

State Route 62 Embankment Restoration Project

SAN BERNARDINO COUNTY, CALIFORNIA
DISTRICT 08-SBd-62 (PM 124.0/ 142.0)
EA 08-1G010 PN 0815000106

Draft Initial Study with [Proposed] 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.



April 2019

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General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans), 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 on State Route 62, from 1.76 miles west of U.S. Route 95 (Post Mile [PM] 124.0) to 0.25 mile west of Parker Dam Road (PM 142.0), in San Bernardino County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is also the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, what alternatives have been 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 IS/EA, as well as the related technical studies, are available for review at:

Caltrans District 8
464 West 4th Street
San Bernardino, CA 92401

Palo Verde Valley District Library
125 West Chanslor Way
Blythe, CA 92225

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Parker, AZ 85344

This IS/EA may be downloaded at the following website: <http://www.dot.ca.gov/dist8>

- We'd like to hear what you think. If you have any comments regarding the proposed project, or would like to request a Public Hearing, please send your written comments to Caltrans by the deadline below. We will begin accepting comments on: Monday, April 8, 2019.
- Send comments via U.S. postal mail to:

Renetta Cloud, Senior Environmental Planner
California Department of Transportation, District 8
464 West 4th Street, 6th Floor, MS 823
San Bernardino, California 92401-1400
- Send comments via email to: StateRoute62.Embankment.Restoration.Project@dot.ca.gov
Please use "SR-62 Embankment Project" in the subject line.
- Submit comments by the deadline: Tuesday, May 7, 2019.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans as assigned by FHWA, 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 appropriated, Caltrans could design and construct all or part of the project.

Alternative formats:

For individuals with sensory disabilities, this document is 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 to Caltrans, District 8 Attn: Renetta Cloud, Senior Environmental Planner, 464 W. 4th Street, 6th Floor, MS 823, San Bernardino, CA, 92401-1400 or call the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice), or 711.

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Restore Storm Eroded Embankments with Rock Slope Protection (RSP) and Concrete Aprons, and Install Rumble Strips at ten (10) Desert Wash locations on State Route 62 (SR-62) from 1.76 miles west of State Route 95 [Post Mile (PM) 124.0] to 0.25 mile west of Parker Dam Road (PM 142.0), in San Bernardino County.

**Draft INITIAL STUDY with (Proposed) NEGATIVE DECLARATION/
ENVIRONMENTAL ASSESSMENT**

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

THE STATE OF CALIFORNIA
Department of Transportation

4/3/19
Date


David Bricker, Deputy District Director
Division of Environmental Planning
California Department of Transportation, District 8
CEQA Lead Agency
NEPA Lead Agency

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NEGATIVE DECLARATION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

SCH:

08-SBd-62 – PM 124.0/142.0
EA 08-1G010
PN 0815000106

Proposed Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to restore storm eroded embankments with rock slope protection (RSP) and concrete aprons, and install rumble strips at ten (10) desert wash locations on State Route 62 (SR-62) from 1.76 miles west of U.S. Route 95 (Post Mile [PM] 124.0) to 0.25 mile west of Parker Dam Road (PM 142.0), in San Bernardino County, California.

Build Alternative

The Build Alternative would restore storm eroded embankments at ten desert wash locations along SR-62 to their original condition, by constructing eleven water embankment protection systems. This would consist of installing RSP, consisting of a concrete apron for drainage purposes, as well as a non-erodible concreted rock side slope at the downstream portion of each site, beginning at the edge of traveled way. Concrete aprons would also be installed at various locations upstream of the RSP, at the edge of traveled way, to prevent undercutting of the edge of pavement. Rumble strips would be installed along concrete aprons to alert drivers and help prevent vehicles from running off the road.

Temporary staging and storage of materials would be located at PM 125.8 and PM 134.1. Both locations are currently graded, devoid of native vegetation, and currently used by Caltrans Maintenance with direct access to SR-62.

Additional, permanent right of way drainage easements would be acquired from the Bureau of Land Management (BLM) and the Colorado River Indian Reservation for construction and maintenance activities.

No-Build Alternative

Under the No-Build Alternative, the storm eroded embankments at the ten desert wash locations along SR-62 would not be restored with water embankment protection systems. SR-62 would also continue to flood during rain events, resulting in excess roadway debris, continued roadway damage, road closures, and increased maintenance costs.

After the public circulation period, all comments will be considered, and Caltrans 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, Caltrans will prepare and approve a Negative Declaration.

Determination

This proposed Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Negative Declaration for this project. This does not mean that Caltrans' decision on the project is final. This Negative Declaration 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 from this study that the proposed project would not have a significant effect on the environment for the following reasons.

- The proposed project would have no effect on: Aesthetics, Agriculture and Forest Resources, Land Use Planning, Mineral Resources, Population and Housing, Public Services, and Recreation Utilities and Service Systems.
- The proposed project would have less-than-significant effects on Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation and Traffic, and Tribal Cultural Resources.

David Bricker, Deputy District Director
Division of Environmental Planning
California Department of Transportation, District 8
CEQA Lead Agency

Date

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Chapter 1 Proposed Project

1.1 NEPA Assignment

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.

1.2 Introduction

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), and Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

The proposed project would restore storm eroded embankments with a water embankment protection system at ten desert wash locations along State Route 62 (SR-62) from 1.76 miles west of Route 95 [Post Mile (PM) 124.0] to 0.25 mile west of Parker Dam Road (PM 142.0), in San Bernardino County, California. Refer to Figures 1-1 and 1-2 for Project Vicinity and Project Location Maps, respectively.

This proposed project is currently programmed in the 2018 State Highway Operation and Protection Program (SHOPP) under the 201.131 Permanent Restoration Program for delivery in the 2019/2020 fiscal year.

1.2.1 Existing Facility

State Route 62 (SR-62) is an east-west highway beginning at the Interstate 10 (I-10) interchange near Palm Springs and continues east through the cities and communities of Desert Hot Springs, Morongo Valley, Yucca Valley, Joshua Tree, Twentynine Palms, and Earp, terminating at the California-Arizona state line, located on the Colorado River. SR-62 was constructed in the 1940s at grade, and across numerous desert washes.

The existing facility within the project limits begins 1.76 miles west of US 95 near Vidal Junction at PM 124.0 and continues east where it ends 0.25 mile west of Parker Dam Road at PM 142.0 near the community of Earp. Within the project area, SR-62 is a two-lane highway with one lane in each direction. The existing lanes are 12 feet wide, with outside shoulders that vary from one to two feet wide.

The project area is within a primarily undeveloped and sparsely populated area of the Sonoran Desert. No residences or businesses are located within this area with the exception of a few businesses at Vidal Junction.

1.2.2 Project Background

A Project Initiation Proposal (PIP) was prepared by the Caltrans District 8 Office of Maintenance to obtain approval for the development of a Small Capital Value Project (SCVP) Project Initiation Document (PID) to construct a water embankment protection system at ten desert wash locations along SR-62. The PID was approved on March 3, 2016 and the project is now programmed in the 2018 SHOPP.

1.2.3 Purpose and Need

1.2.3.1 PROJECT PURPOSE

The purpose of this project is to restore storm eroded embankments with 11 rock slope protection (RSP) sites at ten desert wash locations along SR-62. The project would restore the facilities to their original condition prior to damage caused by flash flood events, and would reduce the number of road closures needed for maintenance workers to conduct repairs.

1.2.3.2 PROJECT NEED

During heavy rains and flash flood events, water runoff at the wash locations flows across the roadbed. This has historically led to closures of SR-62 due to flooding, debris on the road, and moderate roadway damage. There is a need to reduce the number of road closures that result in motorist delay, exposure of maintenance workers to traffic, and increased maintenance costs.

There have been a total of 20 events that have generated maintenance work orders on SR-62 for roadway damage between January 1, 2012 and January 1, 2015. On July 8, 2014, an intense rainstorm occurred in the low desert area and caused erosion and undermining along SR-62. As a consequence, emergency project 08-1F6604 was issued for SR-62 in the amount of \$1,250,000 as a temporary repair measure until permanent damage restoration could be carried out.

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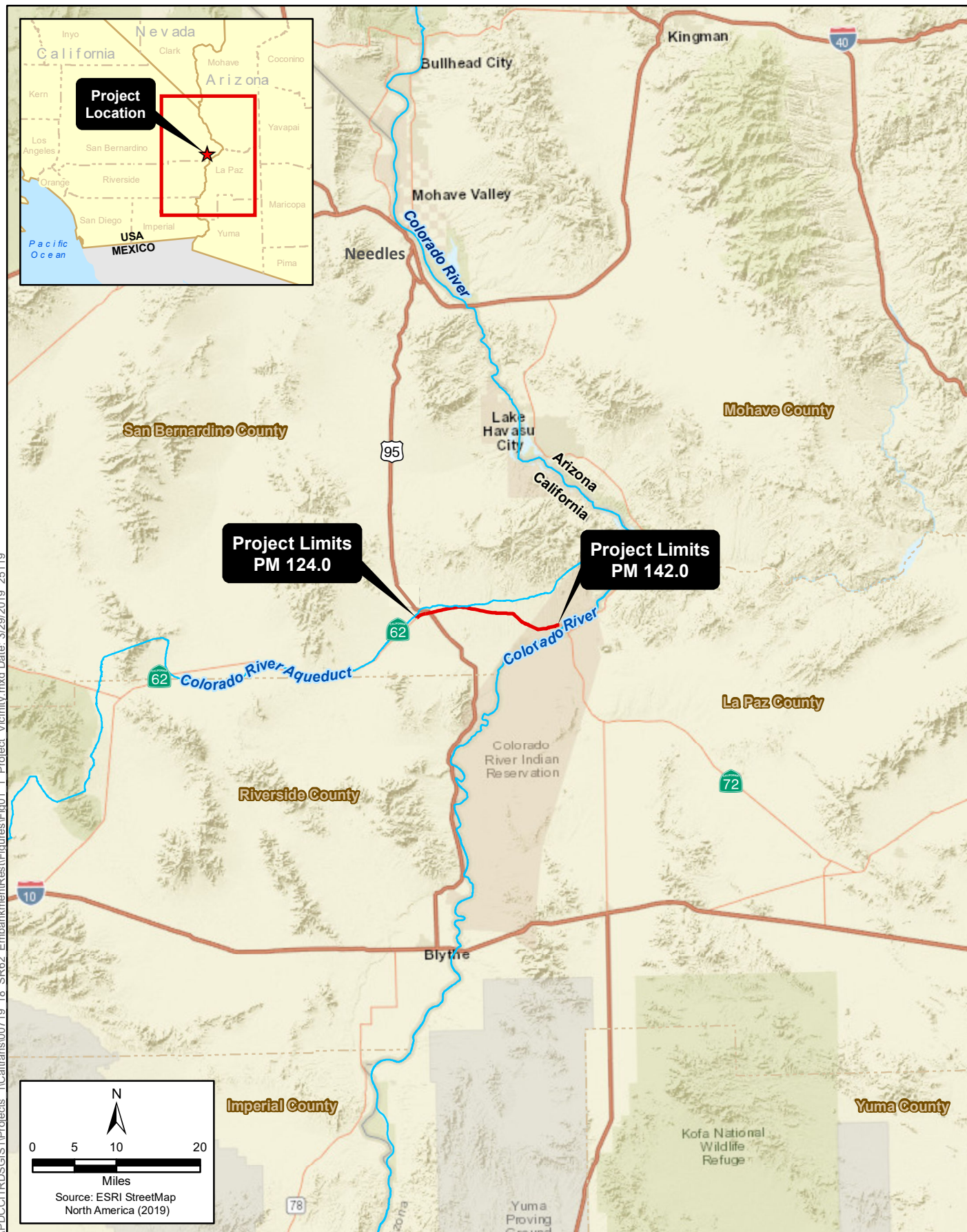


Figure 1-1
Project Vicinity
SR-62 Embankment Restoration Project

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Figure 1-2
Project Location
SR-62 Embankment Restoration Project

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1.2.4 Capacity, Transportation Demand, and Safety

1.2.4.1 CURRENT AND FORECASTED TRAFFIC

The scope of this project does not propose to increase capacity or improve the operations of the facility to carry traffic; as such, current and forecasted traffic information is not needed.

1.2.4.2 SAFETY

The Traffic Accident Surveillance and Analysis System (TASAS) – Transportation Systems Network (TSN) data was analyzed for accident rates and types of collisions for a three-year period from January 1, 2015 to December 31, 2017. The accident rates are shown in Table 1-1.

Table 1-1. Accident History

Accident Rates (# of Accidents/Million Vehicle Miles)						
Location	Actual Accident Rates			Average Accident Rates		
	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
SR-62 PM 124.0/142.0	0.013	0.22	0.42	0.017	0.31	0.72
Source: Project Report for SR-62 Between Junction Route 95 and Parker Dam Road.						

As shown in Table 1-1, the actual accident rates along SR-62 within the project limits are lower than the statewide average rates in both the fatal and fatal plus injury categories. The percentages for types of collisions and primary collision factors are shown in Tables 1-2 and 1-3, respectively.

Table 1-2. Type of Collisions

Head-On	Sideswipe	Rear-End	Broadside	Hit Object	Overtake	Auto-Ped	Other	Not stated
3.0%	15.2%	6.1%	3.0%	48.5%	18.2%	0.0%	6.1%	0.0%
Source: Project Report for SR-62 Between Junction Route 95 and Parker Dam Road.								

Table 1-3. Primary Collision Factors

HBD	FTC	FTY	IT	ESS	OV	ID	OTD	UNK	FA	NS
15.2%	0.0%	3.0%	48.5%	9.1%	18.2%	0.0%	6.1%	0.0%	0.0%	0.0%
Source: Project Report for SR-62 Between Junction Route 95 and Parker Dam Road. Note: HBD = Influence of Alcohol, FTC = Following too close, FTY = Failure to yield, IT = Improper turn, ESS = Speeding, OV = Other violations, ID = Improper driving, OTD = Other than driver, UNK = Unknown, FA = Fell Asleep, NS = Not stated										

As shown in the table above, the majority of collision types along SR-62 within the project limits involved vehicles hitting an object and vehicles overturning. The primary collision factors were improper turning movements by the driver.

The proposed construction of a water embankment protection system and installation of rumble strips at the ten desert wash locations is expected to reduce the number and severity of hit object and overturn collisions within the project limits. The proposed improvements would reduce debris flow onto the roadway, which may reduce potential collisions. Rumble strips would also alert drivers of errant vehicles as they run off the roadway.

1.2.5 Roadway Deficiencies

As mentioned earlier, SR-62 was constructed in the 1940's, at grade, across numerous desert washes which has led to closures of SR-62 due to flooding, debris on the road, and roadway damage during rain events. The TASAS-TSN data indicates that—during a period between January 1, 2015 and December 31, 2017—48.5 percent of accidents occurred when vehicles hit an object. The proposed construction of a water embankment system and the addition of rumble strips are anticipated to contribute to the correction of these deficiencies by reducing the amount of roadway debris from flooding and alerting drivers.

1.2.6 Modal Interrelationships and System Linkages

SR-62 is a conventional highway that connects the Morongo Basin communities of Joshua Tree and Morongo Valley, the town of Yucca Valley, and cities of Desert Hot Springs and Twentynine Palms to the Coachella Valley and Parker, Arizona. The route provides an alternative to Interstate 10 (I-10), north of the Coachella Valley to the state of Arizona. SR-62 is federally classified as a “Minor Arterial” and is part of the Interregional Road System. It connects with SR 247, SR 177, US 95, and Arizona State Route 95 (AZ-95) in Parker, Arizona (Caltrans, 2017).

1.2.7 Independent Utility and Logical Termini

Federal Highway Administration (FHWA) regulations (23 Code of Federal Regulations [CFR] 771.111 [f]) require that the action evaluated:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope.
- Have independent utility or independent significance (be usable and require a reasonable expenditure even if no additional transportation improvements in the area are made).
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Logical termini should encompass an entire project. Cutting a larger project into smaller projects may be considered “improper segmentation.” A project must have independent utility; that is, a project must be able to function on its own, without further improvements.

This Initial Study/Environmental Assessment (IS/EA) assesses portions of SR-62 from 1.76 miles west of Vidal Junction (PM 124.0) to 0.25 mile west of Parker Dam Road (PM 142.0), near the community of Earp in San Bernardino County. The occurrence of road closures, exposure of maintenance workers to traffic, and increased maintenance costs due to flooding,

debris on the road, and roadway damage, as described above, caused this stretch of SR-62 to be identified as a location that needs improvements. The project is of sufficient length, with project termini logically placed, to allow environmental issues to be addressed on a broad scope. The proposed project would restore storm eroded embankments by constructing water embankment protection systems and adding rumble strips at proposed locations along SR-62 without any additional transportation improvements being made in the area. As such, the proposed project is considered a project with independent utility.

1.3 Project Description

This section describes the proposed action and the project alternatives that were developed to meet the identified purpose and need of the project, while avoiding or minimizing environmental impacts. The two alternatives are the No-Build Alternative and the Build Alternative.

The proposed project is on SR-62 from 1.76 miles west of Vidal Junction (PM 124.0) to 0.25 mile west of Parker Dam Road (PM 142.0), in San Bernardino County. Within the project area, SR-62 is a two-lane highway with one lane in each direction, that travel at grade across numerous desert washes. The existing lanes are 12 feet wide, with outside shoulders that vary from one to two feet wide. The purpose of this project is to restore storm eroded embankments with eleven rock slope protection (RSP) sites at ten desert wash locations along SR-62.

1.4 Alternatives

1.4.1 No-Build Alternative

Under the No-Build Alternative, the storm eroded embankments at the ten desert wash locations along SR-62 would not be restored with water embankment protection systems. SR-62 would also continue to flood during rain events, resulting in excess roadway debris, continued roadway damage, road closures, and increased maintenance costs.

1.4.2 Build Alternative

The Build Alternative would restore storm eroded embankments at ten desert wash locations along SR-62 to their original condition, by constructing water embankment protection systems (see Figure 1-3 and Figure 1-4).

To fulfill this objective, it is proposed to restore eleven sites at ten desert wash locations, through the following: the following is proposed:

- Installing rock slope protection (RSP), consisting of a concrete apron for drainage purposes, as well as a non-erodible concreted rock side slope at the downstream portion of each site, beginning at the edge of traveled way. Installing rumble strips at length at each RSP site along the concrete apron. The approximate dimensions of each RSP and concrete apron site vary. Table 1-4 provides the location and dimensions of each location.

- Installing concrete aprons at various locations upstream of the RSP, at the edge of traveled way, to prevent undercutting of the edge of pavement. Installing rumble strips along concrete aprons in order to alert drivers and help prevent vehicles from running off the road.
- Employing staging areas. Proposed staging and storage of materials would be located at PM 125.8 and PM 134.1. Table 1-5 provides the location and description of each temporary staging area.

Table 1-4. Rock Slope Protection and Concrete Apron Locations and Dimensions

Structure ID	Postmile	Downstream RSP Dimension			Downstream Concrete Apron		Upstream Concrete Apron	
		Length (ft)	Width (ft)	Depth (ft)	Length (ft)	Width (ft)	Length (ft)	Width (ft)
RSP 1	124.81	57.6	301	4	18	301	12	301
RSP 2a	125.21	18.5	150.3	4	19.3	150.3	----	----
RSP 2b	125.29	66.5	302.5	4	19.3	302.5	11.6	302.5
RSP 3	125.40	22.3	144.9	4	20.8	144.9	-----	-----
RSP 4	137.05	18	100	4	18.5	100	-----	-----
RSP 5	138.20	40	200	4	15	200	12	200
RSP 6	138.46	20	200	4	20	200	----	----
RSP 7	140.40	10	160	4	18.5	160	----	----
RSP 8	140.52	10	150	4	17.5	150	----	----
RSP 9	141.75	10	106	4	19.5	106	----	----
RSP 10	141.95	15	210	4	17.3	210	----	----

Source: Caltrans, 2019.

Table 1-5. Designated Temporary Staging Areas

Postmile	Length (feet)	Width (feet)	Description
PM 125.8 Westbound	700	700	Caltrans Vidal Junction Maintenance Station. This site is graded and devoid of native vegetation and is currently utilized by Caltrans Maintenance with access directly from SR-62 and SR 95.
PM 134.1 Westbound	800	100	This site is graded and devoid of native vegetation and is currently utilized by Caltrans Maintenance with access directly from SR-62.

Source: Caltrans, 2019.

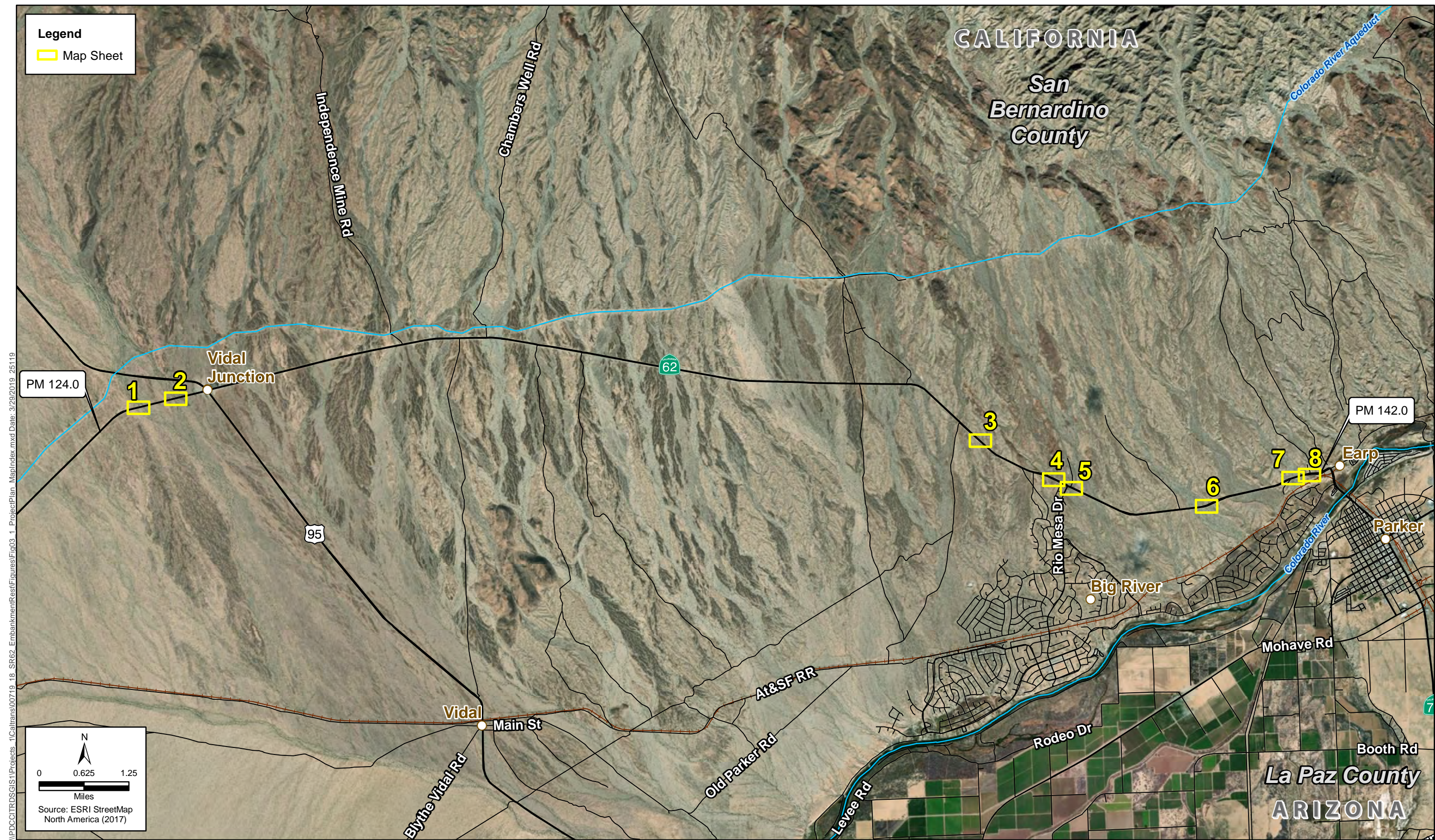


Figure 1-3 - Map Index
Project Plan
SR-62 Embankment Restoration Project

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Figure 1-3 - Sheet 1 of 8
Project Plan
SR-62 Embankment Restoration Project

