Permit), as amended by Order No. 2014-0006-EXEC, Order No. 2014-0077-DWQ, and Order No. 2015-0036-EXEC, NPDES No. CAS000003, or any subsequent permit. Caltrans-approved Design Pollution Prevention BMPs and Treatment BMPs shall be implemented to the maximum extent practicable (MEP) consistent with the requirements of the Caltrans MS4 Permit as implemented by the SWMP.

2.2.3 GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY

2.2.3.1 Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using the Department’s Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge’s category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, please see the Department’s Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

STATE REGULATIONS

Alquist-Priolo Earthquake Fault Zoning Act

California’s Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (referred to as earthquake fault zones). It defines criteria for identifying active faults, giving legal weight to terms such as active, and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. It also encourages and regulates seismic retrofits of some types of structures.

Seismic Hazards Mapping Act of 1990

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690-2699.6) is intended to avoid or reduce damage resulting from earthquakes. While the Alquist-Priolo Earthquake Fault Zoning Act addresses surface fault rupture, the Seismic Hazard mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Earthquake Fault Zoning Act (i.e., the state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped seismic hazard zones.)

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

2.2.3.2 Affected Environment

Regional Geology

The project site lies within the Chuckwalla Valley, surrounded by the Eagle, Coxcomb, Chuckwalla, Palen and McCoy mountains. This area is characterized by isolated mountain ranges with broad, coalescing alluvial fans terminating at dry lake beds. Many faults lie around this region due to the several surrounding mountain ranges, as well as the two major southern California faults, the San Andreas fault and the San Jacinto fault.

Site Geology

Between PM 105.0 and PM 116.0, as well as between PM 127.9 and 129.8, the proposed project passes through alluvial-valley deposits (Q_{oa}) from the Pleistocene. This material is composed of various gravel, sand, silt, and clay and is shown on the geologic map of the project area (see Figure 3.1).

Between PM 116.0 and 127.9, as well as between PM 129.8 and 131, the proposed project passes through undifferentiated deposits (Q) which are mostly marine or nonmarine alluvium²³, lake, playa, and terrace deposits of the Quaternary²⁴ age.

Between PM 131.0 and PM 134.0, the proposed project passes through undifferentiated alluvial deposits (Q_s) from the late Holocene, which is composed of sand and pebble to small- cobble gravel not assigned to any specific surficial materials unit and includes active wash, colluvium²⁵, and valley-filling deposits.

Topography

The topography of the project site is relatively flat, with a downward slope to the east. Elevation at the project start (PM 105.0) is about 928 feet above sea-level and elevation at project end (PM 134.0) is about 382 feet above sea-level.

Groundwater

The Chuckwalla Valley Groundwater Basin, which underlies the proposed project, has a total surface area of approximately 605,000 acres (940 square miles). The boundaries are as follows:

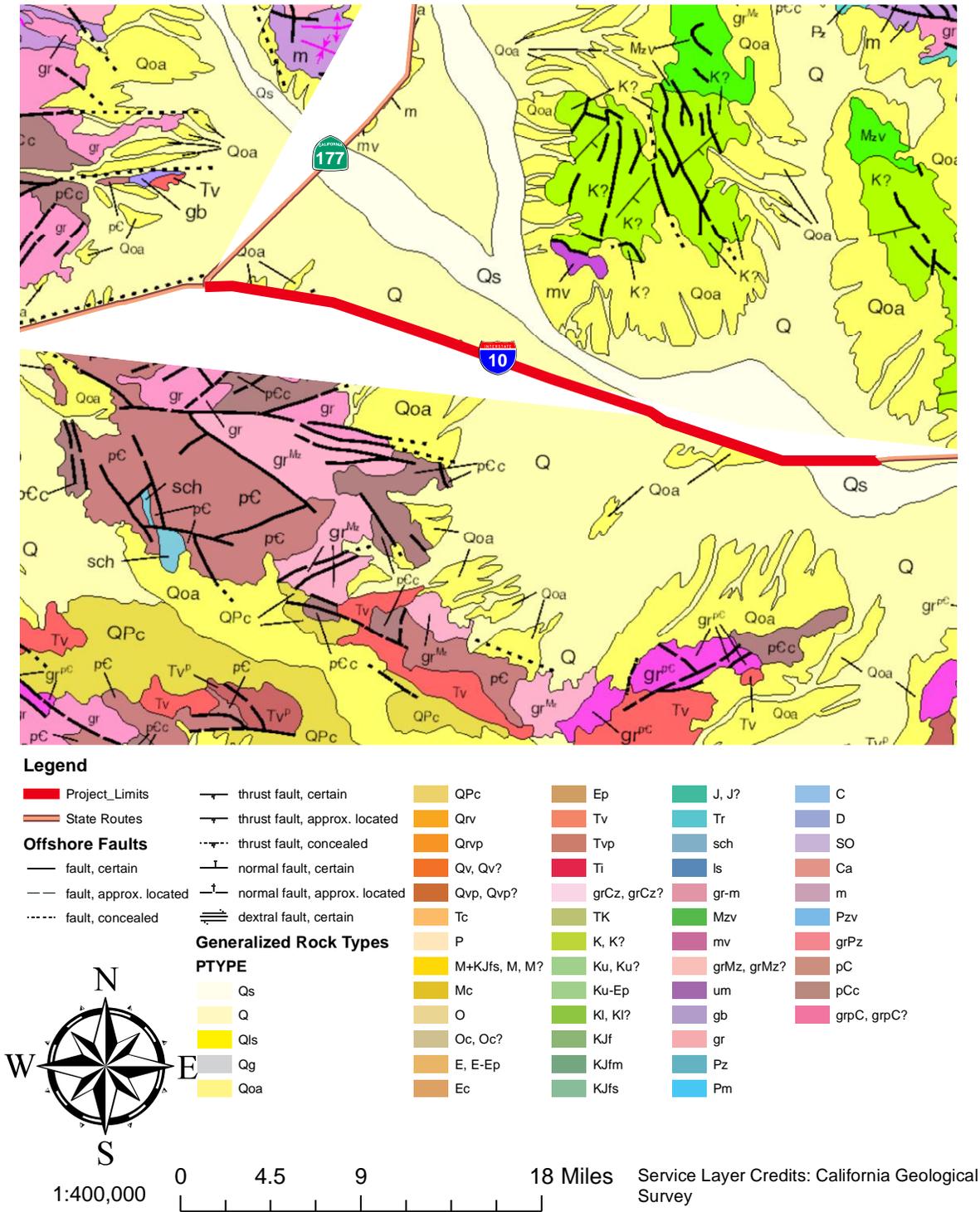
- **South:** Consolidated rocks of the Chuckwalla, Little Chuckwalla, and Mule Mountains;
- **East:** Mule and McCoy Mountains;
- **West:** Eagle Mountains;
- **North:** Rocks of the Coxcomb, Granite, Palen, and Little Maria Mountains bound the valley on the north and extend ridges into the valley.

²³ Alluvium is loose, unconsolidated (not cemented together into a solid rock), soil or sediments, eroded, deposited and reshaped by water in some form in a non-marine setting,

²⁴ The Quaternary Period, which includes the Pleistocene and Holocene epochs, is the most recent of the three periods of the Cenozoic Era in the geologic time scale. The Cenozoic Era is the most recent of the three classic geological eras and covers the period of 65.5 million years ago to the present.

²⁵ Colluvium is the name for loose bodies of sediment that have been deposited or built up at the bottom of a low-grade slope or against a barrier on that slope, transported by gravity.

Figure 2.2-2: Geologic Map



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The smaller intervening valleys are contiguous with and tributary to the main part of the Chuckwalla Valley (DWR 1963). There are no perennial streams in Chuckwalla Valley. Palen, Ford, and several smaller dry lakes are found in topographic low-points. Average annual precipitation in the basin ranges to 3-4 inches.

Surface and Groundwater Quality

As described above, there are 30 water bodies in the HSAs; however, according to the CWA Section 303(d) List, no surface waters in the project are impaired. Also, there are no established beneficial uses for the local water bodies. All the water bodies are not sensitive to sediment.

Groundwater on the south and west of Palen Lake is typically sodium chloride to sodium sulfate-chloride in character. Total Dissolved Solids (TDS) content across the basin ranges from 274 to 12,300 mg/L. The best water quality is found in the western portion of the basin, where TDS content ranges from 275 to 730 mg/L (DWR 1979). An analysis of water from Caltrans Desert Center Maintenance station supply well shows a TDS content of more than 1200 mg/L which would have to be treated with reverse osmosis plant prior to use.

Seismicity

Though most of southern California is a seismically high active area, this project location is in a relatively moderate to low seismically active area, with generally little to no activity. It should be noted that the highly active San Andreas Fault is located about 30 miles from the project start location. Seismic events that are likely to produce the greatest accelerations could be a moderately or large event on the active San Andreas fault zone or a large event on another more distant fault. A fault is considered by the State of California to be active if geologic evidence indicates that movement on the fault has occurred in the last 11,000 years, and potentially active if movement is demonstrated to have occurred in the last two million years.

The most significant fault near the project area runs northerly of and parallel to I-10 through the Desert Center community. Threats from seismic events include ground shaking, fault rupture, and landslides.

Liquefaction

Liquefaction is a process by which water-saturated materials, including soil, sediment and certain types of volcanic deposits lose strength and may fail during strong ground shaking. According to the Riverside County General Plan (County of Riverside, 2015), liquefaction is a moderate threat within much of the area, due to location sediments being susceptible to liquefaction. The use of special building techniques, the enforcement of setbacks, and practical avoidance measures will help to mitigate these potentially dangerous circumstances.

Scour

The project area is characterized by desert climatic conditions associated with the Sonoran Desert in southeastern California. The area receives about 3 inches of rainfall annually. The project area is located adjacent to undeveloped land and desert wilderness. The entire area is located within the Southern Mojave and Imperial Reservoir Watersheds. The majority of the drainages in the region convey water runoff from surrounding mountain ranges to the Colorado

River. Some drainages flow west and terminate at dry lakes. The volume of water conveyed is dependent on the magnitude and duration of storm events. The climate conditions within the region are arid and precipitation is low, however flash floods can still occur and are unpredictable, therefore scour may be an issue.

Landslides

Landslides are not a major problem because the topography in the project region is subdued.

2.2.3.3 Environmental Consequences

Permanent Impacts

Alternative 1 – No-Build Alternative

Under the No-Build Alternative, no permanent effects involving geology, erosion, soils, seismicity, topography, or mineral resources would occur.

Alternative 2 – Build Alternative

Liquefaction, Ground Shaking, and Surface Rupture

Neither ground shaking, nor fault rupture can be avoided in the design of highways crossing active faults. Accordingly, the currently proposed design is favorable for accommodating future ground shaking or surface rupture. Compliance with Caltrans' procedures regarding seismic design, as detailed in Section 19 Earthwork of Caltrans' Standard Specifications 2010 Manual, is also anticipated to prevent any adverse effects related to seismic ground shaking. Seismic design would also meet County requirements for near-source design parameters under the Uniform Building Code.

Groundwater

Groundwater in the area is recharged by subsurface inflow from Cadiz Valley and Pinto Valley basins and by percolation from runoff from the surrounding mountains and precipitation to the valley floors. Therefore, runoff from the net impervious surface of the finished project will contribute to the recharge of the basin. Based on the amount of new impervious surface created by the project, post construction treatment BMPs are required by Caltrans MS4 permit. Hence, impact to groundwater will be negligible.

Temporary Impacts

Alternative 1 – No-Build Alternative

Under the No-Build Alternative, no temporary effects involving geology, erosion, soils, seismicity, topography, or mineral resources would occur.

Alternative 2 – Build Alternative

Soils

Due to the sandy nature of the on-site soils, the soils are easily erodible, and erosion could occur during construction. Development of the detour lanes would cause groundbreaking and vegetation removal during construction. As a result, soil could be exposed to rain and wind, potentially causing accelerated erosion and deposition from the project site. Federal and State jurisdictions require that an approved SWPPP be prepared for projects that involve one acre or more of disturbance. A SWPPP specifies BMPs that would prevent construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving off site into receiving waters (see Measures WQ-1 and WQ-2 in Section 2.2.2). Earthwork in the project area would be performed in accordance with Section 19 Earthwork of the Caltrans' Standard Specifications 2010 Manual and/or the requirements of applicable government agencies.

2.2.3.4 Avoidance, Minimization, and/or Mitigation Measures

As is standard, earthwork in the project area would be performed in accordance with the latest edition of Caltrans' Standard Specifications. No additional measures for geology and soils are proposed.

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2.2.4 PALEONTOLOGY

2.2.4.1 Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils.

A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects.

16 United States Code (USC) 431-433 (the “Antiquities Act”) prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the Department of Government having jurisdiction over the land. Fossils are considered “objects of antiquity” by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies.

16 United States Code (USC) 461-467 established the National Natural Landmarks (NNL) program. Under this program property owners agree to protect biological and geological resources such as paleontological features. Federal agencies and their agents must consider the existence and location of designated NNLs, and of areas found to meet the criteria for national significance, in assessing the effects of their activities on the environment under NEPA.

16 United States Code (USC) 470aaa (the Paleontological Resources Preservation Act) prohibits the excavation, removal, or damage of any paleontological resources located on federal land under the jurisdiction of the Secretaries of the Interior or Agriculture without first obtaining an appropriate permit. The statute establishes criminal and civil penalties for fossil theft and vandalism on federal lands.

23 United States Code (USC) 1.9(a) requires that the use of Federal-aid funds must be in conformity with all federal and state laws.

23 United States Code (USC) 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 USC 431-433 above and state law.

Under California law, paleontological resources are protected by the California Environmental Quality Act (CEQA).

2.2.4.2 Affected Environment

As part of the scoping and environmental analysis carried out for the project, the paleontological resources were considered, and a paleontology review memorandum was prepared (Caltrans 2018d).

The proposed project location is within the Chuckwalla Valley. As explained in Section 2.2.3, the project geology site includes alluvial-valley deposits (Q_{oa}) from the Pleistocene, undifferentiated deposits (Q) from marine and nonmarine alluvium, and undifferentiated alluvial deposits (Q_s) from the late Holocene.

All work is scheduled to occur in previously-disturbed areas within the Caltrans ROW. The project location includes eastbound and westbound lanes, median, shoulders, guardrail locations, and bridge locations for 29 miles on the I-10 between PM 104.9 and PM 134.0. Vertically, the footprint is between 2 to 12 inches below ground level for pavement replacement and a maximum depth of 3.5 feet below grade in areas where guardrail will be replaced. New guardrail posts will be placed in the same post holes previously excavated during the original guardrail installation.

2.2.4.3 Environmental Consequences

No adverse permanent or temporary impacts to paleontological resources were identified because the proposed project involves work in a previously-disturbed area.

2.2.4.4 Avoidance, Minimization, and/or Mitigation Measures

No impacts are anticipated, thus, no avoidance, minimization, or mitigation measures are proposed.

2.2.5 HAZARDOUS WASTE/MATERIALS

2.2.5.1 Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, and the Resource Conservation and Recovery Act (RCRA) of 1976. The purpose of CERCLA, often referred to as “Superfund,” is to identify and cleanup abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the *CA Health and Safety Code* and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

2.2.5.2 Affected Environment

Unless otherwise noted, the information below was synthesized from the Initial Site Assessment (ISA) Checklist (Caltrans 2019c).

The ISA Checklist concludes the project's risk for hazardous waste involvement is "Low Risk". Nevertheless, because of historic use of leaded gasoline; the potential for aerially deposited lead (ADL) exists. An ADL Report was prepared on the I-10 Post Mile (PM) R62.3 to PM R63.7 for project EA No. 45210, about 43 miles west of this rehabilitation project in 2015. Few interchanges, where additional vehicles and therefore additional ADL contributions, exist between the easterly project limits of project 45210 and the limits of this project. This means the vehicles travelling the stretch of 45210 would be the same vehicles traveling through this stretch of I-10. Therefore, the amount of ADL deposited by vehicles traveling through the project limits of 45210 would be the same as that deposited by the vehicles traveling this stretch, if any.

According to the ADL report for project 45210, on-site soils at PM R62.3-R63.7 are considered Soil Type "X", which is non-hazardous. There is no special requirement for on-site reuse and off-site disposal of non-hazardous soils. The results of the ADL concentrations for the proposed rehabilitation project are expected to be similar to the ADL concentrations for project 45210 because of the proximity of the project and the negligible number of additional vehicles that would have merged into the facility outside the project limits of 45210.

Additionally, the project scope proposes to remove, replace, repair, and/or extend RSP at 23 bridge locations in each direction. It is possible that asbestos containing material (ACM) may be present in bridge structures, this would be determined with the ACM surveys. In the case that ACM is present, the measures included below would be implemented to avoid or minimize impact.

2.2.5.3 Environmental Consequences

No-Build Alternative

Under the No-Build Alternative, no improvements would be implemented, and thus no effects involving hazardous waste/materials would occur.

Build Alternative

Following construction of the proposed project, operations are not expected to result in the creation of any new health hazards or expose people to potential new health hazards because the proposed project involves rehabilitation of an existing roadway. No storage of hazardous materials or chemicals would occur, and the proposed project is not anticipated to increase the potential hazardous materials in the project area. As such, the proposed project would not result in adverse effects.

Although soils in the project area are expected to be non-hazardous, ADL from the historical use of leaded gasoline may be present. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, ADL Agreement between Caltrans and the California Department of Toxic Substances Control. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met. With implementation of HAZ-1, Caltrans would

ensure that soil sampling and analysis for ADL would be conducted in the project area prior to project construction.

ACMs may be present in bridge structures disturbed by the proposed project. With implementation of HAZ-2, during construction, samples of any suspected ACMs would be collected for laboratory analysis prior to disturbance. If ACM is identified, abatement would be conducted in accordance with regulatory requirements.

In addition, the proposed project would not impair implementation of an adopted emergency response plan or emergency evacuation plan or expose people to significant risk of death via wildland fires.

2.2.5.4 Avoidance, Minimization, and/or Mitigation Measures

HAZ-1: Caltrans is conducting soil sampling and analysis for ADL. If soil is determined to contain lead concentrations exceeding the regulated threshold level, it will be managed in accordance with the criteria in the Soil Management for Aerially Deposited Lead-Soils Agreement (California Environmental Protection Agency, Department of Toxic Substances Control, Docket No. ESPO-SMA 15/ 16-001, June 29, 2016) [ADL Agreement]).

HAZ-2: Caltrans is conducting Lead-Based Paint (LBP) and Asbestos-Containing Material (ACM) surveys for all bridge structures that will be disturbed in the proposed project. If asbestos minerals are identified in the materials sampled during this survey and should the materials be disturbed during demolition, renovation, and/or construction, any generated ACM wastes should be disposed as hazardous asbestos waste; and an ACM abatement is required by a licensed ACM abatement contractor prior to renovation, refurbishing, or demolition activities.

HAZ-3: A lead compliance plan shall be prepared under Section 7-1.02K(6)(j)(iii) of Caltrans' Standard Specifications. The Lead Compliance Plan shall include provisions regarding use of earth material.

HAZ-4: Due to the possible presence of elevated levels of lead concentrations within the yellow thermoplastic and yellow-painted traffic stripes along the existing highway, the Contractor shall be required to properly manage removed stripe and pavement markings as hazardous waste, in accordance with section 14-11.12 of Caltrans' Standard Specifications.

HAZ-5: The handling, storing, and transporting of treated wood waste shall be in accordance with Caltrans' Standard Specifications section 14-11.14. Treated wood waste shall be managed under 22 CA Code of Regs Div 4.5 Ch 34.

HAZ-6: Earth material containing lead shall be handled according to all applicable laws, rules, and regulations. The contractor shall be required to properly manage earth material containing lead from paint and thermoplastic, in accordance with Caltrans Standard Specification section 36-4.

HAZ-7: During bridge rehabilitation activities, the Contractor shall follow Caltrans' Standard Specification sections 14-9.02 and 2-1.06B

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2.2.6 AIR QUALITY

2.2.6.1 Regulatory Setting

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM)—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM_{2.5})—and sulfur dioxide (SO₂). In addition, national and state standards exist for lead (Pb), and state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA). In addition to this environmental analysis, a parallel “Conformity” requirement under the FCAA also applies.

Conformity

The conformity requirement is based on FCAA Section 176(c), which prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan (SIP) for attaining the NAAQS. “Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), and in some areas (although not in California), sulfur dioxide (SO₂). California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO₂, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that

include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA) make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the “open-to-traffic” schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and TIP; the project has a design concept and scope²⁶ that has not changed significantly from those in the RTP and TIP; project analyses have used the latest planning assumptions and EPA-approved emissions models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

2.2.6.2 Affected Environment

The discussion and analysis in this section is based on the Air Quality Checklist (Caltrans 2018e) prepared for this project.

The proposed project is located in the Mojave Desert Air Basin. The project is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the Mojave Air Quality Management District (MDAQMD), and the California Air Resources Board (CARB). As shown in Table 2-12, the project area is in nonattainment of California Ozone and PM₁₀ standards. It is in attainment for all other State and all NAAQS.

Table 2-12: State and Federal Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State ⁱ Standard	Federal ⁱⁱ Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Ozone (O ₃)	1 hour	0.09 ppm ⁱⁱⁱ	--- ^{iv}	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop	Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NOx) in the	Nonattainment	Attainment
	8 hours	0.070 ppm	0.070 ppm (4 th highest in 3 years)				

²⁷ CDFW, Natural Communities. 1C082 Draft IS/EA
 I-10 Pavement Rehabilitation Project

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				productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.	presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.		
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.	Attainment	Attainment
	8 hours	9.0 ppm ¹	9 ppm				
	8 hours (Lake Tahoe)	6 ppm	---				
Respirable Particulate Matter (PM ₁₀) ^v	24 hours	50 µg/m ³ ^{vi}	150 µg/m ³ (expected number of days above standard < or equal to 1)	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic & other aerosol and solid compounds are part of PM ₁₀ .	Dust- and fume-producing industrial and agricultural operations; combustion smoke & vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.	Nonattainment	Attainment
	Annual	20 µg/m ³	--- ⁵				
Fine Particulate Matter (PM _{2.5}) ⁵	24 hours	---	35 µg/m ³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the PM _{2.5} size range. Many toxic & other aerosol and solid compounds are part of PM _{2.5} .	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NO _x , sulfur oxides (SO _x), ammonia, and ROG.	Attainment	Attainment
	Annual	12 µg/m ³	12.0 µg/m ³				
	24 hours (conformity process ^{vii})	---	65 µg/m ³				
	Secondary Standard (annual; also for conformity process ⁵)	---	15 µg/m ³ (98 th percentile over 3 years)				
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	0.100 ppm ^{viii}	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain & nitrate contamination of stormwater. Part of the “NO _x ” group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.	Attainment	Attainment
	Annual	0.030 ppm	0.053 ppm				

Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	0.075 ppm ^{ix} (99 th percentile over 3 years)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.	Attainment	Attainment
	3 hours	---	0.5 ppm ^x				
	24 hours	0.04 ppm	0.14 ppm (for certain areas)				
	Annual	---	0.030 ppm (for certain areas)				
Lead (Pb) ^{xi}	Monthly	1.5 µg/m ³	---	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.	Attainment	Attainment
	Calendar Quarter	---	1.5 µg/m ³ (for certain areas)				
	Rolling 3-month average	---	0.15 µg/m ³ ^{xii}				

¹ State standards are “not to exceed” or “not to be equaled or exceeded” unless stated otherwise.

² Federal standards are “not to exceed more than once a year” or as described above.

¹ ppm = parts per million

¹ Prior to 6/2005, the 1-hour ozone NAAQS was 0.12 ppm. Emission budgets for 1-hour ozone are still be in use in some areas where 8-hour ozone emission budgets have not been developed, such as the S.F. Bay Area.

¹ Annual PM₁₀ NAAQS revoked October 2006; was 50 µg/m³. 24-hr. PM_{2.5} NAAQS tightened October 2006; was 65 µg/m³. Annual PM_{2.5} NAAQS tightened from 15 µg/m³ to 12 µg/m³ December 2012 and secondary annual standard set at 15 µg/m³.

¹ µg/m³ = micrograms per cubic meter

¹ The 65 µg/m³ PM_{2.5} (24-hr) NAAQS was not revoked when the 35 µg/m³ NAAQS was promulgated in 2006. The 15 µg/m³ annual PM_{2.5} standard was not revoked when the 12 µg/m³ standard was promulgated in 2012. The 0.08 ppm 1997 ozone standard is revoked FOR CONFORMITY PURPOSES ONLY when area designations for the 2008 0.75 ppm standard become effective for conformity use (7/20/2013). Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for newer NAAQS are found adequate, SIP amendments for the newer NAAQS are approved with an emission budget, EPA specifically revokes conformity requirements for an older standard, or the area becomes attainment/unclassified. SIP-approved emission budgets remain in force indefinitely unless explicitly replaced or eliminated by a subsequent approved SIP amendment. During the “Interim” period prior to availability of emission budgets, conformity tests may include some combination of build vs. no build, build vs. baseline, or compliance with prior emission budgets for the same pollutant.

¹ Final 1-hour NO₂ NAAQS published in the Federal Register on 2/9/2010, effective 3/9/2010. Initial area designation for California (2012) was attainment/unclassifiable throughout. Project-level hot spot analysis requirements do not currently exist. Near-road monitoring starting in 2013 may cause re-designation to nonattainment in some areas after 2016.

¹ EPA finalized a 1-hour SO₂ standard of 75 ppb (parts per billion [thousand million]) in June 2010. Nonattainment areas have not yet been designated as of 9/2012.

¹ Secondary standard, set to protect public welfare rather than health. Conformity and environmental analysis address both primary and secondary NAAQS.

¹ The ARB has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM₁₀ and, in larger proportion, PM_{2.5}. Both the ARB and U.S. EPA have identified lead and various organic compounds that are precursors to ozone and PM_{2.5} as toxic air contaminants. There are no exposure criteria for adverse health effect due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong.

¹ Lead NAAQS are not considered in Transportation Conformity analysis.

2.2.6.3 Environmental Consequences

The proposed project is included in SCAG’s 2016 RTP/SCS (page 74, FTIP ID RIVLS02) and FTIP both of which were found to be conforming (see Air Quality section of Chapter 2). Therefore, the proposed project will not conflict with the Air Quality Management Plan (AQMP),

violate any air quality standard, result in a net increase of any criteria pollutant, or expose sensitive receptors to substantial pollutant concentrations.

As confirmed by the Air Quality Checklist (September 2018) this project is exempt from air quality conformity per 40 CFR 93.126 under the category of Project Type of *Pavement Resurfacing and/or Rehabilitation*.

Although two temporary detour lanes will be constructed, this project is not a capacity-increasing transportation project. After construction completion, these detour lanes will be striped signaling to the traveling public they are not to be used. Since this project does not increase capacity in the long term, it will have no impact on traffic volumes and would generate a less than significant amount of pollutants during construction due to the very short duration of project construction.

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment also are expected and would include carbon monoxide (CO), nitrogen oxides (NO_x), volatile organic compounds (VOCs), directly-emitted particulate matter (PM₁₀ and PM_{2.5}), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NO_x and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction typically involves clearing, cut-and-fill activities, grading, removing or improving existing roadways, building bridges, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM₁₀, PM_{2.5}, and small amounts of CO, SO₂, NO_x, and VOCs to be of concern. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an added source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the United States Environmental Protection Agency (U.S. EPA) to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. The Department's Standard Specifications (Section 14) on dust minimization require use of water or dust palliative compounds and will reduce potential fugitive dust emissions during construction.

In addition to dust-related PM₁₀ emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, VOCs and some soot particulate (PM₁₀ and PM_{2.5}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

SO₂ is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Under California law and ARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 ppm sulfur), so SO₂-related issues due to diesel exhaust will be minimal.

Some phases of construction, particularly asphalt paving, may result in short-term odors in the immediate area of each paving site(s). Such odors would quickly disperse to below detectable levels as distance from the site(s) increases.

Most of the construction impacts to air quality are short-term in duration and, therefore, will not result in long-term adverse conditions. Implementation of the Caltrans standardized measures, some of which may also be required for other purposes such as storm water pollution control, will reduce any air quality impacts resulting from construction activities.

Construction activities will not last for more than 5 years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR 93.123(c)(5)). Construction is scheduled to begin at the end of 2021 and conclude at the end of 2024.

2.2.6.4 Avoidance, Minimization, and/or Mitigation Measures

No additional or project-specific measures related to air quality are proposed.

2.2.7 CLIMATE CHANGE

Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. FHWA emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in the California Environmental Quality Act (CEQA) chapter of this document. The CEQA analysis may be used to inform the National Environmental Policy Act (NEPA) determination for the project.

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2.2.8 NOISE

2.2.8.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA/23 Code of Federal Regulations Part 772 (23 CFR 772) noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

NATIONAL ENVIRONMENTAL POLICY ACT AND 23 CFR 772

For highway transportation projects with Federal Highway Administration (FHWA) involvement (and the Department, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 Code of Federal Regulations [CFR] 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

Table 2-13: Noise Abatement Criteria		
Activity Category	NAC, Hourly A- Weighted Noise Level, Leq(h)	Description of activity category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ¹	67 (Exterior)	Residential.
C ¹	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC— reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC— reporting only	Undeveloped lands that are not permitted.
¹ Includes undeveloped lands permitted for this activity category.		

Figure 2.2-3 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Figure 2.2-3: Noise Levels of Common Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft) Commercial Area	70	Vacuum Cleaner at 3 m (10 ft)
Heavy Traffic at 90 m (300 ft)	60	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	50	Large Business Office
Quiet Urban Nighttime	40	Dishwasher Next Room
Quiet Suburban Nighttime	30	Theater, Large Conference Room (Background)
Quiet Rural Nighttime	20	Library
	10	Bedroom at Night, Concert Hall (Background)
	0	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

According to the Department’s *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

The Department's *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction for all impacted receptors in the future noise levels must be achieved for an abatement to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. Additionally, a noise reduction of at least 7 dBA must be achieved at one or more benefited receptors for an abatement measure to be considered reasonable. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents' acceptance and the cost per benefited residence.

2.2.8.2 Affected Environment

The discussion that follows is based on the noise analysis memo (Caltrans 2019b) prepared for the proposed project.

As described in the Section 2.1 Land Use, the area adjacent to the proposed project is generally undeveloped, with relatively low population and large open spaces. Existing uses include rural residential, open space, and retail commercial/tourist commercial. No sensitive noise receptors have been identified in proximity to the project area. Additionally, no areas of frequent human use were identified during the August 9, 2018 site visit.

2.2.8.3 Environmental Consequences

As defined by 23 CFR 772, a Type I project is generally a proposed Federal or Federal-aid highway project for the construction of a highway on a new location, the physical alteration of an existing highway where there is either a substantial horizontal or substantial vertical alteration. A Type II project involves construction of a noise abatement project on an existing highway with no changes to highway capacity or alignment. A Type III project is a project that does not meet the classification of a Type I or Type II project. Type III projects do not require a noise analysis.

The proposed project is a Type III project; therefore, the Department has determined the project is exempt from noise analysis and that a noise study report is not required, per 23 CFR 772.7(f). The project would not expose people to or generate noise levels in excess of standards established in a general plan or noise ordinance, or applicable standards of other agencies. Additionally, construction would be conducted in accordance with Caltrans Standards Specifications Section 14-8.02, which includes specifications for controlling and monitoring noise resulting from work activities, such as that noise shall not exceed 86 dBA L_{max} at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

2.2.8.4 Avoidance, Minimization, and/or Abatement Measures

- N-1:** To minimize potential construction noise impacts, during construction the Resident Engineer shall implement Standard Specification “Noise Control” Section 14-8.02 and SSP 14-8.0, which include specifications for controlling noise resulting from work activities. Noise shall not exceed 86 dBA Lmax at 50 feet from the job site from 9:00 p.m to 6:00 a.m.

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2.3 Biological Environment

The scope of the U.S. Army Corps of Engineers for the proposed project includes only within the footprint of the regulated activity within the delineated water, but also including an area out to 300 feet to account for noise impacts.

2.3.1 NATURAL COMMUNITIES

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species section 2.3.5. Wetlands and other waters are also discussed below in section 2.3.2.

2.3.1.1 Affected Environment

The information from this section was synthesized from the Natural Environmental Study (NES) prepared for the proposed project (Caltrans 2019a). References used in the NES are not carried over into this section.

Project Impact Area and Biological Study Area:

The Project Impact Area (PIA) is limited to the project construction footprint associated with the I-10 pavement rehabilitation project from Post Mile (PM) 104.9 to PM 134.00. The Biological Study Area (BSA) consists of the project construction footprint plus a 500-foot buffer. Biological database queries were conducted for the entire BSA, including those areas that fall outside of the Caltrans right of way (ROW), and biological field surveys were conducted within the Caltrans ROW (from fence line to fence line). The biological field survey area is 29.10 miles long and averages 295 feet wide.

The California Department of Fish and Wildlife (CDFW) assigns rankings of S1, S2, S3, S4, and S5 to natural communities, with S1 being the rarest and of most concern and S5 being common and of least concern. CDFW considers natural communities ranked S1, S2, and S3 as being of special concern. Communities ranked as S4 and S5 are not included as habitats of special concern.²⁷ Table 2-14 depicts information on the vegetation communities and land cover types found in the biological field survey area including rarity and location.

One State sensitive vegetation community appeared in the record search, California fan palm oasis (*Washingtonia filifera* Woodland Alliance), however, it was not observed within the biological field survey area. Two of the three native plant communities identified within the biological field survey area are designated as California Sensitive Natural Communities: blue palo verde – ironwood woodland (S3) and mesquite thickets (S3). A discussion on communities

²⁷ CDFW, Natural Communities.

of special concern is provided below. The third plant community identified in the biological field survey area, Creosote bush scrub (*Larrea tridentate* Shrubland Alliance), represented the highest percent of total biological field survey area. However, Creosote bush scrub is not designated as a natural community of special concern. A discussion of Creosote bush scrub is provided in section 2.3.3.

Discussion of Blue Palo Verde – Ironwood Woodland

In the BSA, blue palo verde – ironwood woodland (*Parkinsonia florida/Olneya tesota* woodland association) is characterized by stands comprised primarily of blue palo verde and ironwood in the tree canopy. This woodland is found intermittently in the BSA, most common in washes and sometimes in upland sites where conditions are suitable. With a State rank of S3, it is considered a natural community of special concern.

Blue palo verde - ironwood woodland covers 90.56 acres of the biological field survey area. This community makes up 8.53 percent of the total biological field survey area and is located throughout the PIA in desert wash areas.

Discussion of Mesquite Thickets

Mesquite thickets (*Prosopis glandulosa* Woodland Alliance) are characterized by stands comprised primarily of low canopy trees, less than 35 feet (10 meters) in height. This habitat is found on fringes of playa lakes, river terraces, stream banks, floodplains, rarely flooded margins of arroyos and washed, and sand dunes. With a State rank of S3, it is considered a natural community of special concern.

