National Trails Highway at 10 Bridges Project

SAN BERNARDINO COUNTY, CALIFORNIA
DISTRICT 8 – SBD – 66/NTH
BRLS-5954(142, 147,149-156)

Draft Environmental Impact Report/Environmental Assessment and Draft Section 4(f) Evaluation



Prepared by the
State of California, Department of Transportation (Caltrans)
and County of San Bernardino, Public Works Department

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 May 27, 2022, and executed by FHWA and Caltrans.

August 2023

General Information about This Document

What's in this document:
The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), and the County of San Bernardino, (County) have prepared this Environmental Impact Report/Environmental Assessment (EIR/EA), which examines the potential environmental impacts of the alternatives being considered for the proposed National Trails Highway at 10 Bridges project located in San Bernardino County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). The County is the lead agency under the California Environmental Quality Act (CEQA). The document describes project purpose and need, 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 Environmental Impact Report/Environmental Assessment.
- Additional copies of this document and the related technical studies are available for review at the Barstow Branch Public Library located at 304 E. Buena Vista Street, Barstow, California 92311. This document may be downloaded at the following County website: https://dpw.sbcounty.gov/#notices
- We welcome your comments. If you have any comments regarding the proposed Project, please send your written comments via regular mail to: Nancy Sansonetti, AICP, Supervising Planner, Public Works Department, 825 E. Third Street, Room 123, San Bernardino, CA 92415 or submit comments via email to Nancy.Sansonetti@dpw.sbcounty.gov.
- Submit comments by the deadline: December 21, 2023.

What happens next:
After comments are received from the public and reviewing agencies, the County will prepare responses to comments received on the environmental document. The County then will publish a Final EIR/EA that includes responses to comments. Caltrans will review the comments and prepare a Finding of No Significant Impact. After preparation of these documents, as CEQA lead agency, the County may (1) give environmental approval to the proposed Project, (2) undertake additional environmental studies, or (3) abandon the Project. As NEPA lead agency, Caltrans would be responsible for approving the Project. If the Project is approved and funding is appropriated, the County would be responsible for design and construction of the Project.

Alternative Formats:
For individuals with sensory disabilities, this document can be made available in large print or on computer disk. To obtain a copy in one of these alternate formats, please call or write to: San Bernardino County Department of Public Works, EMD, Attn: Nancy Sansonetti, Supervising Planner, 825 East Third Street, Room 123, San Bernardino, CA 92415, or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), or 711.

FHWA Highway ID No.

SCH# 2021040231
District 8-SBD-66/NTH
BRLS-5954(142, 147,149-156)

Replace 10 bridges along National Trails Highway in and near the unincorporated communities of Amboy and Essex in San Bernardino County.

DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT
and
DRAFT SECTION 4(F) EVALUATION

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

THE STATE OF CALIFORNIA
Department of Transportation
and
County of San Bernardino

Cooperating Agencies: Bureau of Land Management

10/16/2023
Date

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Summary

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, Caltrans 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 May 27, 2022, for a term of ten years. In summary, Caltrans 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 Caltrans 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 the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

Overview of the Project Area

The County of San Bernardino (County) proposes to replace ten (10) timber trestle bridges with concrete bridges on National Trails Highway (NTH), formerly known as Route 66. This two-lane road holds significant historical and local circulation importance. The majority of this segment of the NTH in the County has been determined to qualify as eligible to the National Register of Historic Places, although not all bridges are eligible as contributing features.

The 10 bridges to be replaced along NTH are located mostly between Amboy Road and Kelbaker Road near the community of Amboy in San Bernardino County. The 10 bridges were constructed in 1930 and span over man-made ditches or "flash flood washes". The existing bridges vary in length (40' to 78') but share similar construction components. The typical existing timber trestle bridges are composed of simply-supported timber stringer spans with a laminated timber deck with a concrete deck on it supported on timber strutted abutments and bents consisting of timber piles. The bridges are approximately 28 feet wide with guardrails that do not meet current AASHTO safety standards. According to Caltrans Structure Inventory and Appraisal Reports, nine (9) of the ten (10) existing bridges have a sufficiency rating less than 50 and are flagged "Structurally Deficient" (SD). The structural deficiency status is mainly due to a low superstructure rating attributable to damaged timber stringers.

Through the years, the bridges have been modified by various maintenance and repair work with the intent of maintaining public safety and prolonging the service life of the bridges. The proposed replacements will resolve all the bridge deficiencies and will remove the bridges from the Eligible Bridge List (EBL).

Purpose and Need

Project Purpose

The purpose of the National Trails Highway at 10 Bridge Replacement Project (Project) is to replace structurally deficient bridges in order to:

- Enhance safety on National Trails Highway by providing new vehicular crossings for 10 bridges;
- Provide a transportation facility consistent with County and Caltrans Standards, as well as local and regional plans.

Project Need

The existing National Trails Highway Bridges are rated "Structurally Deficient" by Caltrans under Federal Highway Administration prescribed inspection criteria. Full replacement of the bridges is needed because the current structures do not meet structural design standards.

Proposed Action

The Project would replace 10 bridges on the National Trails Highway (NTH), also known as U.S. Route 66. The Project is located in the unincorporated communities of Amboy and Essex in the County of San Bernardino. A summary of the existing 10 bridges including their length, width, spans and locations is listed below.

Bridge Name	Bridge Number	Existing Bridge Length	Existing Bridge Width	Original Number of Spans (Current Spans)	Location
Bristol Ditch	54C0272	40 feet	28 feet	2(2)	26.7 miles east of Crucero Rd
Cerro Ditch	54C0275	40 feet	28 feet	2(4)	1.3 miles east of Amboy Rd
Gordo Ditch	54C0276	40 feet	28 feet	2(4)	1.8 miles east of Amboy Rd
Cerulia Ditch	54C0277	40 feet	28 feet	2(4)	2.2 miles east of Amboy Rd
Leith Ditch	54C0279	40 feet	28 feet	2(4)	3.1 miles east of Amboy Rd
Terra Ditch	54C0280	40 feet	28 feet	2(4)	3.6 miles east of Amboy Rd
Sombra Ditch	54C0281	78 feet	28 feet	4(8)	4.1 miles east of Amboy Rd
Beacon Ditch	54C0282	40 feet	28 feet	2(4)	6.2 miles east of Amboy Rd
Larissa Ditch	54C0284	40 feet	27 feet	2(4)	1.1 miles east of Kelbaker Rd
Adena Ditch	54C0315	59 feet	28 feet	3(3)	21.9 miles east of Kelbaker Rd
Note – All but the Bristol Ditch have had supports added since the original construction. The bridges have also undergone some level of rehabilitation since then.					

There are two Project Alternatives being considered, the Build Alternative and the No-Build Alternative. The Build Alternative replaces the 10 bridges with reinforced concrete bridges. The bridge lengths match the existing lengths, except at Bristol Ditch and Sombra Ditch the bridge lengths are lengthened to convey the storm flows. The width of each replacement bridge would be 34 feet to accommodate two 11-foot lanes, two 4-foot shoulders and two 2-foot railings. The vertical profile of the bridges will remain close to the existing profile except for those bridge

locations in which it is determined additional vertical clearance is required to provide sufficient water conveyance beneath the bridge. It is anticipated that necessary changes in vertical profiles would be 2 feet or less, with the elevation gradually conforming to the existing roadway elevations.

Under the No-Build Alternative, the existing 10 bridges would remain, and the structural deficiencies would not be corrected.

Joint CEQA/NEPA Document

The Project is subject to federal, as well as the County of San Bernardino (County) and State environmental review requirements because the County proposes the use of federal funds from the Federal Highway Administration (FHWA) and/or the Project requires an approval from FHWA. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The County is the Project proponent and the lead agency under CEQA. 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 May 27, 2022, and executed by FHWA and Caltrans. With NEPA Assignment, FHWA assigned, and Caltrans 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 the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the Project as a whole, often a "lower level" document is prepared for NEPA. One of the most common joint document types is an Environmental Impact Report/Environmental Assessment (EIR/EA).

After receiving comments from the public and reviewing agencies, a Final EIR/EA will be prepared. The County and Caltrans may prepare additional environmental and/or engineering studies to address comments. The Final EIR/EA will include responses to comments received on the Draft EIR/EA and will identify the preferred alternative. If the decision is made to approve the Project, a Notice of Determination will be published for compliance with CEQA, and Caltrans will decide whether to issue a Finding of No Significant Impact (FONSI) or require an Environmental Impact Statement (EIS) for compliance with NEPA. A Notice of Availability (NOA) of the FONSI will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

Project Impacts

Based on the environmental analysis completed for this Project, the Build Alternative would have impacts to cultural resources, Section 4(f) facilities, a National Scenic Byway, special-status biological species, and would require temporary traffic detours via a temporary parallel road realignment, also referred to as a "shoo-fly detour", that would carry traffic around the construction area. Impacts to cultural resources include the National Old Trails Road/Route 66 (CA-SBR-2910H), which has been determined eligible for the National Register of Historic Places, and the Adena Ditch Bridge, concrete boundary markers (C-Markers), and late 1950s post-mile paddleboards, all of which are character defining features to the overall National Old Trails Road/Route 66 (CA-SBR-2910H). As the Project will replace original components of the National Old Trails Road/Route 66 (CA-SBR-2910H), including the Adena Ditch Bridge, the Project is

considered to have an adverse effect to the overall National Old Trails Road/Route 66 (CA-SBR-2910H) under Section 106 of the National Historic Preservation Act. Such an effect is also considered a “use” of the National Register of Historic Places eligible resources, pursuant to Section 4(f) of the US Department of Transportation Act of 1966. This effect is considered significant under CEQA. This significant effect would be mitigated through historical research documentation and dissemination of the information to the public via websites devoted to the National Old Trails Road/Route 66 (CA-SBR-2910H).

While the Project would replace 10 of the historic timber bridges along the NTH, which is considered a National Scenic Byway, the user’s view of the NTH would be minimally impacted. The majority of the NTH’s defining visual aspect features would either remain intact or the alterations would not be highly visible by the user/viewer as motorists would have a relatively short window of viewing due to their rate of travelling speed; therefore, this is not considered a significant effect under CEQA, nor an impact under NEPA.

The Project would also impact desert tortoise habitat and designated Critical Habitat through temporary construction impacts and permanent conversion of habitat due to the replacement bridge footprint. Through avoidance, minimization, and revegetation measures, the Project would result in a may affect, not likely to adversely affect determination for desert tortoise and designated desert tortoise Critical Habitat; therefore, this is not considered a significant effect under CEQA, nor an impact under NEPA.

Upon completion, the Build Alternative would have no significant effects under CEQA nor impacts under NEPA to any remaining resources as the Project involves replacement of existing bridges along the same alignment. **Table 1** on the subsequent page summarizes the environmental impacts of the build alternative and identifies the proposed avoidance, minimization, and/or mitigation measures for each impact. A detailed description of the impacts and mitigation measures for each impact category is presented in the various sections of the report

The No-Build Alternative would result in continued degradation of the existing timber bridges until their failure and collapse which could result in harm to users of the facility. Failure of the existing bridges would also result in traffic congestion and delay in the Project area. Bridge failure would also result in adverse effect on the National Old Trails Road/Route 66 (CA-SBR-2910H) and the Adena Ditch Bridge, which would be considered a significant effect under CEQA.

Table 1. Summary of Build Alternative Impacts and Proposed Avoidance, Minimization, and/or Mitigation Measures

Potential Impact	Build Alternative Impact	No-Build Alternative	Significant Effect Under CEQA?	Proposed Avoidance, Minimization, and/or Mitigation Measures
Parks and Recreational Facilities	None.		No.	None.
Utilities/ Emergency Services	Temporary traffic diversion route parallel to roadway.		No.	Traffic Management Plan and public information campaigns will be developed to ensure there is minimal disruption of emergency services.
Traffic and Transportation/ Pedestrian and Bicycle Facilities	Temporary traffic diversion route parallel to roadway.		No.	Traffic Management Plan and public information campaigns will be developed to ensure there is minimal impacts to traffic.
Visual/Aesthetics	Replacement of historic timber bridges along NTH. Historic paddleboards will be restored, leading to positive visual impact.		No.	Memorandum of Agreement to mitigate impacts to the Adena Ditch Bridge and overall National Old Trails Road/Route 66 (CA-SBR-2910H).
Cultural Resources	Replacement of the National Register of Historic Places' eligible Adena Ditch Bridge.		Yes.	Memorandum of Agreement to mitigate impacts to the Adena Ditch Bridge and overall National Old Trails Road/Route 66 (CA-SBR-2910H).
Water Quality and Storm Water Runoff	Construction related temporary impacts.		No	BMPs related to erosional control would minimize degradation of water quality during construction.
Hazardous Waste/ Materials	Potential for potential lead and heavy metals associated with pavement striping. Wood timbers supporting bridges would result in treated wood waste.		No.	Implement health and safety procedures to protect construction workers. Comply with federal, State and County requirements.

Natural Communities	Permanent and temporary loss of creosote bush scrub vegetation loss.		No.	Soil decompaction and seed mix applied to all construction disturbed areas.
Wetlands and Other Waters of the U.S.	Temporary impacts jurisdictional waters of the State.		No.	Regrade ephemeral ditches to ensure water flow and implement measures required by Regional Water Quality Control Board and California Department of Fish and Wildlife.
Animal Species	Desert tortoise, desert bighorn sheep.		No.	Implement construction timelines in coordination with CDFW.
Plant Species	Glandular ditaxis, small-flowered androstephium, pointed dodder.		No.	Conduct pre-construction surveys and no-work buffers if necessary.
Threatened and Endangered Species	Desert tortoise.		No.	Preconstruction surveys, installation of animal exclusionary fencing, and adherence to work period timelines would avoid impacts to the desert tortoise. Revegetation of construction disturbed areas with decompaction and seed mix would restore habitat.

Coordination with Public and Other Agencies

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

Agency	PLAC	Status
California Department of Fish and Wildlife (CDFW)	1602 Streambed Alteration Agreement	Will be obtained after approval of the final Environmental Document and prior to construction.
Colorado River Regional Water Quality Control Board	Waste Discharge Requirements (WDRs)	Will be obtained after approval of the final environmental document and prior to construction.
State Historic Preservation Office	Memorandum of Agreement (MOA)	MOA execution expected following circulation of the draft environmental document.
State Water Resources Control Board (SWRCB)	National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waste Discharge Requirements for the State of California, Department of Transportation order number 2012-0011-DWQ, NPDES No. CAS00003	The current NPDES General Construction Permit would be applied prior to construction.
U.S. Department of Fish and Wildlife Service	Section 7 Consultation: Biological Opinion (desert tortoise)	USFWS concurred with a determination that the Project “may affect but is not likely to adversely affect” either the desert tortoise or the critical habitat of the desert tortoise.

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Chapter 1 – Proposed Project

Introduction

The County of San Bernardino (County), in cooperation with the California Department of Transportation (Caltrans), proposes to replace ten (10) existing timber trestle bridges along National Trails Highway, located mostly between Amboy Road and Kelbaker Road near the community of Amboy in San Bernardino County (**Figure 1. Project Vicinity, Figure 2. Project Location**, **Figure 3. Project Features**). The proposed Project is listed in the Southern California Association of Governments (SCAG) financially constrained 2020-2045 Connect Socal Transportation Plan/Sustainable Communities Strategy (MTP/SCS) (SCAG 2020). The Project is also included in the SCAG financially constrained 2019 Financial Transportation Improvement Program (FTIP) (SCAG 2018).

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

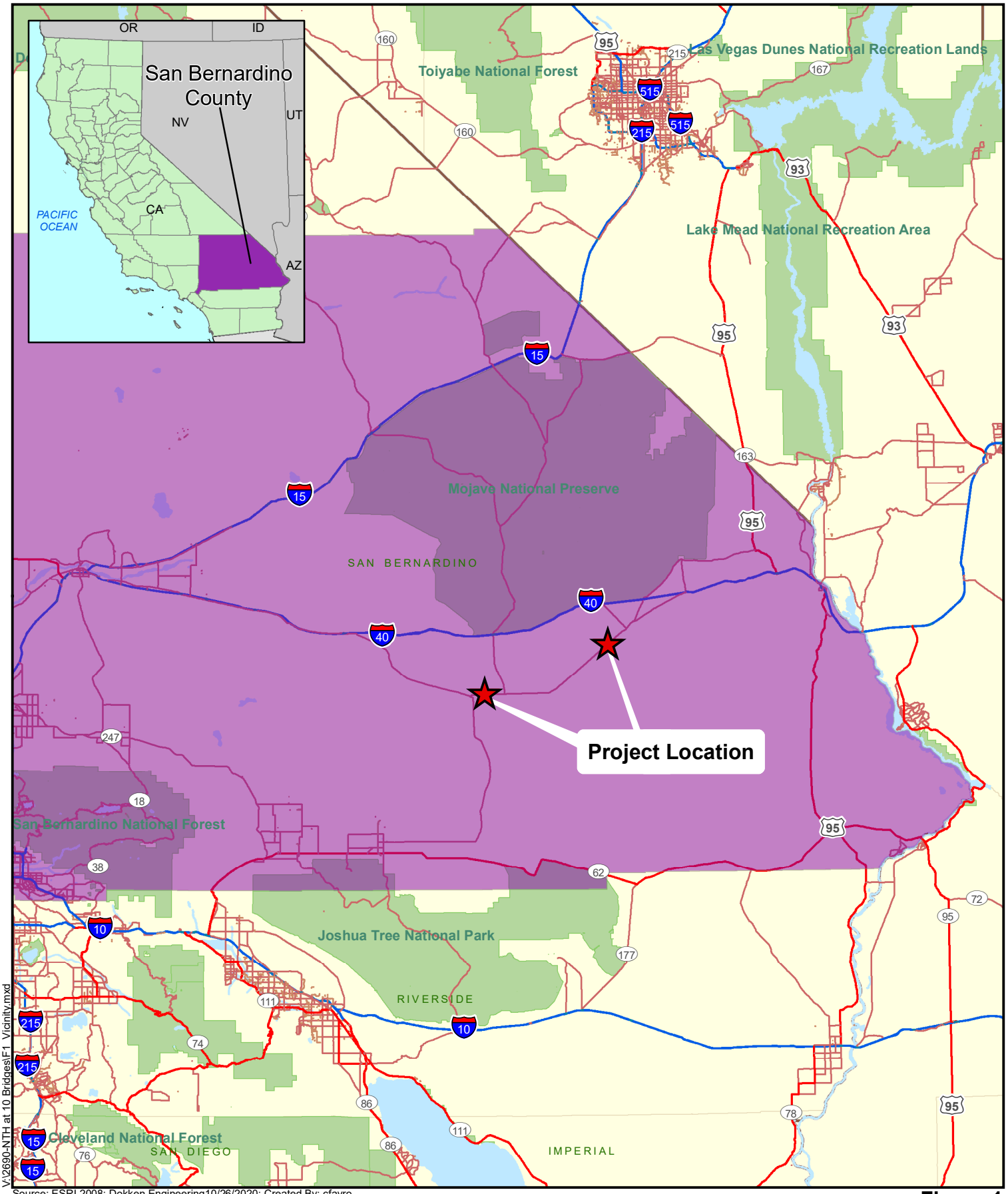
Existing Facility

In San Bernardino County, National Trails Highway, also known as U.S. Route 66, is a two-lane east-west roadway that originates from East Main Street east of the City of Barstow and continues east until it terminates at the Mountain Springs Road/I-50 entrance near the California/Arizona state line. This reach of National Trails Highway includes 128 timber bridges, 10 of which are proposed to be replaced by the proposed Project.