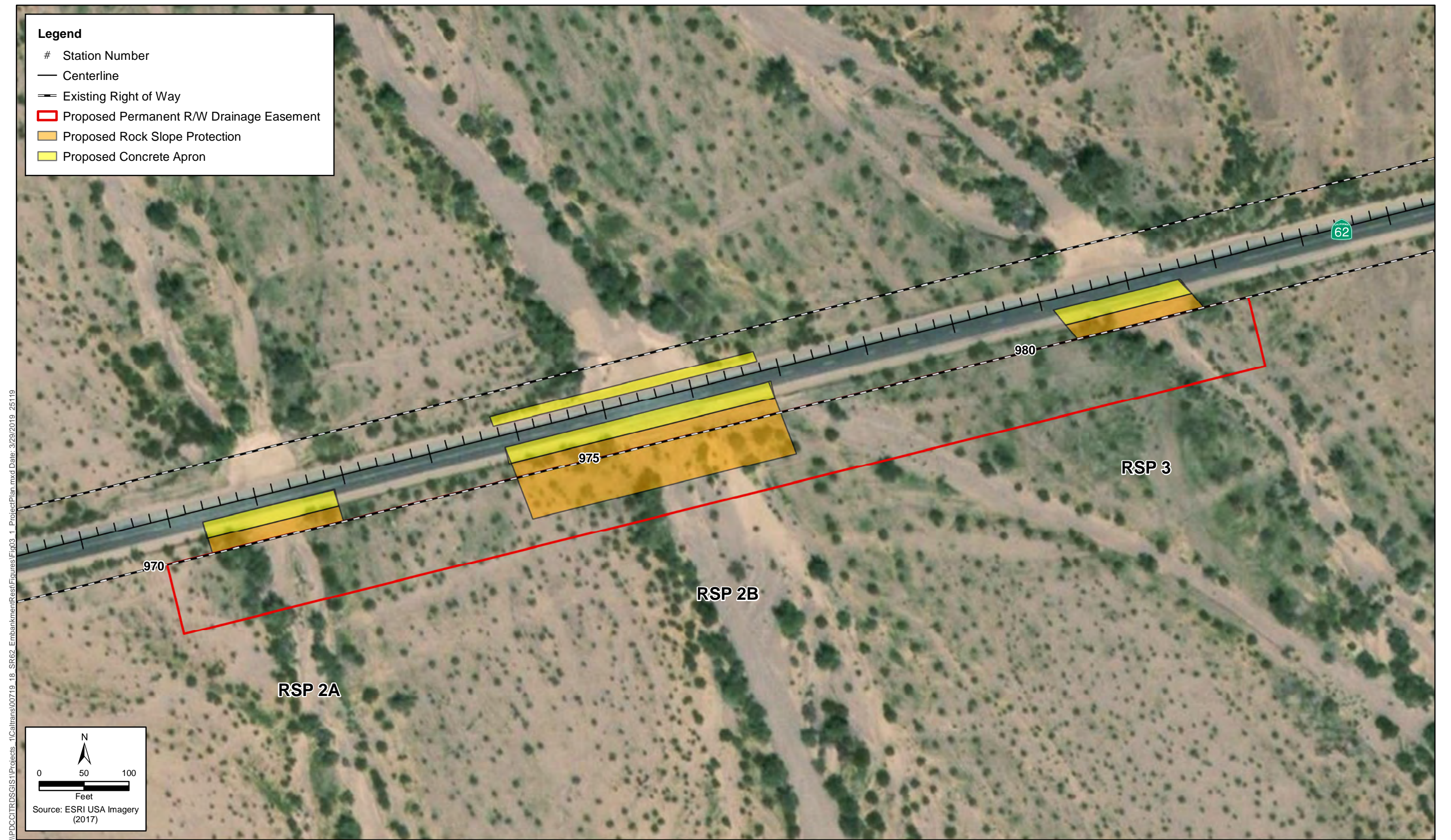


Figure 1-3 - Sheet 2 of 8
Project Plan
SR-62 Embankment Restoration Project

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Figure 1-3 - Sheet 3 of 8
Project Plan
SR-62 Embankment Restoration Project

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Figure 1-3 - Sheet 4 of 8
Project Plan
SR-62 Embankment Restoration Project



Figure 1-3 - Sheet 5 of 8
Project Plan
SR-62 Embankment Restoration Project



Figure 1-3 - Sheet 6 of 8
Project Plan
SR-62 Embankment Restoration Project

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Figure 1-3 - Sheet 7 of 8
Project Plan
SR-62 Embankment Restoration Project



Figure 1-3 - Sheet 8 of 8
Project Plan
SR-62 Embankment Restoration Project

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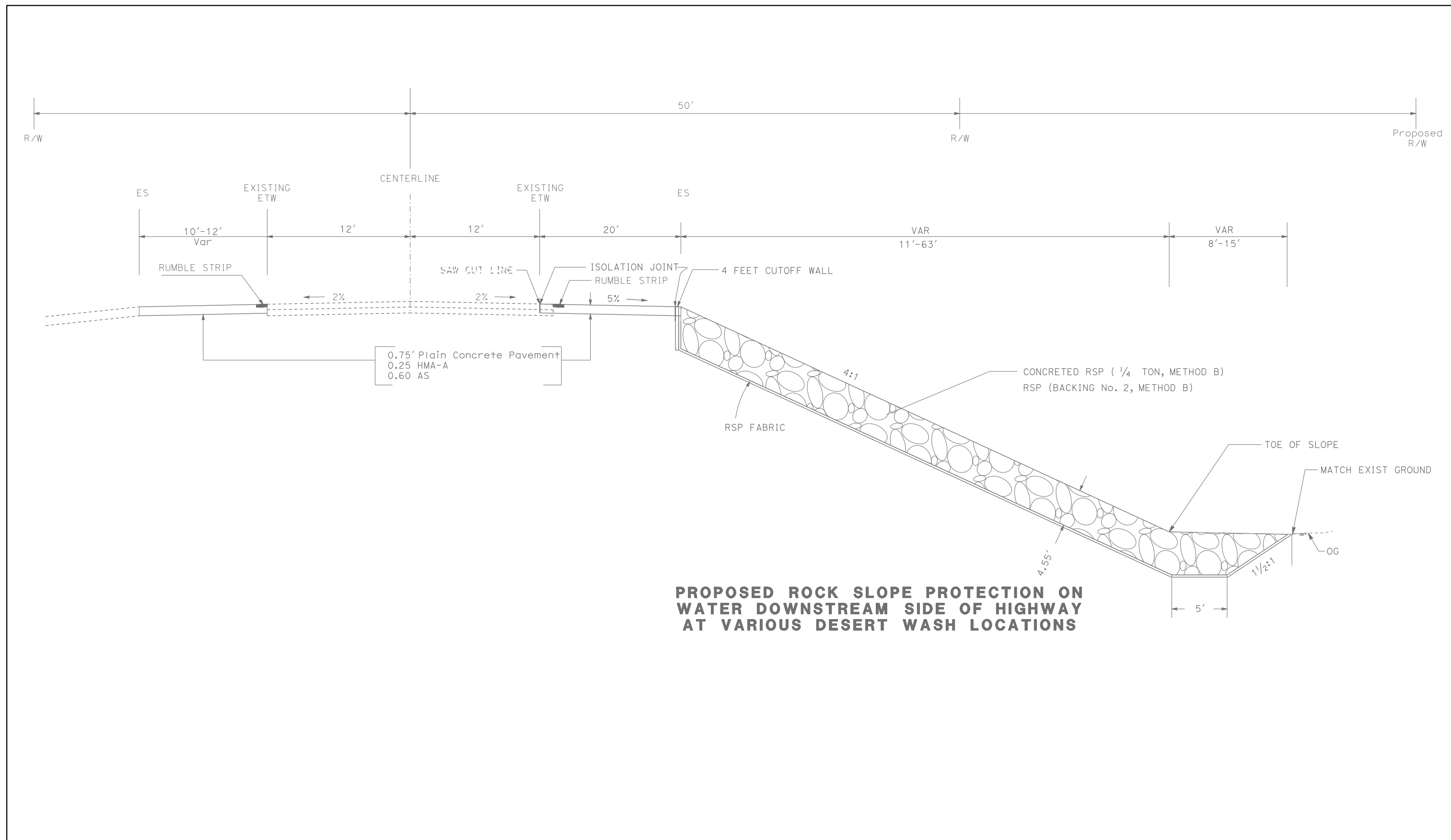


Figure 1-4
Cross-Section
SR-62 Embankment Restoration Project

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Additional, permanent right of way drainage easements would be acquired from the Bureau of Land Management (BLM) and the Colorado River Indian Reservation for construction and maintenance activities.

Utilities within the project limits include a Frontier Communications line and Southern California Edison (SCE) power poles. In addition, exposed telephone utility lines were also observed in the project area.

The estimated total capital cost for the Build Alternative is \$8,642,000. This total includes \$8,480,400 for roadway cost and \$160,800 for right of way costs.

The Build Alternative includes the following standardized measures, which are included as part of the project description. Standardized measures (such as Best Management Practices [BMPs]) are those measures that are generally applied to most or all Caltrans projects. The following items are included as part of the Build Alternative and would be included in the project plans and/or specifications in order to reduce environmental impacts.

- Specifications related to the discovery of unanticipated cultural materials or human remains.
- Standard Specification 7-1.02K(6)(j)(iii) for disturbance of earth material containing lead, requires a lead compliance plan and item 070030 “Lead Compliance Plan.”
- Specifications for construction site BMPs, including complying with U.S. Environmental Protection Agency’s (EPA’s) Construction General Permit, discharges of stormwater from the job site, compliance with permits issued by Regional Water Quality Control Board (RWQCB) for National Pollutant Discharge Elimination System (NPDES) Permit, and permits governing stormwater and non-stormwater discharges resulting from construction activities at the job site.
- Specifications related to complying with the provisions of the 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 Order No. 2010-0014-DWQ and Order No. 2012 0006 DWQ, NPDES No. CAS000002), and any subsequent permit, as they relate to construction activities for the project. This shall include submission of the permit registration documents, including a Notice of Intent (NOI), risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and signed certification statement to the State Water Resources Control Board (SWRCB) at least 14 days prior to the start of construction activity. The SWPPP shall 1) meet the requirements of the Construction General Permit and identify potential pollutant sources associated with construction activities; 2) identify non-storm water discharges; and 3) identify, implement, and maintain BMPs to reduce or eliminate pollutants associated with the construction site. The BMPs identified in the SWPPP shall be implemented during the project construction. A Notice of Termination shall be submitted to SWRCB upon completion of construction and the stabilization of the site.
- Specifications related to complying with the provisions of the Section 401 Water Quality Certification from the Colorado River Basin RWQCB, a Section 404 permit from the U.S. Army Corps of Engineers (USACE), and a Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) for impacts on jurisdictional

areas. These regulatory permits shall be obtained prior to impacts within identified jurisdictional areas.

- Caltrans' Standard Specifications in Section 14-9 (2018).
 - Section 14-9-02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
 - Water or a dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions.
 - Soil binder will be spread on any unpaved roads used for construction purposes, and on all project construction parking areas.
 - Trucks will be washed as they leave the right-of-way as necessary to control fugitive dust emissions.
 - Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by CA Code of Regulations Title 17, Section 93114.
 - A dust control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely re-vegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
 - Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Construction areas will be kept clean and orderly.
 - Environmentally sensitive areas will be established near sensitive air receptors. Within these areas, construction activities involving the extended idling of diesel equipment or vehicles will be prohibited, to the extent feasible.
 - Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.
 - All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) will be provided to minimize emission of dust during transportation.
 - Dust and mud that are deposited on paved, public roads due to construction activity and traffic will be promptly and regularly removed to reduce particulate matter (PM) emissions.
 - To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
 - Mulch will be installed or vegetation planted as soon as practical after grading to reduce windblown particulate matter (PM) in the area.
- Specifications related to the discovery of nesting and migratory birds.

- Specifications related to inspection and cleaning of all construction equipment prior to transporting equipment from one project location to another to avoid the introduction and spread of invasive plant species.

1.4.3 Transportation System Management and Transportation Demand Management Alternatives

1.4.3.1 TRANSPORTATION SYSTEM MANAGEMENT ALTERNATIVES

Transportation System Management (TSM) strategies increase the efficiency of existing facilities; they are actions that increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Examples of TSM strategies include ramp metering, auxiliary lanes, turning lanes, reversible lanes, and traffic signal coordination. Other TSM strategies include encouraging the public to use public and private transit and ridesharing programs.

Although no specific TSM features are included as part of the project, the proposed project serves a transportation system management purpose by providing safer and more efficient operation of SR-62 within the project limits. The proposed project provides a water embankment protection system that would restore the facility to its original condition and reduce the number of road closures needed due to debris and damaged roadway from flood events; therefore, the proposed project is considered consistent with TSM goals and will support the safe and efficient operation of SR-62 within the project limits once it is in place.

1.4.4 Final Decision-Making Process

After the public circulation period, all comments received will be considered, and Caltrans will identify a preferred alternative and make the final determination of the project's effect on the environment. Under CEQA, if no unmitigable significant adverse impacts are identified, Caltrans will prepare a Negative Declaration (ND) or Mitigated ND. Similarly, if Caltrans, as assigned by the Federal Highway Administration (FHWA), determines the NEPA action does not significantly impact the environment, Caltrans will issue a Finding of No Significant Impact (FONSI).

1.5 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications (PLACs) listed in Table 1-6 would be required for project construction.

Table 1-6. Required Permits, Reviews, and Approvals

Agency	Permit/Approval	Status
Bureau of Land Management (BLM)	California Cultural Resources Use Permit for Archaeological Investigations	Issued on January 12, 2016. Authorization to conduct fieldwork on October 12, 2017.
California Department of Fish and Wildlife (CDFW)	1602 Streambed Alteration Agreement	Application to be submitted after approval of Final Environmental Document.
Regional Water Quality Control Board (RWQCB)	Porter-Cologne Act and CWA Section 401 Water Quality Certification	To be submitted after approval of Project Report and Final Environmental Document.
U.S. Army Corps of Engineers (ACOE)	Clean Water Act (CWA) Section 404	To be submitted after approval of Project Report and Final Environmental Document.
U.S. Fish and Wildlife Service (USFWS)	Federal Endangered Species Act Streamlined Section 7 consultation per the Programmatic Biological Opinion	To address potential impacts on desert tortoise. To be completed prior to approval of the environmental document.

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

As part of the scoping and environmental analysis carried out for the project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document.

- **Land Use:** State Route 62 (SR-62) begins at the I-10 interchange near Palm Springs and runs east through the cities and communities of Desert Hot Springs, Morongo Valley, Yucca Valley, Joshua Tree, Twentynine Palms, and Earp, where it then terminates at the California/Arizona border, located on the Colorado River (Caltrans, 2017). Within the project area, SR-62 is a two-lane highway with one lane in each direction. The project begins 1.76 miles west of US 95 near Vidal Junction (PM 124.0) and continues east where it ends 0.25 mile west of Parker Dam Road (PM 142.0) in San Bernardino County. The project area is within a primarily undeveloped and sparsely populated area of the Sonoran Desert. No residences or businesses are located within this area, with the exception of a few businesses at Vidal Junction and residences in the nearby community of Earp, near the Colorado River. The proposed project is consistent with regional planning goals and the Transportation Concept Report, which indicates that this portion of SR-62 is federally designated as a Minor Arterial. Minor amounts of additional right of way would be acquired from the BLM and Colorado River Indian Reservation. No relocation of residences or businesses and no change in land use would occur as a result of the proposed project. As such, the proposed project would be consistent with the existing land use.
- **Coastal Zone:** The proposed project is located within the eastern portion of San Bernardino County and not in the vicinity of a coastal zone.
- **National Marine Fisheries Service (NMFS) Jurisdiction:** This project area is outside of NMFS jurisdiction; therefore, an NMFS species list is not required, and no effects on NMFS species are anticipated.
- **Wild and Scenic Rivers:** The project site is not within the jurisdictional boundaries of a Wild and Scenic River. The nearest designated Wild and Scenic River is Palm Canyon Creek, which is located approximately 115 miles southwest from the proposed project.
- **Farmlands:** According to the California Department of Conservation's Farmland Mapping and Monitoring Program, the project area has not been inventoried for farmlands. Based on a review of the mapping, aerial photographs, and site visits, the project area consists of primarily undeveloped desert landscape. No farmland is located within or adjacent to the proposed project; as such, the proposed project is anticipated to have no effect on farmlands.
- **Growth:** The proposed project is an embankment restoration project in which an embankment protection system with rock slope protection would be installed at ten desert wash locations. In addition, concrete aprons would be installed at the upstream edge of the travel way and

rumble strips would be added to the concrete aprons at each of the wash locations. It would not change accessibility or influence growth. As such, no growth impacts or indirect impacts on growth would occur.

- **Parks and Recreation:** The proposed project is not located near any parks or recreational facilities. The nearest parks are Pop Harvey Park and Western Park, both located over one mile southeast of the eastern limits of the project, in Parker, Arizona. The proposed project is an embankment restoration project and does not have the capacity to generate a substantial increase in use of any existing neighborhood parks, regional parks, or other recreational facilities such that physical deterioration would occur, nor would it require the construction or expansion of existing recreational facilities.
- **Community Impacts:** The proposed project involves the restoration of embankments at ten wash locations along SR-62 with RSP and concrete aprons, as well as the installation of rumble strips. The project corridor is primarily undeveloped, with a few roadside businesses at Vidal Junction at the western terminus of the project, and scattered residences as you approach Earp, at the eastern terminus of the project. Small amounts of undeveloped right-of-way would be acquired from BLM and the Colorado River Indian Reservation for future maintenance. No construction easements or relocation of residences or businesses would be required.
- **Pedestrian and Bicycle Facilities:** According to the Transportation Concept Report (Caltrans, 2017), both bicycle and pedestrian access is not prohibited on SR-62. However, due to the rural nature of the area, there are no bicycle facilities or sidewalks located along this segment of SR-62. The project involves the restoration of embankments and would not impact bicycle or pedestrian facilities.
- **Environmental Justice:** 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.
- **Visual/Aesthetics:** The proposed project would restore embankments at ten existing roadway wash crossing locations along SR-62. SR-62 is not an Officially Designated Scenic Highway and no effects related to visual/aesthetic resources are anticipated.
- **Hydrology and Floodplains:** The project would restore storm eroded embankments along SR-62 and would not alter the alignment of a stream or the configuration of a water body during construction or operation. Water within the project area would continue to follow existing alignments and maintain existing water flow entrance and exit routes. In addition, the project would not change the rate or flow of water. The proposed project is not within a designated Federal Emergency Management Agency (FEMA) one-percent-annual-chance (i.e., 100-year) floodplain. FEMA Flood Insurance Rate Maps 06071C8500H, 06071C8525H, and 06071C8550H indicate that the proposed project is mostly within FEMA Zone D, an undetermined risk area (FEMA, 2008). The proposed project would not result in a significant floodplain encroachment, as defined in 23 Code of Federal Regulations 650.105.
- **Paleontology:** According to Caltrans Environmental Planning/Paleontological Branch, based on the work associated with adding rock slope protection, concrete aprons and rumble strips, it is expected that the project would have no effect on paleontological resources and no paleontological studies would be required for this project (Karimi pers. comm., 2019).

- **Hazardous Waste/Materials:** According to the ISA Checklist prepared for this project (Caltrans, 2019), no hazardous waste or materials sites or issues were identified. The proposed project was determined to have a “low risk” for potential hazardous waste involvement. Any recommended Standard Special Provision is included in Section 1.4.2, Project Description. The proposed project would have no adverse effects due to Hazardous Waste/Materials.
- **Noise:** No permanent noise impacts are anticipated because the project is not a Type I project, as defined in Caltrans’ Traffic Noise Analysis Protocol. The proposed project is an embankment restoration project and is classified as a Type III Project under 23 CFR 772.7. As such, a noise analysis is not required and noise abatement measures need not be considered. No adverse noise impacts from project construction are anticipated because construction would be conducted in accordance with California Department of Transportation (Caltrans) Standard Specifications, Section 14.8.02. Construction noise would be short term and intermittent; therefore, impacts on noise-sensitive receptors would be short term and not adverse.

2.1 Human Environment

2.1.1 Utilities/Emergency Services

2.1.1.1 AFFECTED ENVIRONMENT

A utility search and survey were performed for the proposed project and it was discovered that a Frontier Communications line and Southern California Edison (SCE) power poles are located within the project limits. In addition, exposed telephone utility lines were observed in the project area.

San Bernardino County Fire Department, San Bernardino County Sheriff's Department, and California Highway Patrol (CHP) all serve the project area. The nearest fire station to the project is San Bernardino Fire Station #17 (Big River), located at 150260 Capistrano Way in Earp, located approximately 2 miles south of SR-62 within the project limits.

The Colorado River Station of the San Bernardino County Sheriff's Department provides law enforcement services to the project area. The office of the Colorado River Station, which covers the second largest geographical jurisdiction in San Bernardino County, is located on "J" Street in Needles, approximately 45 miles north of the western project limits. However, it also maintains a resident post at Parker Dam, approximately 13 miles northeast of the project. Colorado River Station personnel also work closely with other law enforcement agencies, including the La Paz County Sheriff's Department, which maintains an office approximately 1.6 miles southeast of the eastern project limits (San Bernardino County, 2019). The nearest CHP office is also located in Needles, approximately 45 miles north of the project area.

The nearest hospitals to the project area are the Parker Public Health Services Indian Hospital, located at 12033 Agency Road in Parker, Arizona, approximately 1.2 miles south of the eastern project limits; and La Paz Regional Hospital at 1200 West Mohave Road, Parker, Arizona, approximately 2 miles south of the eastern project limits.

2.1.1.2 ENVIRONMENTAL CONSEQUENCES

Build Alternative

The proposed project would not result in an increase in population, and therefore would not increase the demand for community services such as police, highway patrol, or fire protection services. No fire or police stations would be acquired or displaced. Construction activities may have the potential to result in temporary traffic disruptions during the construction period by vehicles needing to slow down or stop. This could increase response times for emergency vehicles during construction; however, the proposed project would include preparation and implementation of a Traffic Management Plan (TMP) (see **TRF-1** in Section 2.1.2.3, Traffic and Transportation). Construction impacts would be short term, lasting only the length of construction, and cease upon completion of construction. Once completed, the proposed project would help ensure that the road is not flooded, damaged, or blocked due to debris, allowing for normal and reliable access for emergency responders on SR-62, which would be a beneficial impact.

During the Plans, Specifications, and Estimates (PS&E) phase of the project, the Department will coordinate with Frontier Communications and SCE to confirm whether their utilities would be impacted by the project. Utility potholing will also be conducted to identify the location of utilities in the project area.

No-Build Alternative

Under the No-Build Alternative, no modifications to existing structures or the land would occur, and no utilities would be relocated; therefore, no effects on utilities or emergency services would result from project construction or operation.

2.1.1.3 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION

In addition to the avoidance and minimization measure below, please refer to **TRF-1** in Section 2.1.2.3.

UES-1: Utility relocation plans will be prepared in consultation with the affected utility providers/owners for those utilities that will need to be relocated, removed, or protected in place. If relocation is necessary, the final design will focus on relocating utilities within the state right of way or other existing public rights of way and/or easements. If relocation outside of existing rights of way or additional public rights of way and/or easements are necessary, the final design will focus on relocating facilities so as to minimize environmental impacts resulting from project construction as well as ongoing maintenance and repair activities. The utility relocation plans will be included in the project specifications.

Prior to and during construction, the contractor will implement the components of the utility relocation plans provided in the project specifications.

Prior to utility relocation activities, the contractor will coordinate with affected utility providers regarding potential utility relocations and inform affected utility users in advance about the date and timing of potential service disruptions.

2.1.2 Traffic and Transportation

2.1.2.1 AFFECTED ENVIRONMENT

Information in this section is based on the Project Report (Caltrans, 2019) prepared for the project.

The project would restore storm eroded embankments with RSP and concrete aprons at ten desert wash locations, as well as add rumble strips on the concrete aprons to notify motorists of errant vehicles. These proposed improvements would not increase capacity or improve operations of the facility to carry traffic; as such, forecasted traffic data was not needed or analyzed for this project.

2.1.2.2 ENVIRONMENTAL CONSEQUENCES

Build Alternative

During construction, a shoulder closure and temporary lane closure are anticipated, causing potential traffic delays on SR-62. It is proposed, during construction, that one through traffic lane, not less than 10 feet in width, would be provided for use by both directions of travel (Reversing Control). However, the proposed project would include preparation and implementation of a Transportation Management Plan (TMP) to minimize impacts during construction and ensure the safety of the traveling public and construction workers. The TMP could include public information communications, such as mailers, handouts, brochures, and press releases; information for motorists from changeable message signs or temporary signs; construction strategies, such as traffic plans; and information regarding construction staging, lane modifications (e.g., reduced lane widths or lane closures), and the use of alternate routes/detours. Construction impacts would be short term, lasting only the length of construction, and cease upon completion of the project.

No-Build Alternative

Under the No-Build Alternative, no modifications to existing structures or the land would occur; therefore, no effects on traffic and transportation would result from project construction or operation.

2.1.2.3 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

TRF-1: A Traffic Management Plan (TMP) will be prepared and implemented during construction of the project. Public information and awareness campaigns, motorist information strategies, and incident management strategies in the TMP would inform the public of the proposed project.

2.1.3 Cultural Resources

2.1.3.1 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 regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places (NRHP). Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and 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 USC 327).

The Archaeological Resources Protection Act (ARPA) applies when a project may involve archaeological resources located on federal or tribal land. The ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

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. See Appendix A for specific information regarding 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. 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 of identifying tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects on 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 that 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 Caltrans 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 or eligible for inclusion in the NRHP or registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU)¹ between Caltrans and the 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.

¹ The MOU is located in the SER at http://www.dot.ca.gov/ser/vol2/5024mou_15pdf.

2.1.3.2 AFFECTED ENVIRONMENT

Information for this section comes from the approved *Historic Property Survey Report (HPSR) for SR-62 Restore Storm Eroded Embankments with RSP Project* dated December 2018 (Caltrans 2018).

Area of Potential Effects

In accordance with 36 § 800.4(a)(1), the Area of Potential Effects (APE) for the project was established in consultation with Victoria Stosel, Co-Principal Investigator Prehistoric Archaeology; Martin Villanueva, Project Manager; and Alexandra Bevk Neeb, Acting Chief of the Cultural Studies Office, in December 2018. The discontinuous APE was delineated to encompass the maximum extent of ground disturbances associated with the proposed project activities; as well as direct and indirect effects, including visual and atmospheric effects to the setting, as required by the project design.

The horizontal APE consists of eight locations along SR-62 from PM 124.0 to PM 142.0. The vertical APE extends approximately 8 feet deep and 1 foot above current grade. Indirect effects are limited, due to the proposed improvements being located immediately adjacent to the existing transportation corridor at grade level. No aboveground structures are proposed as part of the project. The APE encompasses approximately 49 acres.