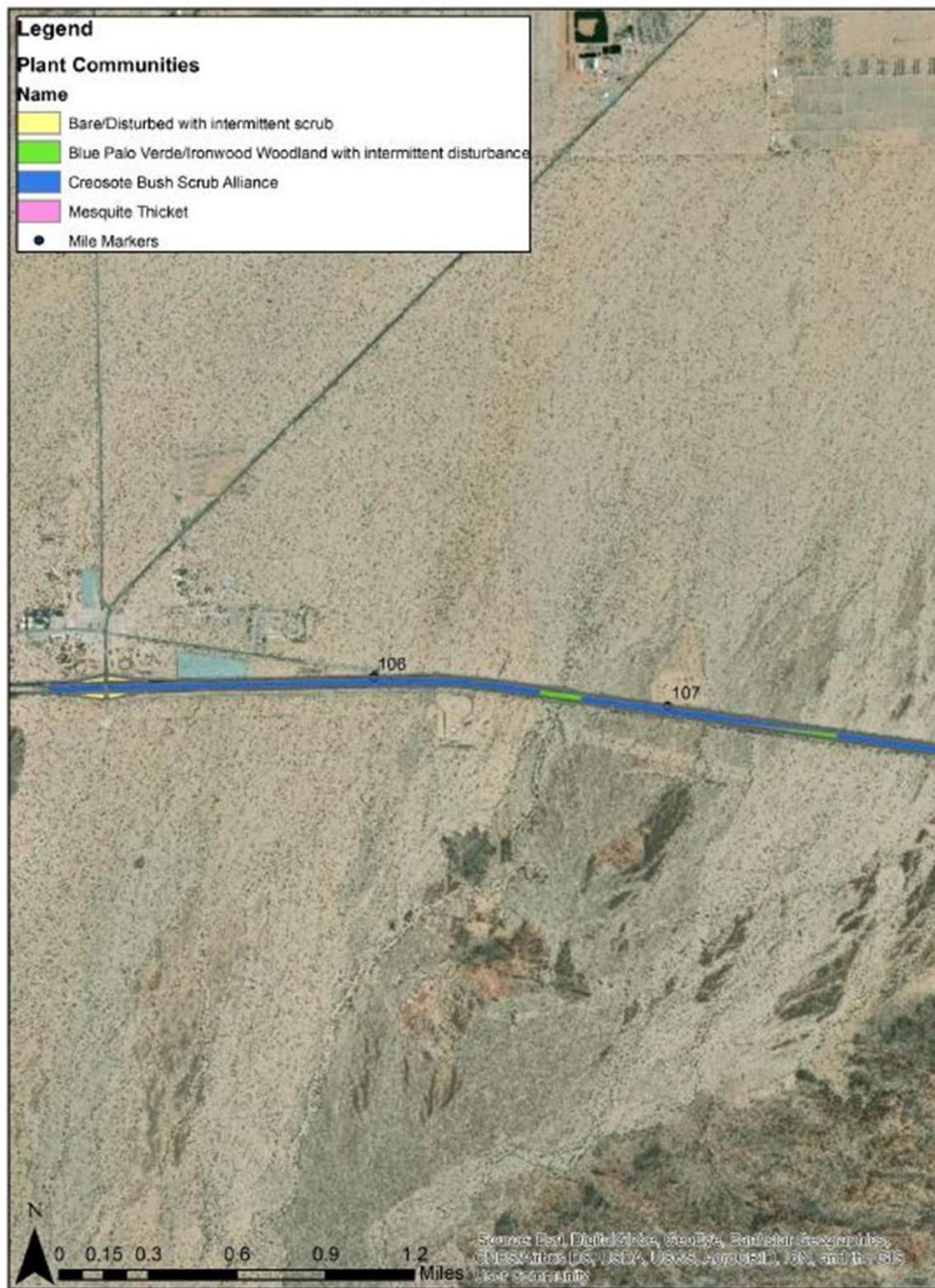
Mesquite thickets cover 2.37 acres of the survey area. This community makes up 0.22 percent of the total survey area and is located between PM 131 and 132.

Table 2-14: Vegetation Communities/Land Cover Types in the Biological Field Survey Area and Project Impact Area

Vegetation Community/ Land Cover Type	Rarity	Acreage in Biological Field Survey Area	Percent of Total in Biological Field Survey Area	Acreage in Project Impact Area (January 2019)	Percent of Total in Project Impact Area (January 2019)	Location
Creosote bush scrub (<i>Larrea tridentata</i> Shrubland Alliance)	G5 S5	640.89	60.36%	387.43	50.81%	Dominant community; found throughout area
Blue palo verde – ironwood woodland (<i>Parkinsonia florida</i> – <i>Olneya tesota</i> Woodland Alliance); <i>Parkinsonia florida</i> / <i>Condea emoryi</i> Association	G4 S3	90.56	8.53%	62.01	8.13%	Found intermittently; most common in wash areas
Mesquite thickets (<i>Prosopis glandulosa</i> Woodland Alliance)	G4 S3	2.37	0.22%	0.29	0.04%	Found between PM 131 and PM 132
Bare/disturbed with intermittent scrub	N/A	42.37	3.99%	27.15	3.56%	Found throughout area
Roadways	N/A	285.64	26.90%	285.64	37.46%	Extends through entire project area
<p>KEY: CNPS Rankings: Global and State Ranks G1 S1: Fewer than 6 viable occurrences worldwide/ statewide, and/ or up to 518 hectares G2 S2: 6-20 viable occurrences worldwide/ statewide, and/ or more than 518–2,590 hectares G3 S3: 21-100 viable occurrences worldwide/ statewide, and/or more than 2,590–12,950 hectares G4 S4: Greater than 100 viable occurrences worldwide/ statewide, and/or more than 12,950 hectares G5 S5: Demonstrably secure because of its worldwide/ statewide abundance</p> <p>Additional Threat Ranks 0.1: Very threatened 1.2: Threatened 1.3: No current threat known</p>						

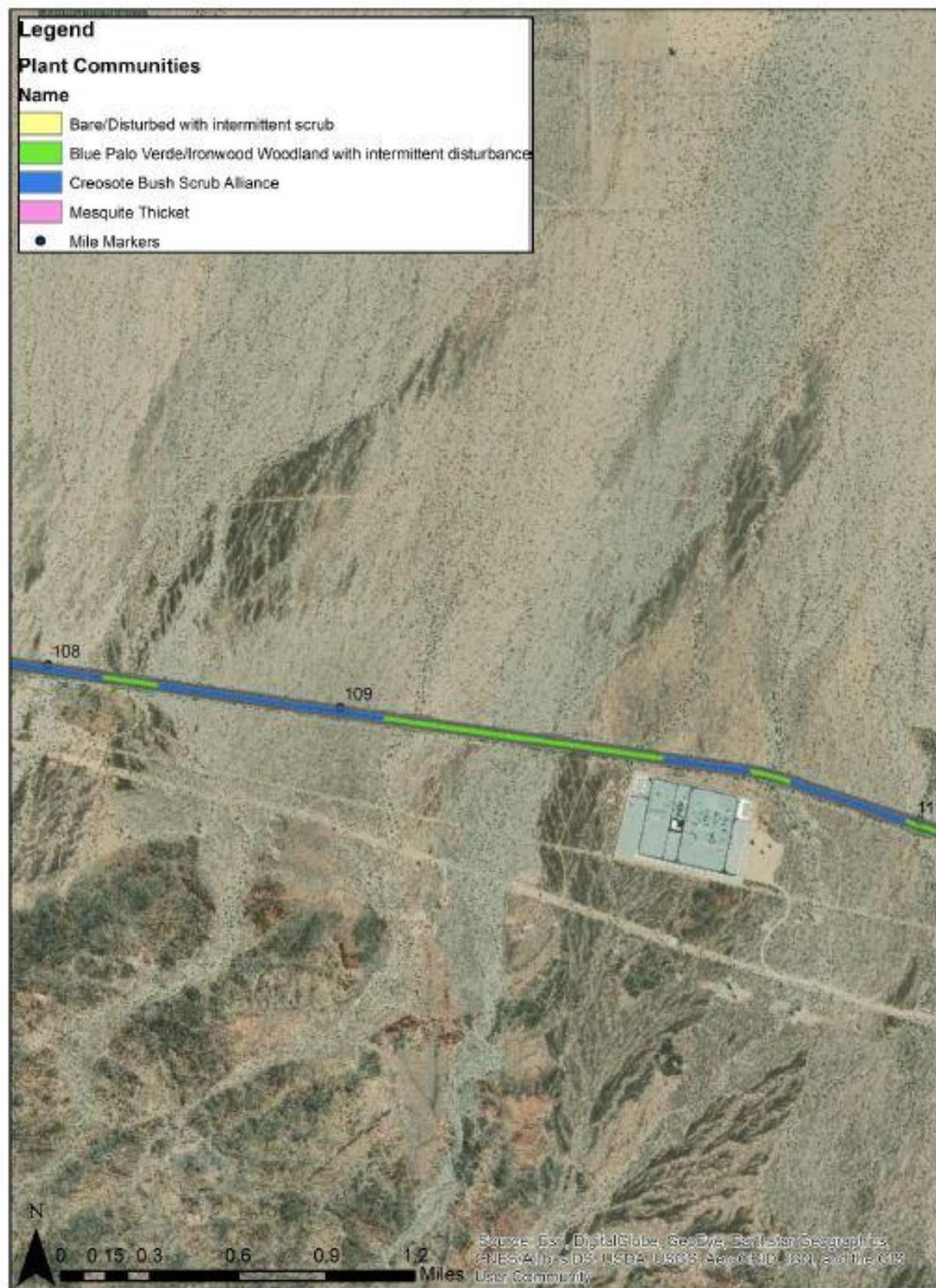
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Figure 2.3-1A: Plant Communities



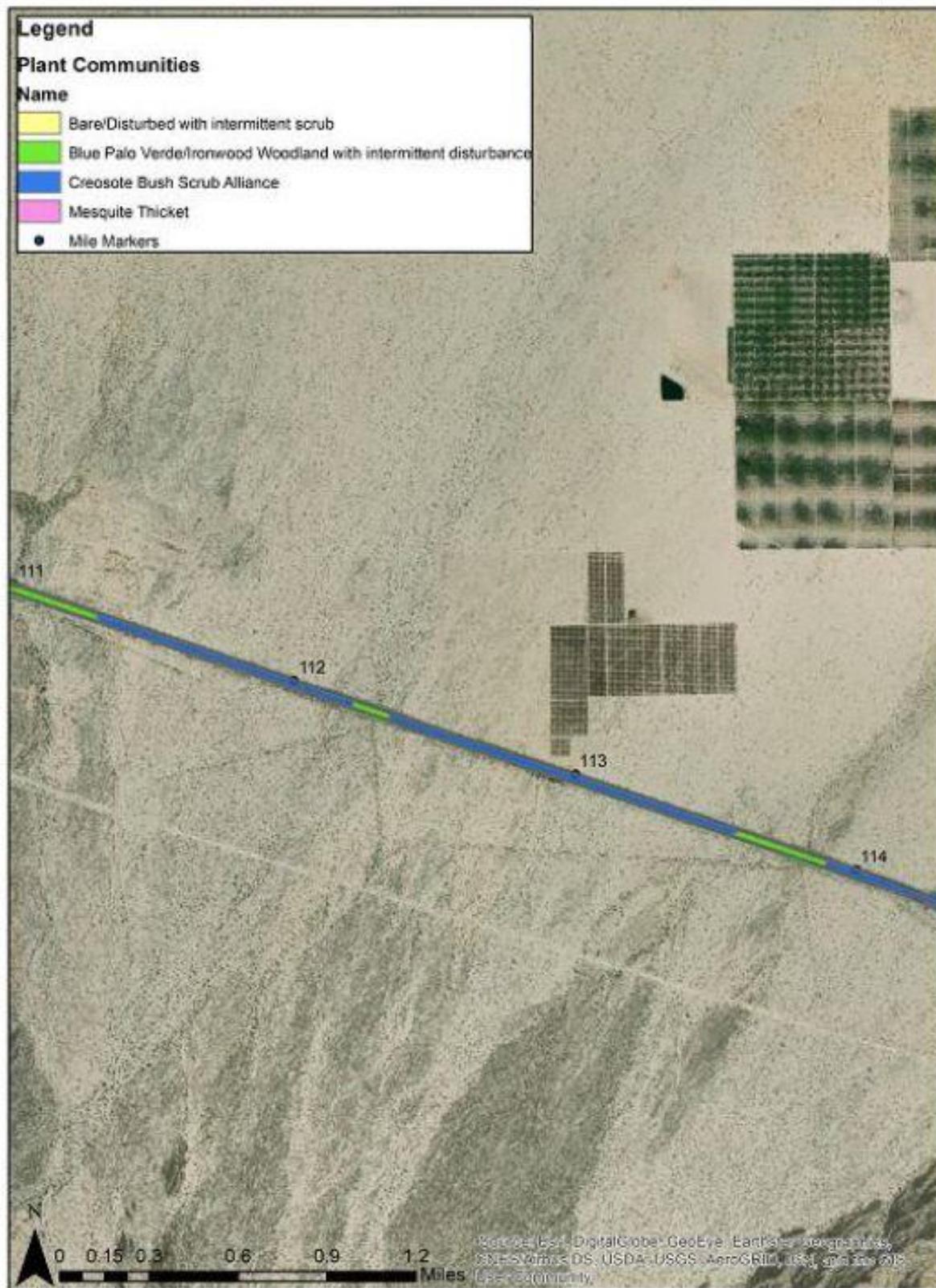
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Figure 2.3-1B: Plant Communities



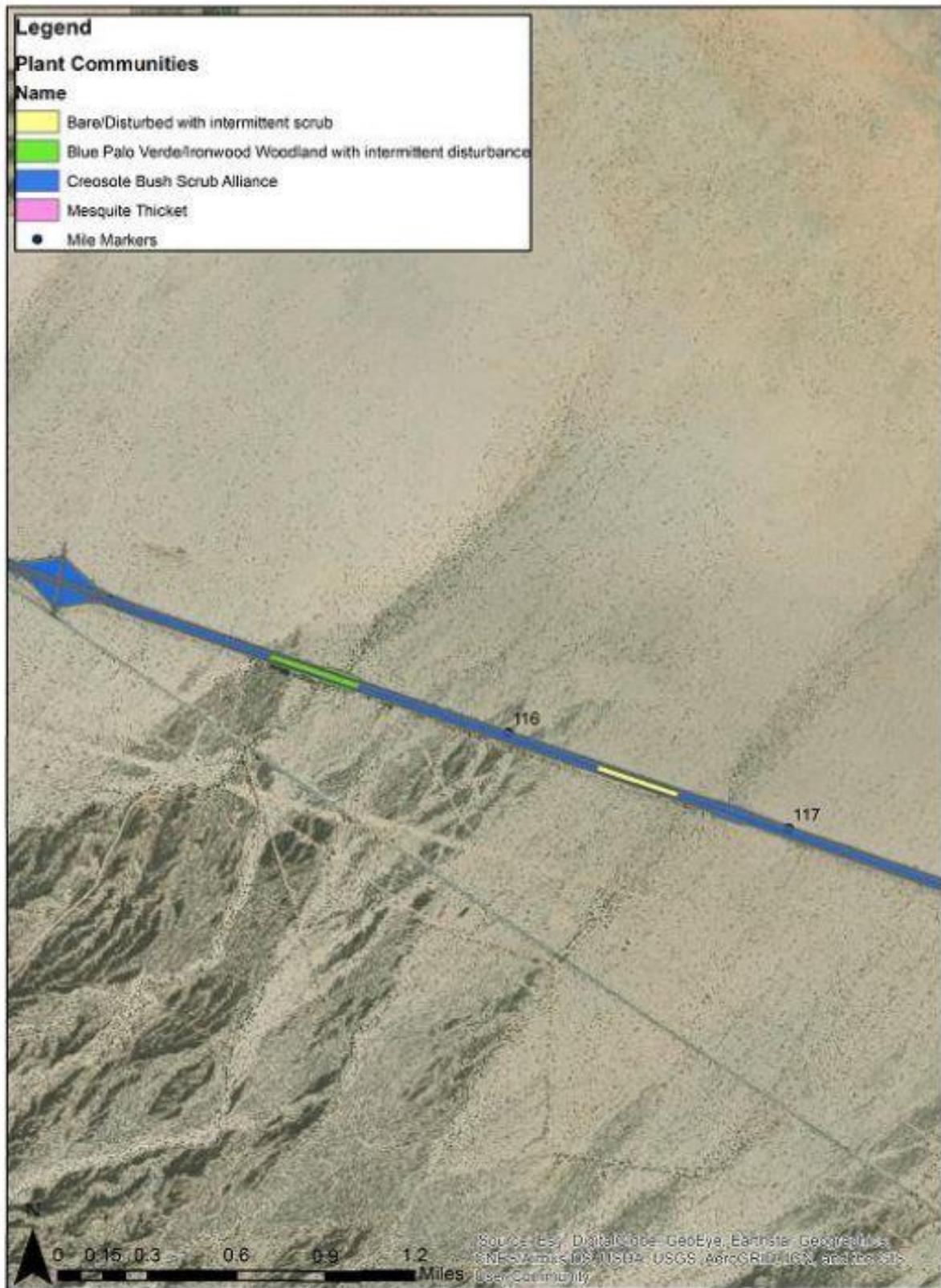
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Figure 2.3-1C: Plant Communities



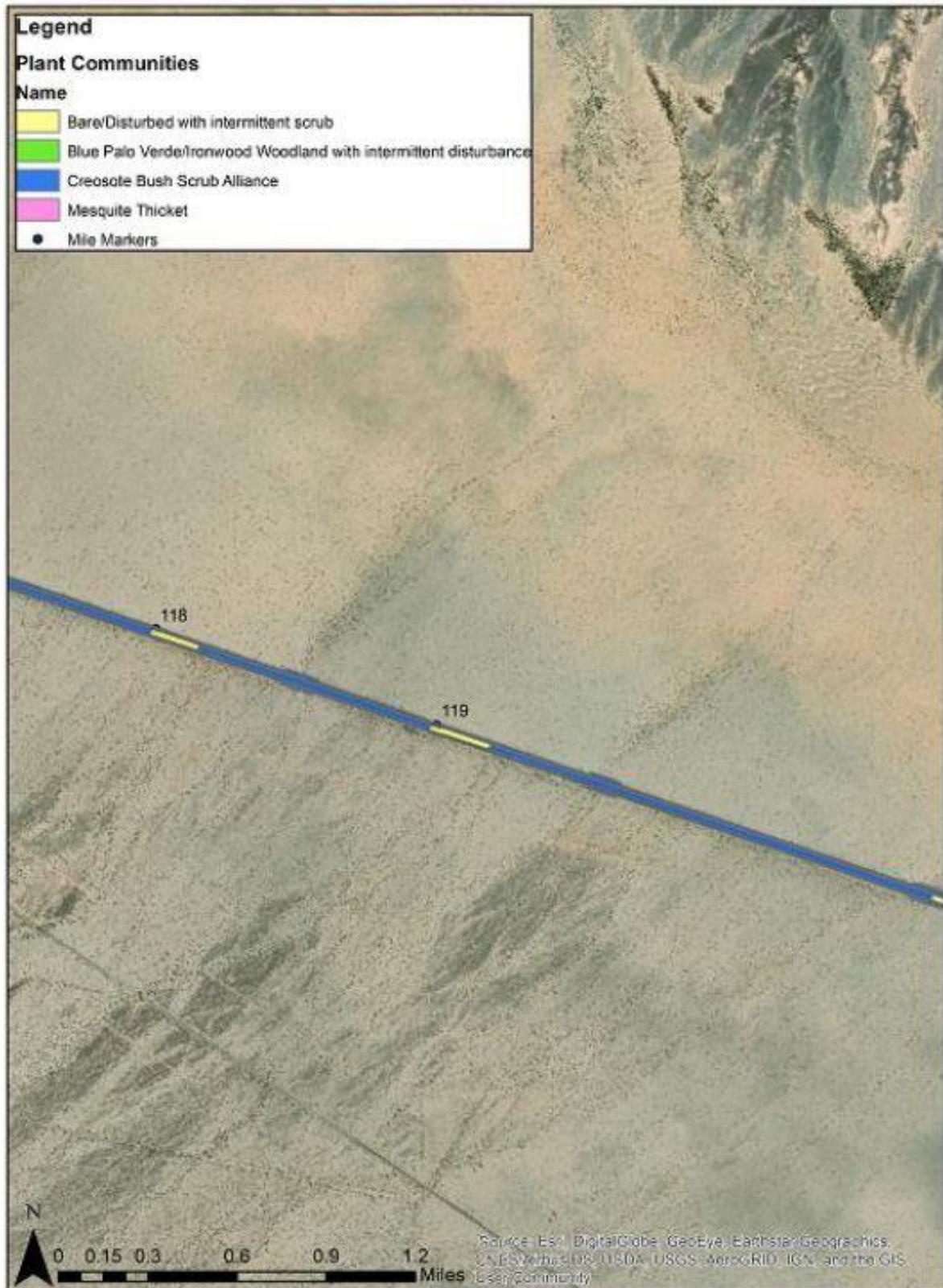
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Figure 2.3-1D: Plant Communities



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Figure 2.3-1E: Plant Communities



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Figure 2.3-1F: Plant Communities



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Figure 2.3-1G: Plant Communities



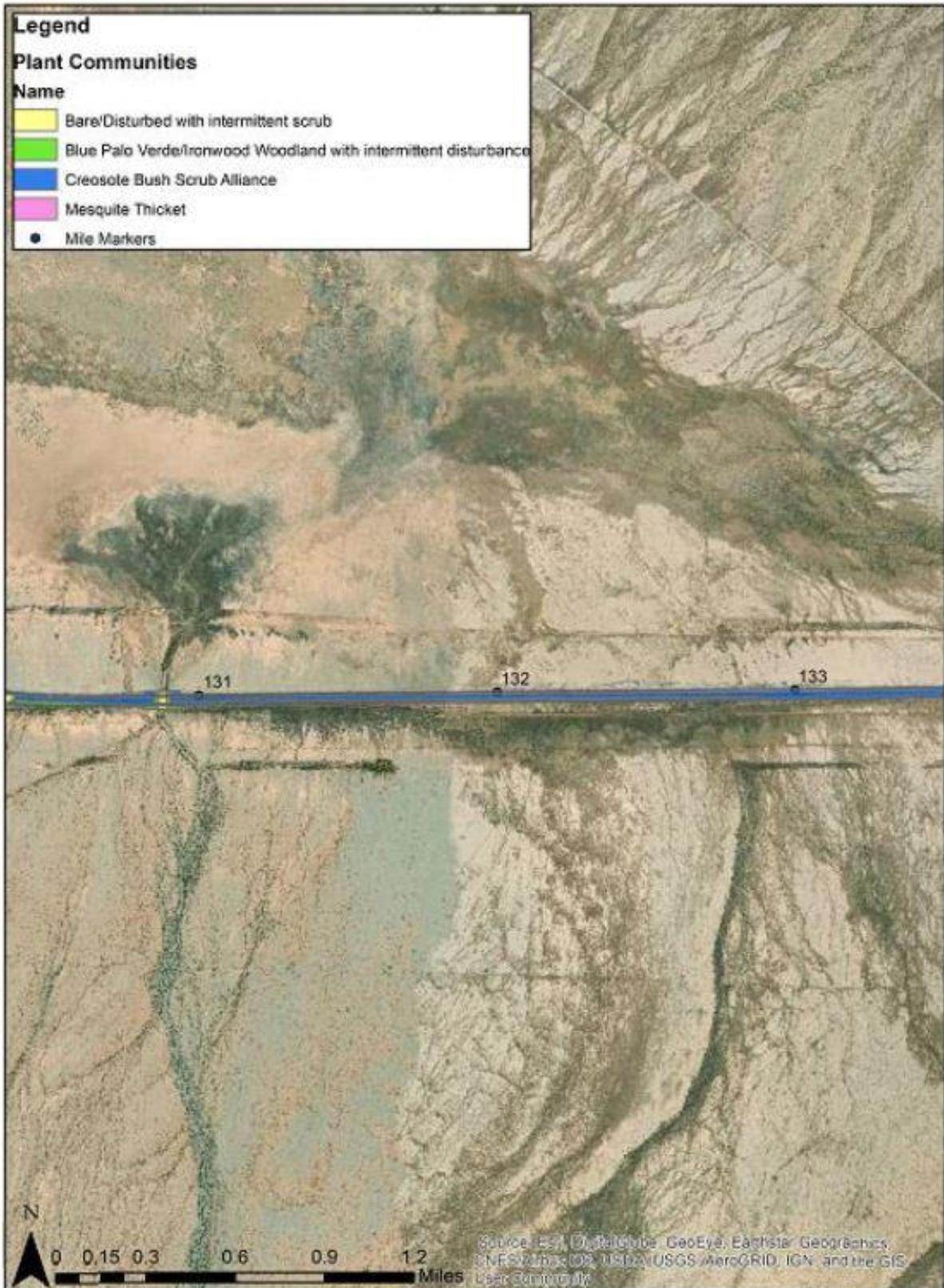
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Figure 2.3-1H: Plant Communities



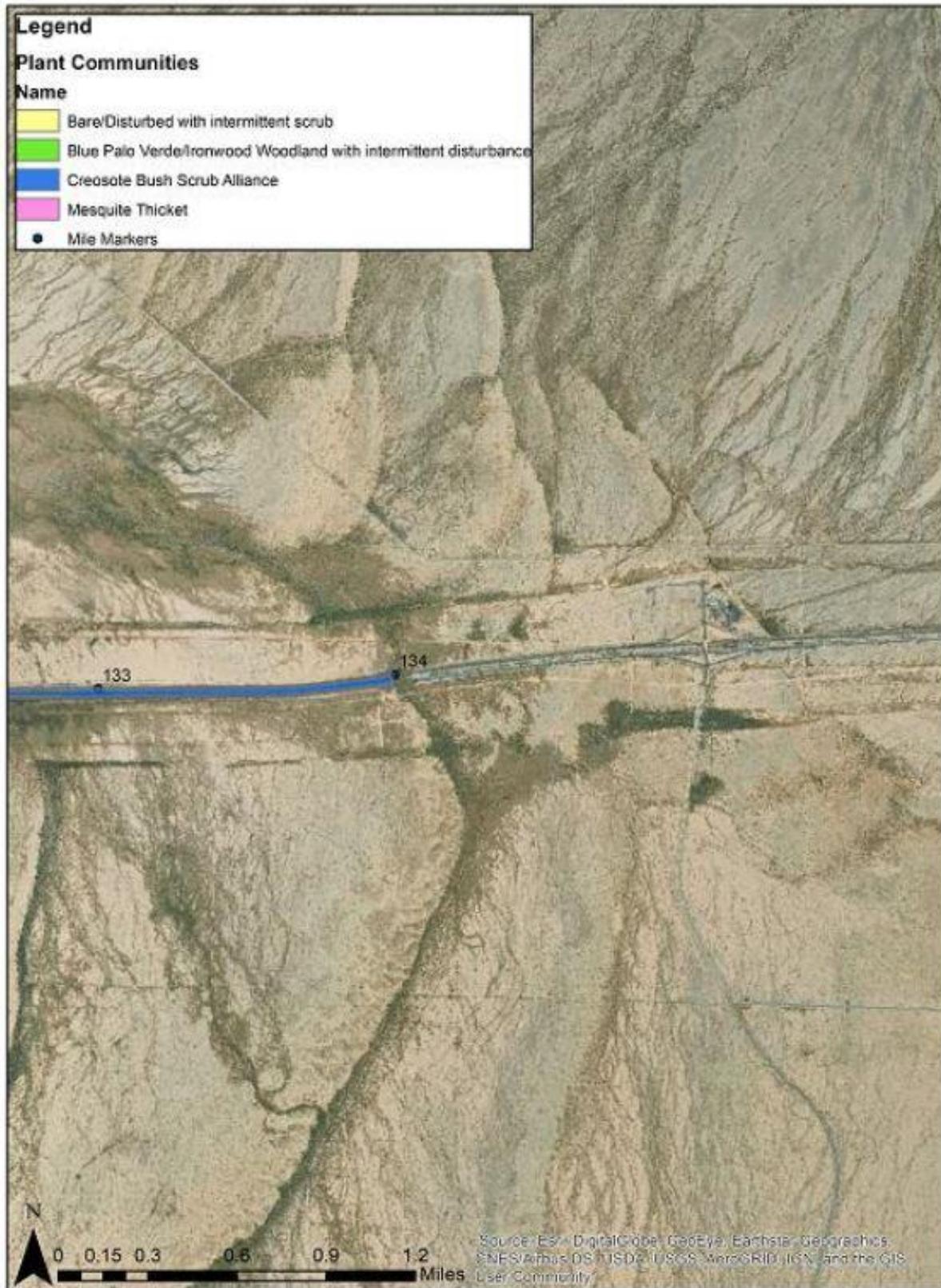
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Figure 2.3-1I: Plant Communities



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Figure 2.3-1J: Plant Communities



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2.3.1.2 Environmental Consequences

Permanent Impacts

No-Build Alternative

Under the No-Build Alternative, there would be no permanent or temporary impacts to natural communities.

Build Alternative

Under the Build Alternative, direct, permanent impacts are anticipated for blue palo verde – ironwood woodland, up to 62.01 acres within the PIA in desert washes located near bridges. Woodlands are located in drainages that flow parallel to the I-10 where work is scheduled to occur and therefore will be impacted by the project.

Implementing avoidance and minimization measures would also help minimize impacts to blue palo verde – ironwood woodland community. Included in the measures, a qualified biologist will perform a pre-construction plant survey no more than a week prior to ground breaking activities. Any rare plant individuals found would be flagged or fenced. In addition, impacts will be fully mitigated pursuant to state and federal requirements.

It is anticipated that the Build Alternative would have direct, permanent impacts on 0.29 acres of mesquite thickets, a community of special concern. Thickets are located south of the EB I-10 within the Caltrans ROW, where work is scheduled to occur. Measures to minimize impacts to mesquite thickets from human activity during construction would be implemented including a pre-construction plant survey to flag or fence any rare plants that might be present. In addition, long-term cumulative impacts to mesquite thickets would be mitigated pursuant to state and federal requirements, therefore, the proposed construction would not contribute to regional cumulative habitat loss.

2.3.1.3 Avoidance, Minimization, and/or Mitigation Measures

Natural community avoidance and minimization measures will include the following:

- BIO-3: Materials and Spoils Control.** Project materials will not be cast from the project site into nearby habitats and project related debris, spoils, and trash will be contained and removed to a proper disposal facility.
- BIO-4: Equipment Staging.** Equipment, vehicles, and materials staged and stored in Caltrans right-of-way will be sited in previously paved or previously disturbed areas only and will avoid native vegetation.
- BIO-5: De-Watering Plan.** For all bridges that cross jurisdictional drainages and are susceptible to running water, a de-watering/water control plan must be created and implemented in accordance with Caltrans Water Control Standard Specifications (Standard Specification 13-4.03G) if water is present or could be present during construction activities.

BIO-6: Dust Control. The contractor shall implement dust control measures during construction activities to avoid inundating surrounding vegetation and to ensure biological monitors on the project site have visibility for monitoring the covered species.

BIO-7: Rare Plant Pre-Construction Clearance Survey, Flagging, and Fencing. No more than one week prior to ground breaking activities, a qualified biologist must perform a pre-construction plant survey. Should any rare plants be found, individuals will be flagged for clear identification to ensure they are visible to construction personnel for avoidance. Should multiple plants in a single location be found, the groupings will be fenced with environmental sensitive temporary fencing.

2.3.2 WETLANDS AND OTHER WATERS

2.3.2.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a "least environmentally damaging practicable alternative" (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or the Department, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the [Water Quality section](#) for more details.

2.3.2.2 Affected Environment

Unless otherwise noted, the information from this section was synthesized from the NES prepared for the proposed project (Caltrans 2019a). References used in the NES and Delineation are not carried over into this section. A Jurisdictional Delineation was submitted to the USACE for their review of features determined to be potentially non-jurisdictional, under Sections 401 and 404 of the CWA, and these findings will be incorporated prior to Final Environmental Document and project approval.

Biological database queries were conducted for the entire Biological Study Area (BSA), which includes the entire project construction footprint plus a 500-foot buffer, including areas that fall outside of the Caltrans ROW. Biological surveys for jurisdictional delineation were conducted within ROW, from fence line to fence line. Work for this project is scheduled to occur only within the Caltrans ROW, including staging areas and detour lanes.

The biological field survey area is characterized by desert climatic conditions associated with the Sonoran Desert in southeastern California. The area receives less than five inches of rainfall annually. The project area is adjacent to undeveloped land and desert wilderness. The entire biological field survey area is located within the Southern Mojave and Imperial Reservoir Watersheds. The majority of the drainages in the region convey water runoff from surrounding mountain ranges to the Colorado River. Some drainages flow west and terminate at dry lakes. The volume of water conveyed is dependent on the magnitude and duration of storm events.

The topographic elevation of the area varies between 377 feet (115 meters) above mean sea level (MSL) and 935 feet (285 meters) above MSL; the area generally descends from west to east as the I-10 extends from the Eastern Sonoran Desert toward the Colorado River Valley.

The database review for jurisdictional delineation included review of aerial photographs, topographic maps, soil maps, and National Wetlands Inventory (NWI) maps. Field surveys entailed visits to all drainages as identified during desktop reviews while documenting changes in vegetation, hydrology, and location culverts. Jurisdictional delineation field surveys were conducted from July 23 to July 26, 2018. 44.10 acres of Waters of the State and CDFW streambeds are within the survey area. Streambanks at crossings have rip-rap, are paved with concrete, or a combination of both, except for Crossing 7, which is a concrete-lined culvert. The substrate of drainages is typically of coarse sand or fine sand, except for one crossing which has sandy loam and damp soil. Most drainages that traverse and parallel the project area flow 7 to 10 miles before reaching the isolated Palen Lake (dry). The easternmost drainages of the project area flow 1 to 5 miles before reaching Ford Dry Lake. There are no wetlands in the biological field survey area.

The study area contains 24 jurisdictional drainages. The drainages are considered ephemeral, thus having flowing water for brief periods of time, and flow into isolated waterbodies. None of the drainages within the project footprint flow into a navigable waterway, and therefore are not Waters of the United States (WOTUS) under the jurisdiction of the USACE. Prior to project approval, Caltrans will submit a letter requesting determination of non-jurisdiction and an approved jurisdictional delineation to USACE for concurrence (see BIO-29). Given a determination of non-jurisdiction by USACE, the project would not require a permit pursuant to Section 404 of the CWA. However, Waters of the State and CDFW streambeds are present.