Project Limits

The Project area includes the 10 bridge locations which are discontinuous, each of which varies in size and shape. The Project area is generally limited to the County ROW and a 400-foot-wide area at some sites to allow room for bridge replacement and temporary parallel road realignment at each bridge site (where needed) required to accommodate through traffic during construction. A summary of the existing 10 bridges including their length, width, spans and locations is listed below.

Bridge Name	Bridge Number	Existing Bridge Length	Existing Bridge Width	Location
Bristol Ditch	54C0272	40 feet	28 feet	26.7 miles east of Crucero Rd
Cerro Ditch	54C0275	40 feet	28 feet	1.3 miles east of Amboy Rd
Gordo Ditch	54C0276	40 feet	28 feet	1.8 miles east of Amboy Rd
Cerulia Ditch	54C0277	40 feet	28 feet	2.2 miles east of Amboy Rd
Leith Ditch	54C0279	40 feet	28 feet	3.1 miles east of Amboy Rd
Terra Ditch	54C0280	40 feet	28 feet	3.6 miles east of Amboy Rd
Sombra Ditch	54C0281	78 feet	28 feet	4.1 miles east of Amboy Rd
Beacon Ditch	54C0282	40 feet	28 feet	6.2 miles east of Amboy Rd
Larissa Ditch	54C0284	40 feet	27 feet	1.1 miles east of Kelbaker Rd
Adena Ditch	54C0315	59 feet	28 feet	21.9 miles east of Kelbaker Rd



Source: ESRI 2008; Dokken Engineering10/26/2020; Created By: cfavro

0 10 20 30 Miles

Figure 1
Project Vicinity
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

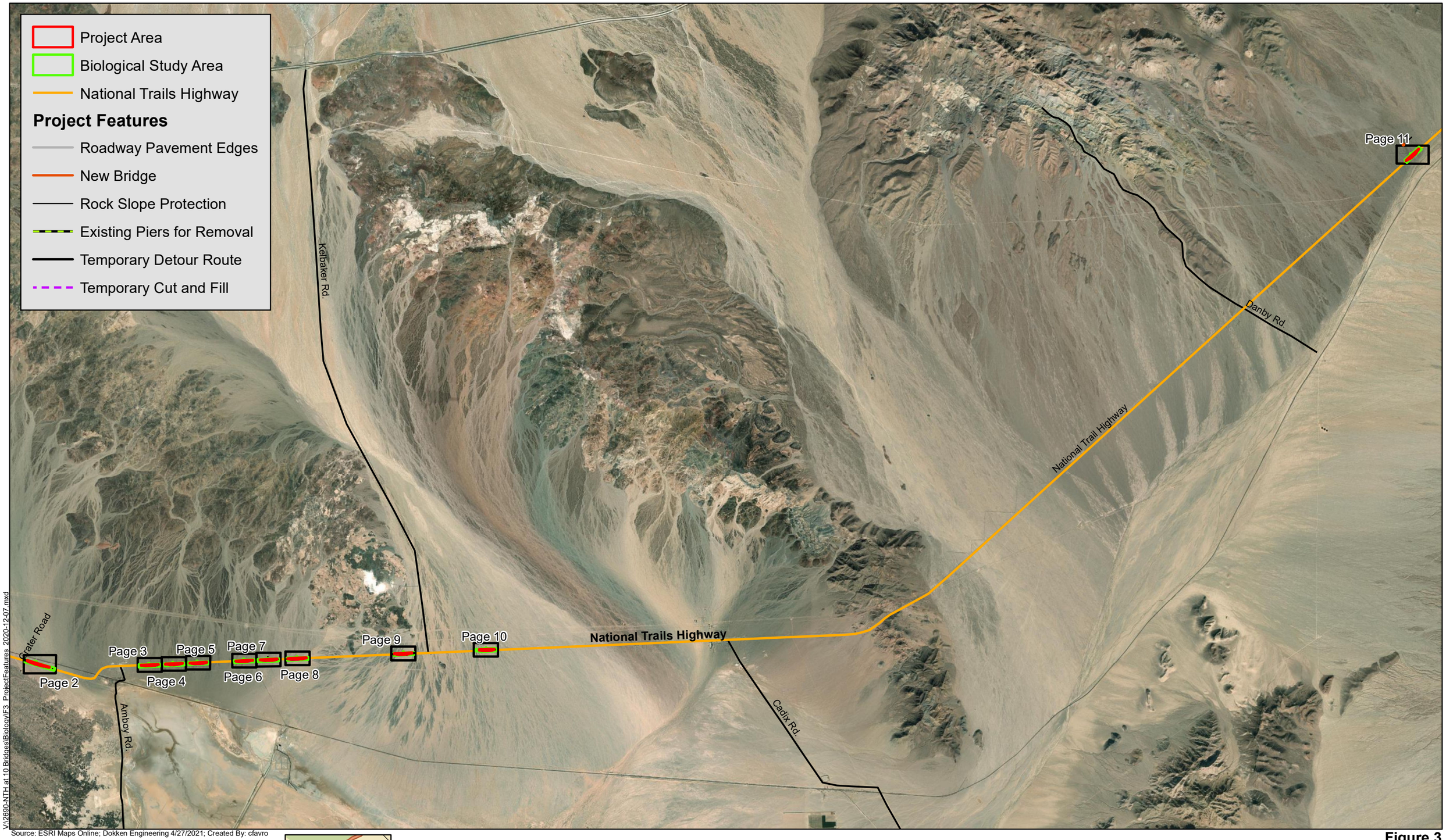


v:\1836_11thStBridge\Cultural\F2_Loc_10-12-10.mxd

Source: ESRI World Street Maps Online; Dokken Engineering 10/26/2020; Created By: cfavro

0 2.5 5 7.5 10
Miles

Figure 2
Project Location
National Trails Highway 10 Bridges Project
BRLS-5954 (142,147,149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\Biology\F3_ProjectFeatures_2020-12-07.mxd

Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

1 inch = 8,750 feet

0 5,000 10,000 15,000 20,000 Feet

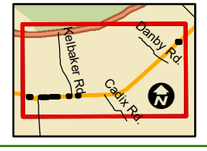


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Project Features - All 10 Bridges
National Trails Highway 10 Bridges Project
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San Bernardino County, California



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Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

1 inch = 200 feet

0 100 200 300 400 Feet

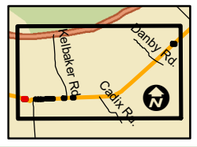
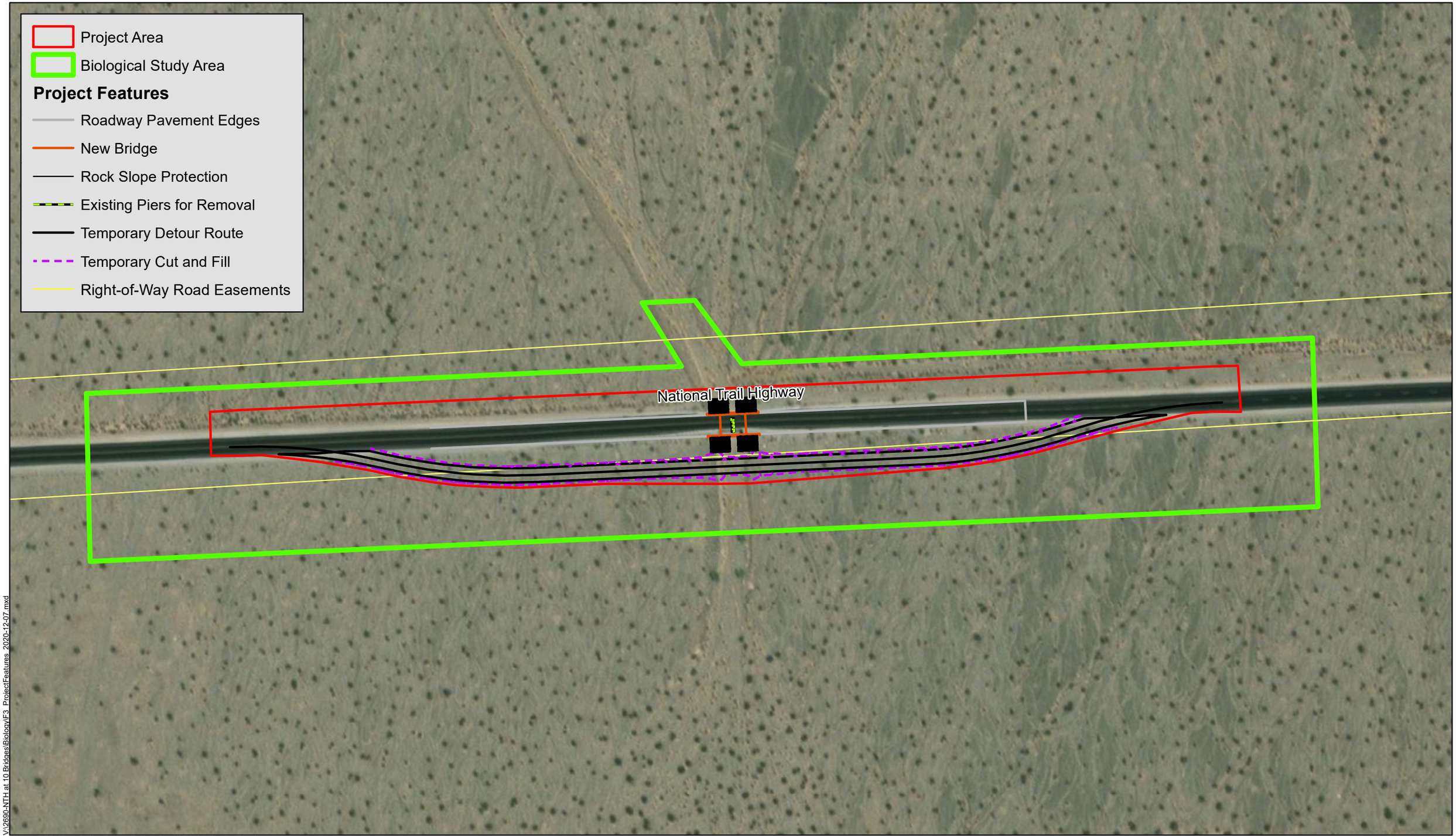


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Project Features - Bristol Ditch (54C0272)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\Biology\F3_ProjectFeatures_2020-12-07.mxd

Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

1 inch = 150 feet

0 100 200 300 400 Feet

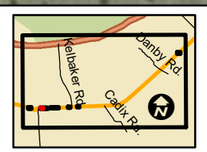


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Project Features - Cerro Ditch (54C0275)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area
Biological Study Area

Project Features

Roadway Pavement Edges
New Bridge
Rock Slope Protection
Existing Piers for Removal
Temporary Detour Route
Temporary Cut and Fill
Right-of-Way Road Easements

National Trail Highway

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Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

1 inch = 150 feet

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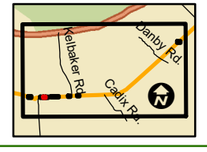


Figure 3
Page 4 of 11
Project Features - Gordo Ditch (54C0276)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



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Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

1 inch = 150 feet

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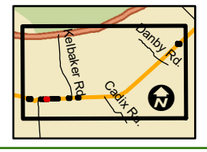


Figure 3
Page 5 of 11
Project Features - Cerulia Ditch (54C0277)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area
Biological Study Area

Project Features

Roadway Pavement Edges
New Bridge
Rock Slope Protection
Existing Piers for Removal
Temporary Detour Route
Temporary Cut and Fill
Right-of-Way Road Easements

National Trail Highway

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Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

1 inch = 150 feet

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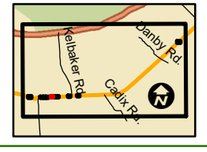
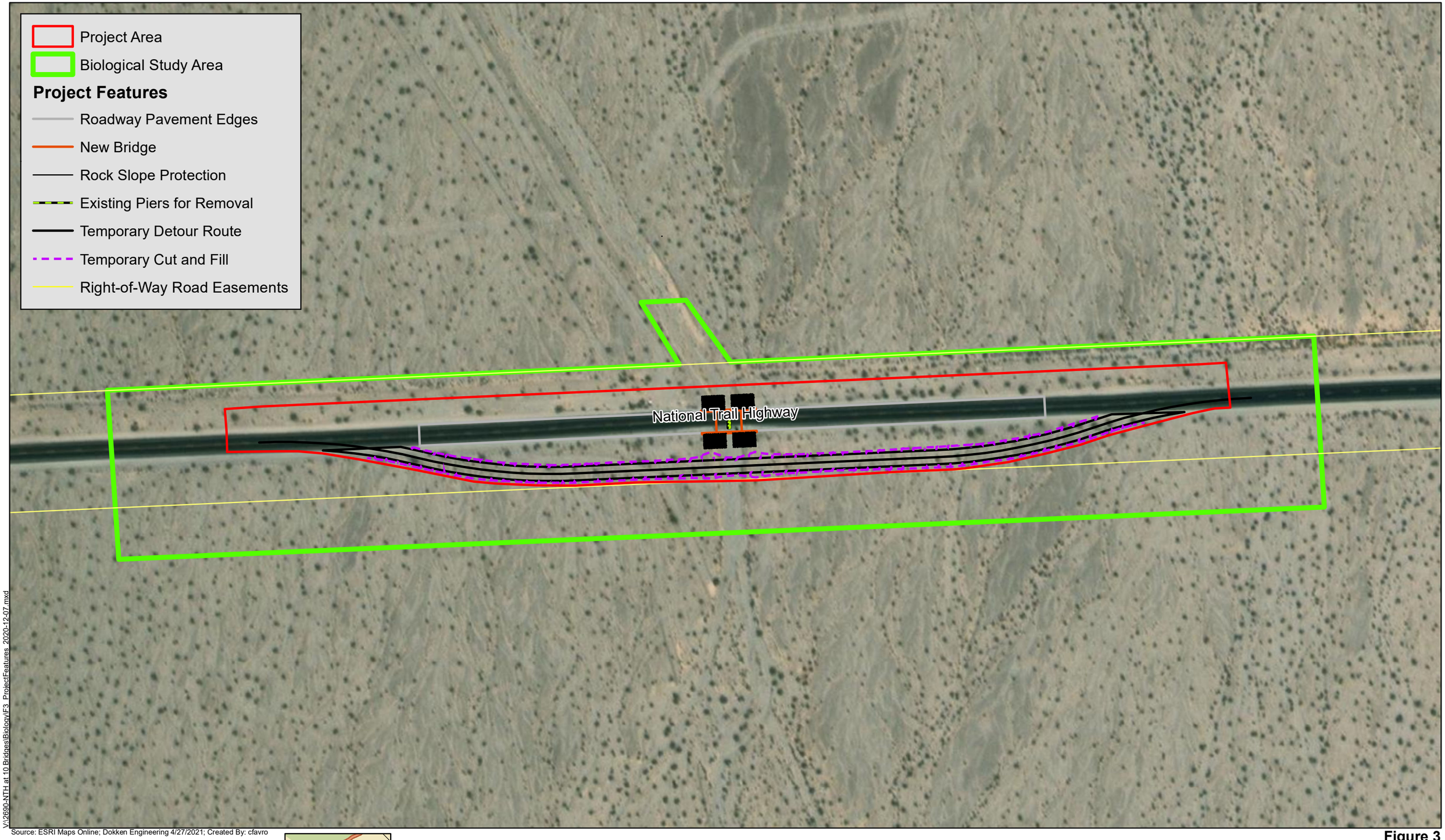


Figure 3
Page 6 of 11
Project Features - Leith Ditch (54C0279)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



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Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

1 inch = 150 feet

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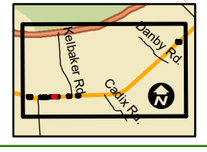


Figure 3
Page 7 of 11
Project Features - Terra Ditch (54C0280)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area
Biological Study Area

Project Features

Roadway Pavement Edges
New Bridge
Rock Slope Protection
Existing Piers for Removal
Temporary Detour Route
Temporary Cut and Fill
Right-of-Way Road Easements

National Trail Highway

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Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

1 inch = 150 feet

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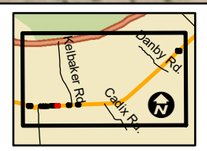


Figure 3
Page 8 of 11
Project Features - Sombra Ditch (54C0281)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area
Biological Study Area

Project Features

Roadway Pavement Edges
New Bridge
Rock Slope Protection
Existing Piers for Removal
Temporary Detour Route
Temporary Cut and Fill
Right-of-Way Road Easements

National Trail Highway

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Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

1 inch = 150 feet

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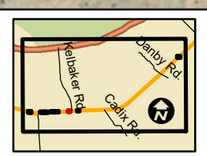


Figure 3
Page 9 of 11
Project Features - Beacon Ditch (54C0282)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



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Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

1 inch = 150 feet

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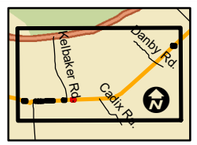


Figure 3
Page 10 of 11
Project Features - Larissa Ditch (54C0284)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area
Biological Study Area

Project Features

Roadway Pavement Edges
New Bridge
Rock Slope Protection
Existing Piers for Removal
Temporary Detour Route
Temporary Cut and Fill
Right-of-Way Road Easements

National Trails Highway

V:\2690-NTH at 10 Bridges\Biology\F3_ProjectFeatures_2020-12-07.mxd

Source: ESRI Maps Online; Dokken Engineering 4/27/2021; Created By: cfavro

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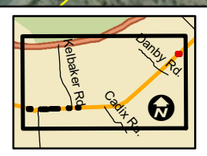


Figure 3
Page 11 of 11
Project Features - Adena Ditch (54C0315)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Purpose and Need

Project Purpose

The purpose of the National Trails Highway at 10 Bridge Replacement Project is to replace structurally deficient bridges in order to:

- Enhance safety on National Trails Highway by providing new vehicular crossings for 10 bridges;
- Provide a transportation facility consistent with County and Caltrans Standards, as well as local and regional plans.