Summary of Identification Efforts

Identification efforts for the project included a records and literature search at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on September 15, 2017. Consultation with interested parties and intensive level pedestrian surveys were also conducted as part of the identification efforts.

The record search at SCCIC was conducted on September 15, 2017 by Joy Vyhmeister. The search encompassed the project APE and one mile buffer around the APE. In addition to the SCCIC search, the following databases were consulted:

- National Register of Historic Places
- California Register of Historical Resources
- California Inventory of Historic Resources
- California Historical Landmarks and updates
- California Points of Historical Interest and updates

Seven previous cultural resource studies were completed within 1 mile of the APE. Only one of these studies was located within the APE and consisted of a roadside survey conducted by SRI that included the 15-meter wide Caltrans right of way along SR-62 (Caltrans Rural Roads Survey).

All efforts resulted in the identification of 49 cultural resources, with 16 of these resources identified within the APE. Only three of the resources identified within the APE were considered

eligible for listing on the National Register of Historic Places and are Historic Properties: SRI-25, Vidal Scatter-3, and the DTC/C-AMA (CHL-985).

Native American Consultation

On May 9, 2017 a request for a Sacred Lands File (SLF) search and contact list from the Native American Heritage Commission (NAHC) was submitted. The NAHC responded on May 15, 2018. The results of the SLF check was completed with negative results. The contact list had three tribes with ties to the project area: the Chemehuevi Reservation; Colorado River Indian Tribe (CRIT); and the Twenty-Nine Palms Band of Mission Indians. Initial consultation under Section 106 and AB 52 were mailed on May 18, 2017.

No response to the initial letter was received from Mr. Wood, Chairman of the Chemehuevi Reservation. A second point of contact was made on August 24, 2017, no response was received. A third point of contact was made on October 4, 2017. To date no response has been received from Mr. Wood or the Chemehuevi Reservation.

On May 23, 2017 Anthony Madrigal Jr., Tribal Historic Preservation Officer for the Twenty-Nine Palms Band of Mission Indians responded to the initial consultation letter. In Mr. Madrigal's letter, request was made information regarding the extent of ground disturbing activity and copies of the cultural resources investigations. A response was sent to Mr. Madrigal Jr. on August 17, 2018 regarding the extent of ground disturbance, which included a copy of the standard plans for the installation of the rock slope protection and indicating that a copy of the draft cultural documents would be sent when they are completed. A draft copy of the phase I documentation was sent to Mr. Madrigal on December 14, 2018.

The CRIT responded on May 25, 2017 stating that they wished all prehistoric cultural resources to be avoided if possible, and that they wished to be contacted if burials, or other cultural resources were identified during ground disturbing activities. On September 22, 2017 a letter was sent to David Harper, Director of the Tribal Historic Preservation Office for the CRIT, stating that the project design team had discovered that some of the culverts included in the project footprint may need rock slope protection that might extend beyond the Caltrans right of way and touch reservation property. That same day an additional email was sent to Mr. Harper which had maps of the proposed work locations. A response was received on October 4, 2017, requesting an in-person meeting for government to government consultation.

On October 5, 2017, the DNAC sent an email to Mr. Etsitty, Acting Director of the CRIT THPO office to address the tribe's request for an in-person meeting for government to government consultation. The letter requested additional information about the what type of meeting would be needed and potential attendees.

A response was received on November 3, 2018 from Jennifer Corona, administrative assistant, on behalf of Bryan Etsitty. The letter requested an informal conference call to gather pertinent information regarding the project.

Between November 17, 2017 and April 30, 2018, the DNAC and various members of the CRIT THPO, Tribal Attorney General's Office, and Commercial Real Estate Division engaged in

communication regarding the necessity of conducting pedestrian survey and arranging for tribal monitoring during the pedestrian survey.

On May 1, 2018, Scott Kremkau of SRI contacted Bryan Etsitty of CRIT to set up Native American monitoring for the four locations within CRIT lands. Dr. Kremkau followed up with Mr. Etsitty and Toni Carlyle of CRIT to finalize the date of the survey. Subsequently, Ms. Carlyle monitored the archaeological survey on May 4, 2018. Because the project is on Tribal Land, the project HPSR will be sent for formal consultation with the CRIT THPO concurrent to submittal to SHPO.

Bureau of Land Management

A California Cultural Resources Use Permit for Archaeological Investigations was issued on January 12, 2016 to Statistical Research Inc. (CA-16-12). A Fieldwork Authorization was received to conduct fieldwork on October 12, 2017 (CA690 FA 17-22). A report was submitted to the BLM in June 2018 to comply with the conditions for the fieldwork authorization permit. To date no comments on the report have been received from BLM.

Study Findings

Pursuant to 36 CFR 800.4(c)(1), three cultural resources: SRI-25, Vidal Scatter-3, and CH-985 DTC/C-AMA are being *considered eligible for the NRHP* for purposes of this undertaking.

Section 4(f) Resources

There are three (3) historic properties in the APE:

Both SRI-25 and Vidal Scatter 3 are eligible for NRHP listing under Criterion D. To be considered a protected 4(f) resource, it needs to be eligible under criteria other than D. As such, SRI-25 and Vidal Scatter 3 are not considered protected Section 4(f) resources. CHL-985 DTC/C-AMA encompasses most of the eastern area of Southern California and extends beyond the border of California, into Arizona and Nevada, and surrounds the project area. A BLM historic context and overview of the DTC/C-AMA facilities concluded that a number of the camps, airfields and other facilities are eligible for the NRHP with significance under Criteria A, B, C, and D. While DTC/C-AMA is technically mapped within the project area, no features were identified within the APE.

Section 4(f) requirements apply to archaeological districts in the same way they apply to historic districts, but only where preservation in place is warranted. There would not be a Section 4(f) use if the project proposes to use only part of the archaeological district which is considered a non-contributing element of that district. The project occupies an area that is considered non-contributing to the DTC; therefore, there is no Section 4(f) use.

Refer to Appendix A, Resources Evaluated Relative to the Requirements of Section 4(f)).

2.1.3.3 ENVIRONMENTAL CONSEQUENCES

Build Alternative

Pursuant to 36 CFR 800.4(c)(1), three cultural resources: SRI-25, Vidal Scatter-3, and CHL-985 DTC/C-AMA are considered eligible for the NRHP.

Both SRI-25 and Vidal Scatter 3 are located in the APE but have not been formally evaluated and are being considered eligible for the NRHP. Caltrans proposes to protect these resources in their entirety with Environmentally Sensitive Area (ESA) designation and an ESA Action Plan. ESA fencing, and construction monitoring within 20 feet of the site boundary by both an archaeological and Native American monitor. An Archaeological Monitoring Area will be established around SRI-25 and Vidal Survey Scatter 3 as described in the ESA Action Plan.

CHL-985 DTC/C-AMA consists of various components including but not limited to camps, supply depots, airfields, and maneuvering areas. While the DTC/C-AMA is technically mapped within the project area, no features were identified within the APE.

On January 22, 2019, Caltrans initiated consultation with SHPO regarding the identification, evaluation, and effect finding efforts described above. SHPO concurred with Caltrans findings via letter dated February 21, 2019. Therefore, Caltrans has determined that a Section 106 finding of No Adverse Effect is appropriate for the undertaking as a whole (see letters in Chapter 5 Comments and Coordination).

If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find. Additional surveys may be required if project plans change to include areas that were not previously surveyed for cultural resources.

If human remains are discovered, State Health and Safety Code 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 shall be contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), which will then notify the most likely descendant. At that time, the person who discovered the remains will contact Gary Jones, Principal Investigator, Prehistoric Archaeology, so that he can work with the most likely descendent on the respectful treatment and disposition of the remains. Further provisions of PRC Section 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 cultural resources are anticipated.

No-Build Alternative

Under the No-Build Alternative, no modifications to existing structures or the land would occur; therefore, no effects on historical or archaeological cultural resources would result from project construction or operation.

2.1.3.4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

CR-1: If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

CR-2: If human remains are discovered, State Health and Safety Code 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 shall be contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, which will then notify the most likely descendent. At that time, the person who discovered the remains will contact Gary Jones, Principal Investigator, Prehistoric Archaeology, so that he can work with the most likely descendent on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.

CR-3: Environmentally Sensitive Areas (ESAs) and Archaeological Monitoring Areas (AMAs) are within the APE but not within the ADI of SRI-25 and Vidal Survey Scatter-3. ESAs and AMAs will be established for both sites in an ESA Action Plan.

CR-4: Archaeological and Native American monitors shall be present during any construction or preconstruction-related activity in all areas designated as Archaeological Monitoring Areas (AMA), as described in ESA Action Plan.

2.2 Physical Environment

2.2.1 Water Quality and Storm Water Runoff

2.2.1.1 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 source¹ 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 (RWQCB) 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 United States. 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 Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the

¹ A point source is any discrete conveyance such as a pipe or a man-made ditch.

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 effluent² 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 segment of a water body.

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. RWQCBs are responsible for

² The U.S. EPA defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.”

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 became 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 to Divisions 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) is applicable to this project. 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 classifies 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 sediment 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 Plan (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.

2.2.1.2 AFFECTED ENVIRONMENT

The primary source used in the preparation of this section is the *Scoping Questionnaire for Water Quality Issues* prepared for the SR-62 Embankment Restoration Project (Caltrans 2019), and the *Addendum to Natural Environment Study (Minimal Impacts)* (Caltrans 2019).

The proposed project is located in the County of San Bernardino within the jurisdiction of the Colorado River Basin Regional Water Quality Control Board (RWQCB). The project is within the Colorado Hydrologic Unit, Vidal Hydrologic Area, and traverses the following surface drainage basins: Lower Vidal Wash, 150301040204, Vidal Junction, Town of Vidal, Chambers Well, Arch-Creek Colorado River, and Town of Earp-Colorado River. These drainage basins are tributaries of the Colorado River which is the nearest receiving water body at the eastern end of

the project area. On-site drainages are primarily ephemeral streams that likely flow less than 3 months per year, and flow between 800 feet to 4 miles southeast through non-relatively permanent waterways before reaching the Colorado River. The average annual rainfall for the area is about 5 inches per year. A formal jurisdictional delineation survey determined that onsite drainages are ephemeral and likely flows for less than 3 months per year and would therefore be classified as non-wetland/non-relatively permanent waterways by the U.S. Army Corps of Engineers. These drainages eventually flow into a traditionally navigable waterway, the Colorado River. The Colorado River is listed as a 303(d) impaired water body for toxicity (2014 - 2016 List). No TMDL has been established by the Regional Water Board. As indicated in the Colorado River Basin Water Quality Control Plan, amended and adopted in June 2018, beneficial uses of the Colorado River, and associated lakes and reservoirs, include warm freshwater habitat, cold freshwater habitat, wildlife habitat, municipal domestic supply, groundwater recharge, agriculture supply, aquaculture, industrial service supply, water contact recreation, non-contact water recreation, hydropower generation, and preservation of rare, threatened, or endangered species.

There are no domestic drinking water sources within or near the project limits.

2.2.1.3 ENVIRONMENTAL CONSEQUENCES

Build Alternative

Temporary

The proposed project would not involve large cuts in the general topography or involve highly erosive soils during construction and would be completed in phases to minimize soil-disturbing work during the rainy season. Short-term or temporary impacts on water quality may occur during construction activities such as grading, land-disturbance activities, and equipment use. In addition, chemicals, liquid products, and petroleum products (such as paints, solvents, and fuels), may be spilled or leaked, and have the potential to be transported via storm runoff into receiving waters.

Construction activities as part of the project would disturb soil and increase the potential for soil erosion and suspended particles that can be generated from vehicles operating on a roadway. The disturbed soil areas (DSAs) are defined by Caltrans as being areas of exposed, erodible soil that are within the construction limits and that result from construction activity. The total DSA for the project is approximately 2.65 acres. The proposed project has been rated a risk level 1, meaning that there is a low receiving water body risk and low sediment erosion risk. Assuming temporary construction site best management practices (BMP) are implemented and maintained during construction, construction runoff would be minimal and water quality would be protected. In addition, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared and approved prior to construction in order to protect the DSA.

Construction activities below groundwater and/or in water courses requiring dewatering is not anticipated to occur. Construction materials, and the storage or stockpiling of earthwork will not occur near creeks, channels, or any other waterways.

The project contains 13 impact areas, that include two staging areas and eleven RSP sites and would result in 0.86 acre of temporary impacts to non-wetland Waters of the United States and

Waters of the State of California (WUS/WSC). The project will require permits from regulatory agencies. These include Section 401 Water Quality Certification, a Section 404 Nationwide Permit, and a Section 1602 Streambed Alteration Agreement.

Permanent

The project would restore storm eroded embankments along SR-62 and would not alter the alignment of a stream or the configuration of a water body during construction or operation. Water within the project area would continue to follow existing alignments and maintain existing water flow entrance and exit routes, nor would the project change the rate or flow of water. The project would result in 0.76 acres of net new impervious area and 0.1 acre of replaced impervious surface, for a total of 0.86 acre of impervious surface area. Because Caltrans is the stakeholder on this project, 100 percent of the Water Quality Volume (WQV) of the New Impervious Surface (NIS) will be treated.

The project would maintain the original line and grade, hydraulic capacity or original purpose of the facility. Because net new impervious surface area would be less than one acre, no downstream effects related to potentially increased flow velocity or volume are anticipated and no treatment BMPs are required. Any project specific BMP measures would be specified and quantified during the design phase of the proposed project to minimize any potential impacts.

No-Build Alternative

The No-Build Alternative would not increase impervious area or change land use in the project area. Therefore, drainages and surface runoff would remain consistent with current conditions, and roadway runoff in this area would remain unchanged from existing conditions. This alternative would not result in an increase in long-term pollutant loading. However, the No-Build Alternative does not preclude the construction of other future improvements or general maintenance to improve the operation of the facility or incorporate drainage enhancements.

2.2.1.4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Standard BMPs will be implemented as part of the project, as discussed in Section 1.4.2.

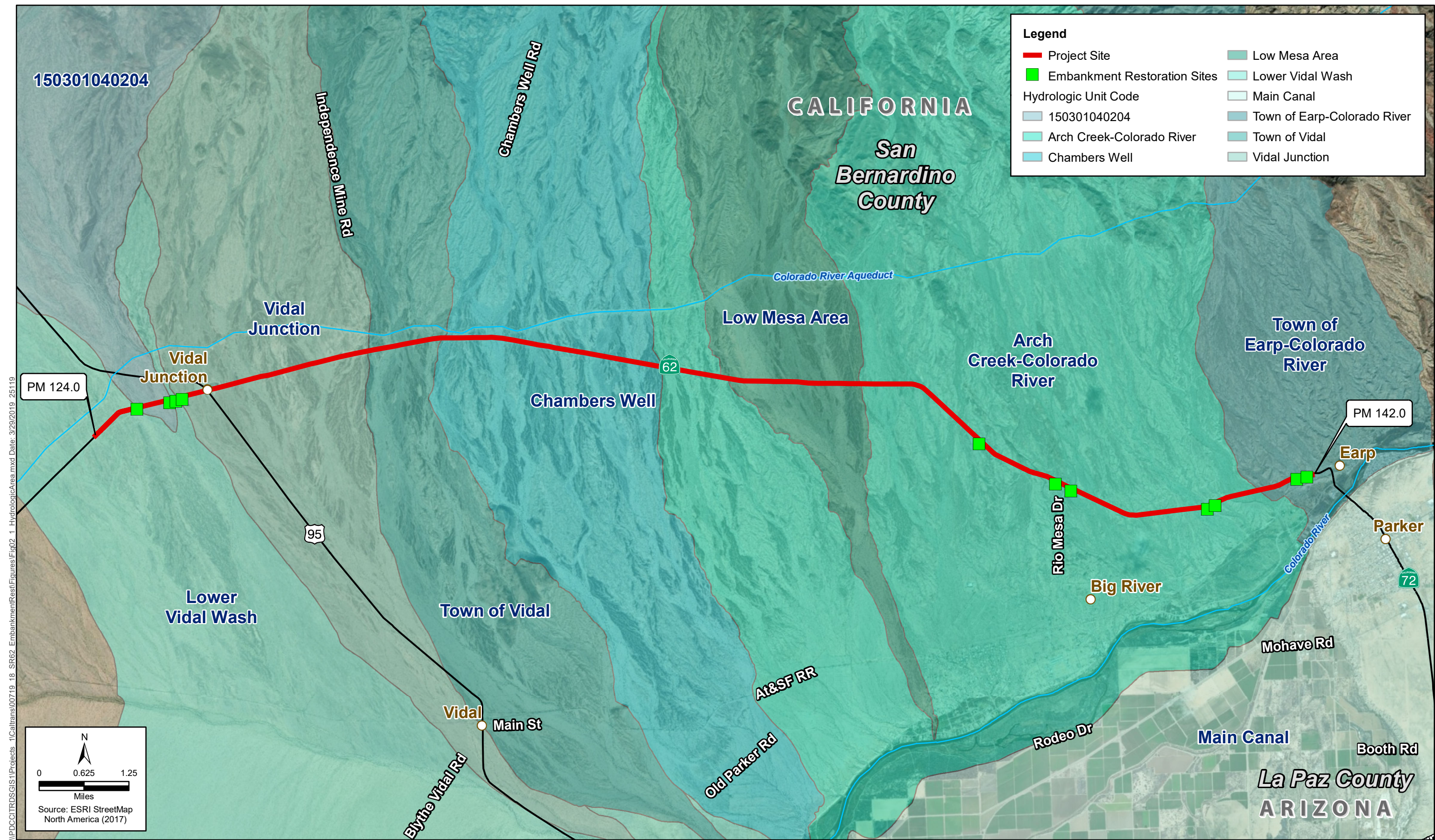


Figure 2-1
Hydrologic Areas
SR-62 Embankment Restoration Project

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2.2.2 Geology/Soils/Seismicity/Topography

2.2.2.1 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. The Department’s Office of Earthquake Engineering is responsible for assessing the seismic hazard for Department projects. 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.

2.2.2.2 AFFECTED ENVIRONMENT

The primary source used in the preparation of this section is the *Addendum to Natural Environment Study (Minimal Impacts)* (Caltrans 2019) prepared for the SR-62 Embankment Restoration Project.

Topography

The project area consists of 11 separate locations, plus two staging areas, situated south of the Whipple Mountains in the eastern portion of the Vidal Valley and north of the Riverside Mountains. The project area is on portions of U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles: Vidal Junction, Parker NW, and Parker, California. Within the project area, SR-62 is a two-lane highway surrounded by undeveloped desert lands. Elevations range from a high of 940 feet above mean sea level at the western-most end of the project area to a low of 400 feet above mean sea level at the eastern-most end. The geology of the site consists of Quaternary alluvium deposits that can be classified as unconsolidated or semi-consolidated.

Soil Conditions

The project area crosses five different soil types including:

- Carrizo extremely gravelly coarse sand (5) – This excessively drained soil occurs on floodplains with 0 to 3 percent slopes. It is composed of extremely gravelly coarse sand on the surface and very gravelly coarse sand below. The parent material is composed of stratified mixed alluvium.
- Chuckawalla-Gunsight association (7) – This soil association consists of 55 percent Chuckawalla and 30 percent Gunsight. The Chuckawalla series are well drained and occur on fan terraces with 1 to 6 percent slopes. They are composed of extremely gravelly silt loam on the surface. The parent material is composed of mixed alluvium. The Gunsight

series are somewhat excessively drained and occur on fan terraces with 20 to 45 percent slopes. They are composed of very gravelly sandy loam on the surface. The parent material is calcareous stratified mixed alluvium.

- Gunsight-Chuckawalla-Carrizo association (17) – This soil association consists of 45 percent Gunsight, 25 percent Chuckawalla, and 15 percent Carrizo. The Gunsight series are somewhat excessively drained and occur on fan terraces with 20 to 45 percent slopes. They are composed of very gravelly sandy loam on the surface. The parent material is calcareous stratified mixed alluvium. The Chuckawalla series are well drained and occur on fan terraces with 1 to 6 percent slopes.
- Rillito-Gunsight (S1140) – The Rillito series consists of very deep, somewhat excessively drained soils that formed in mixed alluvium. Rillito solids are on fan terraces or stream terraces with 0 to 5 percent slopes, but range up to 40 percent. It consists of excessively drained gravelly sandy loam with slow or medium runoff. The Gunsight series consists of very deep, somewhat excessively drained, strong calcareous soils that form in alluvium from mixed soils. Gunsight soils are composed of gravelly loam on fan terraces or stream terraces and have 0 to 60 percent slopes.

None of the on-site soil types occur on the National List of Hydric Soils.

Geologic Hazards

Landslides

Within the project area, SR-62 is a two-lane highway surrounded by undeveloped desert lands. According to the San Bernardino County Geologic Hazards Maps, SR-62 between the project limits is not within an area susceptible to landslides.

Seismicity and Fault Rupture

The project area is in the seismically active Southern California Region. According to the Southern California Earthquake Data Center, the closest fault to the project area is the Cleghorn Lake Fault, approximately 65 miles to the west. As such, the susceptibility of the project area to seismicity and fault rupture is considered low.

Liquefaction

Liquefaction is the loss of soil strength or stiffness due to a buildup of pore-water pressure during ground shaking. Liquefaction is associated primarily with loose (low-density) to medium dense, saturated, fine- to medium-grained cohesion-less soils, where the groundwater level is shallow (typically within 50 feet below ground surface), and sustained ground shaking is anticipated. Effects of liquefaction can include sand boils, excessive displacements, bearing capacity failures, and lateral spreading. According to the San Bernardino County Geologic Hazards Maps, SR-62 between the project limits is not within an area susceptible to liquefaction.

Seiches and Tsunamis

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. Tsunamis are waves generated in large bodies of water by fault displacement or major ground movement. According to the San Bernardino County Geologic Hazards Maps, the eastern end of the project limits is just outside the inundation area of the Colorado River. A review of the California Geological Society Tsunami Inundation Map did not include San Bernardino County or the proposed project area in a tsunami inundation area.

2.2.2.3 ENVIRONMENTAL CONSEQUENCES

Build Alternative

Temporary

Construction of the Build Alternative would not involve large cuts in the general topography or involve highly erosive soils during construction and would be completed in phases to minimize soil-disturbing work during the rainy season. In addition, the project would not require construction of any new cut-and-fill slopes greater than 2H:1V.

The temporary effects due to soil erosion within the proposed improvements are discussed in Section 2.2.1, *Water Quality and Storm Water Runoff*. Erosion potential would be addressed through the implementation of standardized measures as part of the project description (refer to Section 1.4.2). These include erosion control BMPs as part of the SWPPP. With implementation of these standardized measures, no short-term direct or indirect adverse impacts related to soil compaction or erosion would occur during construction of the Build Alternative.

Permanent

The Build Alternative is not anticipated to adversely affect geologic or topographic conditions or be affected by fault rupture within the project limits. The primary geologic and geotechnical constraints associated with the design and construction of the Build Alternative is seismic shaking.

Seismic Shaking

The proposed project is in the seismically active Southern California region. Design and construction of the proposed project following Caltrans' current highway and structure seismic design standards would minimize potential impacts. With implementation of these standard measures, no direct or indirect, adverse, long-term impacts on seismic shaking would occur as a result of the Build Alternative.

Liquefaction

As discussed previously, and according to the San Bernardino County Geologic Hazards Maps, SR-62 between the project limits is not within an area susceptible to liquefaction. The project would follow Caltrans' latest design requirements to minimize any potential effects related to liquefaction and seismically induced settlement. With implementation of these standard measures, no direct or indirect, adverse, long-term impacts would occur as a result of the proposed project.

No-Build Alternative

Hazards associated with seismic activity would still exist under the No-Build Alternative. The No-Build Alternative would not result in any impacts on geology, soils, seismicity, or topography, as no construction would occur along SR-62.

2.2.2.4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

With adherence to Caltrans' standard design and construction practices, which are required on all State Highway System projects, impacts related to geology, soils, seismicity, and topography would be avoided or minimized. No additional measures are required.

2.2.3 Air Quality

2.2.3.1 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 scope³ 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. 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.

2.2.3.2 AFFECTED ENVIRONMENT

The proposed project is located in the east San Bernardino County, an area within Mojave Desert Air Basin (MDAB). Covering over 20,000 square miles, the MDAB is geographically the second largest of the state’s 35 air basins.

The FCAA requires EPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. In addition, the ARB designates areas with respect to CAAQS. The federal and state attainment status for each criteria pollutant is summarized in Table 2-1.

Table 2-1. Project Vicinity State and Federal Attainment Status

Pollutant	State Attainment Status	Federal Attainment Status
Ozone (O ₃)	Nonattainment	Unclassified/Attainment
Respirable Particulate Matter (PM ₁₀)	Nonattainment	Attainment
Fine Particulate Matter (PM _{2.5})	Unclassified	Unclassified/Attainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO ₂)	Attainment	Unclassified/Attainment
Lead (Pb)	Attainment	Unclassified/Attainment
Visibility Reducing Particles	Unclassified	N/A
Sulfates	Attainment	N/A
Hydrogen Sulfide	Unclassified	N/A

Source: ARB, 2019

³ "Design concept" means the type of facility that is proposed, such as a freeway or arterial highway. "Design scope" refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.