Drainage features within an identifiable ordinary high-water mark or clearly defined bed and bank features are subject to Regional Water Quality Control Board (RWQCB) and CDFW jurisdiction. In addition, CDFW jurisdiction is extended to include adjacent riparian vegetation. It was determined that all the surveyed potential ephemeral drainages and stream crossings in the PIA fall under Regional Water Quality Control Board (RWQCB) and CDFW jurisdiction. The streambeds of the drainages are generally vegetated with blue palo verde, ironwood, smoketree, cheesebush, big galleta (*Hilaria rigida*), sweetbush, and desert lavender (*Condea emoryi*). The banks are dominated by creosote bush, white bursage, and brittlebush.

2.3.2.3 Environmental Consequences

Permanent Impacts

No-Build Alternative

Under the No-Build Alternative, no permanent impacts on wetland and other waters would occur.

Build Alternative

The PIA includes center medians, shoulders, and areas beneath all bridges and culverts. The area beneath all bridges and culverts includes the crossings mentioned above. Rock slope protection (RSP), in areas under bridges would be replaced and, at some locations, extended, and bridge supports (e.g., piers) would be added; which would result in permanent impacts. The construction of two temporary detour lanes in the median would also result in permanent impacts. Grading would be done to 5 feet from edge of existing shoulder (except at bridge locations), resulting in permanent impacts. In total, there would be permanent impacts to 0.12 acre of WSC and CDFW streambed. Table 2-15 summarizes permanent impacts to waters by

agency, and a description of permanent impacts is provided below. For a more detailed table and impacts by drainage name, see NES prepared for this project.

Table 2-15: Permanent Impacts to Wetlands and Other Waters by Agency

	US Army Corps of Engineers (acre)	Regional Water Quality Control Board (acre)	California Department of Fish and Wildlife (acre)
Permanent Impacts	0	0.12	0.12
Source: Delineation of Jurisdictional Waters (Caltrans, 2019)			

Impacts to Waters of the United States

None of the drainages in the project area have a nexus to a navigable water body; instead they flow into Palen Dry Lake and Ford Dry Lake. Palen Dry Lake and Ford Dry Lake are isolated waterbodies and are not classified as WOTUS. Thus, no temporary or permanent impacts to WOTUS would occur. An approved jurisdictional delineation and a letter requesting concurrence with a determination of non-jurisdiction for the drainages and stream crossings within the PIA will be submitted to the USACE prior to project approval. With a determination of non-jurisdiction from the USACE over potential ephemeral drainages and stream crossings within the PIA, no permits pursuant to Section 404 of the CWA for authorization of discharge of dredged or fill material into WOTUS, such as an individual permit (IP), would be required.

This project requires Rapid Stability Assessment (RSA) based on the criteria provided in Section 2 of the Caltrans Hydro Modification Guidance dated February 2015. RSA is used to address the downstream post-construction impacts, if any. The RSAs will be completed during the design phase.

Impacts to Waters of the State of California

The potential ephemeral drainages and stream crossings surveyed in the PIA are classified as WSC and are under the jurisdiction of RWQCB and CDFW. Much of the area of impacts associated with the project occurs within existing stream crossings (i.e., under bridges) and potential ephemeral drainages (i.e., in the median). As shown on Table 2-15, there would be permanent impacts to 0.12 acres of jurisdictional areas (WSC and CDFW streambeds) under the Build Alternative.

Construction activities will be limited to the smallest footprint possible within drainage features, and fencing will be erected along the construction footprint to avoid inadvertent disturbances to additional areas within the drainage.

Temporary Impacts

No-Build Alternative

Under the No-Build Alternative, no temporary impacts on wetland and other waters would occur.

Build Alternative

Table 2-16 below summarizes the temporary impacts to wetlands and other waters by agency. A more detailed table of impacts can be found in the NES. Under the Build Alternative, existing RSP would be removed and replaced with like features and extended in some areas; In addition, temporary access roads in the bridge work areas could temporarily impact stream crossings. These activities would result in 12.08 acres of temporary impacts to WSC and CDFW streambed.

Table 2-16: Temporary Impacts to Wetlands and Other Waters by Agency

	US Army Corps of Engineers (acre)	Regional Water Quality Control Board (acre)	California Department of Fish and Wildlife (acre)
Temporary Impacts	0	12.08	12.08
Source: Delineation of Jurisdictional Waters (Caltrans, 2019)			

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

In addition to the best management practices in the Storm Water Pollution Prevention Plan and new measure devised during the regulatory permit process, the following avoidance and minimization measures efforts will be implemented to minimize potential impacts:

- BIO-3: Materials and Spoils Control.** Project materials will not be cast from the project site into nearby habitats and project related debris, spoils, and trash will be contained and removed to a proper disposal facility.
- BIO-4: Equipment Staging.** Equipment, vehicles, and materials staged and stored in Caltrans right-of-way will be sited in previously paved or previously disturbed areas only and will avoid native vegetation.
- BIO-5: De-Watering Plan.** For all bridges that cross jurisdictional drainages and are susceptible to running water, a de-watering/water control plan must be created and implemented in accordance with Caltrans Water Control Standard Specifications (Standard Specification 13-4.03G) if water is present or could be present during construction activities.
- BIO-6: Dust Control.** The contractor shall implement dust control measures during construction activities to avoid inundating surrounding vegetation and to ensure biological monitors on the project site have visibility for monitoring the covered species.

- BIO-29: ACOE Coordination.** Prior to project approval, Caltrans will submit a letter requesting determination of non-jurisdiction and an approved jurisdictional delineation to USACE for concurrence.
- BIO-30: 401 Permit.** Prior to soil disturbance, a 401 permit will be obtained from the RWQCB.
- BIO-31: 1602 Permit.** Pursuant to Section 1600 of the California Fish and Game Code, an LSA would be obtained from the CDFW. Permanent impacts to drainages would be mitigated by land purchase, at a 1:1 ratio, in-lieu fee credit purchase or habitat restoration.

2.3.3 PLANT SPECIES

2.3.3.1 Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see Section 2.3.5 Threatened and Endangered Species, for detailed information about these species.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000-21177.

2.3.3.2 Affected Environment

Unless otherwise noted, the information from this section was synthesized from the NES prepared for the proposed project (Caltrans 2019a). References used in the NES are not carried over into this section.

Plant species in California that have special regulatory or management status were evaluated for potential to occur within the study area. To comply with the provisions of various state and federal environmental statutes and executive orders, the potential impacts to natural resources of the region were investigated and documented. A list of species and habitats within the project region was developed based on information compiled by the USFWS, CNDDDB, and other current publications.

The project area supports three native plant communities with various levels of disturbance: creosote bush scrub, blue palo verde woodland-ironwood woodland, and honey mesquite thickets. In addition, the project area supports bare/disturbed areas and roadway areas.

Creosote bush scrub comprises approximately 60.36 percent of the biological field survey area. Creosote bush scrub community is characterized by fairly open areas that are dominated by creosote bush (*Larrea tridentata*). Typically, this community occurs on well-drained sandy soils below 4,000 feet above mean sea level (amsl). Within the biological field survey area, other species present included white bursage (*Ambrosia dumosa*), cheesebush (*A. salsola*), spiny saltbush (*Atriplex confertifolia*), cattle saltbush (*A. polycarpa*), brittlebush (*Encelia farinosa*), desert tea (*Ephedra californica*), honey mesquite (*Prosopis glandulosa*), and sweetbush (*Bebbia juncea*).

Blue palo verde (*Parkinsonia florida*) and ironwood (*Olneya tesota*) are the codominant species or dominant species in the tree or tall shrub canopy in this community, which comprised approximately 8.5 percent of the survey area. This community is predominantly found in desert arroyo margins, seasonal watercourses and washes, bottomlands, middle and upper bajadas and alluvial fans, and lower slopes where soils are sandy, well drained, and derived from alluvium or colluvium. Other species present included smoketree (*Psoralea argophylla*), white bursage, and creosote bush.

Mesquite Thicket (*Prosopis glandulosa*) is dominant or codominant in the low tree canopy and comprised 0.22 percent of the survey area. This cover type is found on fringes of playa lakes, river terraces, stream banks, floodplains, rarely flooded margins of arroyos and washed, and sand dunes. It is also found commonly with narrowleaf willow (*Salix exigua*), Arroyo willow (*S. lasiolepis*), and elder (*Sambucus nigra*). Shrubs include iodine bush (*Allenrolfea occidentalis*), white bursage, fourwing saltbush (*Atriplex canescens*), and cattle saltbush (*Atriplex polycarpa*).

Bare/disturbed areas comprised about 4 percent of the biological field survey area. Bare/disturbed areas are areas where over 90 percent of the native vegetation has been removed, usually consisting of soft shoulders, staging areas, and gravel or dirty crossings adjacent to the highway. This does not include paved portions of the highway used directly for transportation.

Roadways accounted for approximately 26.90 percent of the biological field survey area and included the paved areas within the I-10 eastbound and westbound lanes and on-ramps.

The streambeds of the drainages were generally vegetated with blue palo verde (not listed [NL]), ironwood (NL), smoketree, cheesebush, big galleta (*Hilaria rigida*), sweetbush, and desert lavender (*Condea emoryi*). The banks were dominated by creosote bush (NL), white bursage (NL), and brittlebush (NL). A discussion on drainages and stream crossings is included in section 2.3.2.

Database searches were completed prior to conducting biological surveys to identify special status plant and wildlife species that have the potential to occur within the vicinity of the survey area. The database searches identified a total of 41 special status plant species with historical occurrences in and/or near the project site. Of these species, none were federally or State-listed as threatened or endangered.

Sensitive plant surveys were conducted on August 6 through 9, 2018 over the entire biological field survey area, which includes the project construction footprint within the Caltrans ROW from fence line to fence line. The biological field survey area is 29.10 miles long and averages 295 feet wide and includes areas containing native plant communities and areas that are disturbed/bare. Reference populations in the vicinity of the biological field survey area were visited for six special status plant species with blooming periods coinciding with the survey. For those species that were not likely to be identifiable during the survey period, biologists identified when the appropriate blooming period would occur. Sensitive plants with blooming periods outside of the dates of conducted surveys were documented as being potentially present with identified suitable habitat. Table 2-17 includes a description of special status plant species with no suitable habitat present in the BS. A total of 30 plants were observed and/or have suitable habitat in the BSA. One special status plant species, desert devil's claw, was observed within the PIA. In addition, four locally important species were observed (Table 2-18).

Figure 2.3-2: CNDDDB Occurrences of Special Status Plant Species within Surrounding Quadrangle Index

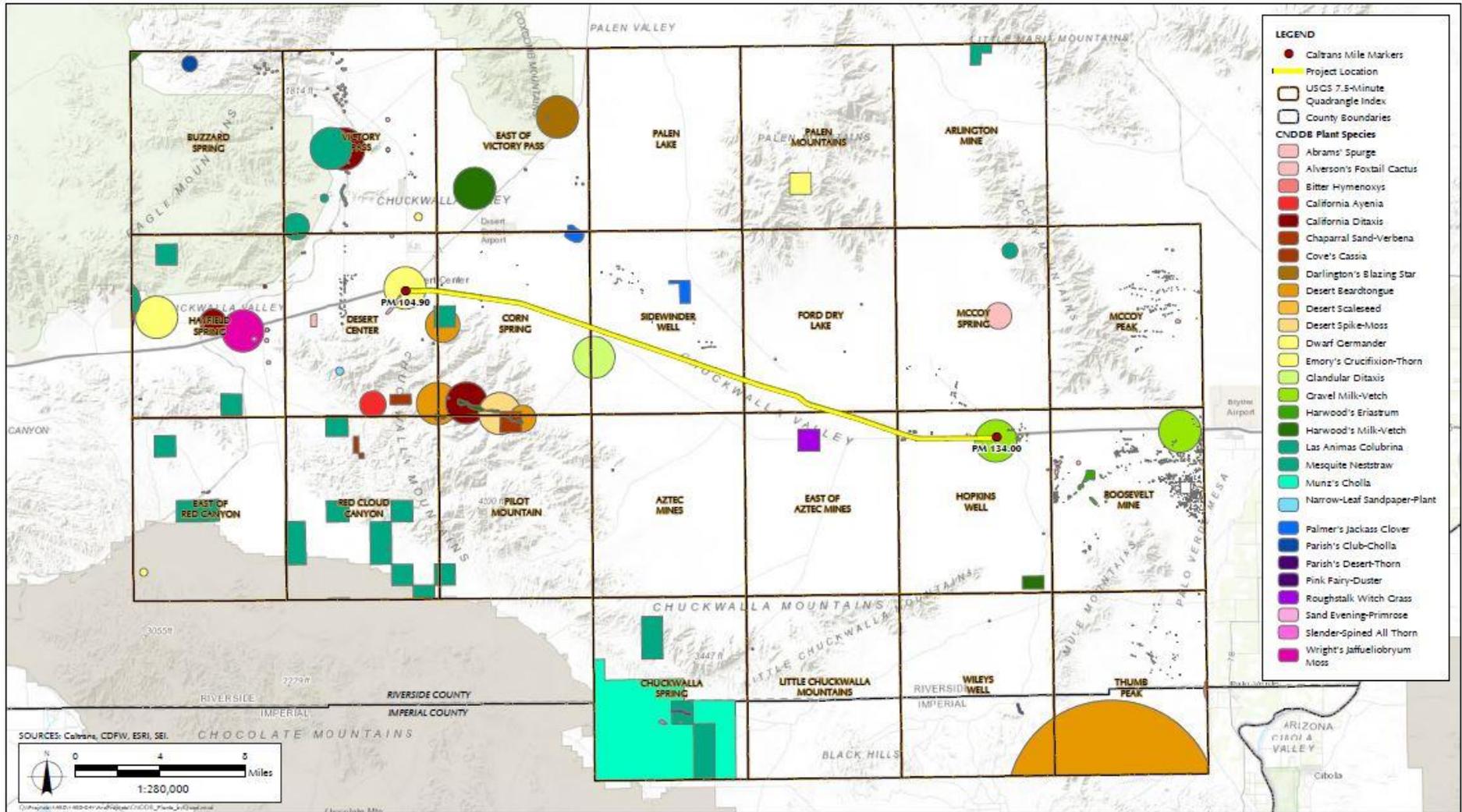


Table 2-17: Special Status Plant Species with the Potential to Occur in the Project Vicinity

Species Name	CRPR	Habitat Description	Habitat Presence	Rationale
chaparral sand-verbena (<i>Abronia villosa</i> var. <i>aurita</i>)	1B.1	Annual herb. Bloom period: (January) March–September. Sonoran Desert. Sandy places in coastal-sage scrub and chaparral; Elevation: < 1,600 m	HP	Suitable habitat exists in the BSA in sandy substrates within washes. This species was not observed during 2018 surveys.
Harwood’s milk-vetch (<i>Astragalus insularis</i> var. <i>harwoodii</i>)	2B.2	Annual herb. Bloom period: January–May. Mojave Desert. Desert dunes, open sandy flats and sandy or stony desert washes, mostly in creosote bush scrub; Elevation: –50–700m	A	No suitable habitat exists in the BSA as this species only occurs in the Mojave Desert. This species was not observed during 2018 surveys.
Providence Mountains milk-vetch (<i>Astragalus nutans</i>)	4.3	Annual herb. Bloom period: March–June (October). Sonoran Desert. Sandy flats, washes of desert foothills, with <i>Larrea</i> and <i>Yucca</i> ; Elevation: 450–2,000 m	A	No suitable habitat exists in the BSA as it is below the elevation limits for this species. This species was not observed during 2018 surveys. Annual not in bloom.
gravel milk-vetch (<i>Astragalus sabulonum</i>)	2B.2	Annual herb. Bloom period: February–June. Mojave and Sonoran Desert. Sandy or gravelly flats, washes, and roadsides; Elevation: –50–900 m	HP	Suitable habitat exists in sandy washes and near roadsides in the BSA. This species was not observed during 2018 surveys. Annual not in bloom. The species is presumed extant in the BSA (CNDDDB 1932).
California ayenia (<i>Ayenia compacta</i>)	2B.3	Perennial herb. Bloom period: March–April. Mojave and Sonoran Desert. Sandy and gravelly washes, dry canyons; Elevation: 100–1,160 m	HP	Suitable habitat is present in sandy washes in the BSA. This species was not observed during 2018 surveys.
fairyduster (<i>Calliandra eriophylla</i>)	2B.3	Perennial shrub. Bloom period: January–March. Sonoran Desert. Sandy washes, slopes, mesas; Elevation: 120–1,500 m	HP	Suitable habitat exists in sandy washes in the BSA. This species was not observed during 2018 surveys. The species is presumed extant in the project area (CNDDDB 1964).
Emory’s crucifixion-thorn (<i>Castela emoryi</i>)	2B.2	Perennial shrub. Bloom period: June–July. Mojave and Sonoran Desert. Dry, gravelly washes, slopes, and plains; Elevation: 88–2000 m	HP	Suitable habitat exists in sandy washes in the BSA. This species was not observed during 2018 surveys. The species is presumed extant in the 500-foot project buffer (CNDDDB 2011).
sand evening-primrose (<i>Chylismia arenaria</i>)	2B.2	Annual/perennial herb. Bloom period: March–April. Sonoran Desert. Sandy washes, rocky slopes, and desert scrub; Elevation: –70– 915 m	HP	Suitable habitat exists in sandy washes and desert scrub in the BSA. This species was not observed during 2018 surveys. Annual not in bloom.

Table 2-17: Special Status Plant Species with the Potential to Occur in the Project Vicinity, Continued

Species Name	CRPR	Habitat Description	Habitat Presence	Rationale
Las Animas colubrina (<i>Colubrina californica</i>)	2B.2	Perennial shrub. Bloom period: November–June. Mojave and Sonoran Desert. On narrow, steep, rocky ravines or washes; Elevation: 10–920 m	HP	Suitable habitat exists in washes in the BSA. This species was not observed during 2018 surveys.
spiny abrojo (<i>Condalia globosa</i> var. <i>pubescens</i>)	2B.3	Perennial shrub. Bloom period: March–June. Sonoran Desert. Scrub; Elevation: < 1,000 m	HP	Suitable habitat exists in the form of Sonoran Desert scrub in the BSA. This species was not observed during 2018 surveys.
Alverson’s foxtail cactus (<i>Coryphantha alversonii</i>)	4.2	Perennial shrub. Bloom period: March–June. Mojave and Sonoran Desert. Sandy or rocky habitat; sites from gravelly slopes and dissected alluvial fans. Granite substrate; Elevation: 75–1,525 m	HP	Suitable habitat exists near the BSA. This species was not observed during 2018 surveys. However, the species is presumed extant in the 500-foot project buffer per CNDDDB (1982).
Munz’s cholla (<i>Cylindropuntia munzii</i>)	4.3	Perennial stem succulent. Bloom period: April–June. Sonoran Desert. Gravelly or sandy soils of washes, canyon walls; Elevation: 150–600 m	HP	Suitable habitat exists in sandy soils of washes in the BSA. This species was not observed during 2018 surveys.
glandular ditaxis (<i>Ditaxis claryana</i>)	2B.2	Perennial herb. Bloom period: October, December, January–March. Sandy; Elevation: < 465 m.	HP	Suitable habitat exists in sandy areas in the BSA. This species was not observed during 2018 surveys. Annual not in bloom.
California ditaxis (<i>Ditaxis serrata</i> var. <i>californica</i>)	1B.3	Perennial herb. Bloom period: March–December. Mojave and Sonoran Desert. Washes, canyons; Elevation: 50–1,000 m	HP	Suitable habitat exists in washes in the BSA. This species was not observed during 2018 surveys.
Harwood’s eriastrum (<i>Eriastrum harwoodii</i>)	3.2	Annual herb. Bloom period: March–June. Mojave and Sonoran Desert. Sand dunes in creosote-bush scrub; Elevation: < 1,000 m	HP	Suitable habitat exists in sand dunes and creosote bush scrub in the BSA. This species was not observed during 2018 surveys. Annual not in bloom.
Abrams’ spurge (<i>Euphorbia abramsiana</i>)	2B.2	Annual herb. Bloom period: September–November. Sandy flats, mixed creosote bush scrub, banks of large washes; Elevation: –45–1,445 m	HP	Suitable habitat exists in creosote bush scrub and large washes in the BSA. This species was not observed during 2018 surveys. Annual not in bloom. The species is presumed extant in the 500-foot project buffer per CNDDDB (2011).
Utah vine milkweed (<i>Funastrum utahense</i>)	4.2	Perennial herb. Bloom period: April–September. Open, dry, sandy or gravelly areas; Elevation: < 1,000 m	HP	Suitable habitat exists in sandy areas in the BSA. This species was not observed during 2018 surveys.

Table 2-17: Special Status Plant Species with the Potential to Occur in the Project Vicinity, *Continued*

Species Name	CRPR	Habitat Description	Habitat Presenc	Rationale
Parish's club-cholla (<i>Grusonia parishii</i>)	2B.2	Perennial stem succulent. Creosote bush scrub, Joshua tree woodland; Bloom period: May-June (July). Elevation: 850-1370 m.	A	No suitable habitat exists in the BSA as it is below the elevation limits for this species. This species was not observed during 2018 surveys.
Wright's jaffueliobryum moss (<i>Jaffueliobryum wrightii</i>)	2B.3	Moss. No blooming period. Mojave and Sonoran Desert. Dry openings, rock crevices, carbonate; Elevation: 160–2,500 m	A	No suitable habitat due to a lack of rocky areas in the BSA. This species was not observed during 2018 surveys.
ribbed cryptantha (<i>Johnstonella costata</i>)	4.3	Annual herb. Bloom period: February–May. Mojave and Sonoran Desert. Fine sand deposits (coarser soils), creosote-bush scrub; Elevation: < 1,000 m	HP	Suitable habitat exists in creosote bush scrub in the BSA. This species was not observed during 2018 surveys. Annual not in
winged cryptantha (<i>Johnstonella holoptera</i>)	4.3	Annual herb. Bloom period: March–April. Mojave and Sonoran Desert. Gravelly to rocky soils, washes, slopes, ridges; Elevation: 50–1,220 m	HP	Suitable habitat exists in gravelly substrate and washes in the BSA. This species was not observed during 2018 surveys. Annual not in bloom.
slender-spined all thorn (<i>Koeberlinia spinosa</i> var. <i>tenuispina</i>)	2B.2	Perennial deciduous shrub. Bloom period: March–July. Sonoran Desert. Creosote-bush scrub; Elevation: 150–510 m	HP	Suitable habitat exists in creosote bush scrub in the BSA. This species was not observed during 2018 surveys.
Parish's desert-thorn (<i>Lycium parishii</i>)	2B.3	Perennial shrub. Bloom period: March–May. Sonoran Desert. Sandy to rocky slopes, canyons; Elevation: < 1,000 m	HP	Suitable habitat exists in sandy slopes in the BSA. This species was not observed during 2018 surveys.
Torrey's box-thorn (<i>Lycium torreyi</i>)	4.2	Perennial shrub. Bloom period: March–May. Mojave and Sonoran Desert. Washes or streambanks; Elevation: < 700 m	HP	Suitable habitat exists in washes in the BSA. This species was not observed during 2018 surveys.
Darlington's blazing star (<i>Mentzelia puberula</i>)	2B.2	Perennial herb. Bloom period: March–May. Mojave and Sonoran Desert. Sandy crevices in cliffs or on rocky slopes; Elevation: 70–1,280 m	A	No suitable habitat exists in the BSA due to a lack of crevices, cliffs, or rocky slopes. This species was not observed during 2018 surveys.
roughstalk witch grass (<i>Panicum hirticaule</i> ssp. <i>hirticaule</i>)	2B.1	Annual herb. Bloom period: August–December. Mojave and Sonoran Desert. Sandy, silty depressions; Elevation: 60–1,465 m	HP	Suitable habitat exists in sandy areas with depressions in the BSA. This species was not observed during 2018 surveys. The species is presumed extant in the 500-foot project buffer per CNDDDB (2011).
little-leaved palo verde (<i>Parkinsonia microphylla</i>)	4.3	Perennial deciduous shrub. Bloom period: April–May. Mojave and Sonoran Desert. Rock slopes; Elevation: 45–1,070 m	A	No suitable habitat exists in the BSA due to a lack of rocky slopes. This species was not observed during 2018 surveys.

Table 2-17: Special Status Plant Species with the Potential to Occur in the Project Vicinity, *Continued*

Species Name	CRPR	Habitat Description	Habitat Presence	Rationale
desert beardtongue (<i>Penstemon pseudospectabilis</i> ssp. <i>pseudospectabilis</i>)	2B.2	Perennial herb. Bloom period: January–May. Mojave and Sonoran Desert. Often in sandy washes; sometimes on rocky slopes; Elevation: 80–1,740 m	HP	Suitable habitat exists in sandy washes in the BSA. This species was not observed during 2018 surveys.
narrow-leaf sandpaper-plant (<i>Petalonyx linearis</i>)	2B.3	Perennial shrub. Bloom period: Year-round. Mojave and Sonoran Desert. Sandy or rocky canyons, generally in creosote-bush scrub; Elevation: –25–1,115 m	A	No suitable habitat exists in the BSA due to a lack of canyons. This species was not observed during 2018 surveys.
desert devil’s claw (<i>Proboscidea althaeifolia</i>)	4.3	Perennial herb. Bloom period: May–September. Sonoran Desert. gently sloping sandy flats and washes, sometimes roadsides; Elevation: < 1,000 m	O	Observed in the BSA, two individuals are located at Esso Ditch, near PM 126.30. Suitable habitat exists within the BSA.
Orocopia sage (<i>Salvia greatae</i>)	1B.3	Perennial evergreen shrub. Bloom period: March–April. Sonoran Desert. Alluvial slopes; Elevation: –40–825 m	A	No suitable habitat exists in the BSA due to a lack of alluvial slopes. This species was not observed during 2018 surveys.
desert spike-moss (<i>Selaginella eremophila</i>)	2B.2	Perennial rhizomatous herb. Bloom period: (May) June (July). Sonoran Desert. Shaded sites, sandy or gravelly soils at the base of rocks or in cracks; Elevation: < 1,295 m	HP	Suitable habitat exists in sandy soils in the BSA. This species was not observed during 2018 surveys.
Cove’s cassia (<i>Senna covesii</i>)	2B.2	Perennial herb. Bloom period: March–June (August). Sonoran Desert. Dry, sandy desert washes and slopes; Elevation: 225–1,295 m	HP	Suitable habitat exists in desert washes in the BSA. This species was not observed during 2018 surveys.
chickweed oxytheca (<i>Sidotheca caryophylloides</i>)	4.3	Annual herb. Bloom period: July–September (October). Western Traverse Ranges. Sand or gravel; Elevation: 1,114–2,600 m	A	No suitable habitat exists in the BSA as it is below the elevation limits for the species. This species was not observed during 2018 surveys.
desert scaleseed (<i>Spermolepis gigantea</i>)	2B.1	Annual herb. Bloom period: March - April. Sonoran Desert. Heavy soil under shrubs; Elevation: 150–400 m	A	No suitable habitat exists in the BSA due to a lack of heavy soils. This species was not observed during 2018 surveys.
mesquite neststraw (<i>Stylocline sonorensis</i>)	2A	Annual herb. Bloom period: March–April. Sonoran Desert. Open, sandy drainages with <i>Prosopis</i> ; Elevation: uncertain	HP	Suitable habitat exists in mesquite communities in the BSA. This species was not observed during 2018 surveys.

Table 2-17: Special Status Plant Species with the Potential to Occur in the Project Vicinity, *Continued*

Species Name	CRPR	Habitat Description	Habitat Presence	Rationale
dwarf germander (<i>Teucrium cubense</i> ssp. <i>depressum</i>)	2B.2	Annual herb. Bloom period: March–May (September–November). Sonoran Desert. Dunes, playa margins and scrub. Elevation < 400 m	HP	Suitable habitat exists in desert scrub in the BSA. This species was not observed during 2018 surveys. Annual not in bloom.
Chocolate Mountains tiquilia (<i>Tiquilia canescens</i> var. <i>pulchella</i>)	3.2	Perennial herb/shrub. Bloom period: February–May. Sonoran Desert. On slopes, ridges, or washes in scrub; Elevation: 250–600 m	HP	Suitable habitat exists in washes and scrub in the BSA. This species was not observed during 2018 surveys.
Palmer’s jackass clover (<i>Wislizenia refracta</i> ssp. <i>palmeri</i>)	2B.2	Perennial deciduous shrub. Bloom period: Year-round. Sonoran Desert. Sandy washes, dunes, desert scrub; Elevation: < 300 m	HP	Suitable habitat exists in sandy washes and desert scrub in the BSA. This species was not observed during 2018 surveys.
jackass-clover (<i>Wislizenia refracta</i> ssp. <i>refracta</i>)	2B.2	Annual herb. Bloom period: April–November. Mojave and Sonoran Desert. Sandy washes, roadsides, alkaline flats; Elevation: 90–1,600 m	HP	Suitable habitat exists in sandy washes and near roadsides in the BSA. This species was not observed during 2018 surveys.
<p>KEY: A = suitable habitat not present; CRPR = California Rare Plant Rank; HP = suitable habitat present; m = meters; O = observed in the survey area during biological field surveys.</p> <p><i>CNPS Rare Plant Rankings:</i> 2B - Plants rare, threatened, or endangered in California, but more common elsewhere. 3 - Plants about which more information is needed (Review List). 4 - Limited distribution (Watch List).</p> <p><i>Threat Ranks:</i> 1.1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat) 1.2 - Moderately threatened in California (20–80% occurrences threatened / moderate degree and immediacy of threat) 1.3 - Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)</p> <p>SOURCE: Baldwin, B.G., D.H. Goldman, D.K. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. The Jepson Manual of Vascular Plants of California, 2nd Edition. Berkeley, CA: University of California Press. Calflora. 2018. Calflora Online Database. Available at: www.calflora.org California Department of Fish and Wildlife. 2019. Rarefind 5: California Natural Diversity Database. Sacramento, CA. California Native Plant Society. 2019. CNPS Electronic Inventory. Available at: www.cnps.org</p>				

Table 2-18: Locally Important Plant Species Observed in the Biological Study Area

Common/Scientific	Status	Habitat Description	Bloom Period*	Observation Details
desert ironwood (<i>Olneya tesota</i>)	CDNPA	Desert washes. Elevation < 400 m	February–March	Fewer than 10 individuals
blue palo verde (<i>Parkinsonia florida</i>)	CDNPA	Creosote bush scrub, washes, and floodplains; Elevation: approximately 1,100 m	April–May	Fewer than 10 individuals
honey mesquite (<i>Prosopis glandulosa</i> var. <i>torreyana</i>)	CDNPA	Grassland, alkali flats, washes, bottoms, sandy alluvial flats, and mesas; Elevation: < 1,700 m	April–August	Fewer than 10 individuals
smoke tree (<i>Psoralea arguta</i>)	CDNPA	Desert washes; Elevation: < 400 m	June–July, October–November	Fewer than 10 individuals
<p>KEY: CDNPA = Protected under the California Desert Native Plants Act; m = meters</p> <p>NOTE: All of the species in this table are perennial shrubs. Where species range differs between sources, the most inclusive range is included in the habitat description.</p> <p>SOURCE: Baldwin, B.G., D.H. Goldman, D.K. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. <i>The Jepson Manual of Vascular Plants of California</i>, 2nd Edition. Berkeley, CA: University of California Press. Calflora. 2018. Calflora Online Database. Available at: www.calflora.org</p>				

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Special Status Plant Species

The California Native Plant Society (CNPS) Rare Plant Ranking system ranges from presumed extinct species California Rare Plant Rank (CRPR) 1A, to limited distribution species now on a watch list CRPR 4. Ranks at each level also include a threat rank and are determined as follows:

- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

(California Native Plant Society)

Thirty (30) sensitive plants with blooming periods outside of the dates of conducted surveys were documented as being potentially present with identified suitable habitat.

Desert Devil's Claw

Desert devil's claw is a native perennial herb in the family Martyniaceae that blooms from May to September. This species occurs in the Sonoran Desert on gently sloping sandy flats and washes at elevations less than 1,000 meters above Mean Sea Level (MSL). It has a CRPR of 4.3. Two individuals of this species were observed in Esso Ditch (PM 126.30) in the PIA during August 2018 surveys.

Alverson's Foxtail Cactus

Alverson's foxtail cactus is a native perennial shrub that blooms from March to June. This species occurs in the Sonoran Desert on sandy or rocky habitat, gravelly slopes, and dissected alluvial fans at elevations 75 to 1,525 meters above MSL. It has a CRPR of 4.2. This species was not observed during August 2018 surveys, although suitable habitat was present near the biological field survey area and the species is presumed extant in the outer portion of the BSA (Table 2-17).

Chaparral Sand-Verbena

Chaparral sand-verbena is a native annual herb that blooms in January and from March to September. This species occurs in the Sonoran Desert in sandy places in coastal-sage scrub and chaparral at elevations less than 1,600 meters above MSL. It has a CRPR of 1B.1. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Gravel Milk-Vetch

Gravel milk-vetch is a native annual herb that blooms from February to June. This species occurs in the Sonoran Desert on sandy or gravelly flats, washes, and roadsides at elevations

less than 900 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17). This species may have been present but not detectable during the surveys conducted outside of the blooming period.

California Ayenia

California ayenia is a native perennial herb that blooms from March to April. This species occurs in the Sonoran Desert on sandy and gravelly washes and dry canyons at elevations between 100 and 1,160 meters above MSL. It has a CRPR of 2B.3. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17). This species may have been present but not detectable during the surveys conducted outside of the blooming period.

Fairyduster

Fairyduster is a native perennial shrub that blooms from January to March. This species occurs in the Sonoran Desert within sandy washes, and on slopes and mesas between 120 and 1,500 meters above MSL. It has a CRPR of 2B.3. This species was not observed during August 2018 surveys, although suitable habitat was present within BSA (Table 2-17). This species may have been present but not detectable during the surveys conducted outside of the blooming period.

Emory's Crucifixion-Thorn

Emory's crucifixion thorn is a native perennial shrub that blooms from June to July. This species occurs in the Sonoran Desert in dry, gravelly washes, slopes, and plains between 88 and 2,000 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Sand Evening-Primrose

Sand evening-primrose is a native annual/perennial herb that blooms from March to April. This species occurs in the Sonoran Desert near sandy washes, rocky slopes, and desert scrub between -70 and 915 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17). This species may have been present but not detectable during the surveys conducted outside of the blooming period.