Project Need

The existing National Trails Highway Bridges are rated “Structurally Deficient” by Caltrans under Federal Highway Administration prescribed inspection criteria. All ten existing bridges have sufficiency ratings from 22.2 to 61.2. All but Bristol Ditch have a sufficiency rating below 50. Full replacement of the bridges is needed because the current structures do not meet structural design standards.

Independent Utility and Logical Termini

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

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope.

2. Have independent utility or independent significance (be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made).

3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Logical termini means that the Project has (1) rational end points for a transportation improvement, and (2) rational end points for a review of the environmental impacts. The proposed Project would address the structural deficiencies of the existing ten bridges. These deficiencies are only found within the bridge structures. As the existing ten bridges would be replaced along the same alignment , the beginning and end points of each replacement structure would be the same if not very close to that of the existing bridges.

Independent utility means the Project will function properly without requiring additional transportation improvements elsewhere. The proposed Project is a stand-alone project intended to improve the safety of bridges along National Trails Highway. The Project will not require future construction to fully utilize the design capabilities of the proposed Project. Once completed, the roadway will be fully operational, and no further construction will be required. The replacement bridges will meet the safety needs of the County of San Bernardino and Caltrans. This environmental document studies the entire Project area. If the Build Alternative is selected, the improvements would create a useable facility even if no other transportation improvements are made. The Build Alternative has independent utility because the proposed Project fully addresses the purpose and need, and is sufficient to ensure that no additional investment would be required following project completion. The proposed Project would also not restrict the consideration of alternatives for other reasonably foreseeable transportation improvements. Based on the

aforementioned, and pursuant to 23 CFR 771.11(f), this Project has independent utility and logical termini.

A problem of "segmentation" may also occur where a transportation need extends throughout an entire corridor, but environmental issues and transportation needs are inappropriately discussed for only a segment of the corridor. As indicated above, the EIR/EA appropriately addresses the environmental issues and transportation needs of the entire proposed corridor; therefore, segmentation of the analysis of issues and needs has not occurred in this document.

Project Description

The County, in coordination with Caltrans, is proposing to replace 10 bridges on the NTH, also known as U.S. Route 66. The Project is located in the unincorporated communities of Amboy and Essex in the County of San Bernardino. A summary of the existing 10 bridges including their length, width, spans, and locations is listed below.

Bridge Name	Bridge Number	Existing Bridge Length	Existing Bridge Width	Original Number of Spans (Current Spans)	Location
Bristol Ditch	54C0272	40 feet	28 feet	2(2)	26.7 miles east of Crucero Rd
Cerro Ditch	54C0275	40 feet	28 feet	2(4)	1.3 miles east of Amboy Rd
Gordo Ditch	54C0276	40 feet	28 feet	2(4)	1.8 miles east of Amboy Rd
Cerulia Ditch	54C0277	40 feet	28 feet	2(4)	2.2 miles east of Amboy Rd
Leith Ditch	54C0279	40 feet	28 feet	2(4)	3.1 miles east of Amboy Rd
Terra Ditch	54C0280	40 feet	28 feet	2(4)	3.6 miles east of Amboy Rd
Sombra Ditch	54C0281	78 feet	28 feet	4(8)	4.1 miles east of Amboy Rd
Beacon Ditch	54C0282	40 feet	28 feet	2(4)	6.2 miles east of Amboy Rd
Larissa Ditch	54C0284	40 feet	27 feet	2(4)	1.1 miles east of Kelbaker Rd
Adena Ditch	54C0315	59 feet	28 feet	3(3)	21.9 miles east of Kelbaker Rd

The existing bridges were constructed in 1930 with simple timber girders and a continuous cast-in-place/reinforced concrete deck. The bridges span over various manmade ditches that were created to channel surface drainage flows. The bridges are supported on closed-end backfilled timber pile extension strutted abutments and timber pile extension bents. They now have asphalt overlays. At Cerro, Gordo, Cerulia, Leith, Terra, Sombra, Beacon and Larissa supplemental timber bents and columns were installed at the midspan doubling the number of supports and spans at these bridges. All ten existing bridges are classified Structurally Deficient and have sufficiency ratings from 22.2 to 61.2. All but Bristol Ditch Bridge has a sufficiency rating below 50.

Project Alternatives

Two alternatives are being considered for this Project - the Build Alternative and the No-Build Alternative.

Build Alternative (Build Alternative 1)

The existing bridges are proposed to be replaced with reinforced concrete bridges. The existing soil is sandy and susceptible to scour, so pile extensions would be utilized at the piers and the abutment foundation would be supported on piles. The bridge barrier would be either steel California ST-75 Bridge Rail or Concrete Barrier Type 85, painted white, which are both Manual for Assessing Safety Hardware (MASH) approved, and which best match the original railing. The bridge lengths would match the existing lengths, if possible, but would be lengthened as needed to convey the storm flows. The width of each replacement bridge would be 34 feet to accommodate two 11-foot lanes, two 4-foot shoulders and the two 2-foot railings. The vertical profile of the bridges will remain close to the existing profile except for those bridges locations in which it is determined that additional vertical clearance is required to provide sufficient water conveyance beneath the bridge. It is anticipated that any such necessary changes in vertical profiles would be 2 feet or less, with the elevation gradually conforming to the existing roadway elevations.

The National Trails Highway alignment would remain unchanged; however, approach road work, up to 800 feet, on either side of each bridge may be needed to conform to the vertical profile of the existing roadway. Grading along the approaches and around the bridges may be needed to ensure storm conveyance and drainage of the area.

A temporary, parallel road realignment, also referred to as a “shoo-fly detour”, would be constructed at each bridge location to accommodate through-traffic during construction. Construction of each bridge replacement is expected to be completed in one season, limiting the time the shoo-fly detour would be in place to one season as well.

Permanent acquisition of right-of-way is not anticipated to be needed; however, temporary construction easements may be needed to accommodate construction of the temporary detour lanes.

The existing utilities include a fiber optic telecommunication line which may require relocation as part of this Project. All utility relocations would be included within the defined limits of the Project area.

Typical equipment for roadway construction would include heavy construction earthmoving equipment, dump trucks and pavers. Typical bridge construction equipment would include cranes, pile drivers, excavators, and concrete pumps.

Transportation System Management (TSM) and Transportation Demand Management (TDM) Alternatives

Transportation System Management (TSM) strategies increase the efficiency of existing facilities primarily to reduce emissions by reducing congestion. Transportation Demand Management (TDM) focuses on regional means of reducing the number of vehicle trips and vehicle miles traveled, as well as increasing vehicle occupancy.

Although no specific TSM features are included as part of the Project, the overall Project serves a transportation system management purpose by providing safer operation of NTH within the

limits; therefore, the Project is considered consistent with TSM goals and will support the continued safe and prolonged operation of NTH at each of the bridge locations.

Reversible Lanes

Assembly Bill 2545 amended California Streets and Highways Code to require, effective January 1, 2017, that Caltrans or a regional transportation planning agency demonstrate that reversible lanes were considered when submitting a capacity-increasing project or a major street or highway lane realignment project to the California Transportation Commission for approval (California Streets and Highway Code, Section 100.015)

The proposed Project is neither capacity-increasing nor a major realignment Project. Implementation of reversible lanes on any of the existing 10 bridges along National Trails Highway were not considered to be a viable alternative in lieu of replacement bridges, as they would not meet the Project's purpose of providing transportation facilities that meet County and Caltrans structural design standards.

No-Build (No-Action) Alternative

Under the No-Build alternative, the existing NTH bridges would not be replaced. The existing NTH bridges would continue to be rated "Structurally Deficient" by Caltrans under Federal Highway Administration prescribed inspection criteria. Failure of the bridges would likely occur. Therefore, under the No-Build alternative, the NTH bridges will be inconsistent with Countywide goals and policies outlined in the Circulation and Infrastructure Element in the 2007 County of San Bernardino General Plan.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION

The existing bridges were constructed in 1930 with timber girders and a continuous cast-in-place/reinforced concrete deck. They are supported on closed-end backfilled timber pile extension strutted abutments and timber pile extension bents. They now have asphalt overlays. At Cerro, Gordo, Cerulia, Leith, Terra, Sombra, Beacon, and Larissa, supplemental timber bents and columns were installed at the midspan to support the deteriorating bridges.

Several bridge types, materials, spans, profiles, and lengths were considered at the various locations. Factors such as structure life span, environmental impacts, future maintenance needs and expense, hydraulics, impacts to the public, and cost were considered when evaluating alternatives and determining the final proposed alternative. If these alternatives were selected for further evaluation, they would result in excessive costs and potential increase in the magnitude of environmental impacts to biological resources associated with the criteria listed above; therefore, these alternatives were eliminated from further consideration.

Build Alternative 2: Improved Water Flow Conveyance - Lengthening the Bridges or Increasing the Vertical Profile

At two locations, Bristol Ditch Bridge and Sombra Ditch Bridge, the existing bridge lengths and vertical clearances were not sufficient to convey the required water flow without overtopping the bridge. At the other Project locations, the existing bridge lengths and vertical clearances were adequate to convey the water flow with only minimal changes to the vertical road/bridge profile to improve the design speed.

The options to create a structure which allowed for sufficient water flow to occur were to either construct a longer spanning bridge, which would create more horizontal clearance for the water to flow beneath the bridge, or to maintain the existing lengths but raise the profile of the bridge

over 2 feet to provide more vertical clearance. Extending the bridges to a sufficient length to allow for complete water flow capacity would result in a larger environmental footprint than Build Alternative 1, which would result in more impacts to sensitive biological resources. Increasing the vertical profile to allow for complete water flow capacity would result in a noticeable visible change to those driving along the NTH. This visual change could be considered an adverse impact/effect to the National Old Trails Road/Route 66 (CA-SBR-2910H), which is considered eligible for listing on the National Register of Historic Places (NRHP). Further, both options would result in higher Project costs than Build Alternative 1.

A balanced approach of limiting the increase in the vertical bridge profile to 2 feet and lengthening the bridge as needed to convey the water flow was used as Build Alternative 1 to minimize impacts to sensitive biological habitats and cultural resources, and to prevent excessive Project cost. For these reasons, Build Alternative 2 was not pursued and is considered eliminated from further consideration.

Build Alternative 3: Timber or Precast Bridge Structure Types

Several structure types were considered to replace the bridges, other than the cast-in-place concrete structure included in Build Alternative 1:

Timber Structures – Replacing the bridges with similar timber bridges was considered to maintain the visual character of the overall NATIONAL OLD TRAILS ROAD/ROUTE 66 (CA-SBR-2910H), which is eligible for the NRHP. Additionally, the initial cost to replace the structures with timber is less than utilizing concrete bridges. However, two recent bridge replacements which utilized timber replacement bridges have since developed issues with cracking in the timbers, requiring substantial repair and anticipated on-going regular inspections to ensure further degradation does not jeopardize the structure. As a result, utilizing timber bridges as replacement structures for the Project would require more repair and maintenance than is expected for a new structure. Such frequent maintenance would also result in more frequent impacts to sensitive biological habitats due to encroachment by construction equipment into sensitive biological habitats ~~desert tortoise habitat~~. Finally, timber superstructures would require more supports in the ditches/channels than other structure types, which would also result in additional permanent impacts to sensitive biological resources, and allow for more channel obstructions, hence reducing the flow conveyance of the channel. Due to the shorter anticipated life span, unreliable nature of timber, the associated maintenance issues, environmental impacts, and hydrological impacts, use of timber replacement structures were eliminated from further consideration as a viable design option.

Precast Concrete Structures – Precast concrete structures have similar advantages to cast-in-place concrete structures. They have longer life span, minimal maintenance required, and are able to span longer distances. However precast concrete structures are more expensive than cast-in-place. For this reason, use of precast concrete structures was eliminated from further consideration as a viable design option.

As the cast-in-place concrete structures included in Build Alternative 1 have a long life span, minimize the need to install new additional piers in the ditches/channel, reduce overall Project costs, minimize environmental impacts, and improve water conveyance beneath the bridges, the structure types considered in Build Alternative 3 were not pursued and therefore it is considered eliminated from further consideration.

Build Alternative 4: Bridge Location

Build Alternative 1 maintains the existing bridge location and provides for a temporary parallel road realignment, also referred to as a “shoo-fly detour”, to allow local traffic access through the

Project area. Build Alternative 4 considered different options for placement of the replacement bridge. Options included maintaining the existing bridges in place during construction to maintain through traffic and constructing the replacement bridge and roadway approach immediately adjacent; or full closure of the road during construction to allow for construction of the replacement bridge in the same location.

Implementing the first option would result in a permanent shift in the road introduced in an otherwise straight alignment. This would also require a new roadway approach be built to connect the replacement bridge with the existing roadway. Such proposed work would result in a larger environmental impact footprint than Build Alternative 1, which would impact sensitive biological resources and significant cultural resources, including potentially an adverse impact/effect to the entire National Old Trails Road/Route 66 (CA-SBR-2910H), which is considered eligible for listing on the NRHP. It would also require additional costs than Build Alternative 1.

The second option requires either a 73-mile paved temporary detour or a 7-mile unpaved temporary detour using existing roads which would also need improvements to allow for heavy trucks. These lengthy detours would result in a much larger environmental impact footprint, i.e. greater impacts to sensitive biological resources and significant cultural resources than Build Alternative 1. Further, both options would have higher Project costs than Build Alternative 1. For these reasons, Build Alternative 4 is considered eliminated from further consideration.

Permits and Approvals Needed

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

Agency	PLAC	Status
California Department of Fish and Wildlife (CDFW)	1602 Streambed Alteration Agreement	Will be obtained after approval of the final Environmental Document and prior to construction.
Colorado River Regional Water Quality Control Board	Waste Discharge Requirements (WDRs)	Will be obtained after approval of the final environmental document and prior to construction.
State Historic Preservation Office	Memorandum of Agreement (MOA)	MOA execution expected following circulation of the draft environmental document.
State Water Resources Control Board (SWRCB)	National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waste Discharge Requirements for the State of California, Department of Transportation order number 2012-0011-DWQ, NPDES No. CAS00003	The current NPDES General Construction Permit would be applied prior to construction.
U.S. Department of Fish and Wildlife Service	Section 7 Consultation: Biological Opinion (desert tortoise)	USFWS concurred with a determination that the Project “may affect but is not likely to adversely affect” either the desert tortoise or the critical habitat of the desert tortoise.

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

TOPICS CONSIDERED BUT DETERMINED NOT TO BE RELEVANT

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

Land Use

The proposed bridge replacements are consistent with statewide, regional, and local mobility goals, and are being coordinated with impacted governmental, regulatory, and local agencies in the area to ensure consistency with applicable local goals and objectives. The Project would not change the land use designation nor result in any zoning changes.

While the proposed Project would occur on land owned by the U.S. Bureau of Land Management, the proposed bridge replacements would occur entirely within the County's right-of-way as granted by the Bureau of Land Management (BLM).

Consistency with State, Regional, and Local Plans and Programs

The Project is consistent with the 2007 County of San Bernardino General Plan, SCAG 2020-2045 Connect SoCal Transportation Plan/Sustainable Communities Strategy, and the SCAG 2019 Financial Transportation Improvement Program.

Coastal Zone

There will be no effects to coastal resources because the Project is not located within the coastal zone.

Wild and Scenic Rivers

The Project is located in southeast San Bernardino County, where there are no designated wild or scenic rivers according to mapping provided by the U.S. Fish and Wildlife Service's Wild and Scenic Rivers Act and National Wild and Scenic Rivers system database.

Farmlands

According to the California Department of Conservation – San Bernardino County Important Farmland 2006 overlay maps dated June 2007, there is no farmland present within the Project area.

Timberlands

There will be no effects to timberlands because no such resources occur within the Project area.

Growth

The Project would replace 10 existing bridges along NTH in San Bernardino County. It would not change accessibility, increase capacity with new or additional travel lanes, or influence growth. As such, no growth impacts or indirect impacts would occur.

Community Character and Cohesion

The Project would replace 10 existing bridges along NTH in San Bernardino County. The Project would not separate residences or divide neighborhoods or result in an increase or decrease to access to the area.

Relocations and Real Property Acquisition
The Project would replace 10 existing bridges along NTH in San Bernardino County. The Project would not result in relocations of residences or businesses.

Environmental Justice
As the Project involves the replacement of 10 existing bridges due to structural deficiency, minority or low-income populations are not anticipated to be adversely affected by the Project. 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.

Hydrology and Floodplains
The Project is located in Zone D, which is an area where there are possible but undetermined flood hazards due to flood hazard analysis not having been conducted in the area: therefore, the Project is not located within an identifiable 100-year floodplain or regulatory floodway. The hydraulic capacity of the watercourse underneath the bridges are anticipated to be improved as a result of the bridge replacements.

Water Quality and Storm Water Runoff
All construction activities will be contained within the existing roadway/right-of-way and will not impact any water resources within or immediately adjacent to the Project area.