2.2.3.3 ENVIRONMENTAL CONSEQUENCES

Build Alternative

Temporary

Site preparation and embankment restoration will involve clearing, cut-and-fill activities, grading, and paving roadway surfaces, among other activities. During construction, short-term degradation of air quality is expected from the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment powered by gasoline and diesel engines are also anticipated and would include CO, NO_x, volatile organic compounds, directly emitted PM₁₀ and PM_{2.5}, and toxic air contaminant (TAC) emissions such as diesel particulate matter (DPM). Construction activities are expected to increase traffic congestion in the area, resulting in increases in emissions from traffic during the delays. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Permanent

The project would not increase capacity along the existing roadway or install traffic signals and is considered exempt under 40 CFR 93.126 (projects that correct, improve, or eliminate a hazardous location or feature). Therefore, no adverse effects on air quality would result.

No-Build Alternative

The No-Build Alternative would not result in any impacts on air quality, as no construction would occur along the SR-62 project limits.

2.2.3.4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Implementation of Caltrans Standard Specifications, as listed in Section 1.4.2 will reduce air quality impacts resulting from construction activities. Please note that although these measures are anticipated to reduce construction-related emissions, these reductions cannot be quantified at this time. No additional avoidance, minimization, and/or mitigation measures are necessary.

2.3 Biological Environment

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 (FESA) are discussed below in Section 2.3.5, Threatened and Endangered Species. Wetlands and other waters are discussed in Section 2.3.2.

2.3.1.1 AFFECTED ENVIRONMENT

Information used in this section is based on the approved March 2019 Addendum to Natural Environment Study (Minimal Impacts) for this project.

The BSA encompasses each of the eleven RSP locations with a buffer of 500 feet immediately surrounding each of the RSP locations and including permanent and temporary impact areas. Additionally, the BSA includes the two staging areas (Figure 2-2). The BSA occurs south of the Whipple Mountains in the eastern portion of the Vidal Valley. It encompasses the undeveloped area adjacent to a two-lane highway. Surrounding land uses include undeveloped desert lands, an agricultural checkpoint, and retail businesses at Vidal Junction.

The BSA includes undeveloped open space within the Colorado Desert (a subdivision of the Sonoran Desert) biome of southern California. The six vegetation communities in the BSA are described below.

Larrea tridentata Shrubland Alliance-Creosote Bush Scrub

Creosote bush (*Larrea tridentata*) is dominant or co-dominant in the shrub canopy. Emergent mesquite or yucca plants may be present at low cover. Shrubs are less than 3 meters, and canopy is intermittent to open. The herbaceous layer is open to intermittent with seasonal annuals or perennial grasses. Habitats include alluvial fans, bajadas, upland slopes, and minor intermittent washes. Soils are well drained, sometimes with desert pavement. The BSA supports this type of plant alliance mostly in the lower elevations at the easternmost portions of the project limits. Vegetation identified includes creosote bush, brittlebush (*Encelia farinosa*), white bur-sage (*Ambrosia dumosa*), lupine (*Lupinus* sp.), and desert dandelion (*Malacothrix glabrata*). *Larrea tridentata* – *Ambrosia dumosa* Shrubland Alliance [Creosote Bush – White Bur Sage Scrub]

Creosote bush-white bur sage scrub (*Larrea tridentata*-*Ambrosia dumosa*), supports creosote bush, desert agave (*Agave deserti*), white bur-sage (*Ambrosia dumosa*), desert trumpet (*Eriogonum inflatum*) and beavertail cactus (*Opuntia basilaris*) with shrubs less than 3 meters tall. Canopy is open to intermittent. The herbaceous layer is open to intermittent with seasonal annuals, and it occurs within minor washes and rills, alluvial fans, bajadas, and on upland slopes.

The soils are well-drained and rocky. They may have desert pavement surfaces and are often derived from granitic or volcanic rock. Additionally, both brittlebush scrub and white bur-sage scrub have a greater than 1 percent absolute cover in the canopy, where no other woody species can greatly exceed their cover. White bur-sage, desert agave, beavertail cactus, and ocotillo (*Fouquieria splendens*) may be present with less than 5 percent absolute cover. The BSA supports this type of plant alliance, mostly in the lower elevations at the easternmost portions of the project limits.

Larrea tridentata – *Encelia farinosa* Shrubland Alliance [Creosote Bush – Brittle Bush Scrub]
Creosote bush and brittlebush are co-dominant and equally conspicuous in the shrub canopy with desert agave, white bur-sage, and desert holly (*Atriplex hymenelytra*). Emergent ocotillo may be present at low cover. Tree layer is scattered, and shrubs are less than 3 meters with a canopy that is open to intermittent, and two-tiered. Herbaceous layer is open with seasonal annuals. Features include small washes, rills, alluvial fans, bajadas, and colluvium on upland slopes. Soils are well drained and rocky, and they may have desert pavement surfaces. They are often derived from granitic or volcanic rock.

Parkinsonia florida – *Olneya tesota* Woodland Alliance [Blue Palo Verde – Ironwood Woodland]
Blue Palo Verde-Ironwood Woodland Alliance supports co-dominant plant species of blue palo verde (*Parkinsonia florida*) and ironwood (*Olneya tesota*) in the tall shrub or tree canopy with associated plant species. These species include white bur-sage, snake weed (*Colubrina californica*), ocotillo, and mesquite (*Prosopis glandulosa*). Canopy is open to continuous. The shrub layer is intermittent or open with a herbaceous layer and is sparse with seasonal annuals. Additionally, the Blue Palo Verde-Ironwood Woodland Alliance is commonly associated with desert arroyo margins, seasonal watercourses and washes, bottomlands, middle and upper bajadas and alluvial fans, and lower slopes. Soils are sandy, well drained, and derived from alluvium or colluvium. The BSA supports this type of plant alliance mostly in the higher elevations at the northernmost portions of the project limits. Vegetation identified includes blue palo verde, ironwood, white bur-sage, narrow leaved forget me not (*Cryptantha angustifolia*), Sonoran sandmat (*Euphorbia micromera*), clavate fruited primrose (*Chylismia claviformis*), and common phacelia (*Phacelia distans*).

Chorizanthe rigida-*Geraea canescens* [Desert Pavement sparsely segetated Alliance [Rigid spineflower - hairy desert sunflower]]

This ecological system occurs throughout much of the warm deserts of North America and is composed of unvegetated to very sparsely vegetated (less than 2 percent plant cover) landscapes, typically flat basins where extreme temperature and wind develop ground surfaces of fine to medium gravel coated with "desert varnish." This sparsely vegetated system may surround playas in valley bottoms or near washes and, less commonly, on dissected, eroding alluvial fans. Very low cover of desert scrub species such as creosote or buckwheat are usually present. However, ephemeral herbaceous species may have high cover in response to seasonal precipitation, including rigid spiny herb, hairy desert sunflower, and buckwheat.

Prepared by: Mindy Boehm, Amec Foster Wheeler
Date prepared: 12/11/2017
Source: AZ666 & consortium a ca

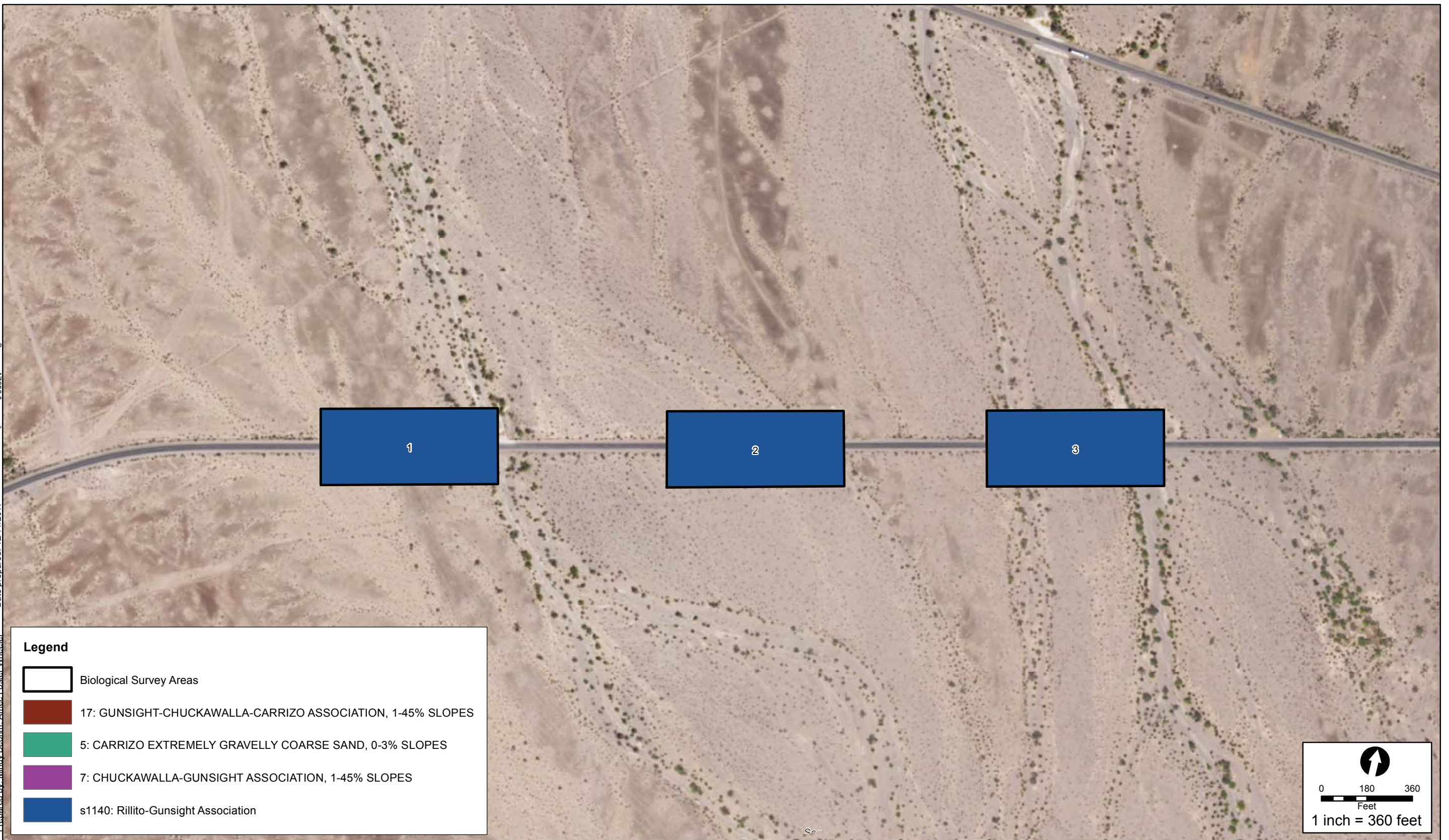


Figure 2-2, Sheet 1
BSA and Soils Map
SR-62 Embankment Restoration Project

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Prepared by: Mindy Boehm, Amec Foster Wheeler
Date prepared: 12/14/2017
Source: AZ666 & asmsuam a ca



Figure 2-2, Sheet 3
BSA and Soils Map
SR-62 Embankment Restoration Project

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***Parkinsonia microphylla* Provisional Shrubland Alliance [Foothill Palo Verde Desert Scrub]**

This community is co-dominant in the shrub or low tree canopy with *brittlebush*, *creosote bush*, and California fagon bush (*Fagonia laevis*). Emergent trees of *ironwood* and saguaro (*Carnegiea gigantea*) may be present at low cover. Shrubs or small trees less than 8 meters are present, and the canopy is open to intermittent. The herbaceous layer is usually sparse, yet many have spectacular annual blooms. The habitat consists of metavolcanics and sedimentary outcrops, mesas, foothills slopes, and washes. Soils are thin, often with a caliche layer. The BSA supports this type of plant alliance mostly on the four easternmost project sites located at PMs 140.35, 140.45, 141.7, and 141.9.

Dominant perennial plant species detected on site and in adjacent areas include creosote bush, white bur-sage, brittlebush, blue palo verde, mesquite, ironwood, catclaw (*Senegalia greggii*), arrow weed (*Pluchea sericea*), and allscale (*Atriplex polycarpa*). Disturbed areas, generally adjacent to US-95 and/or other unimproved dirt roads and off-road trails, are also intermittently present at various locations within the BSA.

In general, plant communities extended to the edge of all the survey area sites, but some sites had extensive areas of bare ground. In all, a combined total of 30 plant species were observed on the project sites. Additional plant species (primarily annuals) are expected to occur on each of the project sites but were not detectable due to the seasonality (Fall) of the surveys.

Critical Habitat and Wildlife Movement Corridors

Three of the proposed RSP sites are within the Chemehuevi Desert Tortoise Critical Habitat Unit of the Colorado Desert Recovery Unit (USFWS 1994b) and the Chuckwalla to Chemehuevi Desert Tortoise Linkage ACEC. These are the RSP sites at PM 124.75, 125.0, and 125.25, located approximately 0.5 mile west of Vidal Junction. These three sites are also located within the Chuckwalla to Chemehuevi Desert Tortoise Linkage Areas of Critical Concern (ACEC). This ACEC provides critical desert tortoise habitat connectivity between the two major desert tortoise populations identified in the Colorado Desert (i.e., the Chuckwalla and Chemehuevi critical habitat units) and Joshua Tree National Park. The stated management actions for this ACEC are: “Develop a desert tortoise habitat linkage management and monitoring plan. The plan would include an inventory of potential obstructions to connectivity and sources of mortality within the ACEC, and a list of specific actions under the jurisdiction of BLM that may be needed to remove or mitigate impediments to desert tortoise occupancy and movement and minimize the risk of fatalities.” (BLM 2014.)

The remaining seven sites are all located east of the Vidal Junction area and are not located in an ACEC or Critical Habitat Unit for the desert tortoise. Additionally, the project would not have an impact on habitat connectivity, given the project would not impede wildlife species movement, and the construction of the proposed project would not further degrade the existing wildlife corridors.

2.3.1.2 ENVIRONMENTAL CONSEQUENCES

Build Alternative

The study areas within each of the sites exhibit native plant communities and friable soils that are potentially suitable habitat for special-status plant species, although field surveys did not identify listed or special-status plant species located within the BSA. Additionally, the project sites exhibit varying degrees of disturbance, and with continual maintenance activities adjacent to the roadway, the project sites do not provide suitable conditions for these special-status plant species. Within the BSA, there are no known historical occurrence for habitats and natural communities of special concern as described by the CDFW CNDDDB occurrence report and thus, special-status plant communities would not be impacted by the project.

The project would not impede wildlife species movement, nor would construction of the project further degrade existing wildlife corridors; therefore, the project would not impact habitat connectivity.

No-Build Alternative

This alternative would not cause any impacts on vegetation communities, including depleted natural communities/habitats of concern.

2.3.1.3 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following avoidance and minimization measures will be implemented to minimize effects during construction.

BIO-1: The project has identified two potential Staging Areas, and approval of additional staging areas will require the Caltrans Biologist to analyze project impacts and receive authorization for additional staging areas. Prior to the beginning of construction, the staging areas will be fenced with temporary fence and maintained throughout construction to prevent the work areas from extending beyond the approved temporary staging area and to avoid encroachment into the native desert habitat.

BIO-2: Pre-construction plant surveys will occur prior to the mobilization by either the Caltrans Biologist or a qualified Contract Supplied Biologist. The qualified Biologist will survey the project impact areas and flag special-status plant species to avoid and minimize impacts. The qualified biologist will be designated to oversee compliance of all protective measures and will notify the resident engineer and District Biologist if project activities are not in compliance. The resident engineer must stop work until corrective actions are taken and protective measures are implemented. Implementation of these measure would reduce potential impacts to these special-status plant species and contribute to the efforts designed to minimize project-related impacts to the on-site native vegetation communities.

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

Information used in this section is based on the approved Addendum to Natural Environment Study (Minimal Impacts) [NES(MI)] prepared for this project (March 2019).

The project area lies within the Colorado River Hydrologic Unit. A jurisdictional delineation identifying potential jurisdictional water features was conducted within the project limits as part of two separate Caltrans projects in 2017 and 2018. The jurisdictional delineation determined that the on-site drainages are ephemeral streams and likely flow for less than 3 months per year; therefore, they would be classified as a non-relatively permanent waterway (RPW) by the USACE. These drainages flow between 800 feet and 4 miles through non-RPWs, before reaching a traditionally navigable waterway (TNW), the Colorado River. The drainages typically exhibit unvegetated or very sparsely vegetated streambeds and the banks of the unmodified drainages were typically steeply-sloping to vertically-incised. The substrate of the on-site drainages was typically coarse sand, often with cobbles in the larger drainages. The streambeds of the on-site jurisdictional drainages were largely unvegetated and the banks are dominated by creosote bush, white bur-sage, cheese bush, mesquite, smoke tree, and brittlebush. Soils in the project limits consist of Carrizo extremely gravelly coarse sand, Chuckawalla-Gunsight association, and Gunsight-Chuckawalla-Carrizo association. These soils are not hydric.

As shown in Figure 2-3 (Sheets 1-3), nine jurisdictional drainages were delineated within the project limits, identified as Drainage 1 through 9. Table 2-2 summarizes findings of the waterways, jurisdictional status, area of jurisdiction, and length of waterway within the project study area. There were no wetlands identified in the BSA based on the absence of hydric soil, hydric soil indicators, and hydrophytic vegetation.

2.3.2.3 ENVIRONMENTAL CONSEQUENCES

Build Alternative

The Build Alternative would result in 11 RSP impact areas at 10 desert washes delineated as jurisdictional drainages and would result in temporary and permanent impacts to Waters of the U.S. (WUS) and waters of the State of California (WSC). In total, the Build Alternative would result in 0.43 acre of permanent and 0.86 acre of temporary impacts to non-wetland WUS/WSC/CDFW streambeds, respectively. The total acreage for temporary and permanent impacts are currently draft and will vary as the project is further developed during the design and implementation phase. Additionally, Figure 2-3 (Sheets 1 through 3) are draft jurisdictional maps and will be revised further and completed once the design plans are finalized. Direct effects on waters include the loss of vegetation from direct removal due to the site preparation activities such as vegetation clearing, grubbing, and site grading. However, the loss of resources is deemed minimal as vegetation would be restored. Other indirect effects on waters may include sediment entering drainage areas from vegetation clearing and/or invasive, nonnative plants transported into areas along the roadway.

Table 2-2: Summary of Jurisdictional Waters of the United States

Drainage ID	RSP Location	Non-Wetland WUS, WSC Acre	Length (feet)	Latitude/Longitude	Cowardin Class	Class of Aquatic Resource
1	1	0.407	444	34.18534/ -114.59142	R4SBA	Non-section 10-non-wetland
2	1	0.203	692	34.18611/ -144.58698	R4SBA	Non-section 10-non-wetland
3	2, 3, and 4	0.812	615	34.18684/ -114.58292	R4SBA	Non-section 10-non-wetland
4	2, 3, and 4	0.144	875	34.17280/ -114.38694	R4SBJ	Non-section 10-non-wetland
5	5	0.283	824	34.16439/ -114.36944	R4SBJ	Non-section 10-non-wetland
6	6	0.494	469	34.16252/ -114.36516	R4SBC	Non-section 10-non-wetland
7	7	6.304	300	34.15796/ -114.33264	R4SBC	Non-section 10-non-wetland
8	8 and 9	3.956	300	34.16308/ -114.31090	R4SBC	Non-section 10-non-wetland
9	10 and 11	0.398	841	34.16343/ -114.30752	R4SBC	Non-section 10-non-wetland
Total		13.0	5,360	N/A	N/A	N/A
WUS – Waters of the United States WSC – Waters of the State of California CDFW – California Department of Fish and Wildlife R4SBA – Riverine, intermittent, streambed, temporary flooded; R4SBC – Riverine, intermittent, streambed, seasonally flooded; R4SBJ – Riverine, intermittent, streambed, seasonally flooded based on Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979).						



Figure 2-3, Sheet 1
Draft Jurisdictional Delineation Map
SR-62 Embankment Restoration Project

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Source: ESRI Imagery

Date prepared: 12/13/2017

Prepared by: Mindy Boehm, Amec Foster Wheeler

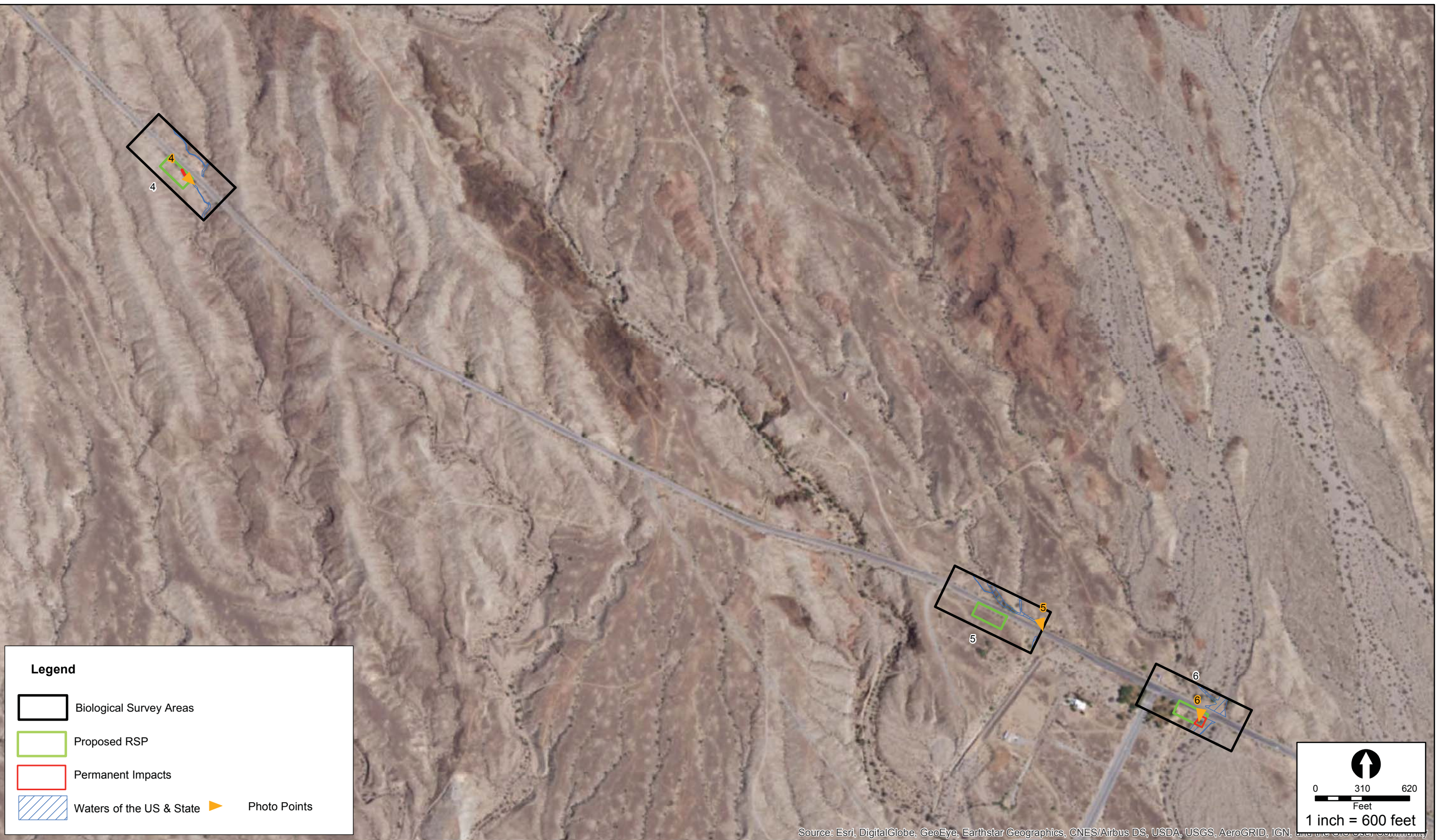


Figure 2-3, Sheet 2
Draft Jurisdictional Delineation Map
SR-62 Embankment Restoration Project

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Figure 2-3, Sheet 3
Draft Jurisdictional Delineation Map
SR-62 Embankment Restoration Project

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Since the project will have temporary and permanent impacts to jurisdictional waters, a 404 Nationwide permit from USACE, 401 water certification from the Colorado River Basin Water Quality Control Board, and 1602 Streambed Alteration Agreement from CDFW will be required.

The two most common types of permits issued by the USACE under Section 404 of the CWA to authorize the discharge of dredged or fill material into WUS are a nationwide permit (NWP) or an individual permit (IP). NWPs are general permits for specific categories of activities that result in minimal impacts on aquatic resources. This project could fall under several Nationwide Permits and as such, the Nationwide Permit will be determined during the permitting phase. The USACE is ultimately responsible for jurisdictional determinations. The Jurisdictional Delineation will be provided to the USACE to assist in making a Preliminary Jurisdictional Determination in which the USACE assumes jurisdiction over the on-site drainages, and processes permits accordingly.

Under Section 401 of the CWA, a Section 401 Water Quality Certification Permit Form must be submitted to the RWQCB to certify that the discharge of dredged or fill materials into WUS does not violate state water quality standards. The RWQCB also regulates impacts on WSC under the Porter-Cologne Water Quality Control Act through issuance of a Construction General Permit, State General Waste Discharge Order, or WDRs, depending upon the level of impact and the properties of the waterway. The project proponent would also need to obtain a Water Quality Certification. A CDFW 1602 Streambed Alteration Agreement is also required for all activities that alter streams and lakes and their associated riparian habitat.

No-Build Alternative

If this project is not constructed, project-related impacts on federal and state jurisdictional waters and wetlands would not occur.

2.3.2.4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The proposed project impacts on jurisdictional areas will be mitigated and coordinated with USACE, RWQCB, and CDFW during the permitting process. Furthermore, in addition to Caltrans BMPs and Caltrans Standard Specifications 13-4.03E(3) and 13-4.03E(4), listed in Section 1.4.2, measures **BIO-1** and **BIO-2**, as listed in Section 2.13.1.3 above, will be implemented to minimize impacts to jurisdictional waters during construction.