Las Animas Colubrina

Las Animas colubrina is a native perennial shrub that blooms from November to June. This species occurs in the Sonoran Desert and elevations under 920 meters. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Spiny Abrojo

Spiny abrojo is a native perennial shrub that blooms from March to June. This species occurs in the Sonoran Desert and elevations under 1,000 meters. It has a CRPR of 2B.3. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Munz's Cholla

Munz's cholla is a native perennial stem succulent that blooms from April to June. This species occurs in the Sonoran Desert on gravelly or sandy soils of washes, canyon walls at elevations between 150 and 600 meters above MSL. It has a CRPR of 4.3. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Glandular Ditaxis

Glandular ditaxis is a native perennial herb that blooms in October, in December, and from January to March. This species occurs in sandy areas at elevations less than 465 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

California Ditaxis

California ditaxis is a native perennial herb that blooms between March and December. This species occurs in washes and canyons within the Sonoran Desert at elevations less than 1,000 meters above MSL. It has a CRPR of 1B.3. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Harwood's Eriastrum

Harwood's eriastrum is a native perennial herb that blooms from March to June. This species occurs in the Sonoran Desert sand dunes and creosote-bush scrub at elevations less than 1,000 meters above MSL. It has a CRPR of 3.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Abrams' Spurge

Abrams' spurge is a native annual herb that blooms between September and November. This species occurs in sandy flats, mixed creosote-bush scrub, and banks of large washes at elevations between -45 and 1,445 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17). This species may have been present but not detectable during the surveys conducted outside of the blooming period.

Utah Vine Milkweed

Utah vine milkweed is a native annual herb that blooms from April to September. This species occurs in open, dry, sandy, or gravelly areas at elevations less than 1,000 meters above MSL. It has a CRPR of 4.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Ribbed Cryptantha

Ribbed cryptantha is an annual herb that blooms from February to May. This species occurs in the Sonoran Desert in fine sand deposits and creosote-bush scrub at elevations less than 1,000 meters above MSL. It has a CRPR of 4.3. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17). This species may have been present but not detectable during the surveys conducted outside of the blooming period.

Winged Cryptantha

Winged cryptantha is a native annual herb that blooms from March to April. This species occurs in the Sonoran Desert in gravelly to rocky soils, washes, slopes and ridges at elevations between 50 and 1,220 meters above MSL. It has a CRPR of 4.3. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17). This species may have been present but not detectable during the surveys that were conducted outside of the blooming period.

Slender-Spined All Thorn

Slender-spined all thorn is a native perennial deciduous shrub that blooms from March to July. This species occurs in the Sonoran desert in creosote-bush scrub at elevations between 150 and 510 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Parish's Desert-Thorn

Parish's desert-thorn is a native perennial shrub that blooms from March to May. This species occurs in the Sonoran Desert in sandy to rocky slopes and canyons at elevations less than 1,000 meters above MSL. It has a CRPR of 2B.3. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Torrey's Box-Thorn

Torrey's box-thorn is a native perennial shrub that blooms from March to May. This species occurs in the Sonoran Desert on washes and streambanks at elevations less than 700 meters above MSL. It has a CRPR of 4.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Roughstalk Witchgrass

Roughstalk witchgrass is a native annual herb that blooms from August to December. This species occurs in the Sonoran Desert in sandy, silty depressions at elevations between 60 and 1,465 meters above MSL. It has a CRPR of 2B.1. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Desert Beardtongue

Desert beardtongue is a native perennial herb that blooms from January to May. This species occurs in the Sonoran Desert in sandy washes and sometimes on rocky slopes at elevations

between 80 and 1,740 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Desert Spike-Moss

Desert spike-moss is a native perennial rhizomatous herb that blooms from May to July. This species occurs in the Sonoran Desert in shaded sites, sandy or gravelly soils at the base of rocks or in cracks at elevations less than 1,295 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17). This species may have been present but not detectable during the surveys conducted outside of the blooming period.

Cove's Cassia

Cove's cassia is a native perennial herb that blooms from March to June and in August. This species occurs in the Sonoran Desert in dry, sandy desert washes and slopes at elevations between 225 and 1,295 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Mesquite Neststraw

Mesquite neststraw is a native annual herb that blooms from March to April. This species occurs in the Sonoran Desert in open, sandy drainages with mesquite thickets. It has a CRPR of 2A. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17). This species may have been present but not detectable during the surveys that were conducted outside of the blooming period.

Dwarf Germander

Dwarf germander is a native annual herb that blooms from March to May and from September to November. This species occurs in the Sonoran Desert on dunes, playa margins, and scrub at elevations less than 400 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17). This species may have been present but not detectable during the surveys that were conducted outside of the blooming period.

Chocolate Mountains Tiquilia

Chocolate mountains tiquilia is a native perennial herb that blooms from February to May. This species occurs in the Sonoran Desert on slopes, ridges, or washes in scrub at elevations between 250 and 600 meters above MSL. It has a CRPR of 3.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Palmer's Jackass Clover

Palmer's jackass clover is a native perennial deciduous shrub that blooms year-round. This species occurs in the Sonoran Desert on sandy washes, dunes, and desert scrub at elevations

less than 300 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

Jackass-Clover

Jackass clover is a native annual herb that blooms between April and November. This species occurs in the Sonoran Desert in sandy washes, near roadsides, and on alkaline flats at elevations between 90 and 1,600 meters above MSL. It has a CRPR of 2B.2. This species was not observed during August 2018 surveys, although suitable habitat was present within the BSA (Table 2-17).

2.3.3.3 Environmental Consequences

No-Build Alternative

No permanent impacts to plant species would occur under the No-Build Alternative.

Build Alternative

Suitable habitat was present in the survey area for 30 special status plant species, none of which were observed except for two individuals of desert devil's claw located in Esso Ditch beneath the I-10 where work is scheduled to occur. It is not anticipated that the project would have an adverse permanent or temporary impact on the above 30 special plant species because no individuals were observed, except for desert devil's claw.

Species that were not likely to be identifiable during the survey period because the surveys were conducted outside the blooming periods may potentially be present within identified suitable habitat. To avoid potential permanent or temporary impacts, a qualified biologist will perform a pre-construction plant survey. Should any rare plants be found, individuals will be flagged for clear identification to ensure they are visible to construction personnel for avoidance. If a special status plant species is found within the work area, the authorized, contractor-supplied biologist will contact the appropriate resource agency(s) to determine the time and suitable translocation area for the plant species to be moved. In addition, the avoidance and minimization measures listed below would be implemented to avoid or reduce impact to the plant species that could be present.

2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

Avoidance and minimization measures for the 29 special status plant species with suitable habitat, as well as the observed individuals of desert devil's claw, within the project area include the following:

BIO-1: Biological Monitor. An authorized contractor-supplied biologist will be designated to oversee compliance of all protective measures and will monitor all construction-related activities. The biological monitor will notify the resident engineer of project activities that may not be in compliance. The resident engineer will stop work until the protective measures are implemented fully.

BIO-2: Worker Environmental Awareness Training. A qualified biologist will present to each employee (including temporary, contractors, and subcontractors) a worker environmental awareness training prior to the initiation of work. They will be advised

- of the special status species in the project area, the steps to avoid impacts to the species and the potential penalties for taking such species. At a minimum, the program will include the following topics: Occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area environs. Included in this program will be color photos of the listed species, which will be shown to the employees. Following the education program, the photos will be posted in the contractor and resident engineer office, where they will remain through the duration of the project. The contractor, resident engineer, and the qualified biologist will be responsible for ensuring that employees are aware of the listed species. If additional employees are added to the project after initiation, they will receive instruction prior to working on the project.
- BIO-3: Materials and Spoils Control.** Project materials will not be cast from the project site into nearby habitats and project related debris, spoils, and trash will be contained and removed to a proper disposal facility.
- Bio-4: Equipment Staging.** Equipment, vehicles, and materials staged and stored in Caltrans right-of-way will be sited in previously paved or previously disturbed areas only and will avoid native vegetation.
- BIO-6: Dust Control.** The contractor shall implement dust control measures during construction activities to avoid inundating surrounding vegetation and to ensure biological monitors on the project site have visibility for monitoring the covered species.
- BIO-7: Rare Plant Pre-Construction Clearance Survey, Flagging, and Fencing.** No more than one week prior to ground breaking activities, a qualified biologist must perform a pre-construction plant survey. Should any rare plants be found, individuals will be flagged for clear identification to ensure they are visible to construction personnel for avoidance. Should multiple plants in a single location be found, the groupings will be fenced with environmental sensitive temporary fencing.
- BIO-8: Rare Plant Translocation.** If a special status plant species is found within the work area, the authorized, contractor-supplied biologist will contact the appropriate resource agency(s), to determine the time and suitable translocation area for the plant species to be moved. Additional requirements and actions will be determined at the time in which such an action arises.

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2.3.4 ANIMAL SPECIES

2.3.4.1 Regulatory Setting

Federal and State Regulations

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species Section 2.3.5. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code

Sections 4150 and 4152 of the California Fish and Game Code

Local Regulations

Riverside County General Plan

The Multipurpose Open Space Element of the General Plan compiles regulations and guidelines for preserving and enhancing open space. The policies are set to achieve balance between urban uses and open space habitat in the unincorporated areas of the County and on public lands owned by the County. Policies include the permanent preservation of open space lands that contain important natural resources: oak trees, superior examples of native trees, forest resources, natural vegetation, and stands of established trees and other features for the ecosystem. Riverside County also values the preservation of aesthetic scenic recreational value, scenic highways, and water conservation. Multiple Species Habitat Conservation Plans have been adopted for the western Riverside County and Coachella Valley areas.

Palo Verde Area Plan

The Palo Verde Valley Area Plan offers additional policy guidance to local land use issues unique to the area. The focal point addresses watershed, floodplain, watercourses, and habitat conservation policies, specifically of environmentally sensitive lands and riparian area management. A specific “Policy Area” of the Plan located in the project area is the Wiley’s Well Road Policy Area.

Desert Center Area Plan

The Desert Center Area Plan offers additional policy guidance to local land use issues unique to the area. The focal point addresses preservation of scenic highways, environmentally sensitive lands, and wildlife habitat, specifically Desert Tortoise Critical Habitat (DTCH). A specific “Policy Area” of the Plan located in the project area is the Desert Center Policy Area.

Caltrans Bat Policy

The Caltrans Bat Policy states that Caltrans' projects will not interfere substantially with the movement of any bat species or with established migratory corridors. Projects and programs avoid, minimize, mitigate, and provide enhancement for potentially substantial adverse effects. This is done either directly or through habitat modifications, for 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. Documentation of considerations and analysis for actions proposed to comply with these regulations shall be included in the environmental documentation prepared for the proposed action.

2.3.4.2 Affected Environment

Unless otherwise noted, the information from this section was synthesized from the NES prepared for the proposed project (Caltrans 2019a). References used in the NES are not carried over into this section. In order to comply with the provisions of various state and federal environmental statutes and executive orders, the potential impacts to natural resources of the region were investigated and documented. A list of species and habitats within the project region was developed based on information compiled by the USFWS, CNDDDB, and other current publications. The project site was field reviewed to identify animal species, specifically desert tortoise and burrowing owl.

The Biological Study Area (BSA), which was used for biological database queries, includes the project construction footprint plus a 500-foot buffer. Biological field surveys were conducted within the Caltrans right of way (ROW) only (from fence line to fence line between PM 104.90 and PM 134.00). Within the biological field survey area, the I-10 consists of a four-lane divided freeway with a dirt median separating the roadbeds. The biological field survey area is characterized by desert climatic conditions associated with the Sonoran Desert in southeastern California.

Individuals or evidence of 20 common wildlife species were identified within the biological field survey area, including 1 invertebrate, 6 reptiles, 11 birds, and 2 mammals. These species included: darkling beetle (*Tenebrionidae* sp.), western whiptail (*Cnemidophorus tigris*), zebra-tailed lizard (*Callisaurus draconoides*), desert iguana (*Dipsosaurus dorsalis*), coachwhip

(*Masticophis flagellum*), desert spiny lizard (*Sceloporus magister*), common side-blotched lizard (*Uta stansburiana*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), roadrunner (*Geococcyx californianus*), loggerhead shrike (*Lanius ludovicianus*), house sparrow (*Passer domesticus*), Western tanager (*Piranga ludoviciana*), hummingbird (*Phaethornis* spp.), Eurasian collared-dove (*Streptopelia decaocto*), mourning dove (*Zenaida macroura*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), and coyote (*Canis latrans*).

20 special status wildlife species were identified through desktop analysis with historical occurrences in the vicinity of the survey area as of July 20, 2018. Three of these species are federally-listed, State Fully Protected, and/or State-listed: desert tortoise, desert bighorn sheep, and elf owl. In addition, 17 of these species are afforded other special status designations by resource organizations. These species, a brief description of their habitat, observed or assumed presence, and assumptions or observations regarding presence are listed in Table 2-19.

As shown in Table 6, of the 20 special status wildlife species with the potential to occur in the project vicinity, eleven special status species have suitable habitat in the BSA. One special status species with the potential to occur in the project vicinity, loggerhead shrike, was observed in the BSA. Loggerhead shrike is discussed below due to its CDFW Species of Special Concern (SSC) and USFWS Bird of Conservation Concern (BCC). Focused surveys were conducted in August 2018 for burrowing owl and for desert tortoise in July 2018. The entire BSA falls within the historic range of desert tortoise. Further discussion on threatened and endangered species is included in section 2.3.5.

No bats were observed in culverts or under bridges within the biological field survey area. Bat signs such as the presence of guano and urine stains were not observed.

Table 2-19: Listed and Special Status Wildlife Species with the Potential to Occur in the Project Vicinity

Common/Scientific Name	Status	Habitat Description	Habitat Presence	Rationale
Amphibians and Reptiles				
Couch's spadefoot (<i>Scaphiopus couchii</i>)	SSC, BLM:S	Occurs in Imperial County and San Bernardino County. Inhabits desert and arid regions of grassland, prairie, mesquite, creosote bush, thorn forest, and sandy washes. Spends 8 - 10 months each year buried in the ground, emerging briefly during spring and summer rains. Reproduction is aquatic.	A	The BSA is outside the range for this species. This species was not observed during 2018 surveys.
desert tortoise (<i>Gopherus agassizii</i>)	FT, ST	Occurs in almost every desert habitat, more commonly in desert scrub, desert wash, and Joshua tree habitats. Creosote bush habitat with large annual wildflower blooms preferred. Requires friable soil for burrow and nest construction.	HP	Suitable habitat exists within the BSA and PIA (most of which is in the I-10 median) within desert scrub communities but is considered degraded due to the presence of the I-10 corridor. This species was not observed during 2018 surveys; however, one active and two inactive desert tortoise burrows were observed in the BSA in 2017.
Mojave fringe-toed lizard (<i>Uma scoparia</i>)	SSC, BLM:S	Inhabits fine, loose, wind-blown sand in sand dunes, dry lakebeds, riverbanks, desert washes, sparse alkali scrub, and desert scrub. Reproduction varies from year to year depending on the amount of rainfall; eggs are buried in the sand.	HP	Suitable habitat including desert washes and desert scrub, exists within the BSA. This species was not observed during 2018 surveys. The species is presumed extant in the outer portion of the BSA per CNDDDB (1938).

Table 2-19: Listed and Special Status Wildlife Species with the Potential to Occur in the Project Vicinity, *Continued*

Common/ Scientific Name	Status	Habitat Description	Habitat Presence	Rationale
Birds				
golden eagle (<i>Aquila chrysaetos</i>)	FP, BCC, WL, BLM:S	Inhabits rolling foothills, mountain areas, sage- juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	A	No suitable foraging or nesting habitat exists within the BSA because open terrain is required. This species was not observed during 2018 surveys.
burrowing owl (<i>Athene cunicularia</i>)	SSC, BCC, BLM:S	Inhabits open, dry annual or perennial grasslands, deserts, and scrublands characterized by low- growing vegetation. Nests in rodent burrows or may create a burrow.	HP	No burrowing owls were found within the BSA during surveys conducted in August 2018. Lack of burrows, burrow surrogates or evidence, but suitable habitat exists within the PIA.
merlin (<i>Falco columbarius</i>)	WL	Inhabits seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands & deserts, or farms & ranches for foraging. Does not breed in California.	HP	Suitable foraging habitat exists within the BSA. This species was not observed during 2018 surveys.
prairie falcon (<i>Falco mexicanus</i>)	WL, BCC	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	HP	Suitable foraging and stopover habitat exist within the BSA; however, no suitable nesting habitat was present. This species was not observed during 2018 surveys.
loggerhead shrike (<i>Lanius ludovicianus</i>)	BCC, SSC	Prefers open habitats, with scattered shrubs, trees, or fences for perching and foraging. Requires fairly dense shrubs and brush for nesting.	O	Suitable habitat exists within the PIA. One individual was observed in the BSA during 2018 surveys.

Table 2-19: Listed and Special Status Wildlife Species with the Potential to Occur in the Project Vicinity, *Continued*

Common/Scientific Name	Status	Habitat Description	Habitat Presence	Rationale
elf owl (<i>Micrathene whitneyi</i>)	SE, BLM:S, BCC	In California, nesting area limited to cottonwood- willow and mesquite riparian zone along the Colorado River. Nests in deserted woodpecker holes, often in larger trees which offer insulation from high daytime temperatures.	HP	Suitable habitat exists in the BSA. This species was not observed during 2018 surveys. However, the species is presumed extant in the outer portion of the BSA per CNDDDB (1973).
black-tailed gnatcatcher (<i>Poliophtila melanura</i>)	WL	Inhabits desert washes and habitat along the Colorado River. Requires mesquite, palo verde, ironwood, or acacia for nesting; absent from areas where salt cedar introduced.	HP	Suitable habitat exists in the BSA. This species was not observed during 2018 surveys.
Bendire's thrasher (<i>Toxostoma bendirei</i>)	SSC, BCC, BLM:S	Summer resident in flat areas of desert succulent shrub/Joshua tree habitats in Mojave Desert. Nests in cholla, yucca, palo verde, thorny shrub, or a small tree, up to 6 meters from the ground.	HP	Suitable habitat exists in the BSA. This species was not observed during 2018 surveys.
crissal thrasher (<i>Toxostoma crissale</i>)	SSC	Resident of southeastern deserts in desert riparian and desert wash habitats. Nests in dense vegetation along streams/washes with mesquite, screwbean mesquite, ironwood, catclaw, acacia, arrowweed, or willow.	HP	Suitable habitat exists near mesquite thickets in the BSA. This species was not observed during 2018 surveys.
le Conte's thrasher (<i>Toxostoma lecontei</i>)	SSC, BCC	Inhabits open desert wash and desert scrub habitats. Nests in dense, spiny shrub or densely-branched cactus in desert wash habitat, usually 1–2 meters above ground.	HP	Suitable habitat exists in desert washes in the BSA. This species was not observed during 2018 surveys.

Table 2-19: Listed and Special Status Wildlife Species with the Potential to Occur in the Project Vicinity, *Continued*

Common/ Scientific Name	Status	Habitat Description	Habitat Presence	Rationale
Mammals				
pallid bat (<i>Antrozous pallidus</i>)	SSC, BLM:S	Inhabits deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	A	Suitable roosting habitat does not exist in the BSA. This species was not observed during 2018 surveys.
pallid San Diego pocket mouse (<i>Chaetodipus fallax pallidus</i>)	SSC	Inhabits sandy, herbaceous areas, usually in association with rocks or coarse gravel in eastern San Diego County desert wash and desert scrub.	A	Suitable habitat does not exist in the BSA. This species was not observed during 2018 surveys.
western mastiff bat (<i>Eumops perotis californicus</i>)	SSC, BLM:S	Inhabits open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	A	No suitable habitat exists in the BSA due to a lack of woodlands, coastal scrub, grasslands, or chaparral. This species was not observed during 2018 surveys.
California leaf-nosed bat (<i>Macrotus californicus</i>)	SSC, BLM:S	Inhabits desert riparian, desert wash, desert succulent scrub, alkali scrub and palm oasis habitats. Needs rocky, rugged terrain with mines or caves for roosting.	A	Suitable roosting habitat does not exist in the BSA. This species was not observed during 2018 surveys.
cave myotis (<i>Myotis velifer</i>)	SSC, BLM:S	Occurs in lowlands of the Colorado River and adjacent mountain ranges. Require caves or mines for roosting.	A	Suitable roosting habitat does not exist in the BSA. This species was not observed during 2018 surveys.

Table 2-19: Listed and Special Status Wildlife Species with the Potential to Occur in the Project Vicinity, *Continued*

Common/ Scientific Name	Status	Habitat Description	Habitat Presence	Rationale
desert bighorn sheep (<i>Ovis canadensis nelsoni</i>)	FP, BLM:S	Widely distributed from the White Mountains in Mono County to the Chocolate Mountains in Imperial County. Inhabits open, rocky, steep areas with available water and herbaceous forage.	A	No suitable habitat exists in the BSA because the existing I-10 lanes block connectivity for this species. This species was not observed during 2018 surveys.
American badger (<i>Taxidea taxus</i>)	SSC	Occurs in drier open stages of most shrub, forest, and herbaceous habitats. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	HP	Suitable habitat exists in desert shrub areas in the BSA. This species was not observed during 2018 surveys.
<p>KEY: A = suitable habitat not observed; BCC = bird of conservation concern; BLM:S = BLM Sensitive; FP = fully protected; FT = federally threatened; HP = suitable habitat present; SE = state endangered; ST = state threatened; SSC = species of special concern; WL = Watch List; O = observed in the BSA during field surveys</p> <p>SOURCE: California Department of Fish and Wildlife. 2019. Animal Species of Special Concern. Available at: http://www.dfg.ca.gov/wildlife/nongame/ssc/index.html California Department of Fish and Wildlife. 2019. <i>Rarefind 5: California Natural Diversity Database</i>. Sacramento, CA. NatureServe. 2018. NatureServe Explorer: An Online Encyclopedia of Life, Version 7.1. Arlington, VA: NatureServe. Available at: http://www.natureserve.org/explorer</p>				

Discussion of Desert Tortoise

The desert tortoise is listed as threatened under the FESA and CESA. Critical habitat was designated by the USFWS for the desert tortoise in 1994. Critical habitat is defined as specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. Critical habitat may also include areas that are not currently occupied by the species but will be necessary for its recovery.²⁸ A discussion on DTCH is offered in Section 2.3.5 Threatened and Endangered Species.

515.15 acres of the BSA falls within USFWS designated critical habitat. Furthermore, the entire extent of the project lies in the historic range of the desert tortoise. Desert tortoise range has decreased by 90 percent since the 1950s. Human-related activities including, but not limited to, highway construction, domestic animals, and land-use practices have degraded suitable habitat or caused complete habitat loss in many areas.

Desert tortoises also suffer from fragmentation, diminished forage quality, fires, protracted droughts, and disease-associated mortality. Predation on juvenile tortoises by ravens has also contributed to declining desert tortoise numbers.

Desert tortoises inhabit the Mojave, Colorado, and Sonoran Deserts in the southwestern United States and adjacent Mexico. The Mojave population of desert tortoise occupies those portions north and west of the Colorado River in southwestern Utah, northwestern Arizona, southern Nevada, and California.

The desert tortoise can be found primarily within desert scrub environments located in washes, rocky hillsides, and flat desert. Burrow construction is possible in sandy, sandy loamy, gravelly, and rocky soils. Desert tortoises prefer surfaces with sand and fine gravel more than areas with coarse gravel, pebbles, and desert pavement and areas with scattered shrubs where there is abundant inter-shrub space for herbaceous plant growth.

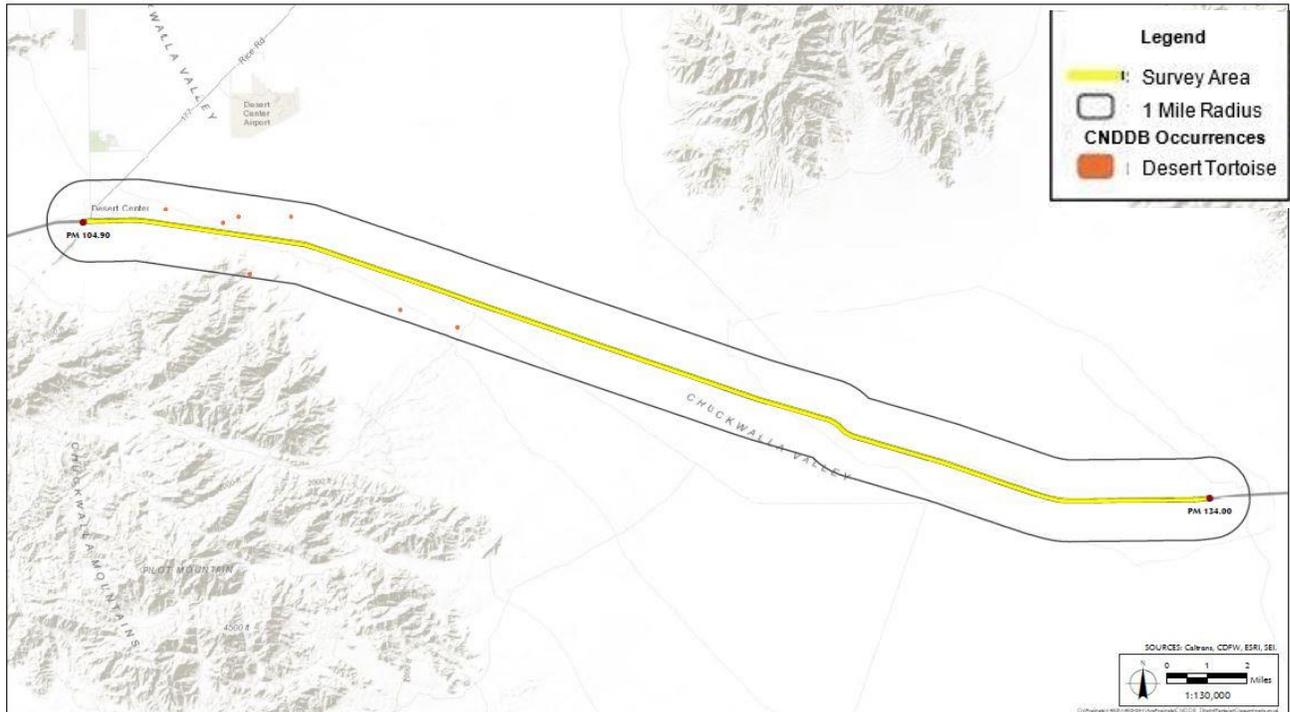
The desert tortoise is primarily active between March and June and in late summer months in the eastern Mojave Desert, but may also be active outside these months when the temperature is below 104 degrees Fahrenheit. During these active periods, desert tortoises usually spend nights and the hotter part of the day in their burrows or resting under shrubs.

During inactive periods, the desert tortoise hibernates, aestivates, or rests as much as 95 percent of the year in subterranean burrows. Most desert tortoise individuals spend November through February in dormant states inside their burrows.

The database searches (California Natural Diversity Database) identified seven records of desert tortoises within 1 mile of the project area (Figure 2.3-3). Four occurrences were between two and five miles east of Desert Center on the north side of I-10, of the northwest portion of the project area. Two occurrences were seven to nine miles east of Desert Center on the south side of I-10, of the southwest portion of the project area. These historic occurrences were documented between 2003 and 2010.

²⁸ USFWS, Listing and Critical Habitat – Critical Habitat – Frequently Asked Questions
<https://www.fws.gov/endangered/what-we-do/critical-habitats-faq.html>

Figure 2.3-3: CNDDB Occurrences of Desert Tortoise within 1 Mile of the Survey Study Area



No signs of desert tortoise, including live tortoise, scat, or burrows, were observed in the biological field survey area during July 2018 surveys. However, per Natural Environmental Study Minimal Impacts (NESMI) prepared by Caltrans in August 2017 for a roadway rehabilitation project (EA 08-1J180) in I-10 from Post Miles (PM) 105.0 to PM 135.1, Caltrans biologists Tracey D'Aoust Roberts and Cesar Garcia observed one active and two inactive desert tortoise burrows in the biological field survey area (inside state ROW) in 2017. The active burrow was located at PM 123. The two inactive tortoise burrows were observed near PM 123 and PM 126. Both inactive desert tortoise burrows were water damaged (figures 2.3-4, 2.3-5, and 2.3-6).



Figure 2.3-4:
Active Desert Tortoise Burrow
(Near PM 123, August 2017)



Figure 2.3-5:
Inactive Desert Tortoise Burrow
(Near PM 123, August 2017)



Figure 2.3-6:
Inactive Desert Tortoise Burrow
(Near PM 126, August 2017)

Additionally, suitable habitat such as native desert scrub communities, flat terrain, and sandy, fine soils was observed throughout the biological field survey area. Overall, the biological field survey area has been affected by previous highway maintenance activities and is routinely used by the public. Due to the presence of the I-10 eastbound and westbound lanes within the biological field survey area and the continuous highway activity and maintenance associated with I-10, there are several areas exhibiting high disturbance levels that do not constitute ideal habitat conditions. However, areas of native scrub with minimal disturbance include suitable habitat for desert tortoise. The project will implement a series of avoidance and minimization measures to further reduce the overall impacts to sensitive biological resources.

Discussion of Burrowing Owl

The burrowing owl is classified as California SSC, USFWS BCC, and BLM Sensitive and is protected under the federal Migratory Bird Treaty Act (MBTA). The burrowing owl is a year-round resident throughout much of Southern California, with an incursion of visitors retreating from higher elevations and more northerly latitudes in the winter months (Garrett and Dunn 1981; Small 1994). Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation and flat to moderate slopes with less than 30 percent canopy cover of trees and shrubs. Burrows are the essential component of burrowing owl habitat. Both natural and artificial burrows provide protection, shelter, and nests for burrowing owls. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use manmade structures, such as cement culverts, cement, asphalt, or wood debris piles, or openings beneath cement or asphalt pavement.

The database search identified four occurrences of burrowing owl within the queried quadrangles between 2008 and 2011, and the nearest occurrence was reported in 2010 at a distance of 0.97-mile northwest of PM 106.60. No burrowing owl sign, including burrowing owl individuals, scat, or burrows, was observed within the biological field survey area in 2018.

According to the CDFW Staff Report on Burrowing Owl Mitigation, essential habitat for burrowing owl must include suitable year-round habitat for breeding, foraging, wintering, presence of burrows, burrow surrogates, well-drained soils, and available prey within close proximity to the burrow. No burrowing owl burrows and burrow surrogates were detected during the 2018 surveys. Protocol surveys were not conducted; however, due to the historic occurrence of this species in proximity to the project area, a pre-construction clearance survey for burrowing owl will be required prior to any grading or vegetation removal.

Discussion of Loggerhead Shrike

Loggerhead shrike is classified as CDFW SSC, USFWS BCC, and is protected pursuant to the federal MBTA. Loggerhead shrike is a common resident and winter visitor of lowlands and foothills throughout California. Preferred habitats include open-canopy valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. It is also common for them to use open cropland, but they rarely use heavily urbanized areas. Breeding requirements include densely-foliaged shrubs or trees.

One loggerhead shrike was observed taking shelter underneath Coxcomb Ditch bridge in the PIA during surveys conducted in 2018. Suitable foraging habitat for this species and suitable nesting habitat for this species (e.g., mesquite) is present in the BSA.

Discussion of American Badger

American badger is designated SSC by CDFW. The species occurs throughout the state, except in northern coastal habitats. American badger inhabits drier open spaces of mostly shrubs, forest, and herbaceous habitats, and need friable soils and open, uncultivated ground to create burrows. No American badger individuals were observed during the surveys conducted in 2018; however, roadkill badgers as well as roadkill southern mule deer, are regularly found near the I-10 between PM 132-134. Suitable habitat for this species was observed within the BSA.

Discussion of Desert Kit Fox

Desert kit fox occurs throughout southeastern California in habitats such as desert scrub, chaparral, and grasslands. Desert kit fox can also occupy urban and agricultural areas. According to the State Fish and Game Code, Division 4, Part 3, Chapter 2, Article 1, Section 4000, take of kit fox is prohibited, and take of badger is regulated. On September 20, 2018, Caltrans biologist Tracey D'Aoust Roberts observed desert kit fox tracks and scat in the I-10 ROW southwest of PM 116.0. In addition, during a December 10, 2018 field visit, Ms. Roberts noted that desert kit fox sign was prevalent between PM 134 – PM 138, suggesting that the eastern portion of this project limits have similar desert kit fox activity. Suitable habitat for this species was observed within the BSA.

2.3.4.3 Environmental Consequences

Permanent Impact

No-Build Alternative

Under the No-Build Alternative, no permanent impacts to special-status species would occur.

Build Alternative

Although permanent impacts to the species listed above could occur as a result of this project, these impacts are not expected to affect the species in a way that would lead the species toward listing under federal or state laws.

The proposed project would not include temporary access roads or staging areas outside the proposed project limits. The project footprint is limited to 5' from edge of the outside shoulder, except at bridge locations.

Desert Tortoise

Suitable habitat was determined to be present within the project area, which lies entirely within the historic range for desert tortoise. Also, the BSA falls within 515.15 acres of DTCH. The presence of desert tortoise is assumed in the PIA because: burrows were detected in 2017; there are historic occurrences as well as many recent occurrences in the general vicinity of the project; the project is located within the desert tortoise range; and the project is within DTCH.

Direct impacts to desert tortoise in the form of permanent vegetation removal, new pavement, and grading will occur. Direct exposure, due to vehicle strikes resulting in injury or mortality, would be limited to adult and juvenile desert tortoises that are able to traverse the PIA. There is the potential for eggs to be crushed by construction equipment and vehicles in the PIA. In

addition, there will be direct impacts to DTCH due to grading, road cut and fill, and the placement of RSP.

As shown in Table 2-20, the project proposes to permanently impact 89.06 acres (0.000015 percent) of the over 6,000,000 acres of DTCH that has been designated in portions of the Mojave and Colorado deserts. Most of the permanent impacts to desert tortoise habitat would occur in the median, where the detour lanes and soft shoulders would be constructed. As a result of these impacts, Caltrans has determined that the project “*May Affect, Likely to Adversely Affect*” desert tortoise and “*May Affect, Likely to Adversely Affect*” DTCH. However, during final design topography would be considered, and soil disturbance minimized, to lessen potential impacts to desert tortoise critical and suitable habitat (see Measure BIO-32).

Table 2-20: Permanent Impacts to Desert Tortoise Habitat

	Permanent Impacts to Desert Tortoise Critical Habitat (Acres)	Permanent Impacts to Desert Tortoise Suitable Habitat (Acres)
Bridge/Washes (RSP and bridge widening foundation)	0.19	0.14
Roadway (Detour widening and soft shoulder)	88.87	105.24
Total	89.06	105.39
Source: Natural Environmental Study, 2019		

A temporary exclusion desert tortoise fencing, pre-construction desert tortoise surveys, and other avoidance and minimization efforts listed below will be implemented.

Burrowing Owl

Suitable habitat for this species is present within the BSA and PIA. Therefore, project impacts (suitable breeding and/or foraging habitat removal, or potential burrow disturbance) to burrowing owl have the potential to occur.

No burrowing owls were found within the BSA during surveys conducted in August 2018. Due to the historic occurrence of this species in proximity to the project area, a pre-construction clearance survey for burrowing owl will be required prior to any grading or vegetation removal to avoid/minimize potential impact to the species.

Loggerhead Shrike

Impacts may occur due to the presence of this species and suitable foraging and nesting habitat in the PIA. These temporary impacts to bird species would be also avoided by the implementation of the MBTA measures.