Paleontology
A Paleontological Identification and Evaluation Report was prepared for the Project in June 2021. The report found the Project area to be underlain by alluvial fan sediments that typically do not yield fossils. Due to the arid nature of the region, the location of all bridges on alluvial fans, the lack of potential for burial, and observations during the field survey, all bridge replacement areas within the Project are assigned a low sensitivity for paleontological resources. If unanticipated discoveries of paleontological resources occur during construction, it is standard best management practice to halt all work within 50 feet of the discovery until the find has been evaluated by a qualified paleontologist. No paleontological mitigation is recommended.

Air Quality
The Project is exempt per 40 CFR 93.126 (Widening narrow pavements or reconstructing bridges [no additional travel lanes]). The Project would result in safety improvements at 10 existing bridges. The Project would not increase the capacity of the existing roadway or bridges or include the installation of traffic signals. No adverse impacts on air quality are expected.

Noise
While the Project will have a potential for construction-related noise impacts such as pile driving and noise impacts related to bridge replacement and road resurfacing, there are no residences or receptors in the immediate vicinity of the Project. Following construction, there would be no permanent increase in ambient noise levels.

Energy
The Project would use a minimal amount of energy during construction activities, such as excavation, road cut and fill, demolition, and other construction-related activities. Construction-related effects on energy would likely be greatest during the site preparation phase because of energy use associated with the excavation, handling, and transport of soils and construction debris to and from the site. However, these construction activities would be short-term in duration, and, therefore, would not result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction. During project operation, the Project would accommodate existing traffic demand, and would not create new traffic demand. As such, the operation of the

Project would not result in a wasteful, inefficient, or unnecessary consumption of energy resources.

Fisheries
This Project is located outside of the National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) jurisdiction; therefore, a NOAA Fisheries species list is not required and no effects to NOAA Fisheries species are anticipated.

Wildfire
The proposed Project is not located within or near a very high fire hazard severity zone identified by CAL FIRE. The proposed bridge replacements are within the desert region of San Bernardino County, where the fire hazard severity risk is Moderate.

2.1 Human Environment

PARKS AND RECREATIONAL FACILITIES

Regulatory Setting

The Park Preservation Act (California Public Resources Code [PRC] Sections 5400-5409) prohibits local and state agencies from acquiring any property which is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

Affected Environment

There are no public parks or recreational facilities within 0.5 miles of any of the Project sites.

Section 4(f) Resources

The following historic properties were identified in the APE: the National Old Trails Road/Route 66 (CA-SBR-2910H) alignment between Daggett and Mountain Springs Road, the Adena Ditch Bridge (character defining feature to the National Old Trails Road/Route 66 [CA-SBR-2910H]), concrete boundary markers called “C-Markers” (character defining feature to the National Old Trails Road/Route 66 [CA-SBR-2910H]), Late 1950s Paddleboards (character defining feature to the National Old Trails Road/Route 66 [CA-SBR-2910H]), and the Desert Training Center and California – Arizona Maneuver Area. These resources are considered Section 4(f) historic resources and are not considered recreational facilities. They are discussed in greater detail in Appendix A - Section 4(f) Analysis, and in Chapter 2.1 Cultural Resources of this document.

There are no known Section 4(f) publicly-owned public parks or recreation areas located within or immediately adjacent to the proposed construction area; therefore, the California Public Park Preservation Act of 1971 would not apply.

Environmental Consequences

There are no public parks or recreational facilities within 0.5 miles of any of the Project sites; therefore, there are no Project impacts.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization and/or mitigation measures are proposed at this time.

UTILITIES/EMERGENCY SERVICES

Affected Environment

An existing buried fiber optic line is potentially within the limits of the proposed structures. No other known utility systems, including water, sewer or electric power are known to occur in the Project area.

Law enforcement, fire protection, and emergency medical response services for unincorporated San Bernardino County in the Project area are provided by the San Bernardino County Sherriff's Department and the County of San Bernardino Fire Department (South Desert Division).

Environmental Consequences

Temporary

Utilities/Emergency Services Impact #1: Utility Relocation

If, through coordination with affected utility companies via Utility "A" letters, it is found that conflicts to the existing buried fiber optic line within the Project area is unavoidable, the County will coordinate with the utility companies as needed prior to bridge construction. The existing fiber optic line will then be relocated and attached to the new bridges by the utility purveyors. Temporary disruption to utilities related to the buried fiber optic line may occur during the relocation.

Utilities/Emergency Services Impact #2: Emergency Services

During construction, emergency service access will be temporarily diverted around the existing bridges by a temporary parallel road realignment, also referred to as a "shoo-fly detour", that would carry traffic around the construction area. Each bridge replacement is anticipated to be completed in one construction season (approximately 100 working days); therefore, the temporary detour would be in place for approximately one season at each bridge replacement.

A Traffic Management Plan (TMP) will be developed in accordance with Caltrans' standards and procedures to ensure impacts to emergency response services remain minimal. While construction is anticipated to occur during the driest times of the year, there remains a risk for flash-flooding during the summer monsoon events. Flash-flooding may result in temporary delays in the Project area as the shoo-fly detours provide at-grade, or near at-grade, low water crossings, which might be temporarily inundated during such storm events. The TMP will provide protocols on how and when to implement alerts and redirect traffic to minimize further traffic delay during any flash-flood forecasts and events. The TMP as described in Measure **TRA-1** is discussed under Traffic and Transportation/Pedestrian and Bicycle Facilities.

Permanent

Utilities/Emergency Services Impact #3: Utility Services

No permanent impacts to existing utility services would occur as a result of the 10 proposed bridge replacements. All existing utility services would continue to provide service even if a utility relocation would occur.

Utilities/Emergency Services Impact #4: Emergency Services

No permanent impacts to emergency service access would occur as a result of the 10 proposed bridge replacements. The alignment of the NTH would remain the same and there would be no impact to emergency response times upon completion of the bridge replacements.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization and/or mitigation measures are proposed at this time.

TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

Affected Environment

Existing Facilities

The NTH, also known as U.S. Route 66 or the National Old Trails Road, is a two-lane east-west roadway that originates from East Main Street east of the City of Barstow and continues east until it terminates at the Mountain Springs Road/I-40 entrance near the California/Arizona state line. This reach of NTH includes 128 timber bridges, 10 of which are proposed to be replaced by the proposed Project. There are no existing pedestrian and/or bicycle facilities within the Project area.

Environmental Consequences

Temporary

Traffic and Transportation Services Impact #1: Temporary Construction Detours

During construction, traffic will be temporarily diverted around the existing bridges by a temporary parallel road realignment, also referred to as a "shoo-fly detour", that would carry traffic around the construction area. Each bridge replacement is anticipated to be completed in one construction season (approximately 100 working days); therefore, the temporary detour would be in place for approximately one season at each bridge replacement.

A Traffic Management Plan (TMP) will be developed in accordance with Caltrans' standards and procedures to ensure impacts to emergency response services remain minimal. While construction is anticipated to occur during the driest times of the year, there remains a risk for flash-flooding during the summer monsoon events. Flash-flooding may result in temporary delays in the Project area as the shoo-fly detours provide at-grade, or near at-grade, low water crossings, which might be temporarily inundated during such storm events. The TMP will provide protocols on how and when to implement alerts and redirect traffic to minimize further traffic delay during any flash-flood forecasts and events. Implementation of Measure **TRA-1** will ensure that a TMP will be developed in accordance with Caltrans' standards and procedures to ensure impacts to emergency response services and other traffic remain minimal.

Permanent

Traffic and Transportation Services Impact #2: Traffic and Circulation

As the Project is intended to enhance safety and does not propose additional travel lanes, the Project would have no permanent impacts on travel times, peak-hour level of service (LOS) performance, or vehicle-miles-travelled (VMT) on roadways or intersections in the Project vicinity. There would be no increase of traffic volume between the design-year build and no-build alternatives. No additional increase in traffic volume from the existing and the design-year build alternative would result specifically from the Project.

Without the proposed Project, the existing 10 bridges would continue to remain structurally deficient. Failure of any of the existing bridges could result in significant disruption of traffic circulation and reduction of LOS.

Traffic and Transportation Services Impact #3: Bicycle and Pedestrian Facilities

There are no existing pedestrian and/or bicycle facilities within the Project area, and no new pedestrian bicycle facilities are proposed. There would be no impact to bicycle and/or pedestrian facilities.

Avoidance, Minimization, and/or Mitigation Measures

The following mitigation measure will be implemented:

TRA-1: A Traffic Management Plan would be prepared prior to construction and be implemented during construction of the Project to reduce disruption of traffic patterns. Public information and awareness campaigns, motorist information strategies, and incident management strategies would alert the public of the temporary construction shoo-fly detours and the Project.

VISUAL/AESTHETICS

Regulatory Setting

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

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

California Streets and Highways Code Section 92.3 directs Caltrans to use drought resistant landscaping and recycled water when feasible and incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

County of San Bernardino Light Trespass Ordinance

Chapter 83.07 of the County of San Bernardino Development Code sets forth standards that prohibit light pollution and light trespass. These standards ensure health and safety and ensure compliances with the California Green Building Standards Code (CALGreen) and enhance the quality of life by minimizing intrusive light. The ordinance includes definitions, establishes requirements for the Valley, Mountain, and Desert regions of the County, and sets forth enforcement and penalties for violations.

Outdoor lighting fixtures on facilities or lands owned operated or controlled by the United States Government are exempt from the requirements of this ordinance.

Construction or emergency lighting, provided such lighting is temporary, necessary, and is discontinued immediately upon completion of the construction work or termination of the emergency, are also exempt from the requirements of this ordinance.

Affected Environment

A Questionnaire to Determine Visual Impact Assessment (VIA) level was completed on February 19, 2020 for the Project to determine the visual impacts of the Project on visual and scenic resources. The Project received a score of 10 out of a total of 30 possible points, which indicates that the Project would not result in noticeable visual changes, and that a fully developed Visual Impact Assessment with photograph simulations is not recommended.

Existing Visual Character

The Project area is located in the Desert Region of San Bernardino County. The visual character of the Desert Region is defined by its arid landscape, consisting of sparsely vegetated mountain ranges and broad valleys with expansive bajadas and scattered dry lakes. The region provides a scope of extensive open space and expansive vistas.

Viewer groups affected by the visual surroundings include nearby residents and motorists on the NTH. Viewer response in the Project area is primarily concerned with the preservation of scenic views from the desert communities and from the NTH itself. The raised roadbed of the NTH allows

for views of the surrounding desert landscape and of the timber wingwalls or abutments at many bridge locations.

State Scenic Highway Designation

The Project site does not contain officially designated State Scenic Highways (Caltrans 2020). The nearest eligible State Scenic Highway is approximately 10 miles north along Route 40, also known as Needles Freeway.

National Scenic Byway Designation

The entire stretch of the NTH on which the 10 existing bridges are within has been designated a National Scenic Byway by the United States Department of Transportation.

Within this scenic byway, the defining visual aspect features of the roadway include:

- NTH alignment, including the 10 proposed bridge replacement sites;
- Historic metal milepost markers, referred to here as Late 1950s Paddleboards, at the Bristol Ditch, Cerulia Ditch, Leith Ditch, and Terra Ditch;
- C-Markers marking the edge of ROW at the Cerro Ditch, Gordo Ditch, Cerulia Ditch, Terra Ditch, Larissa Ditch, and Adena Ditch;
- System of ditches and dikes (water control features); and
- Desert landscape.

Environmental Consequences

Temporary

Visual/Aesthetics Impact #1: Temporary Visual Obstructions during Construction

Temporary visual impacts could result from detour signage, equipment storage, and night-time construction that would require additional lighting. These construction activities may temporarily obscure views. Construction of the proposed improvements is expected to start in 2024 and last approximately 24 months. Motorists would be exposed to temporary signage and lighting very briefly as they travel through the temporary shoo-fly detour, that would carry traffic around the construction area. Furthermore, during construction, the Late 1950s and C-Markers will be temporarily removed from each bridge site (where they occur) (**CUL-3b**) to be protected until the end of construction, which would also result in a minor temporary visual impact.

Permanent

Visual/Aesthetics Impact #2: Visual Character

The existing raised roadbed of the NTH allows for views of the surrounding desert landscape. Throughout the NTH, the proposed 10 bridge replacements would have minimal impact on surrounding views.

The bridge lengths would match the existing lengths if possible but would be lengthened as needed to convey storm flows. The width of each replacement bridge would be increased from

the existing 27-28 feet to 34 feet to accommodate two 11-foot lanes, two 4-foot shoulders and the two 2-foot railings. The vertical profile of the bridges will remain close to the existing profile except for those bridge locations that require additional vertical clearance to provide sufficient water conveyance, in which case it is anticipated the changes in vertical profiles would be 2 feet or less, with the elevation gradually conforming to the existing roadway elevations. The alignment would remain unchanged; however, approach roadway work, up to 800 feet, on either side of each bridge may be needed to conform to the existing roadway vertical profile. The ditch and dike system present at each bridge location would also be minimally modified to match the widened/lengthened bridge. These water control systems are ever changing in dimensions as they have been subject to continual modification and alteration since their inception. An additional, minimal modification would not constitute a significant or noticeable change to motorists.

The widening and slight vertical profile increase of each of the 10 replacement bridges would not substantially degrade or block valued desert landscape views for motorists or nearby residents. There would be minimal impact to the overall NTH resource. Therefore, there would be a low visual impact associated with the proposed Project.

Visual/Aesthetics Impact #3: Scenic Byway

In general, the 10 replacement bridges and railings will closely match what motorists and residents see today. The overall NTH feel, which includes the raised NTH roadway, presence of timber bridges with asphalt decks, Late 1950s Paddleboards, historic right-of-way boundary markers (C-Markers), a system of ditches and dikes, and the desert landscape will remain the same from the viewpoint of nearby residents. Motorists would have a relatively short window of viewing and time span spent along each bridge due to their rate of travelling speed (approximately 55 mph). Each of these components is viewed by motorists and discussed below.

NTH/Bridges

While the existing bridges are timber, the deck of each bridge is asphalt. As such, no component of the timber bridges is visible to motorists, with the exception of the timber wingwalls which are briefly visible at some bridge locations as motorists travel across the bridge. The demolition of the existing bridges will also result in the removal of the timber wingwalls; however, due to the rate of travelling speed (approximately 55 mph), the concrete replacement wingwalls will only be briefly visible to motorists and does not constitute a major visual change. The bridge railing on each new replacement bridge would be either steel California ST-75 Bridge Rail or Concrete Barrier Type 85, painted white, which are both Manual for Assessing Safety Hardware (MASH) approved and which best match the aesthetic of both the original and existing bridge railings.

As discussed above in Visual/Aesthetics Impact #2, the 10 proposed replacement bridges will be widened to accommodate two 11-foot lanes and two 4-foot shoulders, and the vertical profile will be up to 2 feet higher. To conform to the slightly widened bridges, the roadway approaches will taper from the existing roadway width to the slightly wider bridge width. This tapered transition will occur at each bridge location, up to 800 feet on either end of each bridge; however, the overall alignment of the NTH would remain the same and motorists would have a relatively short window of viewing of the bridges due to their rate of travelling speed (approximately 55 mph). As the NTH alignment would remain the same and as motorists would have a minimal view of the replacement bridge wingwalls, visual impacts to the bridge component of the NTH would be minimal. Please note that while the visual impact for motorists is considered minimal, a more in-depth discussion of the character defining features from a historic perspective is discussed in Chapter 2.1 Cultural Resources.

Late 1950s Historic Paddleboards

The Late 1950s historic paddleboards would be damaged or destroyed if left in place during construction, which would degrade the NTH viewshed. To avoid this, each Late 1950s Paddleboard in the Project area will be rehabilitated through implementation of measure **CUL-3b**. This will involve removing them prior to construction, storing them in protective materials in a secure location during construction, implementing paint rehabilitation to better match their original coloration, and reinstalling them following construction. Historic photographs and examples of Late 1950s Paddleboards found along the NTH that are in better condition will be utilized as the guide for coloration. Repainting would in no way damage or destroy the original metal Paddleboard but would restore the faded lettering/numbering as well as the base color. This rehabilitation and reinstallation would result in a positive visual impact to the historic paddleboards and the overall historic roadway. For a more detailed discussion regarding **CUL-3b**, please see Chapter 2.1.

C-Markers

If left in place, the C-Markers would be damaged or destroyed during construction, which would degrade the NTH viewshed for motorists. Implementation of **CUL-3b** will ensure that each C-Marker will be removed prior to construction, stored in protective materials during construction, and reinstalled following completion of construction, ensuring their preservation. Therefore, there would be no permanent visual impact to the C-Markers.

While various components of the NTH will be replaced, the overall NTH feel, which includes the raised NTH roadway, presence of bridges, Late 1950s Paddleboards, C-Markers, ditch/dike system, and the open desert landscape will remain the same from the viewpoint of motorists and nearby residents. While the timber components of the original bridges will be removed, the only view of timber components that motorists currently see are the wingwalls, which are only briefly visible as they pass across each bridge. The replacement concrete wingwalls will also only be briefly visible as motorists pass over the bridges, due to their rate of travelling speed (approximately 55 mph). As the elevated and straight NTH alignment would remain, the C-Markers will be preserved, the Late 1950s Paddleboards will be preserved/rehabilitated, the replacement railings will better match both the original and existing railings, the ditches/dikes would be minimally improved to match the lengthened bridges, and as the open desert landscape would remain unobscured, visual impacts to the overall NTH would be minimal through implementation of **CUL-3b**; therefore, there would there would be a low visual impact associated with the proposed Project.

Avoidance, Minimization, and/or Mitigation Measures

Mitigation measures to avoid, minimize, and/or mitigate adverse effects to the NTH and the proposed 10 bridges are discussed further in the Section 4(f) analysis (Appendix A) and Chapter 2.1 Cultural Resources. No additional measures are necessary to address visual impacts.