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 the Threatened and Endangered Species section (Section 2.3.5) in this document 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

Information used in this section is based on the approved March 2019 Addendum to Natural Environment Study (Minimal Impacts) for this project.

Special-Status Plant Species

CDFW CNDDDB identified special-status plant species that have the potential to occur within the BSA. These include Emory's crucifixion-thorn (*Castela emoryi*), glandular ditaxis (*Ditaxis claryana*), sand evening-primrose (*Chylismia arenaria*), desert pincushion (*Coryphantha chlorantha*), creamy blazing star (*Mentzelia tridentata*), and narrow-leaf sandpaper-plant (*Petalonyx linearis*) and are listed below in Table 2-3.

None of these special-status plant species are federally or state listed as threatened or endangered. These plant species are designated by the CNPS as List 2B.2 or 1B.3 species, meaning that they are considered to be “rare, threatened or endangered in California but more common elsewhere” and that it is “moderately threatened in California.”

The study areas within each of these sites exhibit native plant communities and friable soils that are potentially suitable habitat for special-status plant species; however, no special-status plant species were observed within the BSA during these surveys.

2.3.3.3 ENVIRONMENTAL CONSEQUENCES

Build Alternative

No special-status plant species are anticipated to be impacted by the project. According to Table 2-3, special-status plant species are considered to have a low potential to occur on-site as these species are associated with Alkali Playas and Mojavean and Sonoran Desert scrubs. Further, the project would not impact suitable habitat for special-status plant species given that it is limited to the paved roadway and graded shoulders. The roadway has been affected by previous and continuous highway maintenance activities and continual human disturbances, thus the roadway and graded shoulders do not provide suitable conditions for these special-status plant species.

No-Build Alternative

No construction activities would be undertaken, and no effects on plant species would occur.

2.3.3.4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Implementation of **BIO-1** and **BIO-2**, as listed in Section 2.3.1.3 above, would minimize impacts on special-status plant species.

Table 2-3. Special-status Plant Species Occurring or Potentially Occurring in the BSA

Common Name	Scientific Name	Status	Habitat	Probability
Emory's crucifixion-thorn	<i>Castela emoryi</i>	F: ND C: S2S3 CNPS: 2B.2	Mojavean desert scrub, Sonoran Desert scrub, playas	Low
Sand evening-primrose	<i>Chylismia arenaria</i>	F: ND C:S2S3 CNPS: 2B.2	Sandy or rocky sites within Sonoran Desert scrub	Low
Desert pincushion	<i>Corypantha chlorantha</i>	F: ND C:S3 CNPS: 2B.1	Mojavean desert scrub, Joshua tree woodland, pinyon and juniper woodland.	Absent (habitat lacking)
Glandular ditaxis	<i>Ditaxis claryana</i>	F: ND C:S2 CNPS: 2B.2	Sandy areas in Mojavean Desert scrub & Sonoran Desert scrub; 0-465 meters; Blooms: Oct-Mar	Low
Creamy blazing star	<i>Mentzelia tridentate</i>	F: ND C:S3 CNPS: 1B.3	Sandy or rocky sites within Mojavean Desert scrub	Low
Narrow-leaf sandpaper-plant	<i>Petalonyx linearis</i>	F: ND C:S3 CNPS: 2B.3	Sandy areas in Mojavean Desert scrub & Sonoran Desert scrub	Low

Source: SR-62 Addendum to Natural Environment Study (Minimal Impacts), March 2019

Notes:

Federal Classification: FT—Federal Threatened, SC—Former Candidate (Category 2) for listing under ESA, Species of Concern.

California Classification: SE—State Endangered, ST—State Threatened, SSC—Species of Special Concern.

Local Classification: WRCMSHCP—Western Riverside County Multiple Species Habitat Conservation Plan Special-Status Species.

California Native Plant Society Classifications (CNPS): 1A—Plants presumed Extirpated in CA, but more common elsewhere; 1B—Plants Rare, Threatened, or Endangered in CA and Elsewhere; 2A—Plants presumed extirpated in CA, but more common elsewhere; 2B—Plants Rare, Threatened, or Endangered in CA, but more common elsewhere; 3—Plants about which more information is needed, a CNPS review list; 4—Plants of Limited Distribution, a Watch List; .1—Seriously threatened in CA (over 80% of occurrences threatened); .2—Moderately threatened in CA (20%–80% occurrences threatened); .3—Not very threatened in CA (<20% of occurrences threatened).

Habitat Present/Absent: CH—Critical Habitat, project footprint is located within designated Critical Habitat, but does not necessarily mean that appropriate habitat is present. HP—Habitat Present, is or may be present, species may be present. P—Present, species is present. A—Absent, no habitat present and no further work needed.

2.3.4 Animal Species

2.3.4.1 REGULATORY SETTING

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, below. 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 pertaining to wildlife include the following:

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

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600–1603 of the California Fish and Game Code
- Section 4150 and 4152 of the California Fish and Game Code

2.3.4.2 AFFECTED ENVIRONMENT

Information used in this section is based on the approved March 2019 Addendum to Natural Environment Study (Minimal Impacts) for this project.

Vertebrate wildlife directly observed and/or detected otherwise during the surveys included a total of 42 species. This number includes animals directly observed and/or detected through the presence of sign (i.e., tracks, scat, feathers, bones, and burrows). A combined 42 vertebrates were either directly observed or detected through the presence of sign within the study sites. These included two reptiles, 31 birds, and nine mammals. Many of these are resident, common species in the Colorado Desert, while others (i.e., some birds) are seasonal migrants passing through or wintering in the area. Representative common wildlife species detected included, but were not limited to, western sideblotched lizard (*Uta stansburiana elegans*), Great Basin whiptail (*Aspidoscelis tigris tigris*), verdin (*Auriparus flaviceps*), common raven, black-throated sparrow (*Amphispiza bilineata*), rock wren (*Salpinctes obsoletus*), desert woodrat (*Neotoma lepida*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), black-tailed jackrabbit (*Lepus californicus*), kit fox (*Vulpes macrotis*), and coyote (*Canis latrans*).

Special-Status Wildlife Species

CDFW CNDDDB identified the following special-status wildlife species that may have the potential to occur within the BSA, including: American badger, Colorado River cotton rat, cave myotis, Townsend's big-eared bat, crissal thrasher, pallid bat, yellow-breasted chat, and burrowing owl. Table 2-4 lists species with suitable or absent habitat, including a summary of their potential presence within the project impact areas.

Avian and Mammals Species Survey Results

The project site may have the potential for nesting birds given the close proximity to mesquite, palo verde, ironwood, and other shrubs located within the BSA.

A single Cooper's hawk was observed foraging at one location during the biological assessment. Cooper's hawk is not listed as threatened or endangered by the USFWS or CDFW. This species is, however, designated as a "watch list" species and protected while nesting by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. Although observed foraging in the area, nesting habitat (i.e., trees in riparian forests and woodlands and coast live oaks) for Cooper's hawk is not present anywhere within the BSA.

Although no records of burrowing owl were identified during the literature review process, suitable habitat for burrowing owl is present throughout the BSA. The project site and BSA contain suitable habitat for burrowing owl, but no burrows suitable for this species were observed on the project site or within the BSA during the field surveys.

The presence or absence of special-status species depends upon many factors, including habitat conditions, behavior, seasonal activity, and seasonal occurrence. It is often not readily possible to ascertain the presence or absence of a species at any particular moment in time. Therefore, the presence or the likelihood of the presence of special-status species is based on the following criteria: direct observation of the species or its sign in the BSA or immediate vicinity during surveys conducted for the proposed project or reported in previous biological studies; sighting by other qualified observers; records reported by the CNDDDB; presence or location of specific species lists provided by private groups (e.g., CNPS); and/or the study area lies within known distribution of a given species and contains appropriate habitat. The following table (Table 2-4) summarizes the special-status species occurring or potentially occurring within the BSA.

Table 2-4. Special-status Animal Species Occurring or Potentially Occurring in the BSA

Common Name	Scientific Name	Status	Habitat and Distribution	Probability
Avian				
Burrowing owl	<i>Athene cunicularia</i>	F: BCC, BLM C: SCC	Nests in burrows, drainpipes, and piles of debris in grasslands, scrub habitats, and agricultural areas; often utilizes ground squirrel and other animal burrows in open, dry grasslands, agricultural, railroad rights-of-way and margins of highways, golf courses and airports. Also uses man-made structures such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles.	Nesting: Low (habitat suitable) Foraging: Moderate (if occurs in area)
Yellow-breasted chat	<i>Icteria virens</i>	F: MBTA C: SSC	Nests in dense riparian thickets and brushy tangles in the lower portions of foothill canyons and in the lowlands.	Nesting: Absent (habitat lacking) Foraging: Low
Crissal thrasher	<i>Toxostoma crissale</i>	F: ND C: SSC	Desert riparian and desert wash habitats in lower Colorado Desert in CA. Nests in dense vegetation along streams/washes; mesquite, screwbean mesquite, ironwood, catclaw, arrowweed & willow.	Nesting: Low (habitat suitable but limited) Foraging: Low
Mammals				
Pallid Bat	<i>Antrozous pallidus</i>	F: BLM, FS C: SSC WBWG: H	Deserts, grasslands, shrublands, woodlands & 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.	Roosting: Absent Foraging: High
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	F: BLM, FS C: SSC WBWG: H	Occurs in coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Roosts in caves, mines, buildings, bridges, rock crevices and hollow trees.	Roosting: Absent Foraging: Moderate
Cave myotis	<i>Myotis velifer</i>	F: ND C: SSC WBWG: M	Restricted, in California, to lowlands of Colorado River and adjacent mountain ranges. A colonial dweller of caves, mines & buildings	Roosting: Absent Foraging: High
Colorado River cotton rat	<i>Sigmodon arizonae plenus</i>	C: SSC	Colorado River floodplain from the Nevada border to about Bard. Distribution is spotty.	Roosting: Absent Foraging: Absent
American badger	<i>Taxidea taxus</i>	F: ND C: SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Roosting: Absent Foraging: Moderate

Common Name	Scientific Name	Status	Habitat and Distribution	Probability
<p>Source: SR-62 Addendum to the Natural Environment Study (Minimal Impacts), March 2019.</p> <p>Notes:</p> <p><u>Federal Classification:</u> FT—Federal Threatened, BLM – Bureau of Land Management, SC—Former Candidate (Category 2) for listing under ESA, Species of Concern.</p> <p><u>California Classification:</u> SE—State Endangered, ST—State Threatened, SSC—Species of Special Concern.</p> <p><u>Habitat Present/Absent:</u> CH—Critical Habitat, project footprint is located within designated Critical Habitat, but does not necessarily mean that appropriate habitat is present. HP—Habitat Present, is or may be present, species may be present. P—Present, species is present. A—Absent, no habitat present and no further work needed.</p>				

2.3.4.3 ENVIRONMENTAL CONSEQUENCES

Build Alternative

The project is largely located in previously disturbed and/or developed areas; however, a relatively small amount of minor disturbance to natural vegetation communities that may provide at least marginally suitable habitat for some of the special-status biological resources known from the vicinity is anticipated. This includes minor disturbance at the eleven (11) RSP locations and two (2) proposed staging/storage areas, along SR-62 generally in association with drainage crossings.

Impact Summary

Although observed foraging in the area, nesting habitat (i.e., trees in riparian forests and woodlands and coast live oaks) for Cooper's hawk is not present anywhere within the BSA. For this reason, impacts to nesting Cooper's hawk will be avoided entirely by project implementation.

Avoidance of project related disturbance during the nesting season is expected to result in avoidance of impacts to nesting birds. If avoidance of the nesting season is not possible, pre-construction clearance surveys for nesting birds protected by the MBTA and California Fish and Game Code is recommended (see **BIO-11**). If detected, disturbance to active bird nests must be avoided until the young have fledged. While there is no established protocol for nest avoidance, CDFW generally recommends avoidance buffers of about 500 feet for raptors and threatened/endangered species and 100 – 300 feet for other birds.

The project site and BSA contain suitable habitat for burrowing owl, but no burrows suitable for this species were observed on the project site or within the BSA during the field surveys. Nevertheless, there is the potential for burrowing owl to occur on or immediately adjacent to the project site or BSA at any time in the future if small mammals construct burrows suitable for burrowing owl on site or in adjacent areas. For these reasons, take avoidance (pre-construction) surveys for burrowing owl is recommended prior to commencement of project activities in accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012).

Although occurrence of and impacts to burrowing owl are not anticipated based on the current lack of burrows and sheltering opportunities, if burrowing owls were to be found on or adjacent to the project site or BSA during the take avoidance (pre-construction) surveys, Caltrans would need to contact the CDFW for further guidance.

Due to a lack of suitable habitat, the following special-status wildlife species are considered to be absent and therefore are not expected to be affected by implementation of the proposed project: Arizona bell's vireo, western yellow-billed cuckoo, southwestern willow flycatcher, razorback sucker, gilded flicker, gila woodpecker, elf owl, Yuma Ridgway's rail, American badger, Colorado River cotton rat, cave myotis, Townsend's big-eared bat, crissal thrasher, pallid bat, and yellow breasted chat.

In the case of the birds and bats that are considered to be absent, any of these species could temporarily and/or periodically occur on-site for foraging purposes and/or during migration. Nesting habitat (for the birds) and roosting habitat (for the bats), however, is lacking from the site and therefore these species are considered to be absent from the site for nesting or roosting

purposes. It should be noted, however, that despite a lack of nesting and/or roosting habitat on-site, many of the birds and the bats could, however, temporarily and/or periodically occur on, or fly over, the site for foraging purposes and/or during migration.

No-Build Alternative

No construction and operation activities would occur under the No-Build Alternative, and no effects would occur.

2.3.4.4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Best management practices (BMPs) will be in place to further ensure that no impact to the surrounding critical habitat occurs. In addition to measures **BIO-1** and **BIO-2** in Section 2.3.1.3 (Natural Communities), measures **BIO-3** through **BIO-11** listed in Section 2.3.5.4 (Threatened and Endangered Species) will be implemented.

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 2081 of the 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 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 the CDFW. For species listed under both the FESA and CESA requiring a Biological Opinion under Section 7 of the 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

Information used in this section is based on the approved March 2019 Addendum to Natural Environment Study (Minimal Impacts) for this project.

A US Fish and Wildlife Service literature search conducted for the proposed project indicated that the following species have potential for occurrence in the BSA: southwestern willow flycatcher, Yuma Ridgway's rail, western yellow-billed cuckoo, razorback sucker, desert tortoise, and critical habitat for desert tortoise that may potentially occur within the BSA.

CDFW CNDDDB identified the following state-listed wildlife species: Arizona bell's vireo, western yellow-billed cuckoo, southwestern willow flycatcher, razorback sucker, gilded flicker, desert tortoise, gila woodpecker, elf owl, and Yuma Ridgway's rail to have the potential to occur within the BSA. Table 2-5, below, summarizes the federally and/or state-listed endangered or threatened animal species that are known to occur in the study area. The table includes information on the species, including status, habitat requirements, and the potential for occurrence.

2.3.5.3 ENVIRONMENTAL CONSEQUENCES

Build Alternative

Project Impacts

Based on the species list provided by the USFWS, and CNDDDB (see Chapter 5 for species list), nine (9) species were identified under the FESA and CESA to have the potential to occur at the proposed project site. The proposed project is also within federally designated critical habitat for desert tortoise (refer to Figure 2-4).

Project sites at PM 124.75, 125.0, and 125.25 are within USFWS designated desert tortoise critical habitat located within the Chemehuevi Desert Tortoise Critical Habitat and the Chuckwalla to Chemehuevi Desert Tortoise Linkage ACEC. The remaining seven sites are all located east of the Vidal Junction area and are not located in an ACEC or Critical Habitat Unit for the desert tortoise. Protocol surveys were conducted for desert tortoise and no live tortoises or tortoise sign (burrows, scat, carcasses, egg shells, or tracks) were observed on any of the ten project sites, or within 600 meters of these sites on the three-encircling belt transects (Wood 2017).

Although no desert tortoises, or sign thereof, were observed on or near the BSA, the on-site vegetation communities and surrounding areas are within the geographic range of desert tortoise and provide otherwise suitable habitat for this federally- and state-listed species. Desert tortoise has the potential to enter the project area at any time; therefore, Caltrans is assuming the

presence of the species and will implement measures **BIO-3 to BIO-10** to avoid and/or minimize impacts during construction.

A streamlined USFWS consultation through the Programmatic Biological Opinion for desert tortoise will be completed concurrent with the approval of the environmental document.

Due to a lack of suitable habitat, the following special-status wildlife species are considered to be absent and are not expected to be affected by implementation of the proposed project: Arizona bell's vireo, western yellow-billed cuckoo, southwestern willow flycatcher, razorback sucker, gilded flicker, gila woodpecker, elf owl, and Yuma Ridgway's rail.

Table 2-5. Federally and/or State-listed Endangered or Threatened Animal Species

Common Name	Scientific Name	Status	Habitat and Distribution	Probability
Avian				
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	F: THR , BCC, BLM, FS, MBTA C: END	Breeds and nests in extensive stands of dense cottonwood/willow riparian forest along broad, lower flood bottoms of larger river systems at scattered locales in western North America; winters in South America.	Nesting: Absent (habitat lacking) Foraging: Absent
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	F: END C: END	Riparian woodlands in Southern California.	Nesting: Absent (habitat lacking) Foraging: Absent
Gilded flicker	<i>Colaptes chrysoides</i>	F: BCC C: END	Lowland riparian forests & woodlands, mesquite, cactus (Saguaro) forests in Southwestern deserts	Nesting: Absent (habitat lacking) Foraging: Low
Elf owl	<i>Micrathene whitneyi</i>	F: BCC, BLM C: END	Inhabits and nests in cavities in cottonwood, willow, saguaro & saltcedar trees, formerly occupied by Gila woodpeckers, gilded flickers & ladder-backed woodpeckers.	Nesting: Absent (habitat lacking) Foraging: Absent
Gila woodpecker	<i>Melanerpes uropygialis</i>	F: BCC C: END	Riparian woodlands (cottonwood, willow, sycamore & ash) and palm, eucalyptus, Athel tamarisk & mulberry trees in urban areas.	Nesting: Absent (habitat lacking) Foraging: Low
Yuma Ridgeway's Rail	<i>Rallus obsoletus yumanensis</i>	F: END C: THR , FP	Freshwater marshes along tributaries of the Colorado River and Salton Sea in CA.	Nesting: Absent (habitat lacking) Foraging: Absent
Arizona Bell's vireo	<i>Vireo bellii arizonae</i>	F: BCC, BLM C: END	Willow riparian and mesquite thickets along the lower Colorado River.	Nesting: Absent (habitat lacking) Foraging: Low
Fish				
Razorback sucker	<i>Xyrauchen texanus</i>	F: END C: END , FP	Areas with strong current and backwaters in Colorado River. Also found in off-stream impoundments and reservoirs.	Absent (habitat lacking)

Section 2.3. Biological Environment

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

Common Name	Scientific Name	Status	Habitat and Distribution	Probability
Reptiles				
Desert tortoise	<i>Gopherus agassizii</i>	F: THR C: THR Critical Habitat	Variety of habitats from sandy flats to rocky foothills, including alluvial fans, washes and canyons where suitable soils for den construction.	Absent (focused surveys negative)
<p>Source: SR-62 Addendum to Natural Environment Study (Minimal Impacts), March 2019.</p> <p>Notes:</p> <p><u>Federal Classification:</u> END – Federal-Endangered, THR—Federal Threatened, CAN—Candidate for Federal Listing, MBTA-Migratory Bird Treaty Act, BCC-Birds of Conservation Concern, BLM-Bureau of Land Management.</p> <p><u>California Classification:</u> END—State Endangered, THR—State Threatened, CAN—Candidate for State Listing, RARE- State Listed, Rare.</p> <p><u>Habitat Present/Absent:</u> CH—Critical Habitat, project footprint is located within designated Critical Habitat, but does not necessarily mean that appropriate habitat is present. HP—Habitat Present, is or may be present, species may be present. P—Present, species is present. A—Absent, no habitat present and no further work needed.</p>				

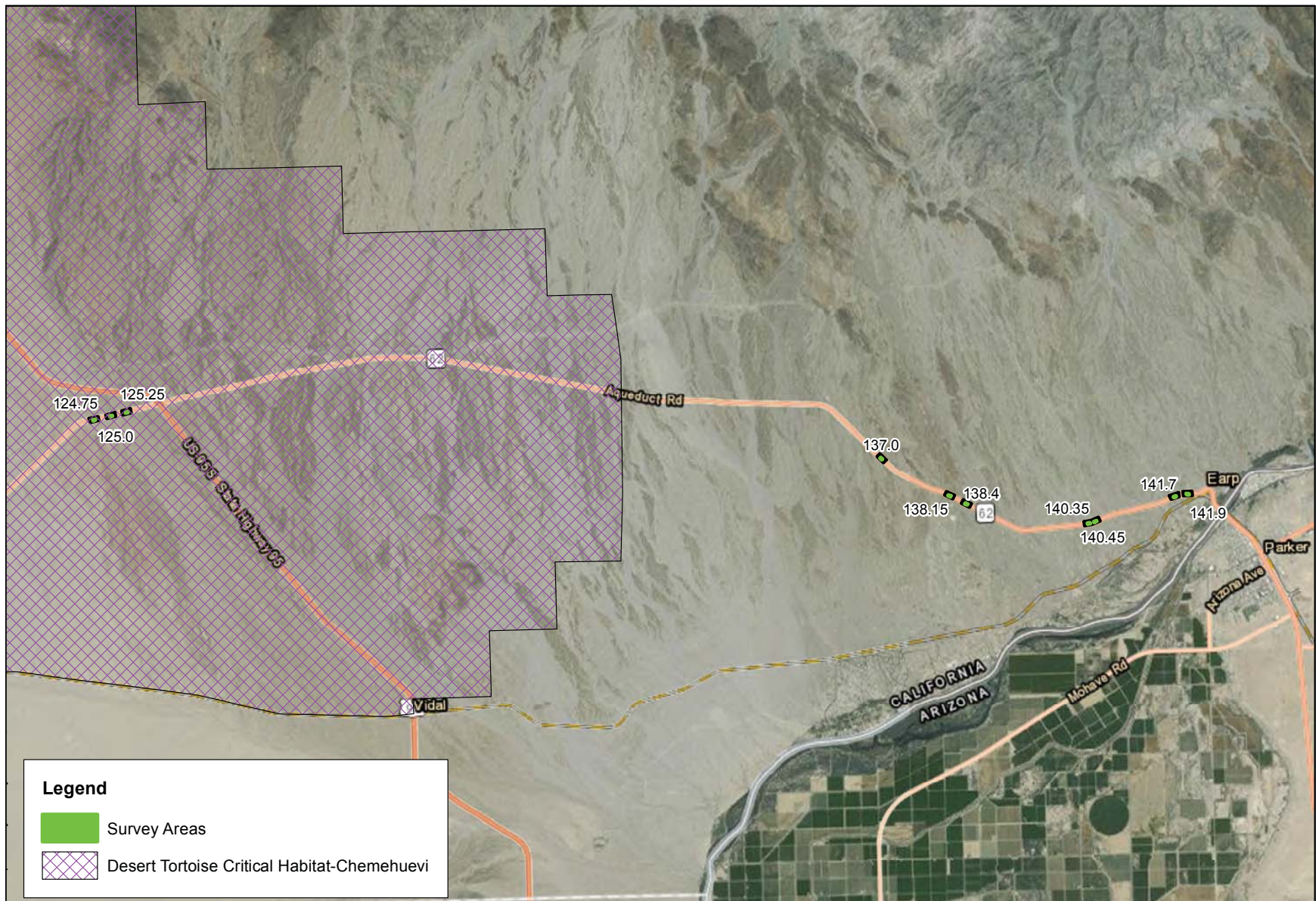


Figure 2-4
Critical Habitat
SR-62 Embankment Restoration Project

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Based on the results of surveys and the background literature search, the NES(MI) and BA prepared for the proposed project indicated that the project will have *no effect* on federally listed Western yellow-billed cuckoo, southwestern willow flycatcher, Yuma ridgeway's rail, razorback sucker. Caltrans has determined and anticipates concurrence from USFWS that the project will have a *may effect, likely to adversely* affect determination to address potential project impacts on the desert tortoise species. Additionally, Caltrans has determined that the project will have a *no* affect determination to address potential project impacts on desert tortoise critical habitat. Table 2-6, below, summarizes the effect findings.

Table 2-6. Preliminary Effects Findings

Common Name	Scientific Name	Status	Effect Findings	Effect Finding for Critical Habitat (If Applicable)
Desert tortoise	<i>Gopherus agassizii</i>	THR Critical Habitat	May Affect, Likely To Adversely Affect	No Effect
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	THR	No Effect	N/A
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	END	No Effect	N/A
Yuma Ridgeway's Rail	<i>Rallus obsoletus yumanensis</i>	END	No Effect	N/A
Razorback sucker	<i>Xyrauchen texanus</i>	END	No Effect	N/A
Source: SR-62 Addendum to Natural Environment Study (Minimal Impacts), March 2019 Note: END=Federal Endangered, THR=Federal Threatened				

Federal Endangered Species Act

An official species list was obtained from USFWS on February 2019. Caltrans has determined that, in accordance with Section 7 of the Endangered Species Act, the project will have a “may affect, likely to adversely affect” designation for desert tortoise and “no effect” designation for its designated critical habitat.