Permanent impacts (suitable breeding and/or foraging habitat removal) will occur and nest disturbance has the potential to occur. Avoidance and minimization measures, such as the requirement of a pre-construction survey prior to any vegetation removal during the bird breeding season, will be implemented. **Avifauna**

It is not anticipated that the project would have a permanent impact on merlin, prairie falcon, elf owl, black-tailed gnatcatcher, Bendire's thrasher, crissal thrasher, and Le Conte's thrasher because no individuals were observed.

Herpetofauna

It is not anticipated that the project would have a permanent impact on Couch's spadefoot because no suitable habitat was present nor were any individuals observed in the BSA. Impacts to Mojave fringe-toed lizard may occur due to the presence of suitable habitat for this species in the BSA.

Bats

It is not anticipated that the project would have a permanent impact on bats because no roosting habitat or individuals were observed in the BSA. Per the Caltrans Bat Policy, Caltrans' projects will not interfere substantially with the movement of any bat species or with established migratory corridors.

Small-Medium Mammals

It is not anticipated that the project would have a permanent or temporary impact on pallid San Diego pocket mouse because no individuals or evidence of this species were observed in the BSA.

Temporary Impacts

No-Build Alternative

Under the No-Build Alternative, no temporary impacts to special-status species would occur.

Build Alternative

Desert Tortoise

Construction activities could temporarily impact the desert tortoise species. Stressors acting through indirect exposure pathways, including construction equipment noise, dust, the introduction of predator attractants (i.e., trash), exclusionary fencing, and the introduction of nonnative plant species, have the potential to behaviorally-alter, displace, or cause home range abandonment of desert tortoise. As shown in table 2-21, the project could temporarily

impact up to 80.47 acres of DTCH and up to 100.98 acres of desert tortoise suitable habitat. During final design topography would be considered, and soil disturbance minimized, to lessen the amount of desert tortoise critical and suitable habitat. Temporary impacts would occur in the median hydroseeded area, which would be hydroseeded to minimize impacts. Temporary impacts would also be avoided and/or minimized with the implementation of all the protective measures listed for these species.

Table 2-21: Temporary Impacts to Desert Tortoise Habitat

	Temporary Impacts to Desert Tortoise Critical Habitat (Acres)	Temporary Impacts to Desert Tortoise Suitable Habitat (Acres)
Median Hydroseeded Area	80.47	100.98
Total	80.47	100.98
Source: Natural Environmental Study, 2019.		

Avifauna

Indirect impacts and direct impacts (suitable breeding and/or foraging habitat removal, potential nest disturbance) to bird species may occur due to the presence of suitable habitat for these eight avian species in the BSA. These temporary impacts to bird species would be also avoided by the implementation of the MBTA measures.

Herpetofauna

No temporary impacts to herpetofauna are anticipated because no suitable habitat was present in the BSA.

Bats

Temporary impact on bats in the BSA is not anticipated because no bats or signs of were observed during the surveys. However, the project may have a temporary impact on bats near the project area due to construction noise disturbance.

Small-Medium Mammals

Temporary impacts are anticipated for American badger (known to occur in the BSA due to the presence of roadkill) and for desert kit fox (known to occur in the BSA due to the observation of sign). Indirect impacts may occur due to the presence of suitable habitat for the three small-medium mammal species in the survey area. Pre-construction surveys for desert kit foxes and other measures would help avoid and/or minimize impact.

2.3.4.4 Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures for animal species will be implemented:

- BIO-1: Biological Monitor.** An authorized contractor supplied biologist will be designated to oversee compliance of all protective measures and will monitor all construction-related activities. The biological monitor will notify the resident engineer of project activities that may not be in compliance. The resident engineer will stop work until the protective measures are implemented fully.
- BIO-2: Worker Environmental Awareness Training.** A qualified biologist will present to each employee (including temporary, contractors, and subcontractors) a worker environmental awareness training, prior to the initiation of work. They will be advised of the special status species in the project area, the steps to avoid impacts to the species and the potential penalties for taking such species. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area environs. Included in this program will be color photos of the listed species, which will be shown to the employees. Following the education program, the photos will be posted in the contractor and resident engineer office, where they will remain through the duration of the project. The contractor, resident engineer, and the qualified biologist will be responsible for ensuring that employees are aware of the listed species. If additional employees are added to the project after initiation, they will receive instruction prior to working on the project.
- BIO-9: Pre-construction Nesting Bird Survey.** If construction occurs within the bird nesting season (February 15 to September 1), then pre-construction surveys will be conducted by a qualified biologist to locate and avoid nesting birds. If an active nest is located, a 300-foot no-construction buffer (500-foot buffer for raptors) will be put in place until nesting has ceased or the young have fledged.
- BIO-10: Pre-Construction Desert Tortoise Survey.** Immediately prior to the start of ground disturbing activities, and prior to the installation of any desert tortoise exclusion fencing, clearance surveys for the desert tortoise will be conducted by the biologist. The entire project area will be surveyed for desert tortoise and their burrows by the contractor supplied biologist prior to the start of any ground disturbing activities.
- BIO-11: Temporary Desert Tortoise Fencing.** Temporary exclusion fencing will be installed outlining the perimeter of any construction staging, storage, or batch plant areas to prevent entry by desert tortoises into the work site. Exclusion fencing will be installed following Service guidelines (2017) or more current protocol. The biologist must check the fencing daily and make any necessary repairs should it become damaged.
- BIO-12: Desert Tortoise Under Vehicles and/or Equipment.** The contractor supplied biologist and project personnel shall carefully check under parked vehicles and equipment for desert tortoises before any of the vehicles or equipment can be moved.

- BIO-13: Desert Tortoise in Work Area.** If at any time a desert tortoise is observed in the project area, the contractor supplied biologist will have the authority to halt any activities, through the Resident Engineer or any other identified authority in charge of implementation, that may pose a threat to desert tortoises and to direct movements of equipment and personnel to avoid injury to mortality to desert tortoises. Desert tortoises will be removed by the authorized biologist according to guidelines set forth by USFWS in the Biological Opinion to a translocation site pre-approved by the appropriate wildlife/resource agency(s). Should a tortoise require removal from the work site, USFWS will be contacted.
- BIO-14: Injured or Dead Desert Tortoise.** The contractor supplied biologist will inform USFWS and CDFW of any injured or dead desert tortoises (and other special status species) found on site (verbal notification within 24 hours and written notification within 5 days).
- BIO-15: Desert Tortoise Monitoring Reports.** The contractor supplied biologist will conduct daily on-site monitoring and submit a weekly monitoring report for desert tortoises (and additional special status species) during construction.
- BIO-16: Speed Limits in Desert Tortoise Habitat.** Except on maintained public roads designated for higher speeds or within desert tortoise-proof fenced areas, driving speeds will not exceed 20 miles per hour through potential desert tortoise habitat on unpaved roads.
- BIO-17: Desert Tortoise Predation Prevention.** To preclude attracting predators, such as the common raven (*Corvus corax*) and coyotes (*Canis latrans*), food-related trash items will be placed in covered refuse cans and removed daily from the work sites and disposed of at an appropriate refuse disposal site. Workers are prohibited from feeding any and all wildlife.
- BIO-18: Identifying Burrowing Owl Burrows.** The entire project area will be surveyed for burrowing owls and their burrows by the contractor supplied biologist no more than 30 days prior to the start of any ground disturbing activities. Use bright orange environmentally sensitive area (ESA) fencing, clearly mark areas supporting burrows and a buffer zone setback area.
- BIO-19: Burrowing Owl Nesting Season Avoidance.** Occupied burrowing owl burrows and the established buffer zone setback area surrounding each of the occupied burrows shall not be disturbed during the nesting season (February 1 to August 31), unless a biologist can verify through noninvasive methods that either the owls have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent flight.
- BIO-20: Burrowing Owl Burrow Exclusion.** For unavoidable impacts to occupied burrowing owl burrows, the burrows must be excluded and closed by a qualified biologist to permanently exclude burrowing owls. One-way doors would need to be temporarily installed in burrow openings during the non-breeding season (September 1 to January 31) and before breeding behavior has begun. Suitable habitat (including suitable burrows) must be available adjacent or near the disturbance site or artificial burrows shall need to be provided nearby. Once the

- biologist has confirmed that the owls have left the burrow, burrows shall be excavated using hand tools and filled to prevent reoccupation. All burrowing owls associated with occupied burrows, that shall be directly impacted (temporarily or permanently) by the Project shall be passively relocated.
- BIO-21: Burrowing Owl Relocation.** All burrowing owl relocation shall be approved by CDFW. The permitted biologist shall monitor the relocated owls a minimum of three days per week for a minimum of three weeks. A report summarizing the results of the relocation and monitoring shall be submitted to CDFW within 30 days following completion of the relocation and monitoring of the owls.
- BIO-22: Desert Kit Fox Pre-Construction Survey.** A qualified contractor supplied biologist will conduct pre-construction surveys for desert kit fox within the project site and biological study area boundaries no more than 30 days prior to the commencement of ground-breaking activities. Dens will be classified as inactive, potentially active, or definitely active. Should dens be deemed active, additional surveys will be required (see BIO-23).
- BIO-23: Desert Kit Fox Den Complex Monitoring.** All desert kit fox den complexes in the project site identified as potentially active or definitely active will be monitored in accordance to CDFW guidelines. If once the monitoring is concluded, no desert kit fox tracks are found at the burrow entrance, or no photos of the target species using the den are observed, the den can be excavated and backfilled by hand. If a den is identified as being active, it must further be classified as non-natal or natal den. Potential natal den complexes are to be monitored for a minimum of 3 additional days using infrared wildlife cameras and/or tracking medium to determine their status. If the den complex is determined to be natal during the denning period (February - June), a 200-foot non-disturbance buffer zone will be established surrounding natal dens, and monitoring by infrared cameras or weekly visits by a qualified contractor supplied biologist will continue until it has been determined that the young have dispersed. The final buffer distance will be determined in consultation with the BLM and CDFW. If the den complex within the project site is determined to be non-natal, passive hazing techniques will be used to discourage desert kit fox from using the den complex.
- BIO-24: Desert Kit Fox Passive Relocation.** Desert kit fox must be excluded from all den complexes within the project site portion of the Project disturbance area. Inactive dens that are within the project site, will immediately be excavated by hand and backfilled to prevent reuse by desert kit fox. If tracks or desert kit fox is captured in camera photos, then various passive hazing techniques will be implemented to deter desert kit fox from using the den complex. If desert kit fox are present and passive relocation techniques fail, CDFW will be contacted to explore other relocation options such as trapping, in consultation with the BLM.
- BIO-25: Stop Work Restrictions for Desert Kit Fox Presence.** If during construction activities a desert kit fox is within the project site, all construction activities shall stop, and the contracted supplied biologist shall be notified. Consultation with resource agencies may be required, as appropriate.
- BIO-26: Animal Entrapment Avoidance.** To prevent inadvertent entrapment of desert kit foxes or other animals during the construction phase of a project, all

excavated, steep-walled holes or trenches more than 2 feet deep should be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals.

- BIO-27: Pre-Construction Survey and Monitoring by a Qualified Bat Biologist.** Prior to construction start, a qualified biologist will conduct a survey to determine if bats are roosting in any of the bridges. If work on bridges that support bat roosting during the bat maternity season (April 1–August 31) cannot be avoided, a qualified bat biologist will perform a humane eviction/exclusion of roosting bats from the bridges in the fall (September or October) before initiation of construction. The exclusionary material will be inspected regularly and maintained during construction activities and will be removed at the completion of construction.
- BIO-28: Wildlife Fencing.** Permanent fencing will be installed at key wildlife crossings in the project area (e.g., PM 132-134) to direct wildlife, including but not limited to desert tortoise, American badger, and southern mule deer, into the highway undercrossing.
- BIO-32: Median Soil Disturbance During Design.** During final design topography will be considered, and soil disturbance minimized, to lessen potential impacts to desert tortoise critical and suitable habitat.
- BIO-33: Hydroseeding.** After completion of detour-lane construction, disturbed soil will be hydroseeded with a native-plant seed mix to restore the PIA.

2.3.4.5 Compensatory Mitigation

Desert Tortoise

Because DTCH and desert tortoise suitable habitat occurs in the PIA, compensatory mitigation for desert tortoise would be required for implementation of the project. Permanent impacts to DTCH and desert tortoise suitable habitat will be mitigated at a minimum 1:1 ratio by land purchase or in-lieu fee credit purchase. Caltrans will submit a 2081 Incidental Take Permit application and translocation plan for potential impacts to desert tortoise and desert tortoise suitable habitat (see Measure BIO-34). The final mitigation requirements and ratio will be determined in coordination and negotiation with CDFW through the 2081 permitting process.

Burrowing Owl

Based on the burrowing owl habitat assessment, suitable habitat for burrowing owls is present within the PIA. There is no mitigation proposed for burrowing owl habitat. Any additional conditions required on permits (e.g., 1600) by CDFW will be included in the mitigation measures.

Loggerhead Shrike

During the 2018 biological field surveys, an individual loggerhead shrike and suitable habitat for loggerhead shrike was observed within the PIA. There is no mitigation proposed for loggerhead shrike habitat. Any additional conditions required on permits (e.g., 1600) by CDFW will be included in the mitigation measures.

Avifauna

Because direct impacts to other avian species are not anticipated, no compensatory mitigation measures would be required.

Herpetofauna

Because direct impacts to these species are not anticipated, no compensatory mitigation measures would be required.

Bats

Because direct impacts to these species are not anticipated, no compensatory mitigation measures would be required.

Small-Medium Mammals

Because direct impacts to these species are not anticipated, no compensatory mitigation measures would be required.

BIO-34: Desert Tortoise Mitigation. Permanent impacts to DTCH and desert tortoise suitable habitat will be mitigated at a minimum 1:1 ratio by land purchase or in-lieu fee credit purchase. Caltrans will submit a 2081 Incidental Take Permit application and translocation plan for potential impacts to desert tortoise and desert tortoise suitable habitat.

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2.3.5 THREATENED AND ENDANGERED SPECIES

2.3.5.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA) (and the Department, as assigned), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement or a Letter of Concurrence. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

2.3.5.2 Affected Environment

Unless otherwise noted, the information from this section was synthesized from the NES prepared for this proposed project (Caltrans 2019a). References used in the NES are not carried over to this section.

To comply with the provisions of various state and federal environmental statutes and executive orders, the potential impacts to natural resources of the region were investigated and documented. A list of species and habitats within the project region was developed based on information compiled by the USFWS, CNDDDB, and other current publications. The project site was field reviewed to identify habitat types, potential wetlands, potential for rare species, sensitive water quality receptors, and potential problem areas for the study.

Federal Threatened and Endangered Species

Under provisions of Section 7(a)(2) of the Federal Endangered Species Act (FESA), a federal agency that permits, licenses, funds, or otherwise authorizes a project activity must consult with the USFWS to ensure that its actions would not jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat.

The only federally-listed species with the potential to be present at the site is desert tortoise, which is listed as threatened. The entire survey area falls within the historic range for this species. A critical habitat is the specific areas within the geographic area, occupied by the species at the time it was listed, that contain the physical or biological features that are essential to the conservation of endangered and threatened species and that may need special management or protection.²⁹ There are 515.15 acres of DTCH designated by the USFWS within the BSA (Figure 2.3-7). Most of the anticipated impacts from the project to DTCH would be in the median, which may not have long-term conservation value. Additionally, during final design grading limits within the PIA would be further evaluated and minimized to lessen the estimated disturbance.

Due to the presence of suitable habitat within the survey area as well as historical occurrences of desert tortoise being observed within one mile of the project area, it is possible for desert tortoise to occasionally be present under the bridges in the PIA during movements between areas of occupied habitat.

California Threatened and Endangered Species

The California Endangered Species Act (CESA) protects plant and animal species that are listed as threatened or that are candidates for listing.

Two State-listed species, desert tortoise and elf owl (*Micrathene whitneyi*), and one State Fully Protected species, desert bighorn sheep (*Ovis canadensis nelsoni*), have the potential to occur within the project area. However, no suitable habitat was observed within the survey area for elf owl or desert bighorn sheep and no individuals of either species were observed. The entire survey area falls within the historic range for desert tortoise. Also, the BSA contains suitable, although degraded and fairly-isolated, desert tortoise habitat. Given the presence of occupied habitat adjacent to the PIA on either side of the I-10, it is possible for desert tortoise to occasionally move under the bridges in the PIA between areas of occupied habitat.

Survey Results

As discussed in Sections 2.3.1 and 2.3.4, the survey results identified 515.15 acres of DTCH within the survey area. Although no live desert tortoises, carcasses, or signs were observed in

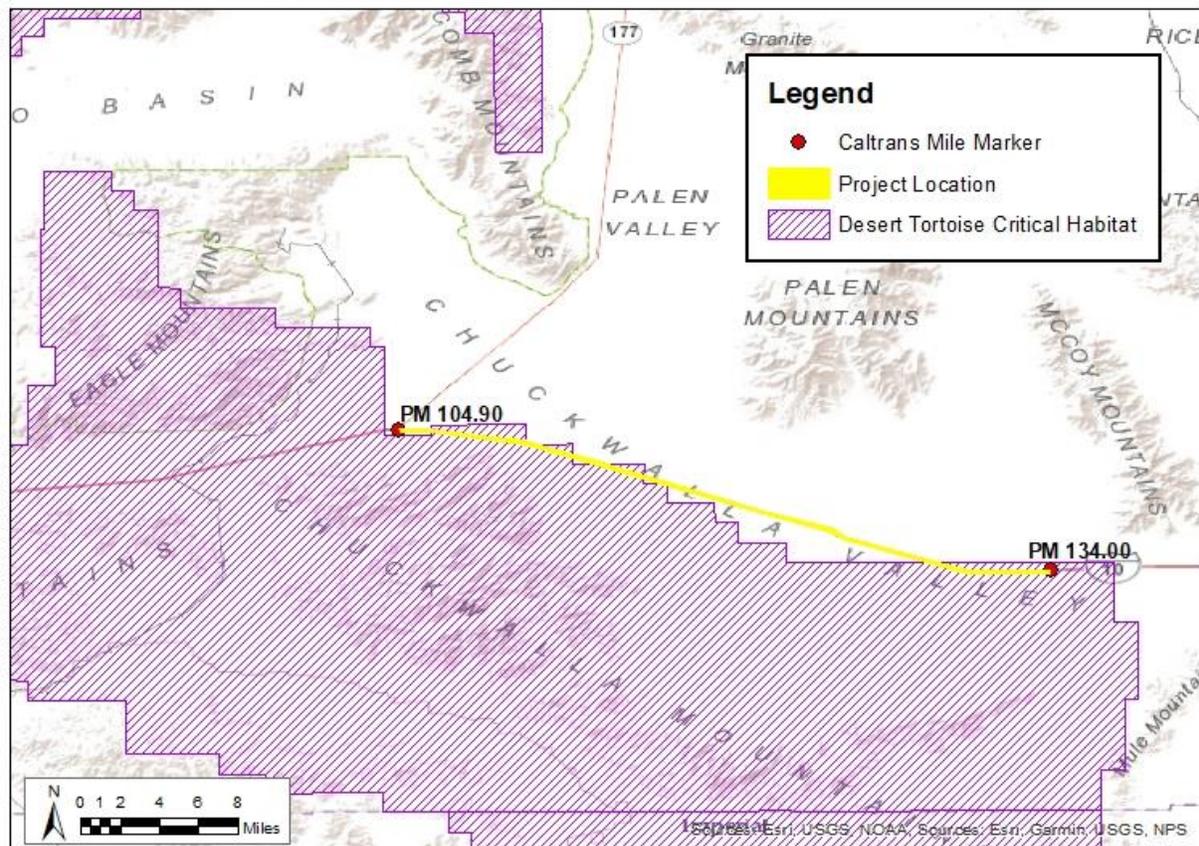
²⁹ USFWS, Critical Habitat - What is it?
https://www.fws.gov/endangered/esa-library/pdf/critical_habitat.pdf

the 2018 surveys, one active and two inactive desert tortoise burrows were observed in the project area in 2017 by a Caltrans biologist while conducting surveys for another roadway project (EA 08-1J180). The active desert burrow was observed at PM 123 on the I-10 in 2017. The two inactive burrows were observed at PM 123 and PM 126. Suitable habitat in the form of desert scrub communities, flat terrain, and sandy, flat soils was observed throughout the biological field survey area.

The results of the biological resource surveys are limited in areas where foot access was not available, not safe (i.e., inaccessibly steep slopes, highway medians, proximity to high-speed traffic, occupied homeless encampments), and/or unauthorized. When foot access was unavailable, binoculars were used to best assess the biological resources. Both the burrowing owl survey report and desert tortoise survey report state that the median was only assessed visually using binoculars from the shoulder of the road, due to safety concerns.

Figure 2.3-7: Critical Habitat

Critical Habitats



Elf owl species is presumed extant in the outer portion of the BSA; this is consistent with the fact that no elf owl individuals were observed during the surveys conducted in 2018.

No suitable habitat for desert bighorn sheep exists in the BSA because the existing I-10 lanes block connectivity for this species. In addition, no desert bighorn sheep individuals were observed during the surveys.

Federal and Resource Agency Consultation

The USFWS 2013 *Desert Tortoise Programmatic Biological Opinion for Routine Highway Improvement, Maintenance Activities, and Safety Projects in Imperial, Inyo, Kern, Los Angeles, Riverside, and San Bernardino Counties* (8-8-10-F-59) (BO), is anticipated to be used to authorize project impacts to desert tortoise and desert tortoise critical habitat. No formal agency coordination was conducted prior to the survey effort. Informal consultation was undertaken with the USFWS to define the target list of species for the field investigations. An official USFWS species list was requested and received on both July 18, 2018 and February 13, 2019. Below is a list of project coordination milestones with USFWS:

- In September 2018, USFWS biologist John M. Taylor was contacted to discuss potential findings and the biological assessment (BA).
- On December 20, 2018, Caltrans Biologist Nancy Frost submitted the desert tortoise Biological Assessment and previous NES to Mr. John Taylor with USFWS. John Taylor confirmed receipt of the request package.
- On December 21, 2018, Caltrans Biologist Nancy Frost received an email from John Taylor indicating the U.S. Government was facing a shutdown and that if it went into effect, the USFWS - Palm Springs Office would be closed and unable to respond to emails or phone calls for the duration of the shutdown, and the requirements to comply with the Endangered Species Act remain in place, and any projects that "may affect" federally listed species could be suspended until consultation can be conducted.
- On January 30, 2019, Nancy Frost met with the Caltrans District 8 Biology Unit and called John Taylor to discuss the project.
- On February 13, 2019, Nancy Frost sent John Taylor a formal letter requesting a revision of the Section 7 consultation impacts to DT, per the new/current project footprint.

In addition, the CNDDDB was queried for all records for state-designated sensitive habitats and special status species that had the potential to be present in the vicinity of the project based on previous recorded occurrences. Below is a list of project coordination milestones with CDFW.

- In September 2018, CDFW biologist Ms. Heather Elder was contacted to discuss the project and potential permit strategies.
- On January 23, 2019, Nancy Frost attended a pre-application meeting/conference call with CDFW (Kim Romich) and USACE (Veronica Li and Luis Betancourt). Caltrans was informed of the one-year to process for a 2081 and the need of a 1600 from CDFW.

2.3.5.3 Environmental Consequences

Permanent Impacts

No-Build Alternative

Under the No-Build Alternative, no permanent impacts to threatened and endangered species would occur.

Build Alternative

All construction activities would take place within the right-of-way once the project area is considered cleared of desert tortoise. No temporary roads or staging areas would be located outside of the fenced right-of-way. Temporary impacts such as noise or dust would be minimized with the listed avoidance and minimization measures in Section 2.3.5.4 and therefore are expected to be minimal.

Desert Tortoise DTCH/DTSH

Table 2-22 identifies permanent impacts to DTCH and desert tortoise suitable habitat (DTSH), summarized from the NES (2019). Refer to the NES for more detailed information on locations on impacts on DTCH and DTSH.

Under the Build Alternative, 89.06 acres of DTCH and 105.39 acres of DTSH would be permanently impacted. Permanent impacts would be in the form of permanent vegetation removal, new pavement, and grading. Direct exposure, due to vehicle strikes resulting in injury or mortality, would be limited to adult and juvenile desert tortoises that are able to traverse the PIA. There is the potential for eggs to be crushed by construction equipment and vehicles in the project area. In addition, there will be direct impacts to DTCH due to grading, road cut and fill, and the placement of rock slope protection (RSP). The permanent impact acreage represents 0.000015 percent of the over 6,000,000 acres of DTCH that has been designated in portions of the Mojave and Colorado Deserts.

Table 2-22: Permanent Impacts to DTCH and DTSH

Desert Tortoise Critical Habitat (DTCH)		
Bridge/Washes	Roadway	Total Impact
0.19 acres	88.87 acres	89.06 acres
Desert Tortoise Suitable Habitat (DTSH)		
Bridge/Washes	Roadway	Total Impact
0.14 acres	105.24 acres	105.38

Based on the type of work proposed, a determination of “*may affect, likely to adversely affect*” has been made for desert tortoise and a “*may affect, likely to adversely affect*” for DTCH. A determination of “*may affect, likely to adversely affect*” means that that listed resources are likely to be exposed to the action or its environmental consequences and will respond in a

negative manner to the exposure.³⁰ Although the PIA grading limits will be further minimized during final design, permanent impacts to DTCH would be mitigated by land purchase of suitable habitat or in-lieu fee credit purchase in coordination with CDFW and the USFWS. Caltrans will submit a 2081 Incidental Take Permit application and translocation plan.

Caltrans has determined that a federal Section 7 consultation between Caltrans, authorized to act on behalf of FHWA, and USFWS, will be necessary to address potential impacts to desert tortoise and designated DTCH. Caltrans has also determined the project will likely cause take to the desert tortoise, a state-listed species; therefore, a CDFW Section 2081 incidental take permit would be obtained for the project prior to soil disturbance.

Authorized take of the desert tortoise can be avoided by implementing the conservation measures specified in the Programmatic Biological Opinion (PBO) (8-8-13-F-0279), for which Caltrans has submitted a request for concurrence to the USFWS. Any additional conditions subsequently required on permits by regulatory agencies will be included in the mitigation measures.

Table 2-23 presents the regulatory determinations for state-listed species. Take of state-listed and candidate species is authorized by CDFW through the provisions of Sections 2081 and 2081.1 of the California Fish and Game Code. Because the project has “potential take” of desert tortoise, Caltrans anticipates applying for a Section 2081 Incidental Take Permit in 2019 for the only state-listed species with the potential to be present in the PIA, the desert tortoise; which is listed as threatened under both FESA and CESA. Unauthorized take of the desert tortoise can be avoided by implementing the conservation measures specified in the PBO. Caltrans will submit a 2081 Incidental Take Permit application and translocation plan to CDFW for potential impacts to desert tortoise and desert tortoise suitable habitat. Conservation measures and compensatory mitigation requirements will be determined in coordination and negotiation with CDFW through the 2081 permitting process.

Table 2-23: Regulatory Determinations for State-Listed Species

Species	Status	Determination
elf owl (<i>Micrathene whitneyi</i>)	SE, BLM:S, BCC	No take
desert bighorn sheep (<i>Ovis canadensis nelsoni</i>)	FP, BLM:S,	No take
desert tortoise (<i>Gopherus agassizii</i>)	FT, ST	Potential take
KEY: BCC = bird of conservation concern; BLM:S = BLM designated sensitive; FT = federally threatened; SE = state endangered; ST = state threatened; FP = state fully protected		

³⁰ USFWS, Section 7 Consultation Guidance for Preparing a Biological Assessment
https://www.fws.gov/midwest/endangered/section7/ba_guide.html

Elf Owl

It is not anticipated that the project would cause a take or have a permanent impact on elf owl because no individuals were observed during the surveys conducted in 2018. Also, no suitable habitat was observed within the survey area for elf owl.

Desert Bighorn Sheep

It is not anticipated that the project would cause take or have a permanent impact on desert bighorn sheep because no suitable habitat was observed within the survey area and no individuals of the species were observed.

Temporary Impacts

No-Build Alternative

Under the No-Build Alternative, no temporary impacts to threatened and endangered species would occur.

Build Alternative

Desert Tortoise DTCH/DTSH

Temporary impact to DTCH and DTSH would occur in the median. In the median “hydroseeded area,” the project could result in up to 80.47 acres of temporary impact to DTCH and 100.98 acres of temporary impact to DTSH.

Temporary impact would be in the form of construction activities. Other stressors acting through indirect exposure pathways, including construction equipment noise, dust, the introduction of predator attractants (i.e., trash), exclusionary fencing, and the introduction of nonnative plant species, have the potential to behaviorally-alter, displace, or cause home range abandonment of desert tortoise. Under the current project scope, areas of temporary impact in the median would be hydroseeded to help minimize impact to desert tortoise. Additionally, during final design grading limits within the PIA would be further evaluated and minimized to lessen the estimated impacts to DTCH and DTSH.

Elf Owl

Indirect impacts to elf owl, such as the removal of suitable breeding and/or foraging habitat and potential nest disturbance, may occur due to the presence of suitable habitat for the species in the BSA. Temporary impacts to elf owl could be avoided by the implementation of MBTA measures. Furthermore, pre-construction nesting surveys would be performed if construction occurs within the bird nesting season by a qualified biologist to locate and avoid nesting birds.

Desert Bighorn Sheep

It is not anticipated that the project would cause temporary impact on desert bighorn sheep because no suitable habitat was observed within the survey area and no individuals of the species were observed.

2.3.5.4 Avoidance, Minimization, and/or Mitigation Measures

Desert Tortoise/Desert Tortoise Critical Habitat

Avoidance and Minimization Measures will include the following:

- BIO-1: Biological Monitor.** An authorized contractor supplied biologist will be designated to oversee compliance of all protective measures and will monitor all construction-related activities. The biological monitor will notify the resident engineer of project activities that may not be in compliance. The resident engineer will stop work until the protective measures are implemented fully.
- BIO-2: Worker Environmental Awareness Training.** A qualified biologist will present to each employee (including temporary, contractors, and subcontractors) a worker environmental awareness training, prior to the initiation of work. They will be advised of the special status species in the project area, the steps to avoid impacts to the species and the potential penalties for taking such species. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area environs. Included in this program will be color photos of the listed species, which will be shown to the employees. Following the education program, the photos will be posted in the contractor and resident engineer office, where they will remain through the duration of the project. The contractor, resident engineer, and the qualified biologist will be responsible for ensuring that employees are aware of the listed species. If additional employees are added to the project after initiation, they will receive instruction prior to working on the project.
- BIO-3: Materials and Spoils Control.** Project materials will not be cast from the project site into nearby habitats and project related debris, spoils, and trash will be contained and removed to a proper disposal facility.
- BIO-4: Equipment Staging.** Equipment, vehicles, and materials staged and stored in Caltrans right-of-way will be sited in previously paved or previously disturbed areas only and will avoid native vegetation.
- BIO-6: Dust Control.** The contractor shall implement dust control measures during construction activities to avoid inundating surrounding vegetation and to ensure biological monitors on the project site have visibility for monitoring the covered species.

- BIO-10: Pre-construction Desert Tortoise Survey.** Immediately prior to the start of ground disturbing activities, and prior to the installation of any desert tortoise exclusion fencing, clearance surveys for the desert tortoise will be conducted by the biologist. The entire project area will be surveyed for desert tortoise and their burrows by the contractor supplied biologist prior to the start of any ground disturbing activities.
- BIO-11: Temporary Desert Tortoise Fencing.** Temporary exclusion fencing will be installed outlining the perimeter of any construction staging, storage, or batch plant areas to prevent entry by desert tortoises into the work site. Exclusion fencing will be installed following Service guidelines (2017) or more current protocol. The biologist must check the fencing daily and make any necessary repairs should it become damaged.
- BIO-12: Desert Tortoise Under Vehicles and/or Equipment.** The contractor supplied biologist and project personnel shall carefully check under parked vehicles and equipment for desert tortoises before any of the vehicles or equipment can be moved.
- BIO-13: Desert Tortoise in Work Area.** If at any time a desert tortoise is observed in the project area, the contractor supplied biologist will have the authority to halt any activities, through the Resident Engineer or any other identified authority in charge of implementation, that may pose a threat to desert tortoises and to direct movements of equipment and personnel to avoid injury to mortality to desert tortoises. Desert tortoises will be removed by the authorized biologist according to guidelines set forth by USFWS in the Biological Opinion to a translocation site pre-approved by the appropriate wildlife/resource agency(s). Should a tortoise require removal from the work site, USFWS will be contacted.
- BIO-14: Injured or Dead Desert Tortoise.** The contractor supplied biologist will inform USFWS and CDFW of any injured or dead desert tortoises (and other special status species) found on site (verbal notification within 24 hours and written notification within 5 days).
- BIO-15: Desert Tortoise Monitoring Reports.** The contractor supplied biologist will conduct daily on-site monitoring and submit a weekly monitoring report for desert tortoises (and additional special status species) during construction.
- BIO-16: Speed Limits in Desert Tortoise Habitat.** Except on maintained public roads designated for higher speeds or within desert tortoise-proof fenced areas, driving speeds will not exceed 20 miles per hour through potential desert tortoise habitat on unpaved roads.
- BIO-17: Desert Tortoise Predation Prevention.** To preclude attracting predators, such as the common raven (*Corvus corax*) and coyotes (*Canis latrans*), food-related trash items will be placed in covered refuse cans and removed daily from the work sites and disposed of at an appropriate refuse disposal site. Workers are prohibited from feeding any and all wildlife.

- BIO-28: Wildlife Fencing.** Permanent fencing will be installed at key wildlife crossings in the project area (e.g., PM 132-134) to direct wildlife, including but not limited to desert tortoise, American badger, and southern mule deer, into the highway undercrossings.
- BIO-32: Median Soil Disturbance During Design.** During final design topography will be considered, and soil disturbance minimized, to lessen potential impacts to desert tortoise critical and suitable habitat.
- BIO-33: Hydroseeding.** After completion of detour-lane construction, disturbed soil will be hydroseeded with a native-plant see mix to restore the PIA.

2.3.5.5 Compensatory Mitigation

Desert Tortoise/Desert Tortoise Critical Habitat

DTCH and desert tortoise suitable habitat occurs in the PIA, therefore, compensatory mitigation for desert tortoise would be required for implementation of the project. Permanent impacts to DTCH and desert tortoise suitable habitat would be mitigated by land purchase or in-lieu fee credit purchase at a minimum ratio of 1:1. Compensatory mitigation measures for impacts to DTCH will be refined in coordination with the regulatory agencies and may include measures to relocate individual desert tortoises found during construction or hydroseed habitat in the median on-site after the project has been completed. Any additional conditions required on permits by regulatory agencies will be included in the mitigation measures. Caltrans will submit a 2081 Incidental Take Permit application and translocation plan for potential impacts to desert tortoise and desert tortoise suitable habitat. The final mitigation requirements and ration will be determined in coordination with CDFW through the 2081 permitting process.