CUL-3b: SOIS Action Plan. An Action Plan for compliance with the Secretary of the Interior's Standards for Rehabilitation (36 CFR 67) (SOIS Action Plan) was approved by Caltrans to avoid adverse effects to the late 1950s Paddleboards (metal postmile markers) located at four of the 10 bridges (Bristol Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, and Leith Ditch Bridge) and 9 C-Markers located at six bridges (Larissa Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, Cerro Ditch Bridge, Adena Ditch Bridge, and Gordo Ditch Bridge) pursuant to the FHWA/Caltrans Section 106 PA Stipulation X.B.1.b. Caltrans shall ensure the SOIS Action Plan, included as MOA Attachment 4, is implemented by the Responsible Parties identified in the plan at the milestones specified therein. In general, the SOIS Action Plan involves temporarily removing the C-Markers

and Late 1950s Paddleboards prior to construction, storing them in protective materials during construction, and reinstalling them following construction. The Late 1950s Paddleboards will be rehabilitated in accordance with the SOIS standards through paint refurbishment to better match the original coloration.

CULTURAL RESOURCES

Regulatory Setting

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

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

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

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires 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 before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU)[1] between Caltrans and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

[1] The MOU is located on the SER at https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/5024mou-15-a11y.pdf

Affected Environment

Information from this section is based on the April 2022 *Historic Property Survey Report* (HPSR) prepared for this Project, which included an *Archaeological Survey Report* (ASR) and a *Historic Resources Evaluation Report* (HRER), the September 2022 Finding of Effect (FOE), and a Memorandum of Agreement (MOA). The MOA is currently in the process of being finalized by the County, Caltrans, and the State Historic Preservation Officer.

The County and Caltrans utilized industry standard cultural resources identification, evaluation, and effect finding methods in the following analysis. These included identifying an Area of Potential Effects (APE), historical research, a search of the Sacred Lands File by the Native American Heritage Commission, a search of site records and survey reports on file at the South Central Coastal Information Center, efforts to coordinate with consulting parties, such as Native American representatives, and a pedestrian survey.

Area of Potential Effect

In accordance with Section 106 PA Stipulation VIII.A, the Area of Potential Effects (APE) for the Project was established in consultation with Steven Holm, Caltrans District 10 Professionally Qualified Staff Principal Investigator in Historic Archaeology, on December 1, 2021 and by Alberto Vergel de Dios, Caltrans District 10 Local Assistance Engineer, on December 2, 2021. The APE Map is included below as **Figure 4: Cultural Resources in Area of Potential Effects**. Please note that all sensitive and confidential information has not been included in this map.

The APE for the Project was configured to include all discontinuous areas located at each of the 10 bridges, each of which varies in size and shape. The APE is generally limited to the County ROW and an approximately 400-foot-wide roadway and maintenance easement held by the County within land owned by the Bureau of Land Management. The APE includes temporary construction staging, temporary construction easements (anticipated on privately owned properties), temporary roadway detours, roadway approach work, flood control ditch/channel modification, potential utility relocation, and all associated grading activities. The APE also includes additional area to account for any Project feature revisions. For any temporary construction easement required, the County will coordinate with each individual or agency to obtain such an easement or permission to complete work. The entire APE totals approximately 141 acres in size.

The vertical APE encompasses the deepest ground disturbance and the full height of the replacement bridges. The deepest ground disturbance will total a maximum of 25 feet or less for the proposed abutment footings and between 35 and 50 feet below ground surface for the pier pile extensions. The height of the APE amounts to approximately 14 feet above existing ground surface, which is approximately 2 feet higher than existing conditions, and includes the bridge deck, railing, and a slight raise in the roadway profile.

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)

Kelbaker Rd.

Danby Rd.

Page 11

Crafer Road

Page 2

Page 3

Page 4

Page 5

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National Trails Highway

Amboy Rd.

Cadiz Rd.

National Trails Highway Alignment/P-36-002910 (MR#F)

V:\2690-NTH at 10 Bridges\EIR_EA\F4_HistoricPropertiesI.mxd

Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 8,750 feet

2000 0 Feet

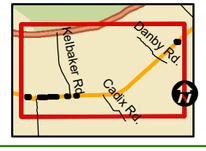
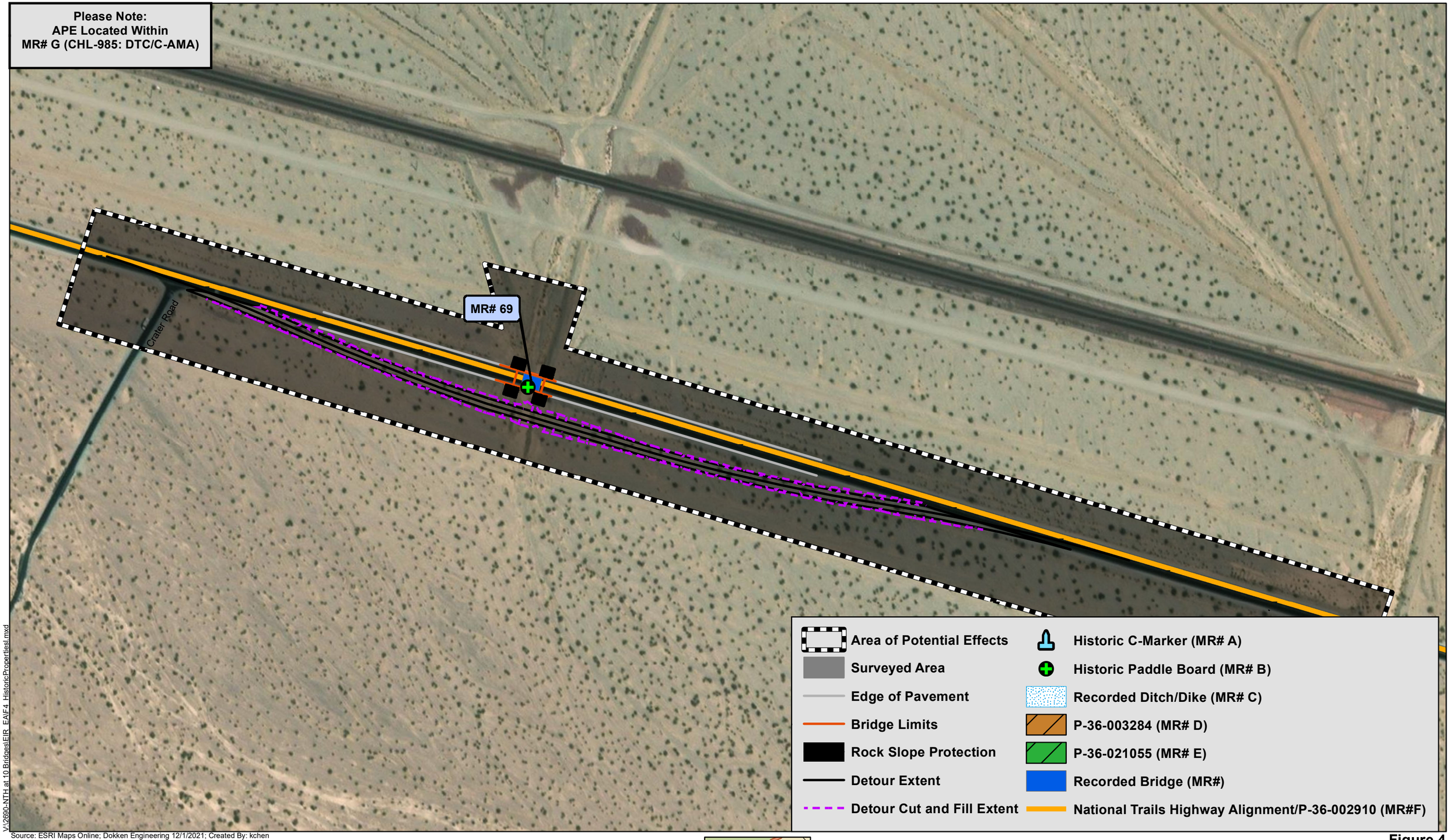


Figure 4
Page 1 of 11
Cultural Resources in Area of Potential Effects - All 10 Bridges
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)



- Area of Potential Effects
- Surveyed Area
- Edge of Pavement
- Bridge Limits
- Rock Slope Protection
- Detour Extent
- Detour Cut and Fill Extent
- Historic C-Marker (MR# A)
- Historic Paddle Board (MR# B)
- Recorded Ditch/Dike (MR# C)
- P-36-003284 (MR# D)
- P-36-021055 (MR# E)
- Recorded Bridge (MR#)
- National Trails Highway Alignment/P-36-002910 (MR#F)

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Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 200 feet

0 200 400 Feet

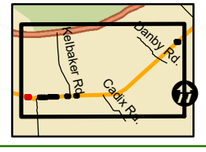


Figure 4
Page 2 of 11
Cultural Resources in Area of Potential Effects - Bristol Ditch (54C0272)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)

MR# 71

- Area of Potential Effects
- Surveyed Area
- Edge of Pavement
- Bridge Limits
- Rock Slope Protection
- Detour Extent
- Detour Cut and Fill Extent
- Historic C-Marker (MR# A)
- Historic Paddle Board (MR# B)
- Recorded Ditch/Dike (MR# C)
- P-36-003284 (MR# D)
- P-36-021055 (MR# E)
- Recorded Bridge (MR#)
- National Trails Highway Alignment/P-36-002910 (MR#F)

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Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 150 feet

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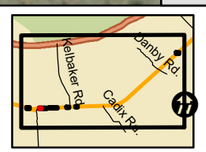


Figure 4
Page 3 of 11
Cultural Resources in Area of Potential Effects - Cerro Ditch (54C0275)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)

MR# 72

- Area of Potential Effects
- Surveyed Area
- Edge of Pavement
- Bridge Limits
- Rock Slope Protection
- Detour Extent
- Detour Cut and Fill Extent
- Historic C-Marker (MR# A)
- Historic Paddle Board (MR# B)
- Recorded Ditch/Dike (MR# C)
- P-36-003284 (MR# D)
- P-36-021055 (MR# E)
- Recorded Bridge (MR#)
- National Trails Highway Alignment/P-36-002910 (MR#F)

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Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 150 feet

0 200 400 Feet

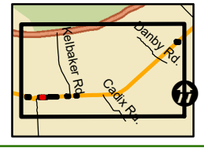
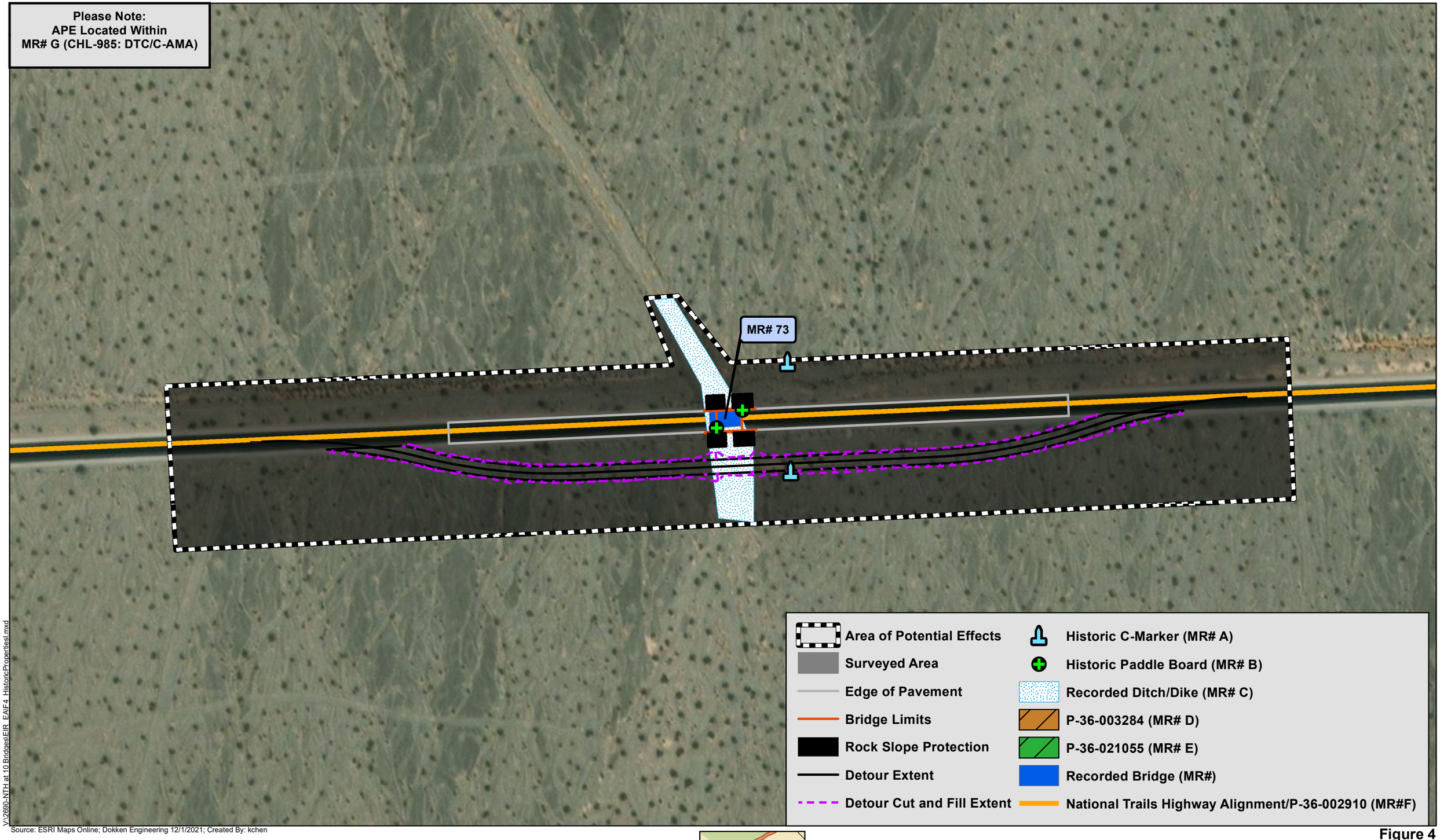


Figure 4
Page 4 of 11
Cultural Resources in Area of Potential Effects - Gordo Ditch (54C0276)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)



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Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 150 feet

0 200 400 Feet

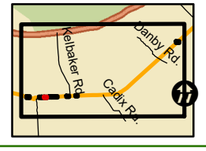


Figure 4
Page 5 of 11
Cultural Resources in Area of Potential Effects - Cerulia Ditch (54C0277)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)

MR# 75

- Area of Potential Effects
- Surveyed Area
- Edge of Pavement
- Bridge Limits
- Rock Slope Protection
- Detour Extent
- Detour Cut and Fill Extent
- Historic C-Marker (MR# A)
- Historic Paddle Board (MR# B)
- Recorded Ditch/Dike (MR# C)
- P-36-003284 (MR# D)
- P-36-021055 (MR# E)
- Recorded Bridge (MR#)
- National Trails Highway Alignment/P-36-002910 (MR#F)

V:\2690-NTH at 10 Bridges\EIR_EAIF4_HistoricPropertiesl.mxd

Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 150 feet

0 200 400 Feet

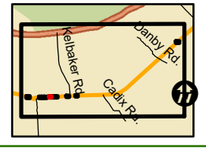


Figure 4
Page 6 of 11
Cultural Resources in Area of Potential Effects - Leith Ditch (54C0279)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)

MR# 76

Area of Potential Effects
Surveyed Area
Edge of Pavement
Bridge Limits
Rock Slope Protection
Detour Extent
Detour Cut and Fill Extent
Historic C-Marker (MR# A)
Historic Paddle Board (MR# B)
Recorded Ditch/Dike (MR# C)
P-36-003284 (MR# D)
P-36-021055 (MR# E)
Recorded Bridge (MR#)
National Trails Highway Alignment/P-36-002910 (MR#F)

V:\2690-NTH at 10 Bridges\EIR_EAIF4_HistoricPropertiesI.mxd

Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 150 feet
0 200 400 Feet

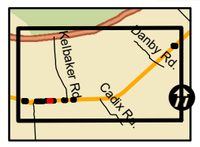


Figure 4
Page 7 of 11
Cultural Resources in Area of Potential Effects - Terra Ditch (54C0280)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)

MR# 77

Area of Potential Effects
Surveyed Area
Edge of Pavement
Bridge Limits
Rock Slope Protection
Detour Extent
Detour Cut and Fill Extent
Historic C-Marker (MR# A)
Historic Paddle Board (MR# B)
Recorded Ditch/Dike (MR# C)
P-36-003284 (MR# D)
P-36-021055 (MR# E)
Recorded Bridge (MR#)
National Trails Highway Alignment/P-36-002910 (MR#F)

V:\2690-NTH at 10 Bridges\EIR_EAIF4_HistoricPropertiesI.mxd

Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 150 feet

0 200 400 Feet

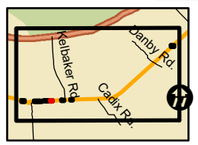


Figure 4
Page 8 of 11
Cultural Resources in Area of Potential Effects - Sombra Ditch (54C0281)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)

MR# 78

Area of Potential Effects
Surveyed Area
Edge of Pavement
Bridge Limits
Rock Slope Protection
Detour Extent
Detour Cut and Fill Extent
Historic C-Marker (MR# A)
Historic Paddle Board (MR# B)
Recorded Ditch/Dike (MR# C)
P-36-003284 (MR# D)
P-36-021055 (MR# E)
Recorded Bridge (MR#)
National Trails Highway Alignment/P-36-002910 (MR#F)

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Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 150 feet