The project is a covered action per the Programmatic Biological Opinion (8-8-10-F-59) Type 1 Project on the California Department of Transportation's Small Projects and Operational Improvement Activities in Desert Tortoise Habitat in Imperial, Riverside, Inyo, Eastern Kern, Los Angeles, and San Bernardino Counties, California. A streamlined USFWS consultation per the Programmatic Biological Opinion will be completed prior to the approval of the environmental document. The project is within designated critical habitat and known habitat range of the desert tortoise. Although no desert tortoises, or sign thereof, were observed on or in the vicinity of the BSA, the on-site vegetation communities and surrounding areas are within the geographic range of the desert tortoise and provide otherwise suitable habitat for this species. Caltrans will limit the project impact areas to the paved roadway and graded shoulders to minimize impacts to the desert tortoise. Additionally, Caltrans has determined the project will have a “no effect” designation for the southwestern willow flycatcher, Yuma Ridgeway's rail, razorback sucker, and western yellow-billed cuckoo given the project does not provide suitable habitat for these listed species and these species were not identified during the general surveys.

Caltrans will implement avoidance and minimization measures to further reduce impacts to these listed species and its associated habitats.

California Endangered Species Act

The CDFW authorizes take, defined as “hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture, or kill,” of endangered, threatened, or candidate species through the provisions of Sections 2081 and 2080.1 of the Fish and Game Code.

The following state listed wildlife species were identified as having the potential to occur within the BSA: Arizona Bell's vireo, western yellow-billed cuckoo, southwestern willow flycatcher, razorback sucker, gilded flicker, desert tortoise, gila woodpecker, elf owl, and Yuma Ridgway's rail. Caltrans has determined the project will have a “no take” designation for these listed species, given the project does not provide suitable habitat for these listed species and these species were not identified during the general surveys. Caltrans will implement avoidance and minimization measures to further reduce impacts to these listed species and its associated habitats. Additionally, the project will have no impacts to special-status species of concern and their habitats and will not cause these special-status species of concern to trend towards warranting a listed status.

Caltrans has determined consultation with CDFW is not required since an Individual Take Permit, Section 2081, is not necessary to obtain for the take of state-listed species.

No-Build Alternative

No construction activities would occur under the No-Build Alternative, and no effects would occur.

2.3.5.4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Best management practices (BMPs) will be in place to further ensure that no impact to the surrounding critical habitat occurs. In addition to measures BIO-1 and BIO-2 in Section 2.1.1.3 (Natural Communities), minimization/avoidance measures **BIO-3** through **BIO-11** from the Programmatic Biological Opinion (8-8-10-F-59) on California Department of Transportation's Routine Highway Improvement, Maintenance Activities, and Safety Projects in Imperial, Inyo, Kern, Los Angeles, Riverside, and San Bernardino Counties, and will be applied to work at the project sites.

BIO- 3: Biological Resource Information Program: An education program will be developed and presented by a qualified biologist to all onsite personnel who will be in the project limits for longer than 30 minutes prior to the onset of ground-disturbing activities. At a minimum, the program will include the following topics: distribution, general behavior, and ecology of the desert tortoise, sensitivity of the species to human activities, legal protection afforded to these species, penalties for violations of Federal and State laws, notification procedures by workers or contractors if a tortoise is found in a construction area, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area. The program will consist of a class presented by a qualified biologist or a video, provided the qualified biologist is present to answer questions. Handout materials will be distributed for workers with important information about the regulated species for future reference and as a

reminder of the program's content. Following the education program, the handouts will be posted at all construction field offices and on all information boards, where they will remain through the duration of the project. If at any time a desert tortoise is observed in the project area, the Resident Engineer will cease operations immediately and will contact the Caltrans Environmental Stewardship & Monitoring Unit.

BIO-4: Whenever project vehicles are parked outside of a fence that is intended to preclude entry by desert tortoises, workers will check regularly under the vehicle before moving the vehicles or equipment. If a desert tortoise is beneath the vehicle, the worker will notify the qualified biologist. If a qualified biologist is not present onsite, the Resident Engineer or supervisor must notify the Caltrans Biologist. Workers will not be allowed to capture, handle, or relocate tortoises.

BIO-5: Immediately prior to the start of any 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 qualified Biologist. The entire project area will be surveyed for desert tortoise and their burrows by a qualified biologist before the start of any ground-disturbing activities following the 2010 Field Survey Protocol or more current protocol. If burrows are found, they will be examined by the qualified biologist to determine if desert tortoises are present. If desert tortoises are found at the project site, then Caltrans will consult with U.S. Fish and Wildlife Service to determine appropriate protective measures.

BIO-6: Temporary desert tortoise 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 (2005) or more current protocol. The biologist will ensure that desert tortoises cannot pass under, over, or around the fence. The biologist must regularly check the fenced area and notify the Engineer should it become damaged and require repair.

BIO-7: The qualified biologist will inform USFWS and CDFW of any injured or dead tortoises found on site (verbal notification within 24 hours and written notification within 5 days).

BIO-8: The qualified biologist will conduct on-site monitoring and submit a monitoring report for desert tortoise and during construction.

BIO-9: Except on maintained public roads designated for higher speeds or within desert tortoise-proof fenced area, driving speed will not exceed 20 miles per hour through potential desert tortoise habitat on unpaved roads.

BIO-10: Litter control measures will be implemented. Litter will be contained in containers to prevent attracting common ravens or other potential predators of the desert tortoise. Workers are prohibited from feeding all wildlife.

BIO-11: Pre-construction nesting bird surveys, 2018 Caltrans Standard Specification 14-6.03B Bird Protection.

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

Information used in this section is based on the approved March 2019 Addendum to Natural Environment Study (Minimal Impacts) for this project.

Seeds of invasive species can be transported to natural open space areas through a variety of mechanisms, including vehicles. Recurring fires can encourage the establishment of invasive species and so can some forms of routine land maintenance (e.g., disking). The impact invasive species have on Southern California native vegetation communities, as well as the plants and animals that are found within these areas, is, in some circumstances, catastrophic. Therefore, a need exists to identify and recommend measures that reduce and/or avoid further transport of invasive species into natural open space areas. Because this project is federalized, Executive Order 13112 is triggered, which states that federal agencies are required to combat the introduction or spread of invasive species in the United States.

2.3.6.3 ENVIRONMENTAL CONSEQUENCES

Build Alternative

The proposed project has the potential to spread invasive species through personnel entering and exiting the project area with contaminated equipment, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species so that seed is spread along the highway. Implementation of measures **BIO-1** and **BIO-2** would avoid and minimize the potential of invasive species spreading into the project area.

No-Build Alternative

The No-Build Alternative is not expected to add impacts from invasive species because it would not change existing conditions.

2.3.6.4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

To ensure that the Build Alternative does not promote the introduction or spread of invasive plant species to the open space areas within the study area, measures **BIO-1** and **BIO-2**, as listed in Section 2.3.1.3 above, would be implemented.

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 this 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 15120 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.

Methodology

Caltrans, in conjunction with Federal Highway Administration and the United States Environmental Protection Agency, developed a guidance document titled *Guidance for Preparers of Cumulative Impact Analysis* (2005). The following is based on the referenced guidance.

As specified in the guidance, if a proposed project will not cause direct or indirect impacts on a resource, it will not contribute to a cumulative impact on that resource and accordingly need not be included in the evaluation of potential cumulative impacts. As discussed at the beginning of Chapter 2 or in related sections of Chapter 2 of the document, the proposed project would not result in direct or indirect impacts on the following resources; therefore, no discussion is provided for these resources in the evaluation of potential cumulative impacts.

- Land Use
- Coastal Zone
- National Marine Fisheries Service
- Wild and Scenic Rivers

- Farmlands
- Growth
- Parks and Recreation
- Community Impacts
- Utilities and Emergency Services
- Traffic and Transportation
- Pedestrian and Bicycle Facilities
- Visual/Aesthetics
- Hydrology/Floodplain
- Geology and Soils
- Paleontological Resources
- Hazardous Waste/Materials
- Air Quality
- Noise

The resources listed below were evaluated in terms of whether the proposed project might contribute to cumulative impacts, and they are discussed in the following sections:

- Cultural Resources
- Water Quality/Stormwater Runoff
- Biological Resources

The following cumulative project is located in and near SR-62 between PM 124.0 to PM 142.0 in San Bernardino County. There were no other planned or reasonably foreseeable project improvements identified within the resource study area (RSA) for any of the environmental resources evaluated for potential cumulative impacts.

Rehab Pavement and Upgrade Guardrail (Caltrans EA- IF133) Project

This project was previously undertaken by Caltrans, District 8 to rehabilitate the pavement and upgrade guardrails along SR-62 between PM 121.5 to 142.7. The SR-62 Embankment Restoration Project occurs within the limits of this project and would replace some of the rumble strips that were added as part of the Rehab Pavement and Upgrade Guardrail Project.

2.4.2 Cultural Resources

The RSA for the project is the Area of Potential Effects (APE). The horizontal APE consists of eight locations along SR-62 from PM 124.0 to PM 142.0. The vertical APE extends approximately 8 feet deep and 1 foot above current grade. Indirect effects are limited, due to the proposed improvements being located immediately adjacent to the existing transportation

corridor at grade level. No aboveground structures are proposed as part of the project. The APE encompasses approximately 49 acres.

Three cultural resources are located within the project APE. Pursuant to 36 CFR 800.4(c) (1), three cultural resources: SRI-25, Vidal Scatter-3, and CHL-985 DTC/C-AMA are considered eligible for the NRHP. Caltrans proposes to protect SRI-25 and Vidal Scatter-3 in their entirety with Environmentally Sensitive Area (ESA) designation and an ESA Action Plan. ESA fencing, and construction monitoring within 20 feet of the site boundary by both an archaeological and Native American monitor. An Archaeological Monitoring Area will be established around SRI-25 and Vidal Survey Scatter 3 as described in the ESA Action Plan. CHL-985 DTC/C-AMA consists of various components including but not limited to camps, supply depots, airfields, and maneuvering areas. While the DTC/C-AMA is technically mapped within the project area, no features were identified within the APE.

The Rehab Pavement and Upgrade Guardrail Project occurred primarily within SR-62 right-of-way. The DTC/C-AMA is mapped within the project area; however, like the proposed project, there are no features mapped in the area, therefore there were no cultural resource issues.

The proposed project in combination with the cumulative project would not result in cumulative impacts to cultural resources.

2.4.3 Water Quality/Stormwater Runoff

The RSA for the project is the Vidal Hydrologic Area. The washes in the region, as part of the hydrologic area, generally convey runoff from the surrounding mountain ranges. On-site drainages are primarily ephemeral streams that likely flow less than 3 months per year, and flow between 800 feet to 4 miles southeast through non-relatively permanent waterways before reaching the Colorado River. New development and redevelopment can increase urban pollutants in dry weather as well as stormwater runoff from project sites in wet weather. Each project must comply with National Pollutant Discharge Elimination System (NPDES) permitting requirements and include best management practices (BMPs) to minimize impacts on water quality and local hydrology in compliance with local ordinances and plans adopted to comply with the area.

The proposed project's total disturbed soil area is 2.65 acres and the estimated new net impervious area is 0.76 acres. The project would restore storm eroded embankments along SR-62 and would not alter the alignment of a stream or the configuration of a water body during construction or operation. The proposed project has been rated a risk level 1, meaning that there is a low receiving water body risk and low sediment erosion risk. Assuming temporary construction site best management practices (BMP) are implemented and maintained during construction, construction runoff would be minimal and water quality would be protected. Water within the project area would continue to follow existing alignments and maintain existing water flow entrance and exit routes, nor would the project change the rate or flow of water. The project would also maintain the original line and grade, hydraulic capacity and original purpose of the facility. Because net new impervious surface area would be less than one acre, no downstream effects related to potentially increased flow velocity or volume are anticipated.

The Rehab Pavement and Upgrade Guardrail Project included the implementation of BMP's and adherence to the requirements of the NPDES. Adherence to these requirements would ensure the project does not violate any water quality standards or waste discharge requirements.

The proposed project, and the projects in the RSA, would be required to comply with the regulations in effect at the time the project is approved or before construction permits are issued, thereby minimizing the water quality impacts of each project. Compliance with these regional programs constitutes compliance with programs that address cumulative water quality impacts. Therefore, the proposed project's contribution to cumulative water quality and stormwater runoff impacts would be minimal. The proposed project would not contribute to cumulative water quality or stormwater runoff impacts in combination with other planned and programmed projects in the RSA.

2.4.4 Biological Resources

The RSA for the cumulative biological resources impacts analysis encompasses the biological study area (BSA). The BSA was created to encompass the project footprint and typical habitats in the immediate project vicinity and a 500-foot buffer that may be affected by the project. The BSA served to identify the maximum extent of biological disturbances that could be caused by the proposed project and is therefore considered as the resource study area for this cumulative analysis.

Three sites in the project area are within USFWS designated desert tortoise critical habitat located within the Chemehuevi Desert Tortoise Critical Habitat and the Chuckwalla to Chemehuevi Desert Tortoise Linkage ACEC. Protocol surveys were conducted for desert tortoise and no live tortoises or tortoise sign (burrows, scat, carcasses, egg shells, or tracks) were observed on any of the ten project sites, or within 600 meters of these sites on three-encircling belt transects. Although no desert tortoises, or sign thereof, were observed on or near the BSA, the on-site vegetation communities and surrounding areas are within the geographic range of desert tortoise and provide otherwise suitable habitat for this federally- and state-listed species. Desert tortoise has the potential to enter the project area at any time; therefore, Caltrans is assuming the presence of the species and will implement measures **BIO-3 to BIO-10** to avoid and/or minimize impacts during construction.

Nesting habitat (for the birds) and roosting habitat (for the bats), is lacking from the site and therefore these species are considered to be absent from the site for nesting or roosting purposes. It should be noted, however, that despite a lack of nesting and/or roosting habitat on-site, many of the birds and the bats could, however, temporarily and/or periodically occur on, or fly over, the site for foraging purposes and/or during migration. BIO-11 addresses impacts to birds.

The project would impact eleven sites within ten desert washes delineated as jurisdictional drainages and would result in temporary and permanent impacts to Waters of the U.S. (WUS) and waters of the State of California (WSC). In total, the project would result in 0.43 acre or permanent and 0.86 acre of temporary impacts to non-wetland WUS/WSC/CDFW streambed, respectively. The total acreage for temporary and permanent impacts are currently draft and will vary as the project is further developed during the design and implementation phase. Direct effects on waters include the loss of vegetation from direct removal due to the site preparation

activities such as vegetation clearing, grubbing, and site grading. However, the loss of resources is deemed minimal as vegetation would be restored. Other indirect effects on waters may include sediment entering drainage areas from vegetation clearing and/or invasive, nonnative plants transported into areas along the roadway.

The Rehab Pavement and Upgrade Guardrail Project (IF133) occurred within almost the same project limits as the proposed project and within the right-of-way of SR-62. As such, the biological environment is similar to that of the proposed project.

Neither the proposed project nor the cumulative project would result in adverse effects with implementation of measures **BIO-1** to **BIO-11**. As such, the proposed project would not result in cumulatively considerable impacts.

2.4.5 Avoidance, Minimization and/or Mitigation Measures

No additional measures are planned for cumulative impacts.

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Chapter 3 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.

3.1.1 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) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

3.1.1.1 CEQA Significance Determinations for Aesthetics

a), b), c), d) No Impact. As discussed in Chapter 2, the proposed project would not result in substantial adverse impacts on the visual environment because the proposed project would restore eroded embankments along an existing highway and would not introduce substantial or new visual elements. The project as designed would not substantially degrade the visual character and quality of the site and would not create a new source of substantial light or glare in the area.

3.1.2 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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"/>

3.1.2.1 CEQA Significance Determination for Agriculture and Forest Resources

a), b), c), d), e) No Impact. There are no farmlands or vacant land mapped as Prime Farmlands, Unique Farmlands, Farmlands of Statewide Importance, or Farmlands of Local Importance in the vicinity. There are no parcels under a Williamson Act contract within the project limits. There is no potential to convert forest land or farmland to non-forest or non-farmland uses.

3.1.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. 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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment 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 checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.1.3.1 CEQA Significance Determinations for Air Quality

a), b), c) Less than Significant Impact. The proposed project is located in the Mojave Desert Air Basin (MDAB) and is within the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD) and the California Air Resources Board (CARB). The MDAQMD is the primary agency responsible for writing the Air Quality Management Plan (AQMP) in cooperation with the Southern California Association of Governments, local governments, and the private sector. The AQMP provides the blueprint for meeting state and federal ambient air quality standards. This project is not a capacity-increasing transportation project. It would 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. Therefore, the proposed project would 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. Impacts would be less than significant. No mitigation is required.

d) No Impact. The proposed project would not result in other emissions, such as those leading to odors, that would adversely affect a substantial number of people.

3.1.4 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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

3.1.4.1 CEQA Significance Determination for Biological Resources

a), b) Less Than Significant Impact. The study areas within each of the RSP sites exhibit native plant communities and friable soils that are potentially suitable habitat for special status plant species, although field surveys did not identify listed or special status plant species located within the BSA. The project sites exhibit varying degrees of disturbance, and with continual maintenance activities adjacent to the roadway, the project sites do not provide suitable conditions for these special status plant species. Within the BSA, there are no known historical occurrence for habitats and natural communities of special concern and thus, special-status plant communities would not be impacted by the project.

Three of the proposed RSP sites are within the Chemehuevi Desert Tortoise Critical Habitat Unit of the Colorado Desert Recovery Unit and the Chuckwalla to Chemehuevi Desert Tortoise Linkage ACEC. These are the RSP sites at PM 124.75, 125.0, and 125.25, located approximately 0.5 miles west of Vidal Junction. The ACEC provides critical desert tortoise habitat connectivity between the two major desert tortoise populations identified in the Colorado Desert (i.e., the Chuckwalla and Chemehuevi critical habitat units) and Joshua Tree National Park. The project would not impede wildlife species movement, nor would construction of the project further degrade existing wildlife corridors; therefore, the project would not impact habitat connectivity. Although no desert tortoises, or sign thereof, were observed on or near the BSA, the on-site vegetation communities and surrounding areas are within the geographic range of desert tortoise and provide otherwise suitable habitat for this federally- and state-listed species. Desert tortoise has the potential to enter the project area at any time; therefore, Caltrans is assuming the presence of the species. and will implement measures **BIO-3 to BIO-10** in Section 2.3.5.4 to avoid and/or

minimize impacts during construction. In addition, measures **BIO-1**, **BIO-2**, and **BIO-11** will be implemented to minimize potential effects to other species during construction.

c) No Impacts. No wetlands were identified within the project BSA. The project would result in temporary and permanent impacts to Waters of the US (WUS) and Waters of the State (WSC). In total, the Build Alternative would result in 0.43 acre and 0.86 acre of permanent and temporary impacts to non-wetland WUS/WSC/CDFW streambed, respectively. Since the project will have temporary and permanent impacts to jurisdictional waters, a 404 Nationwide permit from USACE, 401 water certification from the Colorado River Basin Water Quality Control Board, and 1602 Streambed Alteration Agreement from CDFW will be required.

d), e), f) No Impact. As discussed above, three of the RSP sites, located west of Vidal Junction are within the Chemehuevi Desert Tortoise Critical Habitat Unit of the Colorado Desert Recovery Unit and the Chuckwalla to Chemehuevi Desert Tortoise Linkage ACEC. Based on the studies performed for this project, it was concluded that the project would not impede wildlife species movement, nor would construction of the project further degrade existing wildlife corridors; therefore, the project would not impact habitat connectivity. As such, the project would have no impact on federally protected wetlands, conflict with any local policies or ordinances protecting biological resources, or conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

3.1.5 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 Section 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 Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.1.5.1 CEQA Significance for Cultural Resources

a), b) Less Than Significant Impact. As described in Chapter 2, results of identification efforts for cultural resources identified three cultural resources: SRI-25, Vidal Scatter-3, and CHL-985 DTC/C-AMA, which are being considered eligible for the NRHP for purposes of this undertaking only. Both SRI-25 and Vidal Scatter 3 are located in the APE but not within the area of direct impact. These resources have not been formally evaluated but are being considered eligible for the NRHP. Assuming eligibility for the NRHP also assumes eligibility for the CRHR and thus the site is also assumed as a resource under CEQA. The Department proposes to protect this resource in its entirety by instituting an ESA Action Plan.

CHL-985 DTC/C-AMA consists of various components including but not limited to camps, supply depots, airfields, and maneuvering areas. While the DTC/C-AMA is technically mapped within the DTC, no features were identified within the APE.

There would be no adverse effects on historic properties as a result of construction or operation of the Build Alternative, as an ESA Action Plan has been prepared for the project. ESA fencing would be placed prior to project activities along the edge of the site boundary for SRI-25 and Vidal Scatter 3. Prior to any construction or construction-related activity, the ESA would be delineated in the field by a Caltrans Archaeologist for the placement of temporary fencing. Additionally an Archaeological Monitoring Area would be established to avoid any potential construction-related impacts on cultural resources. See avoidance and minimization measures **CR-1** through **CR-4** in Section 2.1.3.4 for more information.

c) No Impact. If human remains are discovered, State Health and Safety Code 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 shall be contacted. See standard measure **CR-2** in Section 2.1.3.4 for more information.

3.1.6 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"/>

3.1.6.1 CEQA Significance Determination for Energy

a), b) No Impact. The proposed project would rebuild an earthen dike in the southbound I-15 outside shoulder in a desert rural area. Construction of the project would require relatively minor amounts of energy resources to rebuild the dike and in no way would wasteful, inefficient, or unnecessary amounts of energy be used to rebuild the dike. Operation of the project would have no potential to consume energy. Lastly, the project would not obstruct any local or state plans for renewable energy or energy efficiency. As such, there are no anticipated impacts on energy resources as a result of construction or operation of the project.

3.1.7 Geology, Soils, and Paleontological Resources

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 direct or indirect 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"/>

3.1.7.1 CEQA Significance Determination for Geology and Soils

a i), a ii), a iii), c), d), e), and f) No Impact. The proposed project site is in the seismically active Southern California region. However, construction and operation of the project has no potential to cause rupture of an earthquake fault, strong ground shaking, or seismic-related ground failure, including liquefaction. According to the San Bernardino County Geologic Hazards Maps, SR-62 between the project limits is not within an area susceptible to liquefaction. There would be no on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.

The proposed project is not in an area of expansive soils or liquefaction, and would not implement the use of septic tanks. Impacts are not anticipated in this regard.

The proposed project has no potential to affect paleontological resources. According to Caltrans Environmental Planning/Paleontological Branch, based on the work associated with adding rock slope protection, concrete aprons and rumble strips, it is expected that the project would have no effect on paleontological resources and no paleontological studies would be required for this project (Karimi pers. comm).

a iv), b) Less Than Significant Impact. As previously mentioned, the County of San Bernardino General Plan, Liquefaction and Landslides map, SR-62 between the project limits is not within an area susceptible to landslides, and the susceptibility for landslides is low. In addition, with adherence to Caltrans' standard design and construction practices, no direct or indirect, adverse, long-term impacts from landslides or rockfalls would occur as a result of the Build Alternative.

Erosion potential would be addressed through the implementation of standardized measures as part of the project description (refer to Section 1.4.2). These include erosion control BMPs as part of the SWPPP. With implementation of these standardized measures, no short-term direct or indirect adverse impacts related to soil compaction or erosion would occur during construction of the Build Alternative.

3.1.8 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 that follows the CEQA checklist and related discussions.			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				

3.1.9 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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" 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"/>

3.1.9.1 CEQA Significance Determinations for Hazards and Hazardous Materials

a), b) Less Than Significant Impact. Implementation of the proposed project is not expected to create a significant hazard to the public or environment and the project site is not on a list of hazardous materials sites. If encountered, soil with elevated concentrations of lead as a result of ADL on the State Highway System right of way within the limits of the project would be managed under the July 1, 2016, ADL Agreement between Caltrans and DTSC. 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. The transportation, use, or disposal of ADL soils and other potential hazardous materials that may be present are also covered by standardized measures that are generally applied to Caltrans projects. See Section 1.4.2 for the measure that is used to avoid or reduce potential environmental impacts related to hazardous wastes.

c), d, e), f), g) No Impact. No schools are within a quarter-mile of the project site. The proposed project is not within two miles of a public or public use airport or in the vicinity of a private airstrip. The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. In addition, there are no sites on a list of

hazardous materials sites compiled pursuant to Government Code Section 65962.5 near the proposed project. The project would not interfere with any emergency response or evacuation plans.

3.1.10 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 groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 that 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 that would result in flooding on or off site;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

3.1.10.1 CEQA Significance Determination for Hydrology and Water Quality

a), b), c ii), c iii), c iv), d) No Impact. There would be no permanent water quality impacts with implementation of the project. The project limits are within the Vidal Valley and Calzona Valley Groundwater Basins. There is no information available regarding depth-to-groundwater nor annual estimates of change in groundwater in storage within these groundwater basins (DWR 2013). The proposed project would not result in excavations that could affect groundwater. The proposed project involves restoring storm eroded embankments, therefore, it would not affect groundwater during construction.

No downstream effects related to potentially increased flow velocity or volume are anticipated because the proposed project would increase impervious surfaces by less than one acre (0.76 acre) compared to existing conditions (SWDR, 2019). The proposed project has a low receiving water risk and a low sediment risk, with a project combined risk of level 1. The proposed project is not anticipated to increase velocity or volume of downstream flow (SWDR 2019).

The proposed project would not violate water quality standards or otherwise substantially degrade surface or groundwater quality. The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

c i) Less Than Significant Impact. The proposed project would restore storm eroded banked with RSP and concrete aprons at ten desert wash locations. The proposed project would not involve large cuts in the general topography or involve known highly erosive soils. The construction of the project would be completed in phases to minimize soil-disturbing work during the rainy season. Short-term or temporary impacts on water quality may occur during construction activities such as grading, land-disturbance activities, and equipment use. However, temporary impacts would be minimized with the implementation of construction best management practices to minimize construction runoff and protect water quality.