Elf Owl

Because direct impacts to this avian species are not anticipated, no compensatory mitigation measures would be required.

Desert Bighorn Sheep

Because direct impacts to this species are not anticipated, no compensatory mitigation measures would be required.

- BIO-34: Desert Tortoise Mitigation.** Permanent impacts to DTCH and desert tortoise suitable habitat will be mitigated at a minimum 1:1 ratio by land purchase or in-lieu fee credit purchase. Caltrans will submit a 2081 Incidental Take Permit application and translocation plan for potential impacts to desert tortoise and desert tortoise suitable habitat

2.3.6 INVASIVE SPECIES

2.3.6.1 Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

2.3.6.2 Affected Environment

Unless otherwise noted, the information from this section was synthesized from the NES prepared for the proposed project (Caltrans 2019a). References used in the NES are not carried over to this section. During the August 2018 surveys, surveyors detected no invasive species.

2.3.6.3 Environmental Consequences

Invasive plant species were not found within the biological field survey area during the August 2018 plant surveys. In compliance with Executive Order on Invasive Species, EO 13112, and guidance from the Federal Highway Administration (FHWA), the landscaping and erosion control included in the project will not use species listed as invasive. None of the species on the California list of invasive species is used by the Department for erosion control or landscaping in Riverside County. All equipment and materials will be inspected for the presence of invasive species and cleaned if necessary.

2.3.6.4 Avoidance, Minimization, and/or Mitigation Measures

In addition to Caltrans Best Management Practices, the following avoidance and minimization measures will be implemented:

- BIO-3: Materials and Spoils Control.** Project materials will not be cast from the project site into nearby habitats and project related debris, spoils, and trash will be contained and removed to a proper disposal facility.
- BIO-4: Equipment Staging.** Equipment, vehicles, and materials staged and stored in Caltrans right-of-way will be sited in previously paved or previously disturbed areas only and will avoid native vegetation.
- BIO-5: De-Watering Plan.** For all bridges that cross jurisdictional drainages and are susceptible to running water, a de-watering/water control plan must be created and implemented in accordance with Caltrans Water Control Standard Specifications (Standard Specification 13-4.03G) if water is present or could be present during construction activities.
- BIO-7: Rare Plant Pre-Construction Clearance, Survey, Flagging, and Fencing.** No more than one week prior to ground breaking activities, a qualified biologist

must perform a pre-construction plant survey. Should any rare plants be found, individuals will be flagged for clear identification to ensure they are visible to construction personnel for avoidance. Should multiple plants in a single location be found, the groupings will be fenced with environmental sensitive temporary fencing.

2.4 Cumulative Impacts

2.4.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR) Section 1508.7.

2.4.2 Resources Considered in the Cumulative Analysis

The cumulative impact analyses included in this section considers projects that are currently proposed, approved, or under construction in the vicinity of the proposed project. The geographic boundaries, or resource study area (RSA) boundaries, vary by resource due to factors unique to the human or biological ecology of each resource. The specific RSA boundaries are noted, as applicable, in the discussion below. The projects considered in this cumulative impacts analysis are:

1. EA 1C081: RIV 10 Blythe Pavement Rehab (PM 60.90-74.0)

Caltrans 1C081 pavement rehabilitation project is of similar scope to the proposed project, but for PM 60.90 to PM 74.00. Construction for this project is expected to start in the fall of 2022.

2. EA 1C083: RIV 10 Blythe Pavement Rehab (PM 134-156.50)

Caltrans 1C083 pavement rehabilitation project is of similar scope to the proposed project, but for PM 134.00 to PM 156.50. Construction for this project is expected to start on January 2023.

The proposed project would have no permanent effects on land use, parks and recreation, farmlands and timberlands, growth, community cohesion/character, relocations and property

acquisition, environmental justice, traffic and emergency services, cultural resources, visual/aesthetics, hydrology, stormwater, water quality, geology and soils, paleontology, hazardous waste/materials, air quality, climate change, noise, coastal zone, wild and scenic rivers, or waters of the US. Therefore, the proposed Project would not have the potential to contribute to a cumulative impact to these resources.

The proposed Project, however, could potentially have project-level direct or indirect effects on, waters of the State, and threatened and endangered species. The potential for cumulatively considerable impacts in these resource areas is discussed below.

2.4.2.1 Biological Resources

Wetlands and Other Waters

The RSA is located in eastern Riverside County within the Sonoran Desert. The RSA was determined by the individual Hydrological Sub-Areas the proposed Project intersected (HSA 717.20 and 717.20) to ensure the inclusion of all wetlands and other waters that could be affected by the construction of this project. Elevations in the Project area range from 377 to 935 feet AMSL. No potential waters of the United States were mapped within the Project area for the proposed project. Surface water throughout most of the year is scarce due to the low precipitation within the region.

The proposed Project location is characterized by highly variable climate extremes. Lowland areas receive less than five inches of precipitation per year. High temperatures and low precipitation are present during the summer with highs regularly exceeding 100 degrees Fahrenheit.

Most of the ephemeral drainages located in the project area flow downstream, encounter the I-10, and are then redirected through parallel ditches eastward to the next available crossing and toward Palen (dry) Lake and Ford Dry Lake. These potential ephemeral drainages and crossings are not considered by USACE to be jurisdictional due to their lack of connectivity with a navigable water body; Palen Lake and Ford Dry Lake are isolated waterbodies and are not classified as WOTUS. It was determined, however, that they are WSC protected under Section 1600 of the CDFG code and under regulations of the RWQCB.

The proposed Project would not directly contribute to the regional loss of WOTUS; however, it would result in impacts to state streambeds due to the rehabilitation activities of a transportation facility through ephemeral drainages and crossings under the jurisdiction of RWQCB and CDFW. The proposed project would result in impacts to WSC due to RSP replacement, temporary bridge work, and grading. For the proposed project alone, there is potential for permanent impacts to 0.12 acre of jurisdictional drainages (WSC and CDFW jurisdictional streambeds), and potential for temporary impact to 12.08 acres of jurisdictional areas. However, these impacts would be fully compensated by compliance with state regulations such that no net loss of habitat functions or values occurs. Also, the proposed project will minimize and/or offset potential impact by limiting construction activities to the smallest footprint possible within drainage features and by installing temporary fencing along the construction footprint to avoid disturbances to additional areas within the drainage.

This project is adjacent to Caltrans pavement rehabilitation projects for two additional sections of I-10 with similar scope for a total of over 90 miles. Wetland delineations would also take place

for the two adjacent projects to determine if WOTUS and state streambeds would be affected. Appropriate avoidance and/or minimization measures would be implemented as needed to ensure protection of federal and/or state jurisdictional features. In addition, these projects would be required to provide compensation that fully replaces the relevant functions and values at a watershed level under the permitting processes of Section 404 of the Clean Water Act and Section 1602 of the State Streambed Alteration Program if it is determined that WOTUS and state streambeds are affected. With implementation of proposed measures WQ-1, WQ-2, and BIO-3 through BIO-6, to minimize potential impacts, the proposed Project would not contribute to substantial adverse cumulative impacts to state streambeds. The project impacts would be fully mitigated, thus the proposed construction would not contribute to regional cumulative loss of riparian or wetland resources.

Threatened and Endangered Species

The RSA is located in an incorporated portion of Riverside County within the Colorado Desert region of the Sonoran Desert. General habitat for the species analyzed under cumulative impacts encompasses the Mojave Desert and Colorado/Sonoran Desert regions in Riverside County. The RSA for endangered species potentially impacted is defined as the Project limits and area within a five-mile radius of the Project limits, including the dirt median that separates the roadbeds. These RSA limits are based on the home ranges³¹ for the Desert tortoise, a federal- and state-listed species found in the area.

The RSA is characterized by arid climatic conditions and low precipitation. The combination of extreme temperature ranges and low precipitation rates creates a unique environment for many plants and animals in the region. Biological field surveys were conducted for this project within the Caltrans ROW; the survey area is about 29.10 miles long and 295 feet wide, on average. During the biology surveys, it was determined that areas that are already bare and/or disturbed cover about 4 percent of the RSA. Bare and/or disturbed areas are areas where over 90 percent of the native vegetation has been removed; these areas include soft shoulders, staging areas, and gravel or dirt crossings adjacent to the freeway, but do not include areas used directly for transportation. Roadways comprise approximately 26.90 percent of the RSA.

Desert tortoise range has declined due to several factors including: Habitat loss due to human-related activities, disease caused by reintroduction efforts and other contamination by humans, illegal collection, road kills, habitat degradation by invasive plants, and predation on tortoises by dogs and juvenile tortoises by ravens. Other factors influencing the Mojave Desert populations of the desert tortoise are described by the “road corridor” or “road-effect zone.” These terms are used to describe the area directly surrounding habitat that is affected by the road and vehicle traffic.

Two adjacent projects with the same scope, in combination with the proposed project, are expected to contribute to cumulative impacts that may adversely affect the desert tortoise. As noted in Table 2-24, the 1C081, 1C082, and 1C083 I-10 pavement rehabilitation projects would have a cumulative permanent impact of 136.76 acres to DTCH and at least 163.39 acres of DTSH. Also, these three projects could temporarily impact 159.03 acres of critical habitat and at least 249.84 acres of suitable habitat.

³¹ Home range is defined as the maximum distance a species is expected to travel in its life time.

Table 2-24: Cumulative impacts to desert tortoise critical habitat and suitable habitat

Project EA	Impacts to Desert Tortoise Critical Habitat (acres)		Impacts to Desert Tortoise Suitable Habitat (acres)	
	Permanent	Temporary	Permanent	Temporary
1C081	29.88	30.81	-	-
1C082	89.06	80.47	105.39	100.98
1C083	17.83	47.75	58.00	148.86
TOTAL	136.76	159.03	163.39	249.84

Source: NES 1C081, NES 1C082, NES 1C083

As discussed in Section 2.3.4 Animal Species, most of the impact to desert tortoise habitat would occur in the median. In contrast to critical habitat, suitable habitat in the RSA is primarily found in the median. As discussed in section 3.1, Table 6 of the NES, most of this habitat is considered to be already degraded due to the presence of the I-10 corridor. Further, the I-10 can pose a threat to wildlife species due to high-speed vehicles and continuous maintenance activities. The center median is expected to be revegetated (hydroseeded). Areas along the shoulder that will be graded are already disturbed. Therefore, effects would be minimal.

No desert tortoises were observed during the surveys conducted for the proposed project. Although habitat is assumed present in the NES the habitat present within the median is not of high quality to successfully support desert tortoise populations. In a conversation with Caltrans Senior Environmental Planner Antonia Toledo in April 2019, John Taylor from USFWS concurred that the median is transitory habitat and “not high quality” habitat due to the high mortality rate. The median is surrounded by high-speed traffic on both directions of the I-10. Roads and the disturbances associated with them may lead to reduced habitat quality due to a decrease in abundance/density of breeding individuals and to behavioral responses, such as avoidance. Traffic disturbances, particularly noise, and psychological factors, such as stress, have been shown in studies to reduce habitat quality for wildlife species near roads.³²

Nevertheless, to minimize and mitigate impacts to this species, Caltrans will implement avoidance and minimization measures BIO-10 through BIO-17, and BIO-33; and compensatory mitigation, as described in section 2.3.4 and section 2.3.5 (see Measure BIO-34). The two adjacent projects will also conduct desert tortoise surveys and would implement necessary measures and mitigation in coordination with, and as required by, the appropriate agencies.

³² Richard Forman, et al., *Road Ecology: Science and Solutions*. (Washington, DC: Island Press, 2003), 123-125.

Chapter 3 – California Environmental Quality Act (CEQA) Evaluation

3.1 Determining Significance under CEQA

The proposed project is a joint project by the California Department of Transportation (Department) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans. The Department is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the Department to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

3.2 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

I. AESTHETICS

Except as provided in Public Resources Code Section 21099. Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Aesthetics

a) No Impact

The proposed project would not have a substantial adverse impact on a scenic vista because the project area does not include any scenic vistas.

b, c) Less Than Significant

As discussed in the Visual/Aesthetics section in Chapter 2, the proposed project would alter the median from an earthen median to AC pavement. However, the visual impacts will be low, and the visual quality of the existing corridor will not be altered as a result of the project. No portion of the project limits is eligible for designation as a scenic highway. Viewer sensitivity in the area is considered low.

d) No Impact

The proposed project would not implement or create any new sources of light or glare elements in an area in which there is currently no lighting.

II. Agriculture and Forest Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Agriculture and Forest Resources

a) **No Impact**

As discussed in the Farmland section in Chapter 2, the proposed project would not convert prime farmland, unique farmland, or farmland of statewide importance to non-agricultural land. Therefore, no impacts to farmland would occur.

b) **No Impact**

There are no parcels under a Williamson Act contract within the project limits.

c, d) **No Impact**

There are no forest or timberlands within the project limits.

d) **No Impact**

There are no other changes anticipated to farmland or forest land.

III. AIR QUALITY

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in other emissions (such as those leading to odors) affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Air Quality

a, c, d) No Impact

The proposed project is primarily located in the South Coast Air Basin, but the easterly portion is within the Mojave Desert Air Basin. The project is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the Mojave Air Quality Management District (MDAQMD), and the California Air Resources Board (CARB). Although two temporary detour lanes will be constructed, this project is not a capacity-increasing transportation project. After construction completion, these detour lanes will be striped signaling to the traveling public they are not to be used. Since this project does not increase capacity in the long term, it will have no impact on traffic volumes and would generate a less than significant amount of pollutants during construction due to the short duration of project construction.

b) Less Than Significant

The proposed project is included in SCAG’s 2016 RTP/SCS (page 74, FTIP ID RIVLS02) and FTIP both of which were found to be conforming (see Air Quality section of Chapter 2). Therefore, the proposed project will not conflict with the AQMP, violate any air quality standard, result in a net increase of any criteria pollutant, or expose sensitive receptors to substantial pollutant concentrations.

Temporary construction activities could generate fugitive dust from the operation of construction equipment. The project will comply with construction standards adopted by the SCAQMD, MDAQMD, as well as Caltrans standardized procedures for minimizing air pollutants during construction. Impacts will be less than significant. No mitigation is required.

IV. BIOLOGICAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Biological Resources

a) Less Than Significant with Mitigation Incorporated

Desert tortoise, a federally- and state-listed species has potential to exist within the BSA. Although no individuals or signs of the species were observed during the surveys in 2018, the BSA lies within the historic range of desert tortoise and burrows (one active and two

inactive) were observed near the project area in 2017. In addition, the BSA falls within 515.15 acres of DTCH.

The project has potential to directly impact desert tortoise in the form of vegetation removal, new pavement, and grading, and in the form of direct exposure due to vehicle strikes. The proposed project would permanently impact 89.06 acres of Desert Tortoise Critical Habitat (DTCH) and temporarily impact up to 80.47 acres of DTCH. The permanent impact acreage represents 0.000015 percent of the over 6,000,000 acres that have been designated as DTCH in the Mojave and Colorado deserts. Furthermore, most of the impact would occur in the median, an area of low-quality habitat. With the implementation of the measures in Appendix D Environmental Commitments Record, the impacts to desert tortoise and DTCH would be less than significant with mitigation incorporated. In addition, compensatory mitigation for desert tortoise and DTCH would be incorporated in coordination with CDFW. Mitigation for DTCH and desert tortoise would be at a minimum 1:1 ratio by land purchase or in-lieu fee credit.

b) Less Than Significant with Mitigation Incorporated

As described in Section 2.3.1, under the Build Alternative, direct, permanent impacts are anticipated for blue palo verde – ironwood woodland, up to 62.01 acres within the PIA in desert washes located near bridges. Direct, permanent impacts are also anticipated for 0.29 acres of mesquite thickets, a community of special concern.

Implementing avoidance and minimization measures would minimize impacts to blue palo verde – ironwood woodland community and mesquite thickets community. Included in the measures, a qualified biologist will perform a pre-construction plant survey no more than a week prior to ground-breaking activities to identify and flag or fence any rare plant individuals found in the project area. Also, impacts to these communities would be fully mitigated pursuant to state and federal requirements, thus the proposed construction would not contribute to regional cumulative habitat loss.

c) No Impact

There are no wetlands in the BSA.

d) Less Than Significant with Mitigation Incorporated

Discussed in the NES prepared for this project, the Areas of Conservation Emphasis (ACE) online dataset includes information on the presence of mapped corridors, linkages, and large contiguous natural areas. While transportation facilities, particularly freeways, constitute barriers to habitat connectivity, the project limits along I-10 fall within areas that ACE ranks as having high or medium terrestrial connectivity. Furthermore, Caltrans and CDFW partnered on the development of the California Essentials Habitat Connectivity (CEHC) Project to identify large Natural Landscape Blocks supporting native biodiversity and the Essential Connectivity Areas between them. According to the CEHC Project Report, the Sonoran Desert Ecoregion has 37 Natural Landscape Blocks that are connected by 13 Essential Connectivity Areas. Except for the section of I-10 from PM 12205 to 129, the entire project footprint bisects Essential Connectivity Areas that connect large Natural Landscape Blocks with high Ecological Condition Indices. The CEHC Plan suggests that

management should focus on improving road-crossing structures, to facilitate wildlife movement, and roadside fencing, to keep desert tortoise and other species off roads. Included in this project (BIO-28) permanent fencing will be installed at key wildlife crossings in the project area (e.g., PM 132-134) to direct wildlife, including but not limited to desert tortoise, American badger, and southern mule deer, into the highway undercrossings.

e) No Impact

This project will not conflict with any local policies or ordinances protecting biological resources.

f) No Impact

This project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

V. CULTURAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Cultural Resources

a) Less than Significant

A detailed description of cultural resources findings is included in Chapter 2, Section 2.1.11 Cultural Resources. As described in Chapter 2, tank tracks which are part of the Desert Training Center/California-Arizona Maneuver Area (DTC/C-AMA), a property listed in the California Register of Historic Places, are located within the project’s APE. The DTC/C-AMA was also assumed eligible for listing in the National Register of Historic Places for the purposes of this project.

Caltrans determined that further disturbance to the tank tracks from the DTC/C-AMA located within the APE would not be considered an adverse effect because they represent less than 1% of the DTC/C-AMA. Caltrans determined that a Finding of No Adverse Effect (FNAE) without standard conditions is appropriate for the undertaking and received SHPO concurrence on January 28, 2019. (See appendix G for SHPO coordination).

b) No Impact

No prehistoric archaeological resources, pursuant to SS 15064.5, were identified within the project limits or the APE.

c) No Impact

All rehabilitation activities are proposed to occur within the existing State right of way in previously disturbed area. Therefore, no human remains are expected to be encountered. Caltrans standard specification will be implemented in the event human remains are found during construction activities.

VI. ENERGY

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Energy

a) No Impact

The project will not result in significant environmental impacts during project construction and operation from wasteful, inefficient, or unnecessary consumption of energy resources. A Transportation Management Plan (TMP) will be developed and implemented to reduce vehicle delays and idling that generate GHGs.

b) No Impact

The project does not conflict with state or local plans for renewable energy or energy efficiency.

VII. GEOLOGY AND SOILS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Geology and Soils

a) No Impact

The project lies outside the San Andreas Fault line, categorized by the California Geological Survey as a Category A fault³³. The proposed project is located just east of the Mission Creek and Banning fault lines. The project limits lie within a B fault area, considered less destructive than A faults, thus the potential for a fault rupture or seismic activity that would expose people or structures to adverse effects is unlikely.

Caltrans will implement standard specifications related to earthquakes, ground shaking, ground failure, and landslides during the design and construction to avoid and/or minimize any potential impact. Therefore, no mitigation measures are required.

b) Less Than Significant

Although the topography within the project limits is general flat, soil erosion and loss of topsoil may occur during construction. To avoid and/or minimize potential impacts, Caltrans standard specification and BMPs will be implemented. No mitigation measures are required.

c, d, e) No Impact

According to the California Department of Conservation Landslide Inventory Map³⁴ the project is not located in an area susceptible to landslides. Further, according to the County of Riverside General Plan – Safety Element³⁵ the project is located in an area of low liquefaction susceptibility. According to *Figure S-3: Generalized Liquefaction* the westerly half of the project lies an area where no groundwater data exists. The easterly portion is lies in an area where the potential is low- moderate, but the groundwater table is below 50 feet of the ground surface.

the project limits are not located in an area susceptible to liquefaction or expansive soil. Lastly, the project scope does not involve of septic tanks or alternative waste water disposal systems. No mitigation measures are required.

f) No Impact

No unique paleontological resources or sites or unique geologic features have been identified in the vicinity of the project. the proposed project involves work in a previously disturbed area.

³³ http://www.conservation.ca.gov/cgs/rghm/Pages/near_source_zones.aspx, Accessed July 23, 2018.

³⁴ <http://maps.conservation.ca.gov/cgs/lis/>. Accessed July 23, 2018.

³⁵

http://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/elements/OCT17/Ch06_Safety_DEC2016.pdf. Accessed July 24, 2018.

VIII. GREENHOUSE GAS EMISSIONS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. The analysis included in the climate change section of this document provides the public and decision-makers as much information about the project as possible. It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. These measures are outlined in the climate change section of the document.			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Hazards and Hazardous Materials

Unless otherwise noted, the information from this section was derived from the ISA prepared for this project (Caltrans, 2019).

a - d) No Impact

The proposed project involves the rehabilitation of existing pavement through this stretch of I-10. Some vehicles using this facility may contain materials deemed hazardous. The project, however, is not anticipated to increase the potential for vehicles carrying hazardous

materials to travel using this route or increase the potential for accidents to occur in the project area. The hazards associated with vehicular transport of hazardous waste are regulated under existing programs and would not be affected by the project.

No schools exist or are currently proposed within a 0.25 mile of the proposed project site. The proposed project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and did not show up in any of the Federal, State, and local databases searched.

e) No Impact

The project is not located within an airport land use plan. The airport closest to the project is the Desert Center Airport, a private-use airport. It is located approximately three perpendicular miles north of the I-10 and five nautical miles northeast of the Desert Center business district. Therefore, the project would not result in a safety hazard for people residing or working in the project area.

f) Less Than Significant

To avoid and/or minimize impacts to emergency response plans or emergency evacuation plans during construction, detour lanes will be installed before pavement rehabilitation activities begin. Additionally, Caltrans will implement TMP to avoid and/or minimize impacts to any emergency response plan or emergency evacuation plan in the area. No mitigation measures are required.

g) No Impact

According to the Riverside County General Plan – Safety Element, the site is located in an area classified as *Moderate* for wildfire susceptibility. Caltrans standard measures for fire suppression during construction will be implemented.

X. HYDROLOGY AND WATER QUALITY

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Hydrology and Water Quality

a) Less Than Significant

The project has potential to temporarily impact groundwater and surface water quality. The potential impact would be in the form of pollutant runoff during construction, including paints, solvents, fuels, concrete waste, trash, and sediments. Construction activities could also result in increased potential for soil erosion. As discussed in Section 2.2.2, the project would comply with provisions of Statewide National Pollutants Discharge Elimination System (NPDES) permit. NPDES permits set limits on discharges, schedules for compliance, special conditions, and monitoring programs.

The project contractor would be responsible for preparing and implementing a SWPPP in accordance to Caltrans standards incorporating water pollution control BMPs, and of amending SWPPP during the course of project construction as necessary. Deployment of BMPs would reduce long-term water quality impacts. Therefore, less than significant impacts are anticipated.

b) Less Than Significant

The project is not expected to substantially deplete groundwater supplies or interfere substantially with groundwater recharge. As discussed in Section 2.2.3, groundwater in the area is recharged, in part, by runoff from the surrounding mountains. As a result of the project, runoff from net impervious surface would contribute to water runoff and to basin recharge. Post-construction BMPs will be required in order to minimize impacts on the receiving basin.

c) Less Than Significant

During project construction, erosion could be temporarily increased due to groundbreaking and vegetation removal. BMPs identified in the SWPPP would prevent construction pollutants from contacting stormwater with the intent of keeping erosion from moving into receiving waters. Thus, less than significant impact is anticipated.

The proposed project could result in an increase to net new impervious surface area of 117.9 acres, which would increase the amount of runoff. Increased runoff could potentially increase risk of flooding, exceed the capacity of stormwater drainage, and provide for increased sources of pollution. Although increase in runoff could potentially increase flooding on- or off-site, according to FEMA flood zone maps, the project is not within a 100-year flood zone. A MS4 permit would be required for the project for stormwater discharging. As part of the MS4 permit, water discharges would be required to meet water quality standards through the implementation of BMPs. To comply with the permit, the project would also be programmed to follow the guidelines and procedures outlined by SWMP to address storm water runoff.

This project requires Rapid Stability Assessment based on the criteria provided in Section 2 of the Caltrans Hydro modification Guidance dated February 2015. The RSAs will be completed during the design phase.

The project would not significantly impede or redirect flood flow.

d) No impact

The project is not located in a flood hazard, tsunami, or seiche zone area.

e) No Impact

The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

XI. LAND USE AND PLANNING

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Land Use and Planning

a) No Impact

As detailed in Chapter 2, the area surrounding this stretch of I-10 is general undeveloped. Additionally, the proposed scope involves rehabilitation of an existing facility. For these reasons, implementation of the project would not physically divide an established community.

b) No Impact

The project is located in an unincorporated area of Riverside county and is therefore governed by the County of Riverside General Plan. The westerly portion of the project area lies within the Desert Center Area Plan; which further guides land use and development in the area. All proposed activities will occur within the existing right of way, already zoned for a transportation use, and no property acquisition will be necessary. No impacts are anticipated.

XII. MINERAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Mineral Resources

a) No Impact

The Project site is not within an area designated for state or locally important mineral resources and is not utilized for mineral resource protection.

b) No Impact

The project involves rehabilitating an already existing freeway, in an area zoned for transportation use. Per the Riverside County General Plan, Desert Center Area Plan, and Palo Verde Valley Area Plan, most of the area surrounding the project is on “Open Space Rural” designation. The project site is not within a area designated for mineral resources. Thus, the project would not result in a significant impact on the availability of any known mineral resource within the project area.

XIII. NOISE

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Noise

a) No Impact

There are no noise sensitive receptors located within or near the project area. The project is not directly adjacent to or within a community. The project will not have a significant noise impact because there are no residences or businesses in the immediate vicinity of the project. The project would also be conducted in accordance with Caltrans Standard Specification Section 14-8.02 (Measure **N-1**), which states that contractor shall comply with all local sound control and noise rules, regulations, and ordinances that apply to any work pursuant to contract. Under CEQA, no significant noise impact would occur as a result of the project and no mitigation is required.

b) No Impact

Groundborne noise and vibration could potentially occur during project construction. However, because there are no sensitive receptors in the vicinity of the project and because the contractor would follow Caltrans Standard Specifications outlined in N-1, the project would result in no impact from groundborne vibration or noise.

c) No Impact

The project would not expose people residing or working in the project area to excessive noise levels. The project is not located within an airport land use plan. Desert Center Airport, a private-use airport, is the airport closest to the project. Desert Center Airport is located approximately three perpendicular miles north of the I-10 and five nautical miles northeast of the Desert Center business district.

XIV. POPULATION AND HOUSING

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Population and Housing

a) No Impact

The project involves the rehabilitation of an already existing freeway, and there will be no new infrastructure. This is also not a capacity-increasing project. Although two temporary detour lanes will be constructed, the detour lanes would be stripped signaling to the public that they are not to be used after construction is completed. Therefore, there will be no direct or indirect impacts to population growth in the area.

b) No Impact

No new ROW will be acquired for this project. All work will be done within already existing Caltrans ROW. As a result, no residents or businesses will be displaced and/or relocated. Thus, no impact will occur.

XV. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Public Services

a) No Impact

The project would not affect the acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks, or other public facilities. No permanent impacts are anticipated. Temporary impacts during construction related to traffic operations may occur. To minimize potential construction related impact to public services, two detour lanes would be constructed prior to rehabilitation activities. Two lanes would be opened in each direction during construction, as is currently the case. No significant impact is anticipated.

XVI. RECREATION

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Recreation

a & b) No Impact

The project would not increase the use of existing neighborhood and regional parks or other recreational facilities because it is not a capacity-increasing project. As discussed in Section 2.1.2, there are no parks or recreational facilities within 0.5 miles of the project vicinity. No project would not require construction or expansion of any recreational facilities.

XVII. TRANSPORTATION

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Transportation

a) No Impact

The project is a rehabilitation project of an already existing freeway in an area zoned for transportation. The project will not conflict with a program, plan, ordinance, or policy addressing the circulation system because no new land uses are proposed.

b) Less Than Significant

CEQA Guidelines sections 15064.3, subdivision (b) states that, transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact.³⁶ Due to the nature of the project, no change in vehicles miles traveled is expected.

c) No Impact

The proposed project would not change or alter current design features. Thus, the project will not increase hazards due to a design feature.

d) Less Than Significant

³⁶ California Natural Resources Agency
<http://resources.ca.gov/ceqa/docs/update2018/proposed-regulatory-text.pdf>

Construction activities have the potential to result in temporary disruptions related to emergency access during construction. However, to minimize impacts during construction, two detour lanes would be constructed. Emergency vehicles would have access to two lanes in each direction during construction, thus the impact will not be significant.

XVIII. TRIBAL CULTURAL RESOURCES

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Tribal Cultural Resources

A summary of tribe consultation efforts is included in Section 2.1.11.

a) Less Than Significant

One property in the APE was determined to be a historic property listed on the CHRP as California Historical Landmark (CHL)-985:DTC/C-AMA. During the identification process, it was determined that tank tracks, elements of the historic property, are located within the APE. Caltrans determined that further disturbance to the tank tracks would not result in significant impact to the historic property. The tank tracks represent less than 0.01% of the overall DTC/C-AMA. No mitigation is proposed.

b) No Impact

As described in Section 2.1.11, consultation with various interest and tribal groups has occurred and is ongoing. No SLFs were identified in the project area. although the THPO expressed that there are culturally sensitive areas within the project area, no comments on

the draft cultural documentation were received. Therefore, it is assumed that the project will have no impact.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Utilities and Service Systems

a) No Impact

The project would not generate the need for relocation or construction of water, wastewater treatments or stormwater drainage, electric power, natural gas, or telecommunication facilities. Thus, no impact would occur.

b) No Impact

The project would not require a water supply. No impacts are anticipated.

c) No Impact

The project does not require wastewater treatment and will not change the projected demands. Therefore, no impacts are anticipated.

d) No Impact

Some solid waste would be generated by the project. Solid waste would require temporary use of local landfills during construction. The project would be served by a landfill with sufficient capacity. It is also Caltrans' policy to recycle materials whenever possible. Therefore, the project would have no impacts.

e) No Impact

The Project would be in compliance with all federal, state, and local management and reduction statutes and regulations related to solid waste. No impact is anticipated.

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Wildfire

a, b, c, d) No Impact

The project is not located in or near a state responsibility area or land classified as very high fire hazard severity zone. Per the Riverside County General Plan Safety Element, the project is located primarily within federal responsibility areas classified as moderate. Local responsibility areas classified as “all others” are scattered throughout the project area. Therefore, the project would not have an impact.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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 other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Mandatory Findings of Significance

a) Less Than Significant with Mitigation

Biological Resources

Desert tortoise, a federal- and state-listed species, is presumed present within the BSA. In addition, the project is also located within 515.15 acres of DTCH. The impacts to desert tortoise and DTCH are discussed in sections 2.3.4 and 2.3.5. Overall, the project has potential to permanently impact 89.06 acres of DTCH and permanently impact 105.39 acres of desert tortoise suitable habitat. A summary of the impacts is included in tables 2-20 and 2-21. Most of the permanent and temporary impact to desert tortoise habitat will occur in an area where habitat is considered to be of low-quality because it is a dirt median surrounded by high-speed traffic in both directions.

Compensatory mitigation in the form of land purchase or in-lieu fee credit purchase, at a minimum of 1:1 ratio. In addition, the project will also implement several biological avoidance and minimization measures listed in Section 2.3 to minimize impact to desert tortoise and DTCH.

Historical Resources

One property in the APE was determined to be a Historic Property listed in the CRHP, the Desert Training Center/ California-Arizona Manauver Area (DTC/C-AMA). The DTC/C-AMA is an extremely large historic landscape composed of numerous site types and features. Identification efforts determined that tank tracks, part of the DTC/C-AMA, are located within the project APE. However, further disturbance to the tank tracks would not be considered an adverse effect because the tank tracks represent less than 0.01% of the overall DTC/C-AMA. Impact is less than significant and no mitigation is proposed.

b) Less Than Significant with Mitigation

Cumulative impacts of the project are discussed in section 2.4. Two other rehabilitation projects of similar scope near the project area were considered for determining cumulative impacts, Caltrans projects 1C081 and 1C083.

Although the project has potential for cumulative considerable impact to Waters of the State of California (WSC) because there will be impact to potential ephemeral drainages and crossings, the impact would be minimized with measures BIO-3 through BIO-6 and WQ-1 and WQ-2. For this proposed project, Caltrans is coordinating with CDFW for Lake Streambed and Alteration review. Additional avoidance and minimization measures may also be identified through the permitting process. All three projects would be required to prepare wetland delineations and to follow all laws and regulations and to apply for the appropriate permits.

The project also has potential for cumulative considerable impacts to biological resources, due to potential impact to desert tortoise and DTCH for all three projects. Table 2.4-2 in section 2.4 summarizes the impacts broken down per each project. As discussed in section 2.4, most of the impact to DTCH and to desert tortoise suitable habitat would occur in the median. Although the median is considered habitat, it is surrounded by high-speed traffic on both directions. The median is already an area of high mortality and thus considered "low quality" habitat. Impact to desert tortoise and DTCH would be mitigated for each project and all appropriate permits and laws/regulations would be followed. For this proposed project measures BIO-10 through BIO-17, and BIO-33 would help minimize and/or avoid impact. In addition, mitigation would be implemented for this project by land purchase or in-lieu fee credit of, at a minimum, 1:1 ratio.

c) No Impact

The project area is located within a rural desert zone, with low human population and large open space. The project would not cause substantial adverse effects to human beings, either directly or indirectly.

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3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (1, 1, 1, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation.³⁷ In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.³⁸ The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." "Greenhouse gas mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

Federal

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices. This approach encourages planning for sustainable highways by addressing climate risks while

³⁷ <https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014>

³⁸ <https://www.arb.ca.gov/cc/inventory/data/data.htm>

balancing environmental, economic, and social values—“the triple bottom line of sustainability.” Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

Energy Policy Act of 2005 (109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Standards: This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

U.S. EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions.

U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010 and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of

54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules' long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and ARB will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025. However, the EPA finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Trump ordered EPA to reopen the review and reconsider the mileage target.