0 200 400 Feet

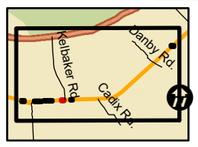
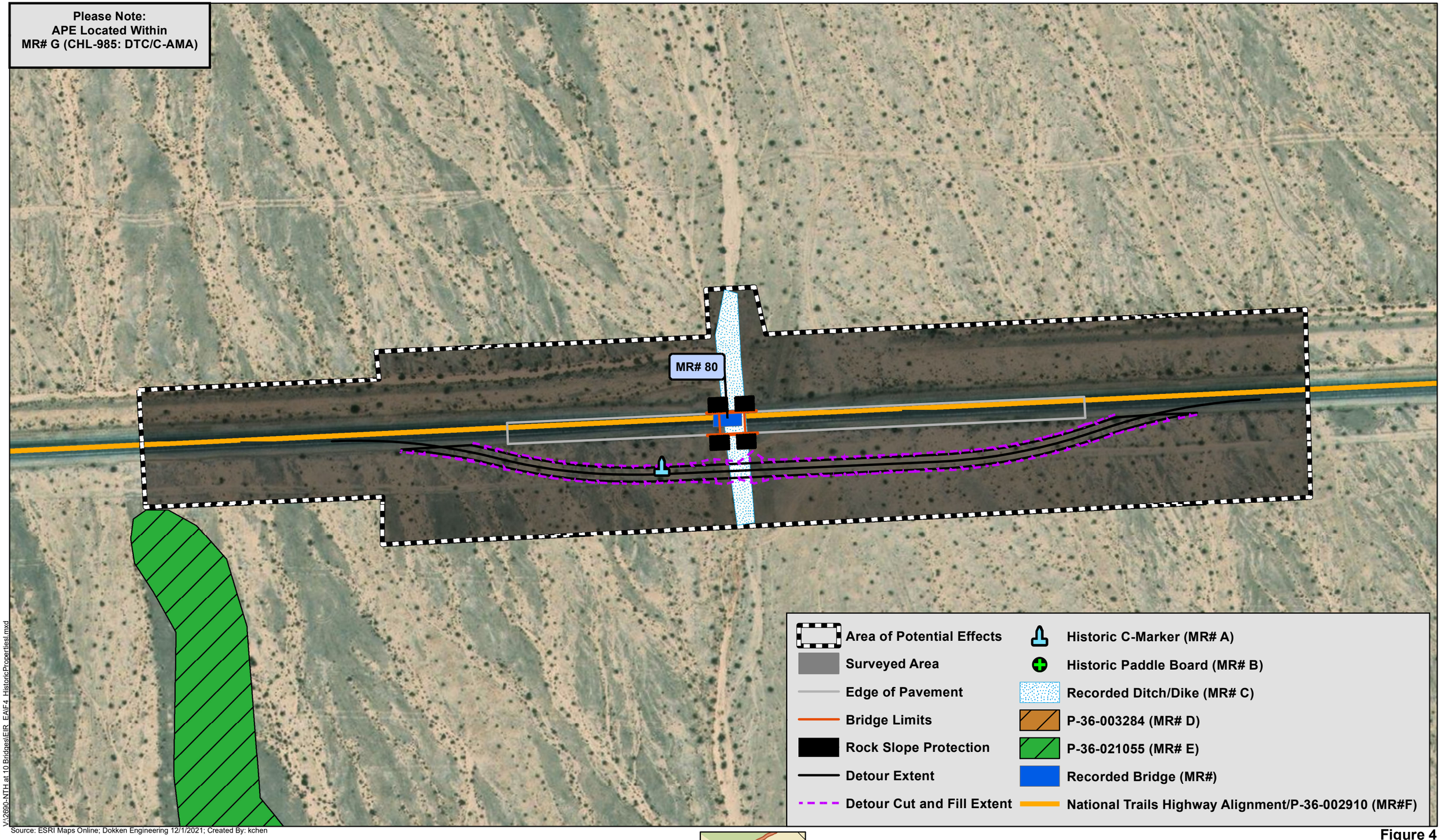


Figure 4
Page 9 of 11
Cultural Resources in Area of Potential Effects - Beacon Ditch (54C0282)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)



V:\26690-NTH at 10 Bridges\EIR_EAF-4_HistoricProperties\.mxd

Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 150 feet

0 200 400 Feet

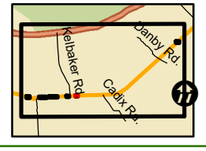


Figure 4
Page 10 of 11
Cultural Resources in Area of Potential Effects - Larissa Ditch (54C0284)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Please Note:
APE Located Within
MR# G (CHL-985: DTC/C-AMA)

MR# 111

- Area of Potential Effects
- Surveyed Area
- Edge of Pavement
- Bridge Limits
- Rock Slope Protection
- Detour Extent
- Detour Cut and Fill Extent
- Historic C-Marker (MR# A)
- Historic Paddle Board (MR# B)
- Recorded Ditch/Dike (MR# C)
- P-36-003284 (MR# D)
- P-36-021055 (MR# E)
- Recorded Bridge (MR#)
- National Trails Highway Alignment/P-36-002910 (MR#F)

V:\2690-NTH at 10 Bridges\EIR_EA\F4_HistoricPropertiesI.mxd

Source: ESRI Maps Online; Dokken Engineering 12/1/2021; Created By: kchen

1 inch = 200 feet

0 200 400 Feet

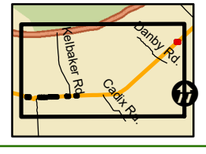


Figure 4
Page 11 of 11
Cultural Resources in Area of Potential Effects - Adena Ditch (54C0315)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Native American Consultation

Native American consultation was completed under both CEQA and NHPA Section 106 for this Project. Below is a summary of the consultation efforts completed for NEPA, under Section 106 of the National Historic Preservation Act. Please refer to Chapter 3.2 Tribal Cultural Resources for a discussion of consultation efforts completed under CEQA's *PRC 21080.3.1 (AB 52).*

On September 25, 2020, a letter and map figures depicting the Project vicinity and location was sent to the Native American Heritage Commission (NAHC) requesting a review of the Sacred Lands File (SLF) for any Native American cultural resources that might be affected by the Project. The NAHC replied on September 28, 2020 via letter that the results of the review were negative. The letter also contained a list of Native American tribes and recommended contacting a representative from each for further review of potential known and recorded sites within proposed Project area.

On December 11, 2020, initial consultation letters were mailed to the Native American individuals identified by NAHC. The letters provided a summary of the Project and requested information about comments or concerns the Native American community might have about the Project. For those individuals that did not reply to the letter, follow-up emails (or phone calls when no email was available) were sent on February 10, 2021 and April 21, 2021 to those individuals with email contact.

As a result of these efforts, the Fort Mojave Indian Tribe (FMIT) relayed concerns that the landforms surrounding the Project area are part of a linkage of interdependent cultural sites. They also conveyed that the Project should consider both tangible and intangible resources as important and valued parts of an interconnected and wholistic landscape. Caltrans responded in a letter stating while Caltrans understands the FMIT's position that cultural resources include both tangible and intangible resources which comprise entire landscapes, in order for Caltrans to assess a Project's anticipated effect to cultural resources, the resource must first be defined in terms of boundary, components, and location. Only then can Caltrans assess eligibility and if applicable, an effects finding. No distinct information regarding a landscape boundary, components, or location was provided by the FMIT in response. A digital copy of the draft Finding of Effect was provided to FMIT via email for review and comment. No response from the FMIT was received.

Chapter 4 (Comments and Coordination) of this EIR/EA includes a summary of consultation efforts conducted with the Native American contacts provided by the NAHC to satisfy the requirements of Section 106 of the NHPA, California Public Resources Code 21080.3.1, and Chapter 532 Statutes of 2014 (i.e., AB 52).

Local Agencies and Organizations

Initial consultation letters were mailed in February 2021 to historic preservation groups, museums, and federal agencies that had previously shown an interest in past projects involving National Old Trails Road/Route 66 (CA-SBR-2910H). The letters provided a summary of the Project and requested information about comments or concerns the agencies might have about the Project.

As a result of these efforts, the California Historic Route 66 Association requested detailed plans for the new construction and noted the recent designation of the National Old Trails Road/Route 66 (CA-SBR-2910H) from the Arizona border to downtown Barstow as a National Scenic Byway. They stated that the wooden bridges are one of the iconic features of the roadway in the Mojave Desert. Detailed plans, visual renderings of the completed Project, and draft cultural reports were provided to the California Historic Route 66 Association for their review. The California Historic

Route 66 Association acknowledged receipt of the documents and have not provided any response since receipt.

The National Park Service (NPS) responded to request consulting party status and to inquire how the current Project related to the San Bernardino County Bridge Replace/Rehabilitation Section 106 of the NHPA Programmatic Agreement. Caltrans replied that in discussion with the State Historic Preservation Officer, Caltrans decided not to pursue the Programmatic Agreement at this time and to instead work with the County on the current bridge replacement Project, in the interest of getting some of the bridges repaired and reopening the roadway to the travelling public. Caltrans further explained that the proposed Project will result in an adverse effect to the National Old Trails Road/Route 66 (CA-SBR-2910H) which would require a Memorandum of Agreement (MOA) to resolve the adverse effects. Caltrans provided copies of the draft cultural identification and evaluation reports to the NPS for their review. The NPS relayed that they understood the replacement timber bridges, while maintaining the historic look and feel of the National Old Trails Road/Route 66 (CA-SBR-2910H), will not meet structural/engineering requirements. The NPS inquired as to whether other bridge or railing designs exist that would maintain a historic look and feel within the historic corridor. Caltrans responded by stating Caltrans shares the NPS' sentiments on the history and uniqueness of this section of the Old Trails Road/Route 66 (CA-SBR-2910H) in the Desert region of California and that the draft cultural Finding of Effect report, which contained a discussion of alternatives and railing types considered for the Project, would hopefully address the NPS's questions. Caltrans also provided a draft of the MOA for the NPS' review.

After review of the draft Finding of Effect report and draft MOA, the NPS provided one comment, which was to remind Caltrans and the County that the historic feeling and association of the Old Trails Road/Route 66 (CA-SBR-2910H) continues to be lost at a rapid rate. The NPS encouraged special effort and attention be paid to preserving the look and feel of the Old Trails Road/Route 66 (CA-SBR-2910H). The NPS also inquired as to whether accident data supported the need to widen the bridges beyond the historic 28-foot width. Caltrans and the County provided traffic data, accident data, and current safety design requirements which support and require widening the bridges. Caltrans also relayed that the proposed mitigation measures specified in the MOA for this Project and future projects are meant to build on each other to preserve the look and feel of the Old Trails Road/Route 66 (CA-SBR-2910H) as much as possible. No further response from the NPS has been received.

Chapter 4 (Comments and Coordination) of this EIR/EA includes a detailed summary of consultation efforts conducted with local agencies and organizations.

Records Search

Background research was conducted to identify any previously recorded cultural resources within the APE. The background research consisted of a record search, literature and map reviews, and consultation with the Native American Heritage Commission (NAHC) and Native American groups. Available Historical Maps, General Land Office (GLO) Plat Maps, and Soil Survey Maps were also consulted.

As a result of the records search, the Old Trails Road/Route 66 (CA-SBR-2910H), which is eligible for listing on the National Register of Historic Places, was identified within the APE. The records search also identified several historic-era cultural resources associated with the Old Trails Road/Route 66 (CA-SBR-2910H), including one resource determined to be a character defining feature, several resources determined to be non-character defining features, and several resources which had not yet been assessed. Character defining features are cultural resources which contribute to the overall significance of a larger cultural resource that is eligible for or listed on the National Register of Historic Places. At the time of the records search, only one character

defining feature of the Old Trails Road/Route 66 (CA-SBR-2910H) was identified within the APE - the Adena Ditch Bridge. The nine remaining bridges located within the APE were previously determined to be non-character defining features. Associated cultural resources that had not yet been assessed included concrete monuments called C-Markers, Late 1950s Paddleboards (post mile markers), and man-made flood control ditches and dikes located at each bridge replacement location.

The records search also identified California Historical Landmark No. 985, the Desert Training Center and California – Arizona Maneuver Area (DTC/C-AMA), within the APE. This resource is a 1940s military encampment and training ground encompassing approximately 18,000 square miles.

Cultural Resource Surveys

Cultural resource surveys, consisting of archaeological and built-environment surveys, were completed to identify all cultural resources within the APE. An archaeological pedestrian survey for each bridge was conducted by Michelle Campbell, M.A. (Archaeologist) and Namat Hosseinion, M.A. (Archaeologist) on October 20, 2020 and again on May 4, 2021 by Michelle Campbell, for the purpose of identifying and recording archaeological resources. Stephen Mikesell, Principal Architectural Historian, completed a built environment survey which included each of the 10 bridges within the APE as well as 33 bridges along the Old Trails Road/Route 66 (CA-SBR-2910H) chosen as a sample for a wholistic assessment, to determine whether any associated historic-era resources retain sufficient integrity to warrant consideration as a character defining feature of the Old Trails Road/Route 66 (CA-SBR-2910H).

The entire APE was fully surveyed and no constraints regarding access or obscured ground surfaces were encountered. Aside from the Old Trails Road/Route 66 (CA-SBR-2910H), the bridges, C-Markers, Late 1950s paddleboards, and the man-made flood control ditches, the only cultural resources identified within the APE consisted of isolated historic-era refuse, noted near all 10 bridges. The bulk of the refuse items consists of pull tab cans from the late 1960s to early 1970s. These refuse items meet the requirements of an archaeological resource exempt from review, per Caltrans Section 106 PA Attachment 4 because they lack any demonstratable potential for significance.

Cultural Resources in the APE

Once cultural resources have been identified within the APE, a Project must assess whether the resources have a demonstrable potential for significance. If a cultural resource has been determined as possessing significance, it is considered a historic property and is eligible for listing on the National Register of Historic Places (NRHP), which is the official list of the United States' historic places worthy of preservation. To determine significance, a resource must meet one or more of the NRHP eligibility listing criteria, which include the following:

a) That are associated with events that have made significant contribution to the broad patterns of our history; or
b) That are associated with the lives of persons significant in our past; or
c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d) That have yielded, or may be likely to yield, information important in prehistory or history.

To gain consensus on NRHP significance evaluations, Caltrans consults with the State Historic Preservation Officer (SHPO), who works with Federal undertakings to ensure compliance under the Section 106 provision of the National Historic Preservation Act.

As a result of the cultural resource surveys, records search, Native American consultation, and local agency and organization consultation, sixteen (16) cultural resources were identified within the Project's APE. Of these, nine cultural resources were previously determined as not significant and therefore not eligible for listing on the NRHP through consultation with the SHPO as part of a separate project. These nine resources are therefore not considered historic properties, as detailed in **Table 2**. Two resources were previously determined significant and therefore eligible for listing on the NRHP as part of the same previous SHPO consultation, as detailed in **Table 2**. These two resources are therefore considered historic properties. As no new information or changes in the condition of these resources was identified during cultural resource assessment efforts conducted for this Project, the previous SHPO determinations are considered still valid and have been adopted for the purposes of this Project.

The remaining five cultural resources required NRHP significance evaluation as part of this Project:

- C-Markers
- Late 1950s Paddleboards
- Desert Training Center and California – Arizona Maneuver Area (DTC/C-AMA)
- Man-made Flood Control Dikes
- Man-made Flood Control Ditches

Please see the below table for a detailed listing of all sixteen cultural resources and their NRHP eligibility status. For their locations, please see **Figure 4**. It should be noted the "Map Reference #" refers to a number callout on the **Figure 4** map.

Table 2. Cultural Resource Significance Determinations

Resource Name	Location	Figure 4 Map Reference #
Previously Determined Not Eligible for the NRHP (SHPO Consultation 2014)		
Bristol Ditch Bridge	26.7 miles east of Crucero Rd	69
Cerro Ditch Bridge	1.3 miles east of Amboy Rd	71
Gordo Ditch Bridge	1.8 miles east of Amboy Rd	72
Cerulia Ditch Bridge	2.2 miles east of Amboy Rd	73
Leith Ditch Bridge	3.1 miles east of Amboy Rd	75
Terra Ditch Bridge	3.6 miles east of Amboy Rd	76
Sombra Ditch Bridge	4.1 miles east of Amboy Rd	77
Beacon Ditch Bridge	6.2 miles east of Amboy Rd	78
Larissa Ditch Bridge	1.1 miles east of Kelbaker Rd	80
Previously Determined Eligible for the NRHP (SHPO Consultation 2014)		
Old Trails Road/Route 66 (CA-SBD-2910H)	Between Daggett to Mountain Springs Road	F
Adena Ditch Bridge	21.9 miles east of Kelbaker Rd	111
Determined Not Eligible for the NRHP as part of the analysis for this Project		
Bridge Flood Control Ditches (multiple, discussed collectively)	Located at Each Bridge Location within APE	Not Applicable
Bridge Flood Control Dikes (multiple, discussed collectively)	Located at Each Bridge Location within APE	Not Applicable

Determined Eligible for the NRHP as part of the analysis for this Project		
C-Markers (multiple, discussed collectively)	Located at Cerro, Gordo, Cerulia, Terra Ditch, Larissa, and Adena Ditch Bridges	A
Late 1950s Paddleboards (multiple, discussed collectively)	Located at Bristol, Cerulia, Leith, and Terra Ditch Bridges	B
Desert Training Center and California – Arizona Maneuver Area	Stretches from Indio, California eastward toward Prescott, Arizona and from Yuma, Arizona to Searchlight, Nevada	G

The man-made flood control dikes and ditches were determined to lack significance and are not eligible for listing in the NRHP. The C-Markers and Late 1950s Paddleboards were considered to be character defining features of the Old Trails Road/Route 66 (CA-SBR-2910H) and therefore determined to be eligible for listing on the NRHP as part of the Old Trails Road/Route 66 (CA-SBR-2910H). As the Desert Training Center and California – Arizona Maneuver Area (DTC/C-AMA) consists of 18,000 square miles, a full assessment of the resource's NRHP eligibility significance was beyond the scope of this Project; however, as the resource is currently listed on the California Register of Historical Resources, which is the official list of California's historic places worthy of preservation, and as there are no components of the resource located within the APE, Caltrans considers Desert Training Center and California – Arizona Maneuver Area (DTC/C-AMA) as eligible for listing on the NRHP, for the purposes of this Project only (future projects will need to conduct their own NRHP eligibility assessments). The SHPO concurred with these eligibility determinations on June 20, 2022.

Each of these five resources is discussed in greater detail below, including their significance evaluation for listing on the NRHP. In addition, the previously determined NRHP eligible Old Trails Road/Route 66 (CA-SBR-2910H) and its character defining feature, the Adena Ditch Bridge, are also discussed in detail. For the location of these resources, please see **Table 2** and **Figure 4**. It should be noted the "Map Reference #" refers to a number callout on the **Figure 4** map.

National Old Trails Road/Route 66 (CA-SBR-2910H)

In a concurrence letter dated November 25, 2014, the SHPO concluded that the National Old Trails Road/Route 66 (CA-SBR-2910H), alignment from Daggett to Mountain Springs Road was eligible for listing in the NRHP under Criteria A and C as part of the contextual development of the National Old Trails Road/Route 66 (CA-SBR-2910H) with a period of significance from 1926 to 1974. The National Old Trails Road/Route 66 (CA-SBR-2910H) roadway intersects the APE for this undertaking and is present at all 10 bridge locations.