3.1.11 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 a 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"/>

3.1.11.1 CEQA Significance Determinations for Land Use and Planning

a), b) No Impact. The proposed project is within a primarily undeveloped and sparsely populated area of the Sonoran Desert. No residences or businesses are located within this area with the exception of a few businesses at Vidal Junction. No relocation of residences or businesses and no change in land use would occur as a result of the proposed project. As such, the proposed project would be consistent with the existing land use. The proposed project would not divide an established community, as there are none within or near the project area. The proposed project would not conflict with any applicable land use plan, policy, or regulation.

3.1.12 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"/>

3.1.12.1 CEQA Significance Determinations for Mineral Resources

a), b) No Impact. According to available County of San Bernardino Plan data, the proposed project is not in an area designated for mineral resources. There is no evidence of mineral resources being present at the project location.

3.1.13 Noise

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a 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) Generate excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be 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 and 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"/>

3.1.13.1 CEQA Significance Determinations for Noise

a), b), c) No Impact. No noise impacts are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications 14.8-02. Construction-related noise would be short term and intermittent during the construction period; therefore, noise impacts would last only during the duration of construction and would not affect potential noise-sensitive receptors in the vicinity, especially because there are no residences, businesses, or recreational facilities near the proposed project location. The project would also 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. The proposed project would not permanently increase ambient noise levels in the project vicinity and is not located within an airport land use plan, or in the vicinity of a private airstrip.

3.1.14 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"/>

3.1.14.1 CEQA Significance Determinations for Population and Housing

a), b) No Impact. The proposed project would restore storm eroded embankments with RSP at ten desert wash locations along SR-62. The project area is within a primarily undeveloped and sparsely populated area of the Sonoran Desert. No residences or businesses are located within this area with the exception of a few businesses at Vidal Junction. Right of way acquisitions and relocations would not be required for the proposed project. As such, the proposed project would not necessitate the relocation of any existing developments and/or people. No impacts on population and housing would occur as a result of the proposed project.

3.1.15 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 type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.1.15.1 CEQA Significance Determinations for Public Services

a) Less than Significant Impact. No fire or police stations would be acquired or displaced. Construction activities may have the potential to result in temporary traffic disruptions during the construction period by vehicles needing to slow down or stop. This could increase response

times for emergency vehicles during construction; however, the proposed project would include preparation and implementation of a Traffic Management Plan (TMP) (see TRF-1 in Section 2.1.3, Traffic and Transportation). Construction impacts would be short term, lasting only the length of construction, and cease upon completion of construction. Once completed, the proposed project would help ensure that the road is not flooded, damaged, or blocked due to debris, allowing for normal access for emergency responders on SR-62, which would be a beneficial impact. Implementation of avoidance and minimization measure TRF-1 (as described in Section 2.1.3) would ensure impacts related to access for emergency responders would be minimized or avoided.

There are no schools or parks within or near the proposed project; therefore, there would be no short-term or long-term impacts on either from construction or operation of the Build Alternative.

3.1.16 Recreation

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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"/>

3.1.16.1 CEQA Significance Determination for Recreation

a), b) No Impact. The proposed project is not located near any recreational facilities or neighborhoods. The proposed project does not have the capacity to generate a substantial increase in use of any existing neighborhood parks, regional parks, or other recreational facilities such that physical deterioration would occur, nor would it require the construction or expansion of existing recreational facilities. No short-term or long-term impacts would occur.

3.1.17 Transportation/Traffic

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) Conflict or be inconsistent with State CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially increase hazards because of 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 type="checkbox"/>	<input checked="" type="checkbox"/>

3.1.17.1 CEQA Significance Determinations for Transportation/Traffic

a), b), c), d) No Impact.

The project would restore storm eroded embankments with RSP and concrete aprons at ten desert wash locations, as well as add rumble strips on the concrete aprons to notify motorists of errant vehicles. These proposed improvements would not increase capacity of the facility to carry traffic. However, during construction, a shoulder closure and temporary lane closure are anticipated, causing potential traffic delays on SR-62. It is proposed, during construction, that one through traffic lane, not less than 10 feet in width, would be provided for use by both directions of travel (Reversing Control). However, the proposed project would include preparation and implementation of a Transportation Management Plan (TMP) to minimize impacts during construction and ensure the safety of the traveling public and construction workers (**TRF-1**). The TMP could include public information communications, such as mailers, handouts, brochures, and press releases; information for motorists from changeable message signs or temporary signs; construction strategies, such as traffic plans; and information regarding construction staging, lane modifications (e.g., reduced lane widths or lane closures), and the use of alternate routes/detours. Construction impacts would be short term, lasting only the length of construction, and cease upon completion of the project.

Additionally, there would be no conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Lastly, the proposed project has no potential to substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses.

3.1.18 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resources, 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:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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"/>

Would the project cause a substantial adverse change in the significance of a tribal cultural resources, 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:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources 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 checked="" type="checkbox"/>	<input type="checkbox"/>

3.1.18.1 CEQA Significance Determinations for Tribal Cultural Resources

a), b) Less Than Significant Impact. As described in Chapter 2, results of identification efforts for cultural resources identified two new lithic scatters (SRI-25 and Vidal Scatter 3), which were located and recorded in the Area of Potential Effects (APE), but not the Area of Direct Impact (ADI) of the project. The Department has proposed that the site be assumed eligible for the NRHP for the purposes of this project. Assuming eligibility for the NRHP also assumes eligibility for the CRHR; therefore the site is also assumed as a resource under CEQA. The Department proposes to protect this resource in its entirety by instituting an ESA Action Plan around the affected northwestern portion of the project area in order to ensure that no equipment staging or other construction activities for the current reconstruction project occur on the site.

There would be no adverse effects on historic properties as a result of construction or operation of the Build Alternative, as an ESA Action Plan has been prepared for the project. ESA fencing would be placed prior to project activities along the edge of the site boundaries for SRI-25 and Vidal Scatter 3. Prior to any construction or construction-related activity, the ESAs would be delineated in the field by a Department archaeologist for the placement of temporary fencing. Additionally, an Archaeological Monitoring Area would be established to avoid any potential construction-related impacts on cultural resources. See avoidance and minimization measures **CR-3** and **CR-4** in Section 2.1.3.4 for more information.

3.1.19 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, stormwater 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"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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"/>

3.1.19.1 CEQA Significance Determinations for Utilities and Service Systems

a), b), c) d), e) No Impact. Construction of the proposed project is not expected to generate the need for additional wastewater treatment facilities or exceed wastewater treatment requirements of the RWQCB.

No new or expanded entitlements are needed with the proposed project. The proposed project would not require wastewater treatment. The proposed project would require the use of a local landfill, if applicable, to dispose of demolition materials during construction. The use of local landfills would be temporary, lasting the duration of construction. It is Caltrans' policy to recycle materials whenever possible. Furthermore, the proposed project would be in compliance with all federal, state, and local solid waste statutes and regulations.

During the Plans, Specifications, and Estimates (PS&E) phase of the project, the Department will coordinate with Frontier Communications and SCE to confirm whether their utilities would be impacted by the project. Utility potholing will also be conducted to identify the location of utilities in the project area.

3.1.20 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 of, 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"/>

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
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 on 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"/>

3.1.20.1 CEQA Significance Determinations for Wildfire

a), b), c), d) No Impact. The proposed project is located within a primarily undeveloped and sparsely populated area of the Sonoran Desert. No residences or businesses are located within this area with the exception of a few businesses at Vidal Junction. The project would restore storm eroded embankments with RSP at ten desert wash locations along SR-62. The water embankment protection systems at each of the ten locations would consist of Rock Slope Protection, a concrete apron, and rumble strips. The water embankment protection systems themselves are not a fire hazard, as they are mainly composed of concrete and are used for drainage purposes. The project would restore the facility to its original condition prior to damage caused by flash flood events and would reduce the number of road closures needed for maintenance workers to conduct repairs. Additionally, the desert landscape is not prone to wildfire hazards. Construction or operation would not substantially impair with emergency or evacuation plan, expose persons or structures to wildlife spread, or require installation or maintenance of infrastructure that may exacerbate fire risk.

3.1.21 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

3.1.21.1 CEQA Significance Determinations for Mandatory Findings of Significance

a) Less Than Significant Impact. Although no desert tortoises, or sign thereof, were observed on or near the BSA, the on-site vegetation communities and surrounding areas are within the geographic range of desert tortoise and provide otherwise suitable habitat for this federally- and state-listed species. Desert tortoise has the potential to enter the project area at any time; therefore, Caltrans is assuming the presence of the species and will implement measures **BIO-3 to BIO-10** in Section 2.3.4.4 to avoid and/or minimize impacts during construction. In addition, measures **BIO-1, BIO-2, and BIO-11** will be implemented to minimize potential effects to other species during construction.

b), c) No Impact. The proposed project would not result in cumulatively considerable impacts when combined with past, present, and reasonably foreseeable future projects and therefore would have no cumulative impacts. The proposed project would not have environmental effects that would cause substantial effects on human beings, either directly or indirectly, as the purpose of the project is to restore and improve eroded embankments at ten desert wash locations along SR-62.

Chapter 4 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.¹ In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.² 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 covers the activities and policies aimed at reducing GHG emissions to limit or “mitigate” the impacts of climate change. Adaptation, on the other hand, is concerned with 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).

4.1 Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

4.1.1 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.

¹ <https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014>

² <https://www.arb.ca.gov/cc/inventory/data/data.htm>

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.³ This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.”⁴ 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,

³ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

⁴ <https://www.sustainablehighways.dot.gov/overview.aspx>

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 2010⁵ 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.⁶

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.

Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth, of March 28, 2017, orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

4.1.2 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

⁵ <https://one.nhtsa.gov/Laws-&-Regulations/CAFE-%E2%80%93-Fuel-Economy>

⁶ <https://www.federalregister.gov/documents/2017/03/22/2017-05316/notice-of-intention-to-reconsider-the-final-determination-of-the-mid-term-evaluation-of-greenhouse>

(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 (MMTCO_{2e}).

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.

4.2 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.⁷ 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 4-1 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}.⁸ The 2018 edition of the GHG emissions inventory (released July 2018) 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}.

⁷ 2017 Edition of the GHG Emission Inventory (July 2018): <https://www.arb.ca.gov/cc/inventory/data/data.htm>

⁸ The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4)

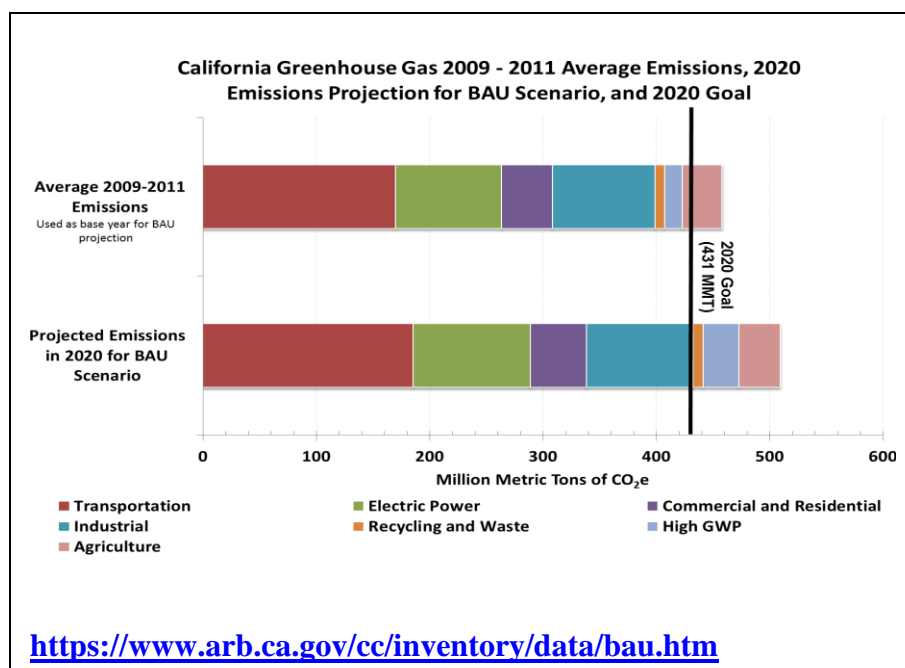


Figure 4-1. 2020 Business as Usual (BAU) Emissions Projection 2014 Edition

4.3 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 combined with the contributions of all other sources of GHG.⁹ 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.

4.3.1 Operational Emissions

Projects that involve embankment restoration and drainage improvements do not increase the capacity of the roadway and have no effect on operational GHG emissions. Because the project would not increase the number of travel lanes on SR-62, no increase in vehicle miles traveled

⁹ 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 U.S. Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

(VMT) would occur as result of project implementation, and traffic volumes would be the same under the Build Alternative and No-Build Alternative. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions would occur.

4.3.2 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.

Construction-period GHG emissions were modeled using the Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model, version 9.0.0. Short-term construction activities would result in GHG emissions from fuel combustion associated with off- and on-road construction equipment and vehicles, which would result in estimated emissions of 7,498 metric tons of CO₂-equivalent (CO₂e) over the approximately 30-month construction period.

The project would comply with all requirements of the Mojave Desert Air Quality Management District (MDAQMD). In addition, Caltrans Standard Specifications Section 14-9, Air Quality, a part of all construction contracts, requires contractors to comply with all federal, state, regional, and local rules, regulations, and ordinances related to air quality. Measures that reduce vehicle emissions and energy use also reduce GHG emissions. Under Avoidance and Minimization Measure TRF-1, a traffic management plan will be implemented to minimize traffic delays during construction.

4.3.3 CEQA Conclusion

While the project is predicted to generate approximately 7,498 metric tons of GHG emissions during short-term construction, the project would not result in any increase in operational GHG emissions. As discussed above, the project would comply with all applicable requirements, such as restrictions on idling and MDAQMD rules. In addition, Avoidance and Minimization Measure TRF-1 would be implemented, which would minimize construction-period traffic delays and related 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.

4.3.3.1 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*.

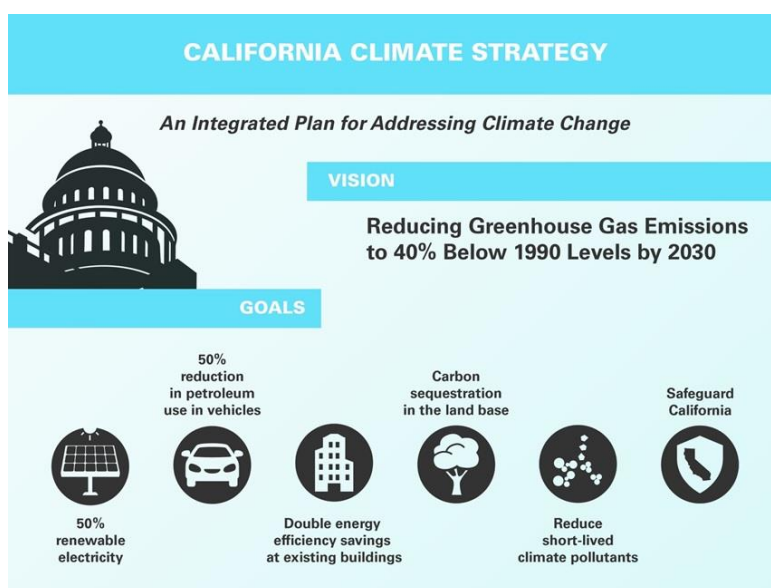


Figure 4-2. The Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals

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.

TRF-1 would involve the implementation of a TMP that would reduce delays and related short-term increases in GHG emissions from disruptions in traffic flow. Also, in the event that portable changeable message signs are required as part of the TMP, these signs will be solar-powered and would not involve GHG emissions during use.

The project would comply with all requirements of the MDAQMD. In addition, Caltrans Standard Specifications Section 14-9, Air Quality, a part of all construction contracts, requires contractors to comply with all federal, state, regional, and local rules, regulations, and ordinances related to air quality. Measures that reduce vehicle emissions and energy use also reduce GHG emissions.

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, 2011,¹⁰ 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 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

¹⁰ <https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience>

taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective in current and future climate conditions.”¹¹

To further the DOT Policy Statement, on December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*).¹² 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.¹³

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)¹⁴ 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 California Climate Adaptation Strategy* (Dec 2009),¹⁵ which summarized the best available science on climate change impacts to California, assessed California’s vulnerability to the

¹¹ https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm

¹² <https://www.fhwa.dot.gov/legisregs/directives/orders/5520.cfm>

¹³ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

¹⁴ *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.

¹⁵ <http://www.climatechange.ca.gov/adaptation/strategy/index.html>

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.”¹⁶

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 toward 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. Accordingly, direct impacts on transportation facilities due to projected sea-level rise are not expected.

The proposed project is designed to protect the roadway from debris and damage caused by periodic flash flooding. Climate change will affect precipitation patterns that can put transportation assets at risk from such events. While climate change forecasts anticipate less overall precipitation in the U.S. Southwest, individual rainfall events are expected to become heavier. The Draft Climate Vulnerability Assessment for Caltrans District 8 (2018) analyzed how the 100-year rainfall event (the design flood standard cited in the Caltrans Highway Design Manual) might change over time, based on the RCP 8.5 (business-as-usual) emissions scenario. Mapping in the report indicates a less than 5 percent change in 100-year storm precipitation depths in the eastern portion of District 8, where the project is located, through 2085.¹⁷ Furthermore, the project hydrology evaluation (see Chapter 2) indicates that the proposed project is not within a designated FEMA one-percent-annual-chance (i.e., 100-year) floodplain. This suggests that the proposed embankment repairs are likely adequate to protect the roadway from flooding that could occur during future less-frequent, but potentially more intense, storms.

¹⁶ <http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/>

¹⁷ California Department of Transportation. 2018. *Caltrans Climate Change Vulnerability Assessments. Draft District 8 Technical Report*. December. Prepared by WSP.

Chapter 5 **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, Project Development Team (PDT) meetings, and public notices. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

Consultation with several agencies occurred in conjunction with preparation of the proposed project technical reports and this IS/EA. These agencies are identified in the various technical reports and include the NAHC, BLM, and USFWS.

5.1 Consultation and Coordination with Public Agencies

The following provides a summary of all meetings, correspondence, and/or coordination relevant for the development of the proposed project.

5.1.1 U.S. Fish and Wildlife Service

An official species list was obtained from USFWS on February 15, 2019.

5.1.2 Bureau of Land Management

A California Cultural Resources Use Permit for Archaeological Investigations was issued on January 12, 2016 to Statistical Research Inc. (CA-16-12). A Fieldwork Authorization was received to conduct fieldwork on October 12, 2017 (CA690 FA 17-22). A report was submitted to the BLM in June 2018 to comply with the conditions for the fieldwork authorization permit. To date no comments on the report have been received from BLM.

5.1.3 Native American Heritage Commission

On May 9, 2017 a request for a Sacred Lands File (SLF) search and contact list from the Native American Heritage Commission (NAHC) was submitted. The NAHC responded on May 15, 2018. The results of the SLF check was completed with negative results. The contact list had three tribes with ties to the project area: the Chemehuevi Reservation; Colorado River Indian Tribe (CRIT); and the Twenty-Nine Palms Band of Mission Indians. Initial consultation under Section 106 and AB 52 were mailed on May 18, 2017.

No response to the initial letter was received from Mr. Wood, Chairman of the Chemehuevi Reservation. A second point of contact was made on August 24, 2017, no response was received. A third point of contact was made on October 4, 2017. To date no response has been received from Mr. Wood or the Chemehuevi Reservation.

On May 23, 2017 Anthony Madrigal Jr., Tribal Historic Preservation Officer for the Twenty-Nine Palms Band of Mission Indians responded to the initial consultation letter. In Mr. Madrigal's letter, request was made information regarding the extent of ground disturbing activity and copies of the cultural resources investigations. A response was sent to Mr. Madrigal Jr. on August 17, 2018 regarding the extent of ground disturbance, which included a copy of the standard plans for the installation of the rock slope protection and indicating that a copy of the draft cultural documents would be sent when they are completed. A draft copy of the phase I documentation was sent to Mr. Madrigal on December 14, 2018.

The CRIT responded on May 25, 2017 stating that they wished all prehistoric cultural resources to be avoided if possible, and that they wished to be contacted if burials, or other cultural resources were identified during ground disturbing activities. On September 22, 2017 a letter was sent to David Harper, Director of the Tribal Historic Preservation Office for the CRIT, stating that the project design team had discovered that some of the culverts included in the project footprint may need rock slope protection that might extend beyond the Caltrans right of way and touch reservation property. That same day an additional email was sent to Mr. Harper which had maps of the proposed work locations. A response was received on October 4, 2017, requesting an in-person meeting for government to government consultation.

On October 5, 2017, the DNAC sent an email to Mr. Etsitty, Acting Director of the CRIT THPO office to address the tribes request for an in-person meeting for government to government consultation. The letter requested additional information about the what type of meeting would be needed and potential attendees.

A response was received on November 3, 2018 from Jennifer Corona, administrative assistant, on behalf of Bryan Etsitty, the letter requested an informal conference call to gather pertinent information regarding the project.

Between November 17, 2017 and April 30, 2018, the DNAC and various members of the CRIT THPO, Tribal Attorney General's Office, and Commercial Real Estate Division engaged in communication regarding the necessity of conducting pedestrian survey and arranging for tribal monitoring during the pedestrian survey.

On May 1, 2018, Scott Kremkau of SRI contacted Bryan Etsitty of CRIT to set up Native American monitoring for the four locations within CRIT lands. Dr. Kremkau followed up with Mr. Etsitty and Toni Carlyle of CRIT to finalize the date of the survey. Subsequently, Ms. Carlyle monitored the archaeological survey on May 4, 2018. Because the project is on Tribal Land, the project HPSR will be sent for formal consultation with the CRIT THPO concurrent to submittal to SHPO.

5.1.4 State Historic Preservation Officer

On January 22, 2019, Caltrans initiated consultation with SHPO regarding the identification, evaluation, and effect finding efforts described above. SHPO concurred with Caltrans findings via letter dated February 21, 2019.

5.1.5 Agency Correspondence and Documentation

Agency correspondence letters are provided on the pages that follow this chapter.

Biological Resources:

- USFWS Species List dated February 15, 2019

Cultural Resources

- Letter from SHPO dated February 21, 2019.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

Carlsbad Fish And Wildlife Office

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

Phone: (760) 431-9440 Fax: (760) 431-5901

<http://www.fws.gov/carlsbad/>



In Reply Refer To:

February 15, 2019

Consultation Code: 08ECAR00-2019-SLI-0482

Event Code: 08ECAR00-2019-E-01127

Project Name: 1G010 - SR 62 PM 124-142

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

02/15/2019

Event Code: 08ECAR00-2019-E-01127

1

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

(760) 431-9440

02/15/2019

Event Code: 08ECAR00-2019-E-01127

2

Project Summary

Consultation Code: 08ECAR00-2019-SLI-0482

Event Code: 08ECAR00-2019-E-01127

Project Name: 1G010 - SR 62 PM 124-142

Project Type: TRANSPORTATION

Project Description: The project will restore storm eroded embankments with RSP

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/34.17701208693303N114.39177369790345W>



Counties: San Bernardino, CA

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yuma Clapper Rail <i>Rallus longirostris yumanensis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3505	Endangered

Reptiles

NAME	STATUS
Desert Tortoise <i>Gopherus agassizii</i> Population: Wherever found, except AZ south and east of Colorado R., and Mexico There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4481	Threatened

02/15/2019

Event Code: 08ECAR00-2019-E-01127

4

Fishes

NAME	STATUS
Razorback Sucker <i>Xyrauchen texanus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/530	Endangered

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Desert Tortoise <i>Gopherus agassizii</i> https://ecos.fws.gov/ecp/species/4481#crithab	Final

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State of California • Natural Resources Agency

Gavin Newsom, Governor

**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

February 21, 2019

VIA EMAIL

In reply refer to: FHWA_2019_0122_002

Ms. Alexandra Bevk Neeb, Acting Chief
Cultural Studies Office
Division of Environmental Analysis
Caltrans
PO Box 942873, MS-27
Sacramento, CA 94273-0001

Subject: Determinations/Finding of Eligibility and Effect for the Proposed Repair and
Restoration of Storm Eroded Embankments, San Bernardino County, CA

Dear Ms. Bevk Neeb:

You have provided me with the results of your efforts to determine whether the project described above may involve or affect historic properties. You have done this, and are consulting with me, in order to comply with Section 106 of the National Historic Preservation Act and implementing regulations codified at 36 CFR Part 800. As part of your documentation, Caltrans submitted a Historic Property Survey Report (HPSR), Historical Resources Evaluation Report, an Archaeological Survey Report, Finding of No Adverse Effect Report, and Environmentally Sensitive Area (ESA) Action Plan for the proposed project.

Caltrans, as assigned by the Federal Highway Administration, proposes to repair and restore storm-eroded embankments with Rock Slope Protection (RSP) in various locations along SR-62 in San Bernardino County, California. The project starts before Vidal Junction and ends in Earp from PM 124.0 to PM 142.0. Construction activities will remain within the existing travel corridor of SR-62 and no detours have been identified. The proposed project takes place within portions of the Caltrans Right of Way, on lands managed by the Bureau of Land Management (BLM), and portions of the Colorado River Indian Tribes Reservation. The project has identified locations where permanent easements for Maintenance access are being requested.