NHTSA and EPA issued a Final Rule for “Phase 2” for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO₂ emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

State

With the passage of legislation including State Senate and Assembly bills and executive orders, California has been innovative and proactive in addressing GHG emissions and climate change.

Assembly Bill 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005): The goal of this executive order (EO) is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and SB 32 in 2016.

Assembly Bill 32 (AB 32), Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Executive Order S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Senate Bill 97 (SB 97), Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391 (SB 391), Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

Executive Order B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Executive Order B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO₂e). Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

Senate Bill 32, (SB 32) Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

Environmental Setting

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by ARB in 2008 and must be updated every 5 years. The second updated plan, California's 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32.

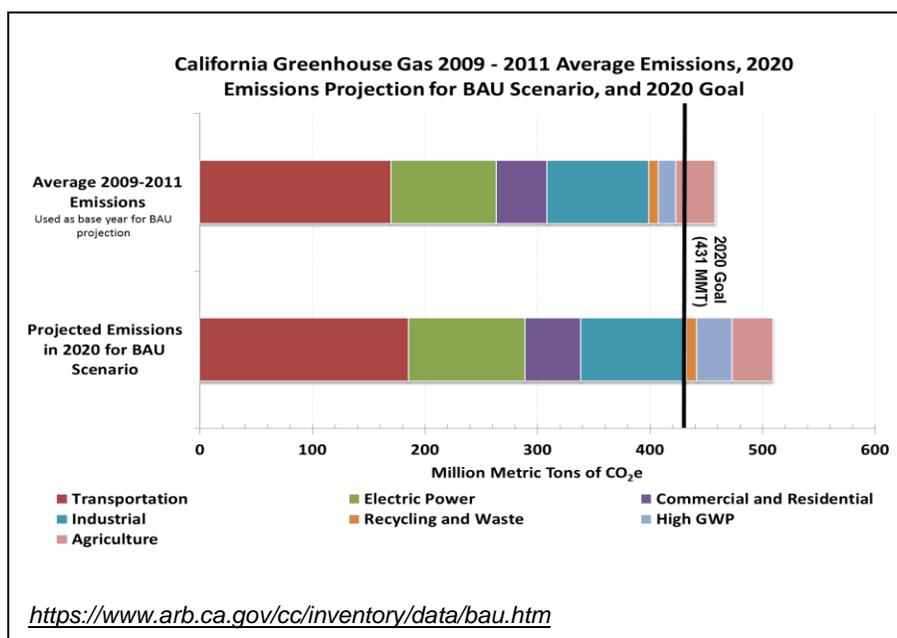
The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the updated Scoping Plan, ARB released the GHG inventory for California. ARB is responsible for maintaining and updating California's GHG Inventory per H&SC Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns.

The projected 2020 emissions provided in Figure 3.3-1 represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO_{2e}³⁹. The 2018 edition of the GHG emissions inventory found total California emissions of 429 MMTCO_{2e} for 2016.

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 MMTCO_{2e} total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO_{2e}.

Figure 3.3-1: 2020 Business as Usual (BAU) Emissions Projection 2014 Edition



Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when

³⁹ The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4)

combined with the contributions of all other sources of GHG.⁴⁰ In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed project.

Operational Emissions

The project proposes to rehabilitate the existing asphalt concrete (AC) pavement to restore and extend the service life of the pavement for a minimum of 20 years. The project would also improve safety and mobility for the traveling public by upgrading guardrails, bridge rails, and drainage facilities. The project would not change roadway capacity or increase vehicle miles traveled. Accordingly, the proposed project has low to no potential for an increase in operational GHG emissions.

Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

The Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model was used to quantify the expected construction-related GHG emissions related to the proposed project. Construction GHG emissions would total 6903.55 tons of CO₂ during the estimated 750 working days of construction.

A Transportation Management Plan will be prepared to reduce traffic delays. Additionally, the scope of the project involves construction of two detour lanes to avoid lane closures that could cause congestion and traffic delays that generate excess GHG emissions. The detour lanes would be constructed and open to the public prior to initiation of the proposed I-10 rehabilitation activities. Furthermore, construction contractors must comply with Caltrans' standard contract specifications, which require using construction best management practices, complying with

⁴⁰ This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

ARB emissions-reduction regulations and local air-pollution control district rules, and taking other actions that help reduce construction GHG emissions.

CEQA Conclusion

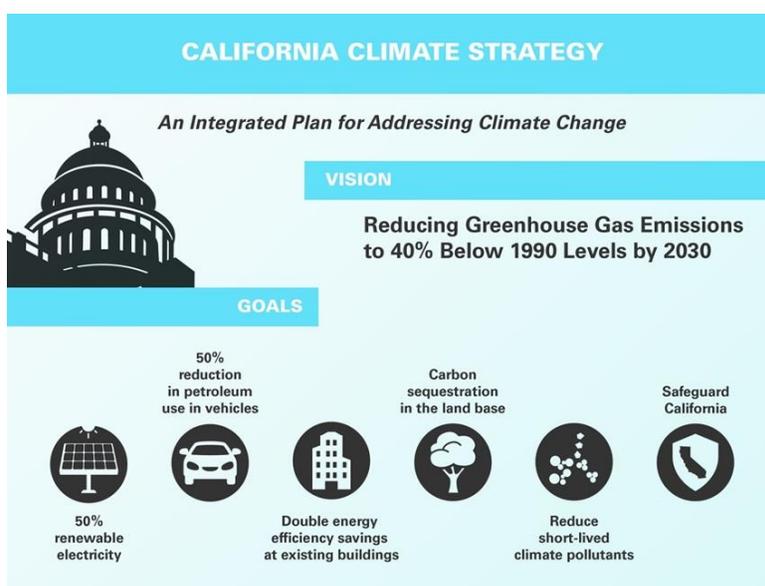
While the project will result in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. While it is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct impact and its contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following sections.

Greenhouse Gas Reduction Strategies

Statewide Efforts

To further the vision of California's GHG reduction targets outlined in AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.

Figure 3.3-2: The Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals



The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of Governor Brown's key pillars sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set a new interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

SB 391(Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

Caltrans Strategic Management Plan

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT per capita
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in Caltrans Activities to Address Climate Change (2013).

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.

Project-Level GHG Reduction Strategies

The following measures will also be implemented in the project to reduce GHG emissions and potential climate change impacts from the project.

CC-1: A Transportation Management Plan will be developed and implemented for this project, to reduce vehicle delays and idling that generate excess GHGs.

CC-2: Standard Specification 7-1.02C, Emissions Reduction, requires contractors to certify that they are “aware of the emissions reduction regulations being mandated by the California Air Resources Board” and “will comply with such regulations before commencing the performance of the work and maintain compliance throughout the duration of this Contract.”

CC-3: Standard Specification 14-9.02, Air Pollution Control, requires contractors to “comply with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, including those provided in Govt Code § 11017 (Pub Cont Code § 10231).”

Adaptation Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.

Federal Efforts

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011⁴¹, outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such

⁴¹ <https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience>

as fresh water, and providing accessible climate information and tools to help decision-makers manage climate risks.

The federal Department of Transportation issued *U.S. DOT Policy Statement on Climate Adaptation* in June 2011, committing to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective in current and future climate conditions.”⁴²

To further the DOT Policy Statement, in December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*).⁴³ This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation’s transportation systems.

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels.⁴⁴

State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California’s vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (Sea-Level Rise Assessment Report)⁴⁵ was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to state infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed *The*

⁴² https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm

⁴³ <https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm>

⁴⁴ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

⁴⁵ *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at: http://www.nap.edu/catalog.php?record_id=13389.

California Climate Adaptation Strategy (Dec 2009),⁴⁶ which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across state agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as Safeguarding California: Reducing Climate Risk (Safeguarding California Plan).

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring state agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how state agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the State of California Sea-Level Rise Interim Guidance Document (SLR Guidance), produced by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided "guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California," specifically, "information and recommendations to enhance consistency across agencies in their development of approaches to SLR." The March 2013 update⁴⁷ finalizes the SLR Guidance by incorporating findings of the National Academy's 2012 final Sea-Level Rise Assessment Report; the policy recommendations remain the same as those in the 2010 interim SLR Guidance. The guidance will be updated as necessary in the future to reflect the latest scientific understanding of how the climate is changing and how this change may affect the rates of SLR.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in working towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

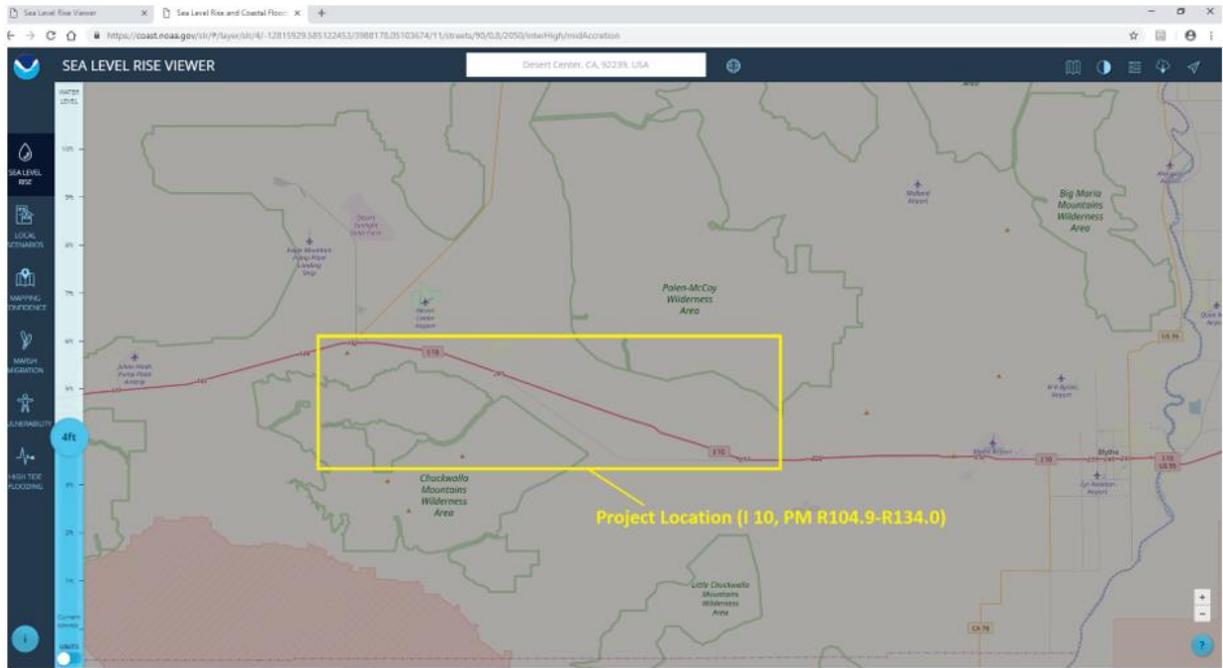
The proposed project is outside the coastal zone and not in an area subject to sea-level rise (Figure 3.3-3). Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

⁴⁶ <http://www.climatechange.ca.gov/adaptation/strategy/index.html>

⁴⁷ <http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/>

Figure 3.3-3: Sea Level Rise Map

NOAA Sea-Level Rise Viewer – I 10 Pavement Rehabilitation Project – Riverside County EA 08-1C082



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Chapter 4 – Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, Project Development Team (PDT) meetings. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

4.1 Cultural Resources

After a review of the Caltrans Cultural Resource Database (CCRD), previous studies, and considering that the project is essentially a maintenance project through a well-established transportation corridor within Caltrans' ROW, it was determined that consultation with Local Government, Local Historical Society/Historic Preservation Groups, and Public Information Meetings were not warranted. However, consultation with associated/interested tribal groups has occurred and is ongoing.

A request was made to the Native American Heritage Commission (NAHC) for a Sacred Land File (SLF) search on the February 21, 2018. The NAHC responded February 26, 2018, with negative SLF results, and provided Native American contact list.

Anthony Madrigal, Tribal Historic Preservation Officer (THPO) for Twenty-Nine Palms Band of Mission Indians, explained the tribe is aware of culturally sensitive areas within the Project area and requested the cultural documentation. Caltrans sent the requested draft documents and follow-up emails requesting comments on the cultural documentation including the Finding of No Adverse Effect to Historic Properties. Caltrans has received no further comments to date.

Brian Etsitty, THPO for the Colorado River Indian Tribe, explained that Caltrans would receive further notification should issues arise. No further response received from tribe to date.

Joseph Ontiveros, THPO for Soboba Band of Luiseno Indians, explained the Project is in proximity to known cultural resources. A government to government meeting was held to discuss these resources. Caltrans sent the draft cultural studies illustrating the lack of prehistoric resources within the APE. A follow-up email was sent requesting comments on the cultural documentation including the Finding of No Adverse Effect to Historic Properties. Caltrans has received no further comments to date.

Consultation letters were also sent to Timothy Williams, Chairperson for Fort Mojave Indian Tribe, and Charles Wood, Chairperson for the Chemehuevi Reservation along with two follow-up contacts, to which no responses have been received to date. As consultation is an ongoing process throughout the life of the Project, Caltrans will continue to consult with interested tribal entities as the project moves forward.

4.2 Public Agencies

Consultation efforts between Caltrans and USFWS, and between Caltrans and CDFW are ongoing.

An official USFWS species list was requested and received on both July 18, 2018 and February 13, 2019.

In September 2018, USFWS biologist Mr. John M. Taylor was contacted to discuss potential findings and the biological assessment (BA). Additionally, in September 2018, CDFW biologist Ms. Heather Elder was contacted to discuss the project and potential permit strategies.

On December 20, 2018, Caltrans Biologist Nancy Frost submitted the desert tortoise Biological Assessment and previous NES to John Taylor with USFWS. John Taylor confirmed receipt of the request package.

On December 21, 2018, Caltrans Biologist Nancy Frost received an email from John Taylor indicating the U.S. Government faces a shutdown and if it goes into effect, the U.S. Fish and Wildlife Service - Palm Springs Office will be closed and unable to respond to emails or phone calls for the duration of the shutdown, and the requirements to comply with the Endangered Species Act remain in place, and any projects that "may affect" federally listed species may need to be suspended until consultation can be conducted.

On January 23, 2019, Nancy Frost attended a pre-application meeting/conference call with CDFW (Kim Romich) and USACE (Veronica Li, Luis Betancourt). Antonia Toledo, Senior Environmental Planner and Tatiana Torres, Environmental Planner were also in attendance. Caltrans was informed of the need for a 2081 (one year to process) and 1600 from CDFW. The submittal to USACE a letter requesting determination of non-jurisdiction and an approved jurisdictional delineation were also discussed. USACE also expressed interest in being a coordinating agency.

On January 24, 2019, Nancy Frost participated in a conference call with USACE (Veronica Li, Luis Betancourt). Veronica told Caltrans that "we are safe to say this is AJD" and that Mr. Betancourt planned to review/provide feedback on the draft JD by the following week.

On January 30, 2019, Nancy Frost met with the Caltrans District 8 Biology Unit and called John Taylor to discuss the project.

On February 13, 2019, Nancy Frost sent John Taylor a formal letter requesting a revision of the Section 7 consultation impacts to DT.

On March 7, 2019, Antonia Toledo, sent a letter to USACE requesting their participation as a coordinating agency.

A letter dated March 28, 2019, from USACE was received with their response accepting to be a coordinating agency for this project.

In April 2019, Caltrans Senior Environmental Planner Antonia Toledo and John Taylor with USFWS had a phone meeting. Mr. Taylor concurred that the median is transitory habitat and “not of high quality” due to high mortality rate.

Caltrans has determined that a federal Section 7 consultation with USFWS is necessary, and has been initiated, to address potential impact to desert tortoise and DTCH. In addition, consultation with CDFW to discuss potential impacts and mitigation requirements will also be conducted.

4.3 Permits, Reviews, and Approvals

Coordination for the following permits, reviews, and approvals is anticipated prior to project construction:

- California State Water Resources Control Board (SWRCB) coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Order No. 2009-0009-DWQ, as amended by 2010-0014-DWG and 2012-0006-DWQ, NPDES No. CAS000002, or any other subsequent permit. The Statewide NPDES Construction General Permit has already been issued and only needs submittal of the Notice of Intent to be activated;
- RWQCB, Region 7, Section 401 Clean Water Act (CWA) Water Quality Certification for activities impacting stream crossings and potential ephemeral drainages;
- CDFW 1602 Streambed Alteration Agreement for activities within jurisdictional drainages;
- CDFW 2081 Incidental Take Permit for Desert Tortoise;
- USFWS Section 7 Consultation for Desert Tortoise;
- USACE Approved Jurisdictional Determination.

4.4 Public Circulation

A public notice advertising Caltrans’ intent to adopt a Mitigated Negative Declaration with Opportunity for Public Hearing will be published in the Palo Verde Valley Times, a newspaper of general circulation. The document will be available for public review and comment for thirty (30) days.

4.5 Coordination Documents

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DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

March 28, 2019

REPLY TO
ATTENTION OF:

Office of the Chief
Regulatory Division

Antonia Toledo, Senior Environmental Planner
Division of Environmental Planning
California Department of Transportation, District 8
464 West Fourth Street, MS-1222
San Bernardino, California 92401-1400

Subject: Invitation to Become Cooperating and/or Participating Agency on the I-10
Rehabilitation Project from the State Route 177/Interstate 10 Junction, to One Mile West of
Wiley Well Road (IC082)

Dear Ms. Toledo:

I am responding to the California Department of Transportation (Caltrans) District 8 request, dated March 7, 2019, for the U.S. Army Corps of Engineers ("Corps") to participate as a Cooperating and/or Participating agency for the rehabilitation of existing asphalt concrete (AC) pavement on Interstate 10 (I-10) from the State Route 177 (SR-177)/I-10 Junction, at Post Mile (PM) R105.0, to 1.0 mile west of the Wiley Well Road Interchange, in the County of Riverside, California. The proposed project would also involve upgrades to ramp facilities for Americans with Disabilities Act (ADA) compliance, grading up to 5 feet outside the edge of the shoulder, and the installation of a two-lane temporary detour within the existing median.

The Corps understands that the Federal Highways Administration (FHWA) has delegated its responsibilities for environmental consultation and coordination under the National Environmental Policy Act (NEPA) and the Clean Water Act (CWA) to Caltrans for the proposed project, pursuant to Section 6005 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). As such, Caltrans, as a federal lead agency, will prepare an Environmental Impact Statement (EIS) for the proposed project, following the Council on Environmental Quality (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" of November 29, 1978. In accordance with Section 6002 of SAFETEA-LU, Caltrans requests that our agency become a cooperating and/or participating agency in the development of this project.

The Corps agrees to accept Caltrans' offer to become a cooperating agency. The Corps also understands that our views, as well as those of other cooperating agencies, will be sought through all stages of the EIS development. It is understood that this coordination is intended to preclude any subsequent and duplicative reviews by cooperating agencies. This coordination is also designed to aid in identifying all reasonable project alternatives, environmental impacts,

and measures to mitigate adverse impacts for the project. The Corps would like to ensure that this project progresses in a mutually acceptable way to streamline the eventual application process for required state and Federal permits. Further, because of our CWA Section 404 administrative responsibilities, we have a particular concern in seeing the project comply with the 404(b)(1) guidelines (40 CFR 230) which are fundamental to supporting our eventual determination of the least environmentally damaging practicable alternative (LEDPA).

The Corps has reviewed the FHWA "Guidance on Cooperating Agencies," which outlines the responsibilities of the federal lead agency and those of the cooperating agencies. However, staff resource constraints will limit Corps participation to the following:

- Assist in identifying interest groups.
- Attend coordination meetings and joint field reviews.
- Provide meaningful and early input on issues of concern.
- Review pre-draft and pre-final environmental documents.
- Adopt the final environmental document, if after an independent review, the Corps concludes that the document satisfies NEPA and other requirements for our approval and permit for the proposed action.
- Provide information on alternatives, including the "no practicable alternative" finding.
- Assist the lead agency in determining appropriate and practicable mitigation, including "all practicable measures to minimize harm." These measures should reflect avoidance, minimization, and compensation.
- Cooperate in the application of principles for integration of NEPA and the Section 404 Permits contained in Chapter 11 of Applying the Section 404 Permit Process to Federal-aid Highway Projects.

The Corps looks forward to continued dialogue and coordination with Caltrans District 8 on this project. If you have any questions, please contact Luis O. Betancourt-Massanet of my staff, at (213) 452-3845, or via e-mail at Luis.O.Betancourt@usace.army.mil. Please refer to this letter and Corps File Number: SPL-2019-00265-LOB in your reply.

Sincerely,



Mark D. Cohen
Deputy Chief, Regulatory Division
USACE-SPL, Los Angeles District

cc:

Karin Cleary-Rose, U.S. Fish & Wildlife Service, Palm Springs, CA
Elizabeth Goldman, Environmental Protection Agency, Region IX, San Francisco, CA
Jason Bill, Santa Ana Regional Water Quality Control Board, Riverside, CA
Michael Flores, California Department of Fish & Wildlife, Bermuda Dunes Office, CA
Jessica Tudor, State Historic Preservation Office, CA

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Chapter 5 – List of Preparers

The following Caltrans staff contributed to the preparation of this IS/EA.

Wil Ochoa, Project Manager

Antonia Toledo, MS Senior Environmental Planner – Generalist

Tatiana Torres, Environmental Planner – Generalist

Nancy Frost, Associate Environmental Planner – Natural Sciences

Shannon Clarendon, Associate Environmental Planner – Cultural Studies (Archaeology)

Gary Jones, District Native American Coordinator

Bahram Karimi, Associate Environmental Planner – Paleontological Studies

Fatima Islam, Transportation Engineer, Civil

Christopher Gonzalez, Transportation Engineer, Civil

Farhana Islam, Transportation Engineer, Civil

Chris Igbinedion, Senior Transportation Engineer

Almabeth Anderson, Landscape Associate

Hannah Duarte, Environmental Planner – Generalist

Alben Phung, Environmental Planner – Generalist

Rachel Darney-Lane, Environmental Planner - Generalist

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Chapter 6 – Distribution List

A public notice of this IS/EA was distributed to federal, state, regional and local agencies, elected officials, and utilities and services providers. In addition, all property owners and occupants within a 500-foot radius of the project limits were provided the notice.

Agencies and Elected Officials	
George A. Johnson County Executive Officer	County of Riverside County Administrative Center 4080 Lemon Street – 4 th Floor Riverside, CA 92501
Anne Mayer Executive Director	Riverside County Transportation Commission P.O. Box 12008 Riverside, CA 92502
Supervisor V. Manuel Perez	Board of Supervisors 4 th District, Riverside County 73-710 Fred Waring Drive Suite 222 Palm Desert, CA 92260
Assembly Member Eduardo Garcia	48220 Jackson Street Suite A3 Coachella, CA92236
Environmental Coordinator	U.S. Bureau of Land Management Palm Springs-South Coast Field Office 1201 Bird Center Drive Palm Springs, CA 92262
Raul Ruiz Congressman	House of Representatives, California District 36 445 East Florida Ave - 2 nd floor Hemet, CA 92543
Susan E. Scott Superintendent	Desert Center Unified School District P.O. Box 6 Desert Center, CA 92239
Dr. Charles Bush Superintendent	Palo Verde Unified School District 295 N. First St. Blythe, CA 92225
Jeff Stone, Senator	California Senate, District 28 45-125 Smurr Street Suite B Indio, CA 92201
California Highway Patrol	California Highway Patrol 430 S. Broadway Blythe CA 92225
Captain David Teets	Riverside County Sheriff Colorado River Station 260 N. Spring Street Blythe, CA 92225

Riverside County Fire Department, Lake Tamarisk	Riverside County Fire Department, Station 49 43880 Lake Tamarisk Desert Center, CA 92239
Brian Croft Acting Division Chief	West Mojave Desert Division U.S. Fish and Wildlife Service 777 East Tahquitz Canyon Way, Ste 208 Palm Springs, CA 92262
Planning Department	County of Riverside Planning Department 4080 Lemon Street Riverside, CA 92502
Mark D. Cohen Deputy Chief Regulatory Division	U.S. Army Corps of Engineers Los Angeles District – Regulatory Division 915 Wilshire Blvd, Los Angeles, CA 90017
Regional Manager	California Department of Fish and Wildlife Inland Deserts Region 3602 Inland Empire Boulevard, Suite C-220 Ontario, CA 91764
Nancy Wright Board Chair	Regional Water Quality Control Board Colorado River Basin Region (7) 73-720 Fred Waring Dr., Suite 100 Palm Desert, CA 92260
Ironwood State Prison	P.O. Box 2229 Blythe, CA 92226
Chuckawalla Valley State Prison	P.O. Box 2289 Blythe, CA 92226
Property Owners	
Rupert E. & Meron B. Yessayian	P.O. Box 1511 La Quinta, CA 92247
Estate of Stanley E Ragsdale	1212 Hexem Ave. Santa Rosa, CA 95404
Elmer & Evelyn Hunter	P.O Box 209 Desert Center, CA 92239
Doris & Clair Holmes	P.O. Box 743 Desert Center, CA 92239
Vera Stanley	43700 Ragsdale Road. #42 Desert Center, CA 92239
Donna Stevens	34913 San Rosen Ct. Yucaipa, CA 92399
Bran Palmi	P.O. Box 712 Desert Center, CA 92239
Junaid Farooque	1640 Kiowa Crest Dr. Diamond Bar, CA 91765
Thelma Ramona Ragsdale Brookshire Family	4020 Byron St. Corona, CA 92879
Southern California Gas Co.	101 Ash St. San Diego, CA 92101
Robert B. Helman	15210 N. Scottsdale Rd. Ste. 230

Pacific Land Exchange	Scottsdale, AZ 85254
Cocopah Nurseries, Inc.	81880 Arus Ave. Indio, CA 92201
Golden Monkey Inc.	P.O. Box 1468 Monterey Park, CA 91754
Woodspur Farming	52200 Industrial Way Coachella, CA 92236
Arundhati Mallik	212 E. Rhea Rd. Tempe, AZ 85284
Caltex Industries	43 Giotto Aliso Viejo, CA 92656
Mei Mei Lin	1920 Bella Vista Ave. Arcadia, CA 91007
Narine & Lucy Kasparian	2155 Rimcrest Dr. Glendale, CA 91207
Scott H. Allen SKMC Family Trust	2829 Del Oro Lane Fullerton, CA 92835
Chandravadan & Ranjan Bhagat	10610 S. Western Ave. Los Angeles, CA 90047
Marth & Alandus Wright	222 Idaho Falls Dr. Henderson, NV 89044
Liliane Tran	8472 Slater Ave. Huntington Beach, CA 92647
Surendra & Francisca Choudhari	8209 Rimridge Ln. San Diego, CA 92126
David & Barbara Welty	39105 Regency Way Palm Desert, CA 92211
Manila Inv	1442 E. Lincoln Ave. #118 Ramona, CA 92065
Kerry St. Peter	1545 Gulf Shores Pkwy. #172 Gulf Shores, AL 36542
Glenn Hansel	658 E Third Ave. Sant David, AZ 85630
Siegfried Wilke & Frank Leonard	P.O. Box 4184 Brookings, OR 97415
P. Genus L	2006 Highway 365 Fallbrook, CA 92028
Quan & Nhan Doan Truong	2909 Elm St. Los Angeles, CA 90065
Ho Chung	6958 Grove Spring Dr. Rancho Palos Verdes, CA90275
Paul Wing Tseung Chow	118 Susan Way Monterey Park, CA 91755
Dia Ali	11974 Oakview Way San Diego, CA 92128
Asim Butt	196 Temple Ave. Beaumont, CA 92223
Ignacio Escutia	23772 Coronel Dr.

	Mission Viejo, CA 92691
Happy Family Center	1108 W. Valley Center Alhambra, CA 91803
Phu Lien Pham	8837 Valley Blvd. Rosemead, CA 91770
Joo Song Lee Kyung Sup Choi	466 Foothill Blvd. #317 La Canada Flintridge, CA 91011
Rita Nelson	P.O. Box 1478 Helendale, CA 92342
Susan Chen Chen Trust	1343 Via Del Rey South Pasadena, CA 91030

Chapter 7 – References Cited

- Forman, Richard et al., *Road Ecology: Science and Solutions*. Washington, DC: Island Press, 2003, 123-125.
- Caltrans. *I-10 Project Initiation Report*. California: GPO June 2017a.
- Caltrans. *I-10 Transportation Concept Report*. California: GPO 2017b.
- Caltrans. *I-10 Project Archaeological Survey Report*. California: GPO December 2018a.
- Caltrans. *I-10 Project Cultural Resources, Finding of Effect*. California: GPO December 2018b.
- Caltrans. *I-10 Project Historic Property Survey Report*. California: GPO December 2018c.
- Caltrans. *I-10 Project Paleontology Review Memorandum*. California: GPO December 2018d.
- Caltrans. *I-10 Project Transportation Air Quality Conformity Findings Checklist*. California: GPO September 2018e.
- Caltrans. *I-10 Project Water Quality Assessment Report*. California: GPO November 2018f.
- Caltrans. *I-10 Pavement Rehabilitation Natural Environmental Study*. California: GPO May 9, 2019a.
- Caltrans. *I-10 Pavement Rehabilitation Noise Review Memo*. California: GPO March 14, 2019b.
- Caltrans. *I-10 Project Initial Site Assessment Checklist*. California: GPO March 2019c.
- Caltrans. *I-10 Project Section 4(f) Evaluation*. California: GPO April 2019d.
- Caltrans. *I-10 Project Visual Impact Assessment*. California: GPO May 2019e.
- California Department of Conservation. *California Geological Survey – Near-Source Maps*. Internet. July 2018. Available: http://www.conservation.ca.gov/cgs/rghm/Pages/near_source_zones.aspx
- FEMA Flood Map Service Center: *Search by Address*. Online Department of Homeland Security. Internet. 15 March 2018. Available: msc.fema.gov/portal/search.
- Southern California Association of Governments *Final 2016 RTP/SCS*. Internet. 21 February 2018. Available: <http://scagrtpscscs.net/Pages/FINAL2016RTPSCS.aspx>.

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APPENDICES

Appendix A. SCAG FTIP Listing

Appendix B. Section 4(f)

Appendix C. Title 6 Policy Statement

Appendix D. Environmental Commitments Record (ECR)

Appendix E. List of Technical Studies

Appendix F. Air Quality Checklist

Appendix G. Cultural Resources Coordination

Appendix H. List of Acronyms

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Appendix A. SCAG FTIP Listing

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Final 2019 Federal Transportation Improvement Program

Riverside County Project Listing State Highway (in \$000's)

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	Signage Begin	Signage End	System	Conformity Category	Amendment
RIVLS01	Riverside	SCAB		3GR104	SHP04	999					S	EXEMPT - 93.126	0
							PTC	248,873			Agency	CALTRANS	
Description: GRP'D PRJCTS FOR SAFETY IMPRVMTS - SHOPP CLLISION RDUCTN PRGRM: PRJCTS ARE CNSISTNT W/ 40 CFR PART 93.126 EXEMPT TBL 2&3 - RR/HWY CRSSNG, SAFER NON-FED-AID SYSTEM RDS, SHULDR IMPRVMTS, TRFFIC CNTRL DVICES/OPRTNG ASSIST OTHR THN SGNLS, INTERSCTN SGNL PRJCTS AT INDVL INTERSCTNS, PVMNT MRKING DEMO, TCL OTSIDE THE UA, LGHTNG IMPRVMTS, EMRGNCY TRCK PLOVRS. INCLDS SHOPP FNDING BYOND FNCLY CNSTR YRS													
Fund		ENG	R/W	CON	Total	Prior	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	Total
SHOPP - ADVANCE CONSTRUCTION				248,873	248,873	112,623	8,566	65,149	3,957	58,578			248,873
RIVLS01 Total				248,873	248,873	112,623	8,566	65,149	3,957	58,578			248,873
RIVLS02	Riverside	SSAB		30M0701	SHP03	999					S	EXEMPT - 93.126	0
							PTC	997,816			Agency	CALTRANS	
Description: GROUPED PROJECTS FOR PAVEMENT RESURFACING AND/OR REHABILITATION - SHOPP ROADWAY PRESERVATION PROGRAM: PROJECTS ARE CONSISTENT W/ 40 CFR PART 93.126 EXEMPT TABLE 2 - PAVEMENT RESURFACING AND/OR REHABILITATION, EMERGENCY RELIEF (23 USC 125), WIDENING NARROW PAVEMENTS OR RECONSTRUCTING BRIDGES (NO ADDITIONAL TRAVEL LANES).													
Fund		ENG	R/W	CON	Total	Prior	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	Total
SHOPP - ADVANCE CONSTRUCTION				997,816	997,816	287,582	35,566	343,819	73,722	257,127			997,816
RIVLS02 Total				997,816	997,816	287,582	35,566	343,819	73,722	257,127			997,816
RIVLS03A	Riverside	SCAB		30M07 01	SHP02	999					S	EXEMPT - 93.126	0
							PTC	7,765			Agency	CALTRANS	
Description: GROUPED PROJECTS FOR PAVEMENT RESURFACING AND/OR REHABILITATION ON THE STATE HIGHWAY SYSTEM: PROJECTS ARE CONSISTENT WITH 40 CFR PART 93.126 EXEMPT TABLES 2 AND TABLE 3 CATEGORIES - PAVEMENT RESURFACING AND/OR REHABILITATION.													
Fund		ENG	R/W	CON	Total	Prior	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	Total
SHOPP - ADVANCE CONSTRUCTION				7,765	7,765		7,765						7,765
RIVLS03A Total				7,765	7,765		7,765						7,765
RIVLS06	Riverside	SSAB		30M0701	SHP04	999					S	EXEMPT - 93.126	0
							PTC	35,858			Agency	CALTRANS	
Description: GROUPED PROJECTS FOR BRIDGE REHABILITATION AND RECONSTRUCTION - SHOPP PROGRAM: PROJECTS ARE CONSISTENT W/40 CFR 93.126 EXEMPT TABLE 2 - WIDENING NARROW PAVEMENTS OR RECONSTRUCTING BRIDGES (NO ADDITIONAL TRAVEL LANES).													
Fund		ENG	R/W	CON	Total	Prior	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	Total
SHOPP - ADVANCE CONSTRUCTION				35,858	35,858	11,570	19,477	4,811					35,858
RIVLS06 Total				35,858	35,858	11,570	19,477	4,811					35,858

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Appendix B. Section 4(f) Evaluation

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Appendix B. Section 4(f) Evaluation

B.1 Applicable Technical Reports

- Historic Property Survey Report (January 2019)

B.2 Introduction

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if both of the following apply.

- There is no prudent and feasible alternative to using that land.
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

B.3 Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate the existing asphalt concrete (AC) pavement on Interstate 10 (I-10) from the SR-177/I-10 Junction, at Post Mile (PM) R104.9, to 1.0 mile west of the Wiley’s Well Road Interchange (PM 134.0) in the County of Riverside. Rehabilitation activities include removal and replacement of existing inside and outside shoulders, guardrails, rumble strips, drainage inlets, and dikes, and installation of oversized drains. The proposed project will also involve upgrades to ramp facilities for ADA compliance, installation of two temporary detour lanes in the existing median, extension of existing rock slope protection (RSP) at 44 bridge locations, and hydroseeding the median for erosion control and vegetation restoration.