The original roadbed, as constructed during the period of time extending from 1929-1931, was earthen and very rough. A later improvement to the roadbed included a road-mix surface whereby local gravels were mixed at a batch-plant with oil to create a permanent surface. The original roadway surface exists almost intact beneath the present asphalt surface. The surface of today's travelled way has been altered several times. First, it was entirely repaved at some point prior to 1974 when the State of California turned-over maintenance responsibilities to the County of San Bernardino. Second, various sections have been repaved, chip-sealed, and/or fog-sealed at various times extending from 1974 to the Present.

The present National Old Trails Road/Route 66 (CA-SBR-2910H) roadway alignment consists of an average paved roadway width (including paved shoulders) of up to 36 feet, and an average bridge width varying between 25-26 feet. The roadway at each bridge is often elevated to provide additional height or depth to the channel of the ditch or wash at each bridge. The raised roadbed allows for views of the surrounding desert landscape and of the timber wingwalls or abutments at many bridge locations. The character defining features of the roadway include the historic-period cross section, raised roadbed, presence of bridges and roadway features from the period of

significance within the road corridor, and the rural desert landscape/setting. The character defining features of the National Old Trails Road/Route 66 (CA-SBR-2910H) include the roadway, Adena Ditch Bridge, C-Markers, and Late 1950's Paddleboards. Using the criteria matrix for ranking character-defining features (Caltrans Standard Environmental Reference, Volume 2, Exhibit 6.1 Ranking Character-Defining Features), the relative significance of these elements are as follows:

- "Most Significant" (strongly conveys sense of time and place)
    - Roadway
- "Significant" (conveys sense of time and place)
    - Adena Ditch Bridge
    - C-Markers
    - Late 1950's Paddleboards

Adena Ditch Bridge (character defining feature of National Old Trails Road/Route 66CA-SBD-2910H)

The Adena Ditch Bridge is a timber trestle structure installed in 1930. It was determined to be a character defining feature of the National Old Trails Road/Route 66 (CA-SBR-2910H) in 2014 through consultation with the SHPO. The bridge is 69 feet long and 28 feet wide. It has three spans, created by two timber column bents. The spans are roughly equal in length. The bridge is carried on continuous timber girders supporting a cast-in-place reinforced concrete deck, now covered in asphalt. The bridges are supported on closed-end backfilled timber pile extension strutted abutments and timber pile extension bents. At the abutments are timber retaining walls, or splayed wing walls, angled out from the plane of the bridge. The railings are continuous "W" metal guardrail on wooden posts. As with nearly all bridges on the National Old Trails Road/Route 66 (CA-SBR-2910H), the metal railing extends beyond the bridge into the adjacent roadway and ending just before short segments of K-rails.

The characteristics that define the significance of the Adena Ditch Bridge include all timber elements: the longitudinal girders, the column bents, the timber splayed wingwalls at both abutments. The metal w-beam railings are not character-defining features. The reinforced concrete deck is also a character-defining element but not the asphalt overlay.

C-Markers (multiple, discussed collectively as character defining feature to the National Old Trails Road/Route 66/CA-SBD-2910H)

The C-Marker is a concrete monument with a copper wire embedded in the center of the top of the marker used by the Division of Highways to demark the edge of highway right-of-way. The C-Markers were determined to be character defining features of the National Old Trails Road/Route 66 (CA-SBR-2910H) as part of consultation with the SHPO in 2022. While C-Markers are a recognizable part of the National Old Trails Road/Route 66 (CA-SBR-2910H) roadway, the markers were not unique to National Old Trails Road/Route 66 (CA-SBR-2910H) right-of-way. The State Division of Highways used C-Markers throughout the state. An alternative explanation is that markers are survey monuments.. Because these markers represent boundaries, they do not appear to be specifically tied to any of the bridge locations along the National Old Trails Road/Route 66 (CA-SBR-2910H).

The historic use of C-Markers by the Division of Highways is spelled out in a blog about old U.S. 60, essentially the alignment of Interstate 10 through the Mojave Desert.

> A "C" block is a concrete right of way monument (marker) that was used by the California Division of Highways to mark its right of way along many old highways. These markers are found all along Chuckwalla Road; in most cases they were not removed when the road was decommissioned from the state highway system. According to Joel Windmiller (the

California Highwayman), “C” blocks were placed along state routes from 1914 to 1934. The monuments are distinctive for the capital embossed “C” found on top of the monument. “C” blocks are projected about six inches above the surface of the ground.

The C-Marker should be appreciated as a characteristic of the highway generally and not within the context of any bridge located near it. Any C-Marker is significant because it was built as a minor but important part of the National Old Trails Road/Route 66 (CA-SBR-2910H). All known examples of C-Markers retain integrity, a fact that should not surprise, as each marker was a cast concrete block, a highly durable material likely to stay in place for many decades barring major impact from a vehicle or perhaps from high velocity flood waters.

In terms of integrity, all C-Markers found within the APE retain an excellent degree of integrity, providing they are *in-situ*. C-Markers that have been moved, toppled or otherwise damaged have a low degree of integrity, including those located within the APE. It is highly likely that any other C-Marker along this stretch of highway that remains *in-situ* will also retain a good degree of integrity. Therefore, the *in-situ* C-Markers located along the National Old Trails Road/Route 66 (CA-SBR-2910H) are considered character defining features of the National Old Trails Road/Route 66 (CA-SBR-2910H).



Image 1. C-Marker at Adena Ditch Bridge, (Source: Stephen Mikesell, Finding of Adverse Effect 2022)

Of the 10 bridge locations in the APE, six include C-Markers: Cerro Ditch, Gordo Ditch, Cerulia Ditch, Terra Ditch, Larissa Ditch, and Adena Ditch. It should be noted, however, that the right of way near the bridges is subject to frequent flooding and C-Markers may be difficult to see, which raises the possibility that additional markers might be discovered during intensive surveying by engineers during final Project design.

Late 1950s Paddleboards (multiple, discussed collectively as character defining feature to the National Old Trails Road/Route 66/CA-SBD-2910H)

Several generations of metal milepost markers are installed at bridges on the National Old Trails Road/Route 66 (CA-SBR-2910H). Of these, only those installed in the late 1950s are considered to be character defining features of the NRHP-eligible National Old Trails Road/Route 66 (CA-SBR-2910H). The Late 1950s Paddleboards were determined to be character defining features of the National Old Trails Road/Route 66 (CA-SBR-2910H) during consultation with the SHPO in 2022. Of the 10 bridge locations in the APE, four include Late 1950s Paddleboards: Bristol Ditch, Cerulia Ditch, Leith Ditch, and Terra Ditch. This generation of paddleboards are flat steel signs, measuring about 12-inches high by 4-inches wide, mounted on metal posts. These paddleboards were installed in the late 1950s and early 1960s by the Division of Highways when this stretch of National Old Trails Road/Route 66 (CA-SBR-2910H) was abandoned as a state highway and relinquished to San Bernardino County. The relinquishment of the National Old Trails Road/Route 66 (CA-SBR-2910H) came in stages, but was finalized in 1972. Each paddleboard includes three pieces of information. It identifies the county location (San Bernardino County, shown as SBD), denotes the fact that I-40 replaces this stretch of highway (indicated by the number 40), and it indicates a postmile for National Old Trails Road/Route 66 (CA-SBR-2910H) (indicated by a number that is different for each bridge). The paint on some paddleboards from the late 1950s along the entire National Old Trails Road/Route 66 (CA-SBR-2910H) is so faded the numbers are scarcely legible.



Image 2. Paddleboard on the left is modern. The one to the right is an example of the late 1950s Paddleboard (Source: Stephen Mikesell, HRER, 2022)

All paddleboards from the 1950s within the APE retain a good degree of integrity. The boards are made of sturdy metal material. These boards in some cases remain in place even though the original bridge has been replaced. This is possible because the paddleboard is a milepost marker, not a bridge marker.

Desert Training Center and California – Arizona Maneuver Area (DTC/C-AMA)

The recorded boundary of California Historical Landmark No. 985, the DTC/C-AMA, encompasses the entire APE. The DTC/C-AMA is a 1940s military training/maneuver area that is currently being documented as a historical cultural landscape composed of numerous site types

(i.e., maneuver areas, divisional camps, small unit training areas, air facilities and crash sites, bivouacs, as well as hospital and medical features), features (i.e., anti-tank ditches, camouflage areas, foxholes, minefields, observation positions, obstacles, refuse scatter and dumps, reuse of existing facilities, roads, rock features, rock insignias or cairns, rock walls, slit trenches, tank tracks, and tank traps), and military and non-military artifacts. The DTC/C-AMA stretches from Indio, California eastward toward Prescott, Arizona and from Yuma, Arizona to Searchlight, Nevada and covers approximately 18,000 square miles. The DTC/C-AMA has not been evaluated for the NRHP but has been registered and listed on the California Register of Historical Resources (CRHR). It has been recommended and approved to be assumed eligible under all four National Register Criteria, pursuant to Stipulation VIII.C.4 of the Section 106 Caltrans Programmatic Agreement, for the purposes of this Project only. While the recorded boundary of the DTC/C-AMA encompasses the entire APE, no resources associated with the DTC/C-AMA were identified within the APE, including tank tracks, tent pads, or other evidence of military use.

Man Made Flood Control Dikes and Ditches (multiple, discussed collectively)
When the California Division of Highways built this segment of National Old Trails Road/Route 66 (CA-SBR-2910H) in the late 1920s and early 1930s, it made three decisions that would greatly increase maintenance costs for decades to come. These were highly unusual; most state bridges at the time included concrete flood control features. First, it built nearly all bridges out of timber, an unusual construction decision in a state where most bridges were made of reinforced concrete. Second, the Division installed hundreds of small bridges and culverts along this segment of National Old Trails Road/Route 66 (CA-SBR-2910H), often with these bridges occurring only a few hundred feet from each other. Third, it made ephemeral erosion control features upstream from the bridges and culverts to channelize water through the bridge piers, hopefully avoiding damage to the slightly built timber structures.

The ditches and dikes proved to be vulnerable to the destructive impacts of monsoonal floods. The fragile nature of the 1920s and 1930s design may be contrasted with the more recent work of Caltrans in its erosion control program for I-40 from the late 1950s and the ongoing work of the Burlington Northern and Santa Fe (BNSF) Railroad. I-40 and the BNSF are located close to the National Old Trails Road/Route 66 (CA-SBR-2910H) throughout the distance between the community of Daggett and Mountain Springs Road.

When not directly affecting I-40 or the railroad, the ditch and dike work at the National Old Trails Road/Route 66 (CA-SBR-2910H) bridges are modest and ephemeral. Many have been altered by repeated flooding and repair to those features over the last eight decades. These continuous alterations have, in most cases, obliterated the original design of erosion control ditches and dikes.

In discussing integrity for these erosion control features, it is useful to go through the seven aspects of integrity and assess how these apply to these features. Setting and location are often analyzed together because both measure how the feature in question fits into its environment. The bridges represent the location in which ditches and dikes were first constructed and the setting for National Old Trails Road/Route 66 (CA-SBR-2910H) is in most cases intact, although interrupted by views of I-40, which did not exist 1929-1931, and the BNSF tracks, which have been modernized a great deal since the National Old Trails Road/Route 66 (CA-SBR-2910H) was first built. With all seven aspects of integrity, however, the persistent alterations to the ditches and dikes call into question whether integrity can be found to exist at these bridge sites. The flood control channelization for I-40 and the BNSF are generally broad reinforced concrete canals, sometimes linked between the freeway and railroad right of way, far more permanent than the National Old Trails Road/Route 66 (CA-SBR-2910H) earthen channels and better able to withstand the destructive force of the rushing flood waters.

The lack of integrity is especially evident when applying the elements of design, materials, and workmanship to these features. As noted, one detects two types of work along the National Old Trails Road/Route 66 (CA-SBR-2910H): the very permanent work and the far more ephemeral work. Neither type is representative of the work as it was accomplished in the building of National Old Trails Road/Route 66 (CA-SBR-2910H). The workmanship and design, however, date to many decades of natural erosion and alteration due to the alignment and dimensional (changes in widths and heights) caused by eight decades of flood damage and subsequent repairs= since these features were built.

The final elements of integrity – feeling and association – are the most difficult to measure or quantify. The general "feeling" of these earthworks is different from one site to the next but for the most part these earthworks do not "feel" like engineered elements. Rather, they "feel" like natural features. The association is similarly affected by the constant modification to these features. The earthworks are certainly associated with a constant threat to the National Old Trails Road/Route 66 (CA-SBR-2910H) – flooding during winter months. That problem is not directly associated with the first generation of work at National Old Trails Road/Route 66 (CA-SBR-2910H); it is a constant problem that threatens the earthwork, the bridges, and the roadway.

Due to these reasons, the ditches and dikes no longer retain sufficient integrity to be treated as eligible for the NRHP either individually or as character defining features to the National Old Trails Road/Route 66 (CA-SBR-2910H) NRHP eligible resource.

In total, there are five cultural resources which were determined eligible to be listed on the NRHP and are therefore considered historic properties for the purposes of this Project. These resources include:

- National Old Trails Road/Route 66 (CA-SBR-2910H) alignment between Daggett and Mountain Springs Road
- the Adena Ditch Bridge, character defining feature of the National Old Trails Road/Route 66 (CA-SBR-2910H)
- C-Markers (multiple, discussed collectively) , character defining feature of the National Old Trails Road/Route 66 (CA-SBR-2910H)
- Late 1950s Paddleboards (multiple, discussed collectively), character defining feature of the National Old Trails Road/Route 66 (CA-SBR-2910H)
- the Desert Training Center and California – Arizona Maneuver Area

Environmental Consequences

As relayed above, there are five cultural resources within the Project APE that have been determined eligible for inclusion on the NRHP and are therefore considered historic properties. To determine the Project's anticipated impacts to these historic properties, the NHPA Criteria of Adverse Effect has been applied to each resource, as per 36 CFR 800.5(a). The NHPA Criteria of Adverse Effect consist of the following seven criteria:

i. Physical destruction of or damage to all or part of the property;
ii. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
iii. Removal of property from its historic location;
iv. Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

v. Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
vi. Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
vii. Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

In applying the seven Criteria of Adverse Effect to the historic properties within the APE, four Criteria apply: (**Criterion i**) physical destruction; (**Criterion ii**) alteration of a property that is inconsistent with the Secretary of the Interior's Standards for Rehabilitation; (**Criterion iv**) change in setting; and (**Criterion v**) introduction of new visual elements. The remaining three do not: (**Criterion iii**) moving a property – the Project does not involve moving a historic property, therefore this criterion does not apply; (**Criterion vi**) neglect – the road and its various bridges have undergone continuous maintenance, therefore, this criterion does not apply; and (**Criterion vii**) transfer out of federal ownership – no transfer of federal ownership will occur, therefore, this criterion does not apply. See below for discussion of adverse effect criteria for each historic property.

National Old Trails Road/Route 66 (CA-SBR-2910H)
In applying the seven Criteria of Adverse Effect to the National Old Trails Road/Route 66 (CA-SBR-2910H), four Criteria apply: (**Criterion i**) physical destruction; (**Criterion ii**) alteration of a property that is inconsistent with the Secretary of the Interior's Standards for Rehabilitation; (**Criterion iv**) change in setting; and (**Criterion v**) introduction of new visual elements. The remaining three do not: (**Criterion iii**) moving a property – the Project does not involve moving a property; therefore, this criterion does not apply; (**Criterion vi**) neglect – the road and its various bridges have undergone continuous maintenance, therefore, this criterion does not apply; and (**Criterion vii**) transfer out of federal ownership – no transfer of federal ownership will occur, therefore, this criterion does not apply.

The Project will result in the demolition and replacement of 10 bridges along the National Old Trails Road/Route 66 (CA-SBR-2910H) roadway. As such, the replacement bridges and associated roadwork will result in adverse effects to the National Old Trails Road/Route 66 (CA-SBR-2910H) under **Criteria i, ii, iv**, and **v**. Under **Criterion i**, the Project will result in "Physical destruction of or damage to all or part of the property." This is true with the replacement of Adena Bridge, which is a character defining feature of the property. The Project will also result in destruction of up to 800 feet of new roadwork on either end of all 10 bridges. It is true that changes to the roadway include roadway "feathering" or tapering to adjust the roadway to the wider new bridges. This feathering results in a relatively minor change to the roadway at any given point. But the cumulative effect of long stretches of this feathering will result in an adverse effect to the geometry as well as the materials for the roadway.

Under **Criterion ii**, the Project will replace timber bridges with concrete bridges with modern railing, which is inconsistent with the Secretary of the Interior's Standards (SOIS). Therefore, it will result in an adverse effect. Under **Criterion iv** of adverse effect, the Project will result in "Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance." The setting is an important element of the significance for National Old Trails Road/Route 66 (CA-SBR-2910H) and a substantial change to that setting will constitute an adverse effect under this criterion. The Project will introduce thousands of feet of improved roadway which will cumulatively affect the setting for the remaining character defining features of the property. The new roadway, up to 800 feet on either end of each new bridge, will represent "feathered" (tapered) widening to account for the fact that the new bridges will be slightly wider than the historic roadway at these 10 bridge locations.

The Project will also introduce new bridge railings that differ visually from the types of bridge railings found elsewhere on National Old Trails Road/Route 66 (CA-SBR-2910H). The new railings may be a California ST-75 Bridge Rail type or Concrete Barrier Type 85, painted white, both of which are MASH approved. These railing types are somewhat similar to but certainly not identical to the original wooden or the more modern steel railings typically found along the National Old Trails Road/Route 66 (CA-SBR-2910H). These railings, as noted, are the only aspect of the new bridges visible to the motoring public.