Caltrans has identified three cultural resources that are considered eligible for the National Register of Historic Places (NRHP) for the purposes of this undertaking only:

Ms. Bevk Neeb
January 29, 2019
Page 2 of 3

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- Vidal Scatter 3, PM 138.3 – Multi-component
- SRI-25, PM 141.9 – Multi-component
- SHL-985, entire project limits – California Training Center/California-Arizona Maneuver Area (DTC/C-AMA)

Caltrans has also determined that the following properties are not eligible for the NRHP:

- SRI-23, PM 124.7 – Historic Era Refuse Scatter
- Vidal Scatter 1, PM 124.9 – Historic Era Refuse Scatter
- Vidal Scatter 2, PM 125.4 – Historic Era Refuse Scatter
- SRI-9, PM 136.9 – Historic Era Refuse Scatter
- SRI-12, PM 137.0 – Historic Era Refuse Scatter
- SRI-7, PM 138.1 – Historic Era Refuse Scatter
- SRI-1, PM 138.1 – Historic Era Refuse Scatter
- SRI-5, PM 138.1 – Historic Era Refuse Scatter
- SRI-3, PM 138.2 – Isolate: 1 Beverage Can
- SRI-48, PM 138.4 – Isolate: 1 Chert Flake
- SRI-39, PM 141.7 – Isolate: 1 Jasper Angular Debris
- SRI-40, PM 141.8 – Historic Era Refuse Scatter
- CA-SBR-15791H, P-36-024750, Ellis Road, PM 141.9 – Historic Era Road

Caltrans has also found that the proposed project will have no adverse effect on historic properties. Both archaeological sites were recorded within the area of potential effects (APE) but not within the area of direct impact (ADI). Caltrans did not formally evaluate them but is considering them to be eligible for the NRHP, and will protect them in their entirety through the establishment of an ESAs, and an ESA Action Plan. SRI-25 and Vidal Survey Scatter-3 will require construction monitoring during ground disturbing activities within 20 feet of the site boundary by a Qualified Archaeologist and a Native American Representative. Caltrans will establish an Archaeological Monitoring Area as described in the ESA Action Plan around SRI-25 and Vidal Survey Scatter-3.

The DTC/C-AMA consists of various components including but not limited to camps, supply depots, airfields, and maneuvering areas. While the DTC/C-AMA is technically mapped within the DTC, no features were identified within the APE.

Pursuant to 36 CFR 800.4(a-c), Caltrans is requesting SHPO and THPO concurrence on the following:

- 1) Adequacy of the delineation of the APE
- 2) Adequacy of the identification effort
- 3) Adequacy of the evaluation of potential historic properties for eligibility to the NRHP.
- 4) Adequacy of the Caltrans' finding of No Adverse Effect for the undertaking.

Ms. Bevk Neeb
January 29, 2019
Page 3 of 3

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I have reviewed the documentation furnished and have the following comments:

- 1) The APE delineated for the proposed project appears adequate.
- 2) The steps taken to identify historic properties that may be affected by this undertaking are satisfactory.
- 3) Based on review of the submitted documentation, I concur with the foregoing determinations of eligibility
- 4) I have no objections to Caltrans' finding of No Adverse Effect for this undertaking.
- 5) Be advised that under certain circumstances, like unanticipated discovery, Caltrans may have additional responsibilities under 36 CFR Part 800.

If you have any questions, please contact Natalie Lindquist at (916) 445-7014 with e-mail at natalie.lindquist@parks.ca.gov or Alicia Perez at (916) 445-7020 with e-mail at alicia.perez@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer

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Chapter 6 List of Preparers

The following personnel prepared and reviewed this IS/EA.

6.1 California Department of Transportation

Renetta Cloud	Senior Environmental Planner, Branch Chief of Environmental Studies "A"
Kourtney Graves	Associate Environmental Planner, Generalist
Craig Wentworth	Senior Environmental Planner, Branch Chief of Biological Studies
Luz Quinnell	Associate Environmental Planner, Biological Studies & Surveys
Karen Riesz	Associate Environmental Planner, Biological Regulatory Permits
Andrew Walters	Senior Environmental Planner, Branch Chief of Cultural Resources
Shannon Clarendon	Co-Principal Investigator, Prehistoric Archaeology
Steven Holm	Principal Investigator, Historic Archaeology
Majid Allyas	Project Engineer
Neil Azzu	Transportation Engineer, Hazardous Waste
Carola Acuri	Transportation Engineer, Air Quality and Noise
Martin Villanueva	Senior Transportation Engineer, Project Manager
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Bahram Karimi	Associate Environmental Planner, Paleontology

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Meagan Flacy	Water Quality
Katrina Sukola	Water Quality
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Liane Chen	Environmental Planner
Soraya Swiontek	GIS Specialist
Johnnie Garcia	GIS Specialist
John Mathias	Technical Editor
Elizabeth Irvin	Technical Editor

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Chapter 7 Distribution List

A compact disc copy of this Draft Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment (Draft IS/EA) and/or a Notice of Availability was distributed to the following federal, state, regional, local agencies and elected officials, as well as interested groups, organizations and individuals. In addition, all property owners and occupants within a 1000-foot (ft) radius of the project limits were provided the Notice of Availability of the Draft IS/EA.

7.1 Federal Agencies

United States Environmental Protection
Agency Pacific Southwest, Region 9
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75 Hawthorne St.
San Francisco, CA 94105

Natural Resources Conservation Service,
Area 3
Area Conservationist
4974 East Clinton Avenue, Suite 114
Fresno, CA 93727

Office of Environmental Policy and
Compliance, Department of the Interior
Main Interior Building, MS 2462
1849 "C" Street, NW
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U.S. Army Corps of Engineers
LA District - Regulatory Division
Aaron Barta, District Commander
P.O. Box 532711
915 Wilshire Boulevard, Suite 980
Los Angeles, CA 90053-2325

U.S. Bureau of Land Management
Barstow Field Office
Katrina Symons, Field Manager
2601 Barstow Road
Barstow, CA 92311

U.S. Fish and Wildlife Service, Palm Springs
Fish & Wildlife Office
Karin Cleary-Rose, Chief San Bernardino and
Riverside Counties
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Palm Springs, CA 92262

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United States Senate
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Los Angeles, CA 90064

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United States Senate
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7.2 State Agencies

California Department of Conservation
Administrator
655 S. Hope St, #700
Los Angeles, CA 90017

California Department of Conservation
State Mining & Geology Board
Mr. Jeffrey Schmidt
801 K Street, MS 20-15
Sacramento, CA 95814

California State Lands Commission
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Native American Heritage Commission
Christina Snider
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California Department of Transportation
Division of Environmental Analysis
NEPA Assignment Office
1120 N Street MS 27
PO Box 942874
Sacramento, CA 94247-0001

State of California Cal-EPA Department of
Toxic Substances Control Headquarters
Karla Nemeth, Director
P.O. Box 942836, Room 1115
Sacramento, CA 94236

State of California Office of Historic
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State Historic Preservation Officer
1416 Ninth Street, Room 1442
PO Box 942896
Sacramento, CA 95814

California Air Resources Board
Clerk of the Board
1001 "T" Street P.O. Box 2815
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Ontario, CA 91764

State of California Public Utilities
Commission
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505 Van Ness Ave
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California Highway Patrol
Administrator
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Blythe, CA 92225

State Water Resources Control Board
Eileen Sobeck, Executive Director
PO Box 100
Sacramento, CA 95812-0100

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California Senate District 16
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Yucca Valley, CA 92284

Hon. Jay Obernolte, Assemblyman
CA Assembly District 33
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Hesperia, CA 92345

7.3 Regional and Local Agencies

California Regional Water Quality Control
Board Colorado Region 7
Nancy Wright, Chair
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

Mojave Desert Air Quality Management
District
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Victorville, CA 92392

Southern California Association of
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Carrie Schindler, Transit & Rail Director
San Bernardino County Transportation Authority
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Ross Tarangle, Captain
County of San Bernardino
Sheriff's Department, Colorado River Station
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Needles, CA 92363

County of San Bernardino Dept. of Public Works
Environmental Management Division
825 East Third Street
San Bernardino, CA 92415-0835

County of San Bernardino Special Districts
Water and Sanitation Division
PO BOX 504
Victorville, CA 92393-5004

Fire Chief
San Bernardino County Fire Department
Station 55
Black Meadow Landing
Earp, CA 92242

Tim Watkins, Chief of Legislative and Public Affairs
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San Bernardino, CA 92410

Steven Smith, Director of Planning
San Bernardino County Transportation Authority
1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410

Mark Hartwig, Fire Chief/Fire Warden
County of San Bernardino Fire Department
Communications Center
1743 Miro Way
Rialto, CA 92376

Departmental Head
County of San Bernardino, Dept. of Planning
385 North Arrowhead Ave
San Bernardino, CA 92415

County of San Bernardino Dept. of Public Works
Flood Control District
825 East Third Street
San Bernardino, CA 92415-0835

California Department of Food and Agriculture
Vidal Border Station
Teresa Estrada, Station Manager
HCR 20, PO Box 410
Vidal Junction, CA 92280

Cheryl Pomeroy, Safety Director
Big River Community Services District
PO Box 2376
Big River, CA 92242

Bonnie Baker Senior Center
Director
149350 Ukiah Trail
Big River, CA 92242

7.4 Property Owners and Interested Parties

Arizona & California Railroad Company
5400 Broken Sound Blvd NW
Boca Raton, FL 33478

Colorado River Indian Reservation
153400 HWY 62
Earp, CA 92242

Ravik Investments LLC
PO BOX 225
Earp, CA 92242

West Junction Trust 10-2-13
5313 Nadia CT
Las Vegas, NV 89103

Ravik Investments LLC
N HWY 95 & Aqueduct Rd
Vidal, CA 92280

Colorado River Indian Reservation
(APN 0661-071-07-0000)
153400 HWY 62
Earp, CA 92242

Ravik Investments LLC
3637 Hwy 395
Vidal, CA 92280

West Junction Trust 10-2-13
4200 State Hwy
Vidal, CA 92280

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Chapter 8 References

8.1 Chapter 1

California Department of Transportation. 2017. *Transportation Concept Report: State Route 62*. June.

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8.2 Section 2.1

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Personal Communication

Karimi, Bahram. Caltrans. February 21, 2019—email to Kourtney Graves (Caltrans).

8.3 Section 2.2

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California Department of Conservation. 2018. *California Official Tsunami Inundation Maps*. Available: <https://www.conservation.ca.gov/cgs/geohazards/tsunami/maps>.

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County of San Bernardino. 2016. *Land Use Services*. Available: <http://cms.sbcounty.gov/lus/Planning/ZoningOverlayMaps/GeologicHazardMaps.aspx#Desert>.

8.4 Section 2.3

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California Department of Fish and Wildlife. 2012. Staff Report on Burrowing Owl Mitigation. March 7.

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8.5 Chapter 4

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Appendix A Resources Evaluated Relative to the Requirements of Section 4(f): No Use Determination

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.”

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or next to the project area that do not trigger Section 4(f) protection because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, or 4) the project does not permanently use the property and does not hinder the preservation of the property.

Resources Evaluated Relative to the Requirements of Section 4(f)

This section analyzes all cultural resources, public and private parks, recreational facilities, and wildlife refuges within approximately 0.5 mile of the project to determine if they are protected Section 4(f) properties. There are no recreational facilities, wildlife refuges, public or private parks, or public schools within 0.5 mile of the proposed project. The list below includes all historic properties within 0.5 mile of the proposed project.

- **SRI-25:** This is a multi-component site considered eligible for the NRHP. Although SRI-25 is within the project’s Area of Potential Effects (APE); and Caltrans proposes to protect this resource in its entirety with Environmentally Sensitive Area (ESA) delineation, Section 4(f) does not apply to archaeological resources that are important chiefly because of what can be learned from data recovery (Criterion D). The property is not a Section 4(f) property; therefore, the provisions of Section 4(f) do not apply.
- **Vidal Scatter 3:** This is a multi-component site considered eligible for the NRHP. Although Vidal Scatter 3 is within the project’s Area of Potential Effects (APE); and Caltrans proposes to protect this resource in its entirety with Environmentally Sensitive Area (ESA) delineation, Section 4(f) does not apply to archaeological resources that are important chiefly because of what can be learned from data recovery (Criterion D). The property is not a Section 4(f) property; therefore, the provisions of Section 4(f) do not apply.
- **CHL-985, the Desert Training Center/California-Arizona Maneuver Area (DTC/C-AMA):** This is on the California Register of Historical Resources. It encompasses most of the eastern area of Southern California and extends beyond the border of California, into Arizona and Nevada, and surrounds the project area. A BLM historic context and overview of the DTC/C-AMA facilities concluded that a number of the camps, airfields and other facilities are eligible for the NRHP. While CHL-985 encompasses the project area, no contributing features were identified within the APE. The project proposes to use only a part of the archaeological property which is considered a non-contributing element. As such, while the property is a Section 4(f) property, no “use” would occur. Therefore, the provisions of Section 4(f) do not apply.

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Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov



*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, appearing to read "Laurie Berman".

LAURIE BERMAN
Director

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*

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Appendix C Environmental Commitments Record

In order to ensure all environmental commitments identified in this document are executed at the appropriate times, the following mitigation program (as mentioned in the Environmental Commitments Record [ECR]), would be implemented. During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimate, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in the ECR are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. Commitment fields will be filled out/signature confirmed, as each of the measures are implemented and/or completed. Note: Some measures may apply to more than one resource area.

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Permit Type	Agency	Date Submitted	Date Received	Expiration	Fee	Notes	Permit Requirement Completed	
							Name	Date
Use Permit	Bureau of Land Management	01/12/16	10/12/17			California Cultural Resources Use Permit for Archaeological Investigations		
1602	California Department of Fish & Wildlife	Pending				Streambed Alteration Agreement		
401	Regional Water Quality Control Board (Colorado River Basin)	Pending				Section 401 Water Quality Certification		
404	US Army Corps of Engineers	Pending				Nationwide Permit		
Section 7	United States Fish and Wildlife Service	Pending				Streamlined Section 7 Consultation - Biological Opinion		

Date of ECR: April 2019

ENVIRONMENTAL COMMITMENTS RECORD (SR-62 Embankment Restoration Project)

08-SBd-062
PM 124.0/142.0

Project Phase:

- ☒ PA/ED (DED/FED)
☐ PS&E Submittal _____ %
☐ Construction
☐ CEC/CCA

EA 08-1G010-0
PN 0815000106

Environmental Generalist:
Kourtney Graves
(909) 383-6324

Environmental
Const. Liaison:
John Stanton
(951) 232-7585

Avoidance, Minimization, and/or Mitigation Measures	Page # in Env. Doc. Or Permit	Environmental Analysis Source (Technical Study, Environmental Document, and/or Technical Discipline)	Responsible for Development and/or Implementation of Measure	Timing/ Phase	If applicable, corresponding construction provision: (standard, special, non-standard)	Action(s) Taken to Implement Measure/if checked No, add Explanation here	PS&E Task Completed	Construction Task Completed	Environmental Compliance	
							Date / Initials	Date / Initials	YES	NO
<u>CULTURAL RESOURCES</u>										
CR-1. If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.	2-12	Historic Property Survey Report (December 2018)	Resident Engineer/ Contractor	Construction						

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CR-2. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area that is suspected to overlie remains, and the County Coroner shall be contacted. Pursuant to California Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC who will then notify the Most Likely Descendant. At that time, the person who discovered the remains will contact Gary Jones, Principal Investigator, Prehistoric Archaeology so that he can work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.	2-12	Historic Property Survey Report (December 2018)	Resident Engineer/ Contractor	Construction						

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CR-3. Environmentally Sensitive Areas (ESAs) and Archaeological Monitoring Areas (AMAs) are within the APE but not within the ADI of SRI-25 and Vidal Survey Scatter-3 ESAs and AMAs will be established for both sites in an ESA Action Plan.	2-12	Historic Property Survey Report (December 2018)	District Cultural Studies/Resident Engineer/ Contractor	Final Design, Construction						
CR-4. Archaeological and Native American monitors shall be present during any construction or preconstruction-related activity in all areas designated as Archaeological Monitoring Areas (AMA), as described in ESA Action Plan.	2-12	Historic Property Survey Report (December 2018)	District Cultural Studies/Resident Engineer/ Contractor	Final Design, Construction						
UTILITIES AND EMERGENCY SERVICES										
UES-1. During final design, utility relocation plans will be prepared in consultation with the affected utility providers/owners for those utilities that will need to be relocated, removed, or protected in place. If relocation is necessary, the final design will focus on relocating utilities within the state right of way or other existing public rights of way and/or easements. If relocation outside	2-5	Environmental Document	Design: Caltrans Project Manager, Caltrans Project Engineer Construction: Caltrans Project Manager, Caltrans Resident Engineer	Final Design, Construction						

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							Date / Initials	Date / Initials	YES	NO
of existing rights of way or additional public rights of way and/or easements are necessary, the final design will focus on relocating facilities so as to minimize environmental impacts resulting from project construction as well as ongoing maintenance and repair activities. The utility relocation plans will be included in the project specifications. Prior to and during construction, the contractor will implement the components of the utility relocation plans provided in the project specifications. Prior to utility relocation activities, the contractor will coordinate with affected utility providers regarding potential utility relocations and inform affected utility users in advance about the date and timing of potential service disruptions.										
TRAFFIC AND TRANSPORTATION/BICYCLE AND PEDESTRIAN FACILITIES										
TRF-1. A Traffic Management Plan (TMP) will be prepared and implemented during construction of the project. Public information and awareness campaigns, motorist information strategies, and incident management strategies in the	2-6	Environmental Document	District Design/ District Traffic Management/ Resident Engineer/ Contractor	Final Design, Construction						

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TMP will inform the public of the proposed project.										
BIOLOGICAL RESOURCES										
BIO-1: The project has identified two potential Staging Areas, and approval of additional staging areas will require the Caltrans Biologist to analyze project impacts and receive authorization for additional staging areas. Prior to the beginning of construction, the staging areas will be fenced with temporary fence and maintained throughout construction to prevent the work areas from extending beyond the approved temporary staging area and to avoid encroachment into the native desert habitat.	2-38	Natural Environment Study (Minimal Impacts) (March 2019)	Biological Studies/ Resident Engineer/ Contractor	Pre Construction						
BIO-2: Pre-construction plant surveys will occur prior to the mobilization by either the Caltrans Biologist or a qualified Contract Supplied Biologist. The qualified biologist will survey the project impact areas and flag special status plant species to avoid and minimize impacts. The qualified biologist	2-38	NES-MI (March 2019)	Biological Studies/ Design/Resident Engineer/ Contractor	Pre-Construction						

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will be designated to oversee compliance of all protective measures and will notify the resident engineer and District Biologist if project activities are not in compliance. The resident engineer must stop work until corrective actions are taken and protective measures are implemented. Implementation of these measure would reduce potential impacts to these special status plant species and contribute to the efforts designed to minimize project-related impacts to the on-site native vegetation communities.										
BIO-3: Biological Resource Information Program: An education program will be developed and presented by a qualified biologist to all onsite personnel who will be in the project limits for longer than 30 minutes prior to the onset of ground-disturbing activities. At a minimum, the program will include the following topics: distribution, general behavior, and ecology of the desert tortoise, sensitivity of the species to human activities, legal protection afforded to these species, penalties for	2-66	NES-MI (March 2019)	Biological Studies/ Design/Resident Engineer/ Contractor	Pre-Construction						

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violations of Federal and State laws, notification procedures by workers or contractors if a tortoise is found in a construction area, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area. The program will consist of a class presented by a qualified biologist or a video, provided the qualified biologist is present to answer questions. Handout materials will be distributed for workers with important information about the regulated species for future reference and as a reminder of the program's content. Following the education program, the handouts will be posted at all construction field offices and on all information boards, where they will remain through the duration of the project. If at any time a desert tortoise is observed in the project area, the Resident Engineer will cease operations immediately and will contact the Caltrans Environmental Stewardship & Monitoring Unit.										

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BIO-4: Whenever project vehicles are parked outside of a fence that is intended to preclude entry by desert tortoises, workers will check regularly under the vehicle before moving the vehicles or equipment. If a desert tortoise is beneath the vehicle, the worker will notify the qualified biologist. If a qualified biologist is not present onsite, the Resident Engineer or supervisor must notify the Caltrans Biologist. Workers will not be allowed to capture, handle, or relocate tortoises.	2-67	NES-MI (March 2019)	Biological Studies/ Design/Resident Engineer/ Contractor	Construction						
BIO-5: Immediately prior to the start of any 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 qualified Biologist. The entire project area will be surveyed for desert tortoise and their burrows by a qualified biologist before the start of any ground-disturbing activities following the 2010 Field Survey Protocol or more current protocol. If	2-67	NES-MI (March 2019)	Biological Studies/ Design/Resident Engineer/ Contractor	Pre Construction						

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							Date / Initials	Date / Initials	YES	NO
burrows are found, they will be examined by the qualified biologist to determine if desert tortoises are present. If desert tortoises are found at the project site, then Caltrans will consult with U.S. Fish and Wildlife Service to determine appropriate protective measures.										
BIO-6: Temporary desert tortoise 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 (2005) or more current protocol. The biologist will ensure that desert tortoises cannot pass under, over, or around the fence. The biologist must regularly check the fenced area and notify the Engineer should it become damaged and require repair.	2-67	NES-MI (March 2019)	Biological Studies/ Resident Engineer/ Contractor	Pre-Construction, Construction						
BIO-7: The qualified biologist will inform USFWS and CDFW of any injured or	2-67	NES-MI (March 2019)	Biological Studies/ Resident	Pre-Construction						

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dead tortoises found on site (verbal notification within 24 hours and written notification within 5 days).			Engineer/ Contractor							
BIO-8: The qualified biologist will conduct on-site monitoring and submit a monitoring report for desert tortoise and during construction.	2-67	NES-MI (March 2019)	Biological Studies/ Resident Engineer/ Contractor	Pre-Construction, Construction						
BIO-9: Except on maintained public roads designated for higher speeds or within desert tortoise-proof fenced area, driving speed will not exceed 20 miles per hour through potential desert tortoise habitat on unpaved roads.	2-67	NES-MI (March 2019)	Biological Studies/Design/ Resident Engineer/ Contractor	Design/Pre-Construction/ Construction						
BIO-10: Litter control measures will be implemented. Litter will be contained in containers to prevent attracting common ravens or other potential predators of the desert tortoise. Workers are prohibited from feeding all wildlife.	2-67	NES-MI (March 2019)	Biological Studies/Design/ Resident Engineer/ Contractor	Design/Pre-Construction/ Construction						

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BIO-11: Pre-construction nesting bird surveys, 2018 Caltrans Standard Specification 14-6.03B Bird Protection.	2-67	NES-MI (March 2019)	Biological Studies/Design/ Resident Engineer/ Contractor	Design/Pre-Construction/ Construction						

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Appendix D List of Acronyms and Abbreviations

AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ADL	Aerially deposited lead
AMSL	above mean sea level
APE	Area of Potential Effects
ARPA	Archaeological Resources Protection Act
ASR	Archaeological Survey Report
BAU	business-as-usual
bgs	below ground surface
BLM	Bureau of Land Management
BMP	Best Management Practice
BSA	biological study area
Caltrans	California Department of Transportation
CARB	California Air Resources Board
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
CH ₄	methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
County	San Bernardino County
CRHR	California Register of Historical Resources
CRIT	Colorado River Indian Tribe
CTP	California Transportation Plan
CWA	Clean Water Act
Department	California Department of Transportation
DKF	desert kit fox
DSA	Disturbed Soil Area
DTSC	Department of Toxic Substances Control
ECT	Emory crucifixion thorn
EIR	environmental impact report

EIS	environmental impact statement
EO	Executive Order
EPACT92	Energy Policy Act of 1992
ESA	Environmentally Sensitive Area
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GHG	greenhouse gas
GPS	global positioning system
Guidelines	Section 404(b)(1) Guidelines
I-15	Interstate 15
I-5	Interstate 5
IP	individual permit
IPCC	Intergovernmental Panel on Climate Change
IS/EA	Initial Study/Environmental Assessment
ISA	Initial Site Assessment
LCFS	low carbon fuel standard
LEDPA	least environmentally damaging practicable alternative
MDAQMD	Mojave Desert Air Quality Management District
MFTL	Mojave fringe-toed lizard
MMTCO ₂ e	million metric tons of carbon dioxide equivalent
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MS4	municipal separate storm sewer system
MSHCP	Multi-Species Habitat Conservation Plan
N ₂ O	nitrous oxide
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NOAA Fisheries Service	National Oceanic and Atmospheric Administration's National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWP	nationwide permit
OHWM	ordinary high water mark
PA	Programmatic Agreement
PIA	Project Impact Area
PID	Project Initiation Documents

PM	post mile
PRC	Public Resources Code
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental concern
RSP	Rock Slope Protection
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SDC	Seismic Design Criteria
SF	sulfur hexafluoride
SHOPP	State Highway Operation and Protection Program
SHPO	State Historic Preservation Officer
SLR	sea-level rise
SR	State Route
SSP	standard special provision
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TMP	Traffic Management Plan
TPH	total petroleum hydrocarbons
TSM	Transportation System Management
U.S. EPA	United States Environmental Protection Agency
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	Waste Discharge Requirement
WPCP	Water Pollution Control Plan
WSC	Waters of the State of California
WUS	Waters of the U.S.

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Appendix E List of Technical Studies

Air Quality Exemption Memorandum: November 14, 2018

Noise Exemption Memorandum: November 14, 2018

Scoping Questionnaire for Water Quality: March 2019

Addendum to Natural Environment Study (Minimal Impacts): March 5, 2019

Draft Project Report: March 2019

Initial Site Assessment Checklist: February 1, 2019

Historic Property Survey Report: December 2018

Paleontological Exemption Memorandum: February 21, 2019

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