This section describes the proposed action and the Build Alternative that was developed to meet the identified purpose and need while avoiding and minimizing environmental impacts. The proposed project consists of a Build Alternative and a No-Build Alternative. For the full project description and additional details, see Chapter 1 of the IS/EA.

B.4 Purpose and Need

B.4.1 Purpose of the Project

The primary purpose of this project is to restore and extend the service life of existing pavement for a minimum of twenty (20) years; therefore, minimize expenditures of future maintenance. A secondary purpose is to improve safety and mobility for the traveling public by upgrading guardrail, bridge rails, and drainage facilities.

B.4.2 Need for the Project

Under heavy and continuous traffic over a long period of time, existing pavement has deteriorated at several locations within the project limits. As indicated in the Department's 2013 annual Pavement Condition Survey (PCS), there are areas of distress, cracking, rutting, bleeding, and poor ride quality on the pavement, within the project limits, that is beyond normal maintenance repairs and treatment.

B.5 Alternatives

B.5.1 No-Build Alternative

The No-Build Alternative consists of leaving the existing pavement as is. Minor maintenance expenditures may be made to extend the life of the existing pavement, but timing and extent of other maintenance activities is uncertain. Existing and future pavement conditions would continue to deteriorate.

B.5.2 Build Alternative

The Build Alternative would include the following improvements to the identified portion of the I-10 Corridor:

- Rehabilitate 29 miles of existing pavement.
- Install 2 detour lanes (one in each direction, within the median).
- Replacement of existing inside and outside shoulders, guardrails, and rumble strips.
- Remove and replace existing drainage facilities.
- Upgrade existing ADA facilities at ramp termini.
- Provide Rock Slope Protection (RSP) at several bridge locations.
- Extend 23 bridge locations in each direction.
- Regrade the median to accommodate temporary and permanent drainage during construction.
- Hydroseed the median for erosion control and vegetation restoration.

B.6 Section 4(f) De Minimis Evaluation

This section of the document discusses de minimis impact determinations under Section 4(f). Section 6009(a) of SAFETEA-LU amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only de minimis impacts on lands protected by Section 4(f). This revision provides that once the U.S. Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. The Federal Highway Administration's final rule on Section 4(f) de minimis findings is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action. In fulfilling its responsibility under 23 USC 326 and 327, Caltrans evaluated publicly-owned lands of a public park, recreation area or wildlife and waterfowl refuge of national, State, or local significance within the project area. Caltrans has also analyzed all archaeological and historic sites within the Section 106 Area of Potential Effects (APE), to determine whether any are protected Section 4(f) properties. Section 4(f) *de minimis* determination consideration was required for one cultural resource within the project APE. There are no designated Wild or Scenic Rivers within the study area.

B.7 Resources Evaluated Relative to the Requirements of Section 4(f)

This section of the document discusses historic properties found within or next to the project area that do not trigger Section 4(f) protection because either: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use.

Table B-1. Potential Section 4(f) Properties within the Project Study Area

Jurisdiction	Name	Location	Approximate Distance From the Project	Type	Amenities
CA State Historic Preservation Office	1. General Patton's Desert Training Center California/Arizona Maneuver Area (DTC/C-AMA)	(No exact address) From Indio, California eastward toward Prescott, Arizona and from Yuma, Arizona to Searchlight, Nevada covering approximately 18,000 square miles of the Mojave and Colorado deserts.	Encompasses the entire Project APE	Eligible Historic Property	The largest military training ground in the history of military maneuvers. Consisting of eleven divisional camps and associated sites and features including but not limited to: maneuver areas, divisional camps, small unit training areas, air facilities and crash sites, campsites, ranges, railroad sidings and deposits, hospitals and medical facilities depots, airfields, ranges, bivouacs, anti-tank ditches, camouflage areas, foxholes, minefields, observation positions, obstacles, refuse scatter and dumps, roads, rock features, rock insignias or cairns, rock walls, slit trenches, tank tracks, and tank traps, and other associated military and non-military artifacts
Sources: City of Blythe, 2007. HPSR, 2019.					

The properties are described below, with an explanation of why implementation of the proposed project would not constitute a “use” under Section 4(f) for recreation facilities and a *de minimis* use for the DTC/C-AMA.

B.7.1 Historic Sites

DTC/C-AMA

Consultation and identification efforts for the proposed Undertaking resulted in the identification of contributing elements to one Historic Property: General Patton’s Desert Training Center California/Arizona Maneuver Area (DTC/C-AMA). These elements (tank tracks) are permanently located within the existing transportation corridor. Essentially, a very small portion of the DTC/C-AMA is permanently incorporated into a transportation facility, facilitating “use” of a National Register of Historic Places (NRHP) eligible property as defined in 23 CFR 774.17.

The DTC/C-AMA was assumed eligible for listing on the NRHP by the Caltrans Cultural Studies Office (CSO), and determined significant under Criteria A, B, C, and D; for the purposes of this project only. The property was determined significant at the state level and listed on the California Register of Historic Resources as CHL-985: DTC/C-AMA, in June 1989. Although, associated tank tracks were identified within the APE and determined to be contributing elements of the larger NRHP eligible property, the Undertaking and associated activities, will not pose adverse effects on the DTC/C-AMA, as a whole. The effect finding proposed that destruction, and or, further disturbances to these contributing elements, which constitute only a small minute portion of the overall DTC/C-AMA (<0.01%), would not rise to the level of being adverse, as such the Project results in a *Finding of No Adverse Effect* to the Historic Property.

No avoidance, minimization, or mitigation measures are required in conjunction with the completion of this analysis pursuant to Caltrans' Section 106 Programmatic Agreement (PA) and Section 4(f).

Caltrans has fulfilled its responsibilities regarding evaluation of properties protected by Section 4(f) for the proposed Project and has notified the California State Historic Preservation Office (SHPO) of its determination that one property within the APE is eligible for inclusion in the NRHP and requested concurrence in its determination of the Project's ***Finding of No Adverse Effects*** and ***de minimis*** impact. On December 24, 2018 Caltrans Cultural Studies Office (CSO) submitted Caltrans Section 106 documentation to SHPO for review and concurrence. SHPO concurrence was received January 28, 2019. Pursuant to Caltrans' Section 106 PA, a non-response from SHPO, regarding the 4(f) determinations, would be treated as written concurrence for the de minimis finding. Please see Appendix B-1 for consultation documentation regarding CSO's assumption of NRHP eligibility and SHPO concurrence.

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Appendix C. Title VI Policy Statement

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*Making Conservation
a California Way of Life.*

April 2018

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, please visit the following web page:
http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email Title.VI@dot.ca.gov, or visit the website www.dot.ca.gov.

A handwritten signature in blue ink that reads "Laurie Berman".

LAURIE BERMAN
Director

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Appendix D. Environmental Commitments Record (ECR)

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Appendix E. List of Technical Studies

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Technical Studies

Visual Impacts Assessment (May 2018)

Historic Property Survey Report (December 2018)

Archaeological Survey Report (December 2018)

Cultural Resources, Finding of No Adverse Effect (December 2018)

Section 4(f) Evaluation (April 2019)

Water Quality Assessment Report (November 2018)

Paleontology Review of Environmental Study Memorandum (February 2019)

Initial Site Assessment Checklist (March 2019)

Transportation Air Quality Conformity Findings Checklist (September 2018)

Noise Review for Environmental Study Request Memorandum (March 2019)

Natural Environment Study (March 2019)

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Appendix F. Air Quality Checklist

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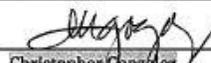
Transportation Air Quality Conformity Findings Checklist

Project Name:	I-10 Pavement Rehabilitation from SR-177 Junction to 1.0 miles west of Wiley Well Road IC, in Blythe		
Dist-Co-Rte-PM:	08-RIV-10	EA:	08-1C082
Federal-Aid No.:	PN: 0816000087		
Document Type:	<input type="checkbox"/> 23 USC 326 CE	<input type="checkbox"/> 23 USC 327 CE	<input checked="" type="checkbox"/> EA <input type="checkbox"/> EIS
Step 1. Is the project located in a nonattainment or maintenance area for ozone, nitrogen dioxide, carbon monoxide (CO), PM2.5, or PM10 per EPA's <u>Green Book</u> listing of non-attainment areas?			
<input type="checkbox"/> If no, go to Step 17. Transportation conformity does not apply to the project.			
<input checked="" type="checkbox"/> If yes, go to Step 2.			
Step 2. Is the project exempt from conformity per <u>40 CFR 93.126</u> or <u>40 CFR 93.128</u> ?			
<input checked="" type="checkbox"/> If yes, go to Step 17. The project is exempt from all project-level conformity requirements (40 CFR 93.126 or 128) (check one box below and identify the project type, if applicable).			
<input checked="" type="checkbox"/> 40 CFR 93.126 Project type: <u>Pavement resurfacing and/or rehabilitation.</u>			
<input type="checkbox"/> 40 CFR 93.128			
<input type="checkbox"/> If no, go to Step 3.			
Step 3. Is the project exempt from regional conformity per <u>40 CFR 93.127</u> ?			
<input type="checkbox"/> If yes, go to Step 8. The project is exempt from regional conformity requirements (40 CFR 93.127) (identify the project type). Project type: <u> </u>			
<input type="checkbox"/> If no, go to Step 4.			
Step 4. Is the project located in a region with a currently conforming RTP and TIP?			
<input type="checkbox"/> If yes, the project is included in a currently conforming RTP and TIP per 40 CFR 93.115. The project's design and scope have not changed significantly from what was assumed in RTP conformity analysis (40 CFR 93.115[b]) Go to Step 8.			
<input type="checkbox"/> If no and the project is located in an isolated rural area, go to Step 5.			
<input type="checkbox"/> If no and the project is not located in an isolated rural area, STOP and do not proceed until a conforming RTP and TIP are adopted.			
Step 5. For isolated rural areas, is the project regionally significant per 40 CFR 93.101, based on review by Interagency Consultation?			
<input type="checkbox"/> If yes, go to Step 6.			
<input type="checkbox"/> If no, go to Step 8. The project, located in an isolated rural area, is not regionally significant and does not require a regional emissions analysis (40 CFR 93.101 and 93.109[1]).			
Step 6. Is the project included in another regional conformity analysis that meets the isolated rural area analysis requirements per 40 CFR 93.109, including Interagency Consultation and public involvement?			
<input type="checkbox"/> If yes, go to Step 8. The project, located in an isolated rural area, has met its regional analysis requirements through inclusion in a previously-approved regional conformity analysis that meets current requirements (40 CFR 93.109[1]).			
<input type="checkbox"/> If no, go to Step 7.			
Step 7. The project, located in an isolated rural area, requires a separate regional emissions analysis.			
<input type="checkbox"/> Regional emissions analysis for regionally significant project, located in an isolated rural area, is complete. Regional conformity analysis was conducted that includes the project and reasonably foreseeable regionally significant projects for at least 20 years. Interagency Consultation and public participation were conducted. Based on the analysis, the interim or emission budget conformity tests applicable to the area are met (40 CFR 93.109[1] and 95.105).¹ Go to Step 8.			
Step 8. Is the project located in a CO nonattainment or maintenance area?			
<input type="checkbox"/> If no, go to Step 9. CO conformity analysis is not required.			
<input type="checkbox"/> If yes, hot-spot analysis requirements for CO per the CO Protocol (or per EPA's modeling guidance, CAL3QHCR can be used with EMFAC emission factors ²) have been met. Project will not cause or contribute to a new localized CO violation (40 CFR 93.116 and 93.123)³. Go to Step 9.			
Step 9. Is the project located in a PM10 and/or a PM2.5 nonattainment or maintenance area?			
<input type="checkbox"/> If no, go to Step 13. PM2.5/PM10 conformity analysis is not required.			
<input type="checkbox"/> If yes, go to Step 10.			

¹ The analysis must support this conclusion before going to the next step.

² Use of the CO Protocol is strongly recommended due to its use of screening methods to minimize the need for modeling. When modeling is needed, the Protocol simplifies the modeling approach. Use of CAL3QHCR must follow U.S. EPA's latest CO hot spot guidance, using EMFAC instead of MOVES; see: <http://www.epa.gov/otaq/stateresources/transcond/projectlevel-hotspot.htm#co-hotspot>.

³ As of October 1, 2007, there are no CO nonattainment areas in California. Therefore, the requirements to not worsen existing violations and to reduce/eliminate existing violations do not apply.

<p>Step 10. Is the project considered to be a Project of Air Quality Concern (POAQC), as described in EPA's <u>Transportation Conformity Guidance</u> for PM 10 and PM 2.5?</p> <p><input type="checkbox"/> If no, the project is not a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Analysis Guidance. Interagency Consultation concurred with this determination on [redacted]. Go to Step 12.</p> <p><input type="checkbox"/> If yes, go to Step 11.</p>
<p>Step 11. The project is a POAQC.</p> <p><input type="checkbox"/> The project is a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123, and EPA's Hot-Spot Guidance. Interagency Consultation concurred with this determination on [redacted]. Detailed PM hot-spot analysis, consistent with 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Guidance, shows that the project would not cause or contribute to, or worsen, any new localized violation of PM10 and/or PM2.5 standards. Go to Step 12.</p>
<p>Step 12. Does the approved PM SIP include any PM10 and/or PM2.5 control measures that apply to the project, and has a written commitment been made as part of the air quality analysis to implement the identified SIP control measures? [(Control measures can be found in the applicable Federal Register notice at: http://www.epa.gov/otaq/stateresources/transconf/reg93sips.htm#ca.)]</p> <p><input type="checkbox"/> If yes, a written commitment is made to implement the identified SIP control measures for PM10 and/or PM2.5 through construction or operation of this project (40 CFR 93.117). Go to Step 14.</p> <p><input type="checkbox"/> If no, go to Step 13.</p>
<p>Step 13a. Have project-level mitigation or control measures for CO, PM10, and/or PM2.5, included as part of the project's design concept and scope, been identified as a condition of the RTP or TIP conformity determination? AND/OR</p> <p>Step 13b. Are project-level mitigation or control measures for CO, PM10, and/or PM2.5 included in the project's NEPA document?</p> <p>AND</p> <p>Step 13c (applies only if Step 13a and/or 13b are answered "yes"). Has a written commitment been made as part of the air quality analysis to implement the identified measures?</p> <p><input type="checkbox"/> If yes to 13a and/or 13b and 13c, a written commitment is made to implement the identified mitigation or control measures for CO, PM10, and/or PM2.5 through construction or operation of this project. These mitigation or control measures are identified in the project's NEPA document and/or as conditions of the RTP or TIP conformity determination¹ (40 CFR 93.125(a)). Go to Step 14.</p> <p><input type="checkbox"/> If no, go to Step 14</p>
<p>Step 14. Does the project qualify for a 771.117(c)(22), (c)(23), (c)(26), (c)(27), or (c)(28)⁴ Categorical Exclusion pursuant to 23 USC 326 and is an Air Quality Conformity Analysis required to document any analysis required by Steps 1 through 13 of this form?⁵</p> <p><input type="checkbox"/> If yes, then Caltrans prepares the Air Quality Conformity Analysis and makes the conformity determination. No FHWA involvement is required. See the <u>AQCA Annotated Outline</u>. Go to Step 17.</p> <p><input type="checkbox"/> If no, go to Step 15.</p>
<p>Step 15. Does the project qualify for any Categorical Exclusion pursuant to 23 USC 326 (including 771.117(c)(22), (c)(23), (c)(26), (c)(27), or (c)(28) when NO Air Quality Conformity Analysis is required)?</p> <p><input type="checkbox"/> If yes, then no FHWA involvement is required and Caltrans makes the conformity determination through its signature on the CE form. An Air Quality Conformity Analysis (AQCA) is not needed. Go to Step 17.</p> <p><input type="checkbox"/> If no, go to Step 16.</p>
<p>Step 16. Does the project require preparation of a Categorical Exclusion, EA, or EIS pursuant to 23 USC 327?</p> <p><input type="checkbox"/> If yes, then Caltrans submits a conformity determination to FHWA for FHWA's conformity determination. An AQCA is needed. See the <u>AQCA Annotated Outline</u>.</p> <p>Date of FHWA air quality conformity determination: [redacted]</p> <p>Go to Step 17.</p>
<p>Step 17. STOP as all air quality conformity requirements have been met.</p>
<p>Signature: </p> <p>Printed Name: <u>Christopher Gonzalez</u> Date: <u>9/27/18</u></p> <p>Title: <u>Transportation Engineer, PE</u></p>

⁴ Please note that certain activities covered by these categorical exclusions may require that Caltrans prepare an Air Quality Conformity Analysis rather than documenting the conformity determination with the Senior Environmental Planner's signature on the Categorical Exclusion form.

⁵ Please note that for ALL projects the project file must include evidence that one of the three following situation applies: 1) Conformity does not apply to the project area; or 2) The project is exempt from all conformity analysis requirements; or 3) The project is subject to project-level conformity analysis (and possibly regional conformity analysis) and meets the criteria for a conformity determination. The project file must include all supporting documentation and this checklist.

Appendix G. Cultural Resources Coordination

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DEPARTMENT OF TRANSPORTATION
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Making Conservation
a California Way of Life.

December 24, 2018

Julianne Polanco
State Historic Preservation Officer
California Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Attn: Natalie Lindquist

RE: Transmittal of Finding of No Adverse Effect without Standard Conditions for the I-10 Blythe Pavement Rehab: Mainline, Shoulders, Ramps Project (08-1C082) in Riverside County

Dear Ms. Polanco,

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), is initiating consultation with the State Historic Preservation Officer (SHPO) regarding Caltrans Project EA: 08-1C082, Riv-10 Blythe Pavement Rehab: Mainline, Shoulders, Ramps, located in Riverside County. This consultation is undertaken in accordance with the January 1, 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation* (Section 106 PA). Caltrans is concurrently complying with PRC 5024 pursuant to Stipulation III of the *Memorandum of Understanding between the California Department of Transportation and the California State Historic Preservation Officer regarding Compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92 (PRC 5024 MOU)*. We are consulting with you under Section 106 PA Stipulation X.B.2, which requires SHPO consultation regarding findings of effect.

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S.C. 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

The Undertaking proposes to rehabilitate the existing Asphalt Concrete (AC) pavement on I-10 from State Route 177 (SR-177) Junction (PM R105.4) to 1.0 miles west of Wiley Well Road Interchange (PM R134.0), using full depth pavement replacement strategy for the mainline and shoulders. The existing AC pavement on the mainline and shoulders will be removed and replaced with 1.0-foot-thick Continuous Reinforced Concrete Pavement (CRCP) or Jointed Plain Concrete Pavement (JPCP). This proposed scope of work will take place in the Caltrans Right of Way (RoW) within previously disturbed roadway, shoulders, and median.

Ms. Julianne Polanco
December 24, 2018
Page 2

Enclosed for your review, you will find a Historic Property Survey Report (HPSR) and Finding of Effect (FOE). The HPSR dated November 2018 was prepared for the proposed undertaking. The HPSR determined that there is one (1) Historic Property within the APE which was assumed eligible for listing in the National Register of Historic Places (NRHP) for the purposes of this project:

- **CHL-985: DTC/C-AMA**

The Desert Training Center/ California-Arizona Maneuver Area is a historic-period military training/maneuver area. This Historic Property stretches from Indio, California eastward toward Prescott, Arizona and from Yuma, Arizona to Searchlight, Nevada covering approximately 18,000 square miles. The area was chosen by Gen. George S. Patton, Jr. to prepare troops for the harsh conditions and environment of combat for the North Africa Campaign. This property was listed on the California Register of Historic Places (CHRP) as a California Registered Historical Landmark June 12, 1989 but has not been formally evaluated for the NRHP. *For the purposes of this project only, on September 9, 2018, the DTC/C-AMA was assumed eligible for listing on the NRHP per Stipulation VIII.C.4 of the PA, under Criterion A for its association with World War II; Criterion B for its association with General George S. Patton; Criterion C for the design and layout of the individual camps, tactical maneuver areas, firing ranges, and other associated features; and Criterion D for the data potential of the entirety of the DTC/C-AMA.* The period of significance is 1942 to 1944. Character defining features (tank tracks) were located within the APE.

Pursuant to Stipulation X.A of the Section 106 PA and the PRC 5024 MOU, Caltrans has applied the Criteria of Adverse Effect and has determined that a finding of No Adverse Effect is appropriate for the Undertaking as a whole, per Stipulation X.B.2 of the Section 106 PA and PRC 5024 MOU. Caltrans is seeking SHPO concurrence on this finding.

Caltrans, as assigned by FHWA, intends to make a *de minimis* finding for Section 4(f) use of a historic property (CHL-985: DTC/C-AMA) based on your concurrence on the Section 106 effect finding, pursuant to Section 6009(a) of SAFETEA-LU. Please note that if no response is received from the SHPO within 30 days of receipt of this submittal, Caltrans will still make a *de minimis* impact finding for purposes of Section 4(f) as described in our August 11, 2006 letter agreement.

We look forward to receiving your response within 30 days of your receipt of this submittal in accordance with Stipulation X.B.2.b of the Section 106 PA. Thank you for your assistance with this Undertaking. If you need any additional information, please contact me by phone at (916) 653-0516 or david.price@dot.ca.gov, or District 08 Environmental Branch Chief, Historian Andrew Walters by phone at 909-388-2647 or email at andrew.walters@dot.ca.gov.

Sincerely,

David Price
Acting Section 106 Coordinator
Cultural Studies Office
Division of Environmental Analysis

Ms. Julianne Polanco
December 24, 2018
Page 3

Enclosure:

Historic Property Survey Report for EA:08-1C082, Riv 10 Blythe Pavement Rehab: Mainline, Shoulders, Ramps, Riverside County, California (December 2018), with attached Finding of Effect

cc: Andrew Walters, District 08 Branch Chief - Environmental Support/Cultural Studies
Shannon Clarendon, District 08 Environmental Planner-Archaeology

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DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer
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calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

January 28, 2019

VIA EMAIL

In reply refer to: CATRA_2018_1228_002

Mr. David Price
Acting Section 106 Coordinator
Cultural Studies Office
Caltrans Division of Environmental Analysis
1120 N Street, MS-27
Sacramento, CA 95814

Subject: Finding of No Adverse Effect without Standard Conditions for the I-10 Blythe
Pavement Rehab: Mainline, Shoulders, Ramps Project (08-1C082), Riverside
County, California

Dear Mr. Price:

On December 27, 2018, the Office of Historic Preservation (OHP) received a letter from the California Department of Transportation (Caltrans) for the above referenced undertaking. Caltrans is initiating consultation with the State Historic Preservation Officer (SHPO) in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*. Caltrans' Public Resources Code (PRC) 5024 responsibilities for this project are being conducted in accordance with the January 2015 *Memorandum of Understanding between the California Department of Transportation and the California State Historic Preservation Officer regarding Compliance with Public Resource Code Section 5024 and Governor's Executive Order W-26-92 (PRC 5024 MOU)*. Pursuant to Stipulation X.B.2 of the Section 106 PA, Caltrans is seeking SHPO comment on a finding of no adverse effect without standard conditions. Enclosed with Caltrans' letter is a Historic Property Survey Report (HPSR) with attached Archaeological Survey Report (ASR), and Finding of Effect (FOE). A more detailed description of the undertaking and area of potential effects (APE) is on pages one and two of the HPSR.

As currently proposed, the purpose of the undertaking is to rehabilitate the existing Asphalt Concrete (AC) pavement on I-10 from State Route 177 (SR-177) Junction (PM R105.4) to 1.0 miles west of Wiley Well Road Interchange (PM R134.0), using a full depth pavement replacement strategy for the mainline and shoulders. The existing AC pavement on the mainline and shoulders will be removed and replaced with 1.0-foot-thick Continuous Reinforced Concrete

Pavement (CRCP) or Jointed Plain Concrete Pavement (JRCP). The undertaking will occur in the Caltrans Right-of-Way and within a previously disturbed roadway, shoulders, and median.

Caltrans' efforts to identify historic properties that may be affected by the undertaking included a record search, Native American consultation, and an archaeological pedestrian survey. Efforts identified one cultural resource requiring evaluation according to the National Register of Historic Places (NRHP) criteria, CHL-985 (The Desert Training Center/California-Arizona Maneuver Area [DTC/C-AMA]). The DTC/C-AMA is a historic-era military training/maneuver area that encompasses portions of California, Arizona, and Nevada desert environs. This resource was listed on the California Register of Historical Resources (CRHR) as a California Registered Historical Landmark on June 12, 1989. Pursuant to Stipulation VIII.C.4 of the Section 106 PA and Stipulation VIII.C.4 of the PRC 5024 MOU, Caltrans will consider the DTC/C-AMA as eligible for the NRHP under the following criteria:

- Criterion A for its association with World War II;
- Criterion B for its association with General George S. Patton;
- Criterion C for the design and layout of the individual camps, tactical maneuver areas, firing ranges, and other associated features; and
- Criterion D for the data potential of the entirety of the DTC/C-AMA.

The period of significance is 1942 to 1944. Caltrans' assumption of eligibility of the DTC/C-AMA is for the purposes of this undertaking only because evaluation was not possible.

In applying the criteria of adverse effect pursuant to Stipulation X.A of the Section 106 PA Caltrans finds that as a whole the undertaking will result in a finding of no adverse effect with non-standard conditions. Identification efforts for this undertaking only identified tank tracks, contributing elements to the DTC/C-AMA within the APE. Caltrans argues that the tank tracks represent a ubiquitous-lesser-ranked feature due to the tracks' copious and monolithic distribution throughout the 18,000 square-mile DTC/C-AMA. The tank tracks only account for 5% of the entire DTC/C-AMA site boundary. Caltrans finds that effects to the tank tracks resulting from this undertaking will not adversely affect the DTC/C-AMA's ability to convey its significance under the assumed NRHP criteria A, B, C, and D.

Pursuant to Stipulation X.B.2.a of the Section 106 PA and Stipulation X.B.2.c of the PRC 5024 MOU, Caltrans has found that the proposed undertaking will have no adverse effect on historic properties. Based on review of the submitted documentation, **I do not object**. If you have any questions, please contact State Historian Natalie Lindquist at (916) 445-7014 or at natalie.lindquist@parks.ca.gov or Associate State Archaeologist Alicia Perez at (916) 445-7020 or at alicia.perez@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer



DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION

Lisa Ann L. Mangat, Director

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January 28, 2019

VIA EMAIL

In reply refer to: FHWA_2018_1228_002

Mr. David Price
Acting Section 106 Coordinator
Cultural Studies Office
Caltrans Division of Environmental Analysis
1120 N Street, MS-27
Sacramento, CA 95814

Subject: Finding of No Adverse Effect without Standard Conditions for the I-10 Blythe Pavement Rehab: Mainline, Shoulders, Ramps Project (08-1C082), Riverside County, California

Dear Mr. Price:

On December 27, 2018, the Office of Historic Preservation (OHP) received a letter from the California Department of Transportation (Caltrans) for the above referenced undertaking. Caltrans is initiating consultation with the State Historic Preservation Officer (SHPO) in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*. Caltrans' Public Resources Code (PRC) 5024 responsibilities for this project are being conducted in accordance with the January 2015 *Memorandum of Understanding between the California Department of Transportation and the California State Historic Preservation Officer regarding Compliance with Public Resource Code Section 5024 and Governor's Executive Order W-26-92 (PRC 5024 MOU)*. Pursuant to Stipulation X.B.2 of the Section 106 PA, Caltrans is seeking SHPO comment on a finding of no adverse effect without standard conditions. Enclosed with Caltrans' letter is a Historic Property Survey Report (HPSR) with attached Archaeological Survey Report (ASR), and Finding of Effect (FOE). A more detailed description of the undertaking and area of potential effects (APE) is on pages one and two of the HPSR.

As currently proposed, the purpose of the undertaking is to rehabilitate the existing Asphalt Concrete (AC) pavement on I-10 from State Route 177 (SR-177) Junction (PM R105.4) to 1.0 miles west of Wiley Well Road Interchange (PM R134.0), using a full depth pavement replacement strategy for the mainline and shoulders. The existing AC pavement on the mainline and shoulders will be removed and replaced with 1.0-foot-thick Continuous Reinforced Concrete

Pavement (CRCP) or Jointed Plain Concrete Pavement (JRCP). The undertaking will occur in the Caltrans Right-of-Way and within a previously disturbed roadway, shoulders, and median.

Caltrans' efforts to identify historic properties that may be affected by the undertaking included a record search, Native American consultation, and an archaeological pedestrian survey. Efforts identified one cultural resource requiring evaluation according to the National Register of Historic Places (NRHP) criteria, CHL-985 (The Desert Training Center/California-Arizona Maneuver Area [DTC/C-AMA]). The DTC/C-AMA is a historic-era military training/maneuver area that encompasses portions of California, Arizona, and Nevada desert environs. This resource was listed on the California Register of Historical Resources (CRHR) as a California Registered Historical Landmark on June 12, 1989. Pursuant to Stipulation VIII.C.4 of the Section 106 PA and Stipulation VIII.C.4 of the PRC 5024 MOU, Caltrans will consider the DTC/C-AMA as eligible for the NRHP under the following criteria:

- Criterion A for its association with World War II;
- Criterion B for its association with General George S. Patton;
- Criterion C for the design and layout of the individual camps, tactical maneuver areas, firing ranges, and other associated features; and
- Criterion D for the data potential of the entirety of the DTC/C-AMA.

The period of significance is 1942 to 1944. Caltrans' assumption of eligibility of the DTC/C-AMA is for the purposes of this undertaking only because evaluation was not possible.

In applying the criteria of adverse effect pursuant to Stipulation X.A of the Section 106 PA Caltrans finds that as a whole the undertaking will result in a finding of no adverse effect with non-standard conditions. Identification efforts for this undertaking only identified tank tracks, contributing elements to the DTC/C-AMA within the APE. Caltrans argues that the tank tracks represent a ubiquitous-lesser-ranked feature due to the tracks' copious and monolithic distribution throughout the 18,000 square-mile DTC/C-AMA. The tank tracks only account for 5% of the entire DTC/C-AMA site boundary. Caltrans finds that effects to the tank tracks resulting from this undertaking will not adversely affect the DTC/C-AMA's ability to convey its significance under the assumed NRHP criteria A, B, C, and D.

Pursuant to Stipulation X.B.2.a of the Section 106 PA and Stipulation X.B.2.c of the PRC 5024 MOU, Caltrans has found that the proposed undertaking will have no adverse effect on historic properties. Based on review of the submitted documentation, **I do not object**. If you have any questions, please contact State Historian Natalie Lindquist at (916) 445-7014 or at natalie.lindquist@parks.ca.gov or Associate State Archaeologist Alicia Perez at (916) 445-7020 or at alicia.perez@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer

Appendix H. List of Acronyms

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List of Acronyms

AADT	Average Annual Daily Traffic
AB	Assembly Bill
AC	Asphalt Concrete
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos Containing Material
ADA	Americans with Disabilities Act
ADL	Aerially Deposited Lead
ADT	Average Daily Traffic
APE	Area of Potential Effects
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ASR	Archaeological Survey Report
BA	Biological Assessment
BAU	Business As Usual
BCC	Bird of Conservation Concern
BLM	Bureau of Land Management
BMPs	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
CARB	California Air Quality Management District
CAA	California Clean Air Act
CCRD	Caltrans Cultural Resource Database
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CHRIS	California Historical Resource Information System
CHRP	California Register of Historic Places
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COZEPP	Construction Zone Enforcement Enhancement Program
CRHR	California Register of Historical
CRPR	California Rare Plant Rank
CSO	Cultural Studies Office
CTC	California Transportation Commission
CTP	California Transportation Plan
CWA	Clean Water Act

DHV	Design Hour Volumes
DSA	Disturbed Soil Area
DOC	Department of Conservation
DTC/C-AMA	Desert Training Center/ California-Arizona Maneuver Area
DTCH	Desert Tortoise Critical Habitat
DTCS	Department of Toxic Substances Control
DTSH	Desert Tortoise Suitable Habitat
EB	Eastbound
ECR	Environmental Commitments Record
EIC	Eastern Information Center
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
EPACT92	Energy Policy Act of 1992
ESA	Environmentally Sensitive Area
ESR	Environmental Study Request
FCAA	Federal Clean Air Act
FED	Final Environmental Document
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FNAE	Finding of No Adverse Effect
FOE	Finding of Effect
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FTIP	Federal Transportation Improvement Program
GHG	Greenhouse Gas
H&SC	Health and Safety Code
HPSR	Historic Property Survey Report
HSAs	Hydrologic Sub-Areas
HUD	Housing and Urban Development
IPCC	Intergovernmental Panel on Climate Change
ISA	Initial Site Assessment
IS/EA	Initial Study/Environmental Assessment
LCFS	Low Carbon Fuel Standard
LEDPA	least environmentally damaging practicable alternative
LUCR	Land Use Conversion Report
MBTA	Migratory Bird Treaty Act
MDAQMD	Mojave Air Quality Management District
MEP	Maximum Extent Practicable
MLD)	Most Likely Descendent
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization

MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environmental Study
NESMI	Natural Environmental Study Minimal Impacts
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NNI	Net New Impervious
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Act
OSTP	Office of Science and Technology Policy
PA	Programmatic Agreement
PAC	Public Awareness Campaign
PBO	Programmatic Biological Opinion
PCMS	Portable Changeable Message Signs
PCS	Pavement Condition Survey
PDT	Project Development Team
PIA	Project Impact Area
PLACs	Permits, Licenses, Agreements, and Certifications
PM	Particulate Matter
PM	Post Mile
PRC	Public Resources Code
PRDs	Permit Registration Documents
RAP	Relocation Assistance Program
RCFD	Riverside County Fire Department
RCRA	Resource Conservation and Recovery Act
RCSD	Riverside County Sheriff's Department
RIS	Replaced Impervious Surface
ROW	Right Of Way
RSA	Rapid Stability Assessment
RSP	Rock Slope Protection
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan

RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy"
SDC	Seismic Design Criteria
SHPO	California State Historic Preservation Officer
SHOPP	State Highway Operation and Protection Program
SIP	State Implementation Plan
SLF	Sacred Land File
SLR	Sea Level Rise
SMARTS	Stormwater Multiple Application and Report Tracking System
SR	State Route
SSC	Species of Special Concern
SWMP	Statewide Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
THPO	Tribal Historic Preservation Officer
TMP	Transportation Management Plan
TMDL	Total Maximum Daily Load
TSCA	Toxic Substances Controls Act
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
WB	Westbound
WDID	Waste Discharge Identification Number
WDRs	Waste Discharge Requirements
WOTUS	Waters of the United States
WPCP	Water Pollution Control Program
WSC	Waters of the State of California