Under **Criterion v** of adverse effect, the Project will involve the "Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features." New elements associated with the Project include new roadway on either end of each bridge as well as new bridge railings. The roadway will conform with the existing roadway width, except for "feathering" to ease connection between the roadway and the wider bridges. The new bridge railings, however, are not consistent with railing types installed historically on the National Old Trails Road/Route 66 (CA-SBR-2910H). The Project will also involve long stretches of improved roadway, which will also introduce new visual effects due to the modern materials, tapered width, and slight vertical profile raise. Taken together on all 10 bridges, these modifications will constitute a cumulative effect to the National Old Trails Road/Route 66 (CA-SBR-2910H). Cumulative effects are discussed briefly in 35 CFR 800.5: "Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be it farther removed in distance or be cumulative." The changes to the setting and introduction of new elements are significant when considered on a cumulative basis. This is especially true when the new bridges, new roadway, and new railings will be built in close proximity, as is the case with many of the bridges in this project. Based on the above analysis, the Undertaking will result in adverse effects to the overall National Old Trails Road/Route 66 (CA-SBR-2910H) under **Criteria of Adverse Effect i, ii, iii, iv**, and **v**.

To mitigate the adverse effect that the Build Alternative will have on the National Old Trails Road/Route 66 (CA-SBR-2910H), a *Memorandum of Agreement Between the California Department of Transportation and the California State Historic Preservation Officer Regarding the National Trails Highway at 10 Bridges Project, San Bernadino County, California* (NTH MOA) is currently in the process of being finalized and is anticipated to be executed in Fall 2023. The NTH MOA outlines proposed mitigation measures to resolve adverse effects under Section 106 of the NHPA. Prior to construction, the County will implement the proposed measures of the NTH MOA (**CUL-3a** through **3e**) to mitigate the impacts of the Build Alternative on the National Old Trails Road/Route 66 (CA-SBR-2910H). The NTH MOA outlines proposed measures to further develop the County's existing website which contains historical information compiled on the National Old Trails Road/Route 66 (CA-SBR-2910H) and to submit a National Register of Historic Places Nomination Form for the entire 111-mile long National Old Trails Road/Route 66 (CA-SBR-2910H) alignment, including its character defining features.

Adena Ditch Bridge (as character defining feature to the National Old Trails Road/Route 66/CA-SBD-2910H)

In applying the seven Criteria of Adverse Effect to the Adena Bridge, only one criterion applies: (**Criterion i**) physical destruction. The other six criteria are moot because the resource will be destroyed. The Project will result in the demolition of the existing timber trestle Adena Ditch Bridge. The Project will also involve construction of a replacement bridge on the same alignment and location. Construction of the new bridge will require demolition and removal of all timber members of the Adena Ditch Bridge: the timber stringers, the timber wingwalls, the timber column bents, and all other timber elements as well as the original reinforced concrete deck, which define the significance of this bridge under NRHP Criterion A (as part of this important roadway) and NRHP Criterion C (as an example of a type, period, and method of construction).

This demolition is an adverse effect under **Criterion i**: physical destruction of or damage to all or part of the property. The removal of this bridge, which is a character defining feature of the National Old Trails Road/Route 66 (CA-SBR-2910H), constitutes an adverse effect and also contributes to a cumulative effect to the overall National Old Trails Road/Route 66 (CA-SBR-2910H).

To mitigate the adverse effect that the Build Alternative will have on the Adena Ditch Bridge, mitigation measures were proposed in the NTH MOA (currently in the process of being finalized and is anticipated to be executed in Fall 2023) to resolve adverse effects under Section 106 of the NHPA. Prior to construction, the County will implement the proposed measures of the NTH MOA (**CUL-3a** through **3e**) to mitigate the impacts of the Build Alternative, which includes further development of the County's existing website which contains historical information compiled on the National Old Trails Road/Route 66 (CA-SBR-2910H) and which also requires submittal of a National Register of Historic Places Nomination Form for the entire 111-mile long National Old Trails Road/Route 66 (CA-SBR-2910H) alignment, and its character defining features.

C-Markers (multiple, discussed collectively as character defining feature *to the National Old Trails Road/Route 66/CA-SBD-2910H)*
There are C-Markers at six of the ten bridge sites for this Project. The C-Markers are not attached to the bridges. They do not indicate a bridge location but rather mark the former edge of state-owned right of way. If left in place, these C-Markers would be damaged or destroyed during construction would be an adverse effect to the National Old Trails Road/Route 66 (CA-SBR-2910H). To mitigate this potential adverse effect, an SOIS Action Plan, specified in **CUL-3b**, was developed in consultation with the SHPO, which details the steps required to ensure protection of the C-Markers. This will involve marking the location of the C-Markers on the construction plans, using GPS to note their preconstruction location, removing them prior to construction to avoid damage, storing them in protective materials in a secure location during construction, and reinstalling them at their original locations following construction. Implementation of these steps in the SOIS Action Plan will ensure there is no physical destruction of the resources (**Criterion i**) and will also ensure that the C-Markers will not be altered to such a degree that they lose their integrity and significance (**Criterion ii**).

The Project will not relocate the C-Markers permanently (**Criterion iii**). The C-Markers will be temporarily removed from their locations to protect them during construction of the Project. They will then be reinstalled at their original locations. The Project will also not change the historical setting for the C-Markers (**Criterion iv**) and will not introduce new elements out of keeping with them (**Criterion v**). While the approach roadway will be minimally widened and the bridges will be replaced, these C-Markers are not unique to the National Old Trails Road/Route 66 (CA-SBR-2910H), having been installed throughout the State in conjunction with a variety of roadways and settings. The Project will also not result in harm through neglect (**Criterion vi**) as the C-Markers would be reinstalled at their original 1-foot exposed height to avoid burial by sedimentation, per the SOIS Action Plan. Last, the Project will not transfer the C-Markers out of federal ownership as they are not currently federally owned (**Criterion vii**).

The C-Markers setting in relation to the National Old Trails Road/Route 66 (CA-SBR-2910H) will be unaffected and the integrity of design, materials, and workmanship will not be diminished, through implementation of the SOIS Action Plan (**CUL-3b**). The integrity of feeling and associations will also not be diminished. Based on the above discussion, the SOIS Action Plan, will result in ensuring the C-Markers will be preserved and will continue to function as originally intended. For these reasons, implementation of SOIS Action Plan (**CUL-3b**) will ensure that the Project will not result in an adverse effect to the C-Markers directly or to the overall National Old Trails Road/Route 66 (CA-SBR-2910H).

Late 1950s Paddleboards (multiple, discussed collectively as character defining feature *to the National Old Trails Road/Route 66/CA-SBD-2910H)*

Historic Paddleboards are associated with four of the 10 bridges to be replaced in this Project. In applying the seven Criteria of Adverse Effect or examples of the Criteria of Adverse Effect to the late 1950s Paddleboards, none apply. To protect these resources during construction, an SOIS Action Plan, included as mitigation measure **CUL-3b**, was developed in consultation with the SHPO, which details the steps required to ensure protection and rehabilitation of the Paddleboards. This will involve detailing the location of the Paddleboards on the construction plans, using GPS to note their preconstruction location, removing them prior to construction to avoid destruction, storing them in protective materials in a secure location during construction, implementing paint rehabilitation to restore them to their original colors, and reinstalling them following construction.

Paint rehabilitation will involve matching the original coloration as closely as possible, based on the best-preserved example that exists along the National Old Trails Road/Route 66 (CA-SBR-2910H) or if there is a historic photograph that better communicates the original coloration. Per the SOIS Action Plan, samples and test colors will first be utilized to select the appropriate hues to match the original coloration of the paddleboards. Historic photographs and examples of Paddleboards found along the National Old Trails Road/Route 66 (CA-SBR-2910H) that are in better condition will be utilized as the guide for coloration. Repainting would in no way damage or destroy the original metal Paddleboard but would restore the faded lettering/numbering as well as the base color.

Implementation of the SOIS Action Plan (**CUL-3b**) will ensure the Project avoids physical destruction of the resources (**Criterion i**) and will ensure that rehabilitation efforts are consistent with the SOIS (**Criterion ii**). The paint rehabilitation actions would assist the long-term preservation of the paddleboards to ensure efficient contemporary use by making them more legible and consistent with their original coloration and finish, all of which are consistent with the SOIS for rehabilitation; therefore, there would be no adverse effect under **Criteria ii**, **iv**, or **v**. The Project will not relocate the Paddleboards permanently (**Criterion iii**) as only temporary removal is proposed specifically to protect them and restore them during construction of the Project. Upon rehabilitation, the Paddleboards will be reinstalled at their original location (previously recorded with GPS data), or within 10 feet based on terrain. Even a 10-foot difference in location would not diminish the integrity of the Paddleboard as they denote mileage and tenths of a mile and would remain unaffected by a 10-foot difference. Further, motorists/viewers are accustomed to viewing these Paddleboards near the limits/approaches of the bridges and would therefore preserve the historical view to which motorists/viewers are accustomed; therefore, there would be no adverse effect under **Criterion iii**.

The Project will also not change the historical setting for the Paddleboards (**Criterion iv**) and will not introduce new elements out of keeping with them (**Criterion v**). While the approach roadway will be minimally widened and the bridges will be replaced, these Paddleboards are not unique to the National Old Trails Road/Route 66 (CA-SBR-2910H), having been installed throughout the County in conjunction with a variety of roadways, bridge types, and settings. The Project will also not result in harm through neglect (**Criterion vi**) as the Paddleboards would be rehabilitated per the SOIS Action Plan (**CUL-3b**). Last, the Project will not transfer the Paddleboards out of federal ownership as they are not currently federally owned (**Criterion vii**).

The setting will be compromised somewhat through construction of the new bridge but the setting in relation to the National Old Trails Road/Route 66 (CA-SBR-2910H) roadway will be almost completely unaffected, mainly due to the new visual of the replacement guardrail; however, the integrity of design, materials, and workmanship will not be diminished. Indeed, the case could be made that repainting the Paddleboards will improve integrity in that the board will then be able to

show information to the public, information that is generally not readable today. The integrity of feeling and associations will not be diminished.

Based on the above discussion, it is concluded that implementation of **CUL-3d** will ensure that the Project does not diminish the integrity of the Paddleboards because they will be rehabilitated to original condition in a manner consistent with the SOIS standards, as specified in the SOIS Action Plan (**CUL-3b**). The rehabilitation efforts will result in ensuring the Paddleboards will be preserved and will continue to function as originally intended. As the Paddleboards will continue to function as originally intended, the Project will not result in an adverse effect to the Paddleboards directly or to the National Old Trails Road/Route 66 (CA-SBR-2910H) as a whole, through implementation of the SOIS Action Plan (**CUL-3b**).

Desert Training Center and California – Arizona Maneuver Area

The DTC/C-AMA stretches from Indio, California eastward toward Prescott, Arizona and from Yuma, Arizona to Searchlight, Nevada and covers approximately 18,000 square miles. While the recorded boundary of the DTC/C-AMA encompasses the entire APE, no resources associated with the DTC/C-AMA were identified within the APE. Of the seven Criteria of Adverse Effect, only **Criteria i**, **iv**, and **v**, are applicable. As there are no DTC/C-AMA features or artifacts identified within the APE, the Project would not physically destroy or damage any component of the resource (**Criterion i**) nor would it change the character of the property's use/physical features within the resource's setting (**Criterion iv**). Further, the Project would not introduce a new visual, atmospheric, or audible element as it involves replacement of existing bridges, both of which pre-date the resource's period of significance (**Criterion v**). For these reasons, the undertaking will have no adverse effect to the resource.

Regarding potential cumulative effects to this resource, as the Project would have no effect on any individual features, would not change the historic setting, and would not introduce new elements to the historic setting of the resource, it will not result in an adverse effect to the DTC or contribute to a cumulative effect.

Finding of Effect Determination

Of the five historic properties present within the Project APE, the Project will have an adverse effect on the National Old Trails Road/Route 66 (CA-SBR-2910H) and one of its character defining features, the Adena Ditch Bridge. The Project will have a no adverse effect with conditions imposed on the Late 1950s Paddleboards and C-Markers. The Project will also have a no adverse effect on the DTC/C-AMA, as no component of the historic property is located within the APE. Overall, the finding for the Project is a Finding of Adverse Effect. Caltrans initiated consultation with the SHPO regarding this determination on October 25, 2022. The SHPO concurred with the Finding of Adverse Effect on December 15, 2022.

Section 4(f) of the Department of Transportation Act of 1966

The five historic properties determined eligible for listing on the NRHP are also considered resources under Section 4(f) of the Department of Transportation Act of 1966 within the Project vicinity.

The proposed Project would result in a "use" of four Section 4(f) resources -- the National Old Trails Road/Route 66 (CA-SBR-2910H), Adena Ditch Bridge, Late 1950s Paddleboards, and C-Markers -- as defined by Section 4(f). The Project will have no use of the Section 4(f) resource, the DTC/C-AMA. Please see additional details in Appendix A – Section 4(f) Analysis.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization Measures **CUL-1** and **CUL-2** will be implemented to avoid and or minimize impacts to previously unknown cultural resources, should any be discovered during construction activities.

Caltrans is in the process of negotiating a Memorandum of Agreement with the SHPO. Caltrans proposes to implement mitigation measures **CUL-3a** through **3e** to mitigate adverse impacts to the National Old Trails Road/Route 66 (CA-SBR-2910H) alignment between Daggett and Mountain Springs Road and to its character defining features, the Adena Ditch Bridge, the Late 1950s Paddleboards, and the C-Markers. **CUL-3a** through **3e** includes the historic property treatment measures proposed as part of the NTH MOA.

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

CUL-2: If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact District 8 Division of Environmental Planning; Andrew Walters, DEBC: (909)383-2647 so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

CUL-3: Per the proposed *Memorandum of Agreement Between the California Department of Transportation and the California State Historic Preservation Officer Regarding the National Trails Highway at 10 Bridges Project, San Bernadino County, California* (MOA), the following measures shall be implemented to resolve adverse effects to the National Old Trails Road/Route 66 (CA-SBR-2910H) and its character defining features:

- **CUL-3a**: **Architectural Treatment of Bridge Railings on 10 New Bridges**. County shall direct the contractor to apply treatments for historical railing design considerations as depicted in MOA Attachment 3 to the replaced bridge railings on all 10 NTH/Route 66 replacement bridges. Attachment 3 depicts railings designs for replacement bridge projects on the NTH/Route 66 which were previously approved by Caltrans. Consistency of treatments with this measure, and any future revisions to the treatments, will be determined through review of project plans by Caltrans. County shall submit the design plans and specifications for the Undertaking to District 8 Cultural Studies prior to the commencement of construction and request review by a Caltrans Professionally Qualified Staff Principal Architectural Historian. Following Caltrans approval, the SHPO shall also be afforded the opportunity to review the design plans and specifications for a 30-day review period.

- **CUL-3b: SOIS Action Plan.** An Action Plan for compliance with the Secretary of the Interior's Standards for Rehabilitation (36 CFR 67) (SOIS Action Plan) was approved by Caltrans to avoid adverse effects to the late 1950s Paddleboards (metal postmile markers) located at four of the 10 bridges (Bristol Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, and Leith Ditch Bridge) and 9 C-Markers located at six bridges (Larissa Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, Cerro Ditch Bridge, Adena Ditch Bridge, and Gordo Ditch Bridge)

pursuant to the FHWA/Caltrans Section 106 PA Stipulation X.B.1.b. Caltrans shall ensure the SOIS Action Plan, included as MOA Attachment 4, is implemented by the Responsible Parties identified in the plan at the milestones specified therein. In general, the SOIS Action Plan involves temporarily removing the C-Markers and Late 1950s Paddleboards prior to construction, storing them in protective materials during construction, and reinstalling them following construction. The Late 1950s Paddleboards will be rehabilitated in accordance with the SOIS standards through paint refurbishment to better match the original coloration.

- **CUL-3c: Construction Monitoring.** County shall prepare a construction monitoring plan and conduct periodic monitoring of construction activities to ensure the project is conducted in a manner that meets the stipulations outlined in the MOA. The monitoring plan and its ongoing status will be included in the annual reports submitted pursuant to MOA Stipulation IV.F. Caltrans shall ensure that the construction monitoring plan is implemented. Within three months following the completion of construction and prior to the expiration of the MOA, a monitoring report shall be prepared and submitted to the SHPO to document project completion and compliance with the treatment of Historic Properties outlined in the MOA. The monitoring report may be combined with the final annual report prepared for the Undertaking pursuant to MOA Stipulation IV.F. The monitor shall meet the appropriate professional qualifications standards in accordance with MOA Stipulation IV.A.3.

- **CUL-3d: National Register of Historic Places (NRHP) Nomination**. Caltrans shall ensure that the County has prepared an NRHP Nomination form for the entire 111-mile long NTH/Route 66 segment between Daggett and the Mountain Springs Road exit for submittal to the California SHPO for review by the State Historical Resources Commission, prior to the 2024 Annual Report prepared for the MOA.

- **CUL-3e: Interpretive Website.** The County will develop a website to share historic and other Route 66 road-related information for the benefit of the general public. Information to be included on the website is detailed in the website outline, included as Attachment 5 to the MOA. The final content of the website to be created as part of the MOA will be determined through consultation with the Caltrans District 8 cultural staff and the interested consulting parties and will be focused on the segment of the NTH/Route 66 between Daggett and the Mountain Springs Road exit, with an emphasis on information specific to parts of the NTH/Route 66 within the Project's APE, if available. The website shall be maintained by the County and accessible to the public for their use, information, and enjoyment. The County shall commence development of the website prior to the 2024 Annual Report prepared for the MOA and shall publish the website prior to the 2027 Annual Report.

2.2 Physical Environment

WATER QUALITY AND STORM WATER RUNOFF

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 source[2] unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

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

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

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

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 effluent[3] 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.

State Requirements: Porter-Cologne Water Quality Control Act

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

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

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm

[3] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

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 Caltrans as an owner/operator of an MS4 under federal regulations. Caltrans'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.

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

1. Caltrans must comply with the requirements of the Construction General Permit (see below);

2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and

3. Caltrans 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, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans 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 Caltrans 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. 2022-0057-DWQ (adopted September 8, 2022). The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction

aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with Caltrans's SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than one acre.

Regional Water Quality Control Board Permitting

As the ephemeral ditches located within the Project area are not considered waters of the US, the Project is not subject to the federal Clean Water Act. The ephemeral washes are considered waters of the State and are subject to the jurisdiction of the Regional Water Quality Control Board (RWQCB)

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.

Affected Environment

The 10 bridges within the Project area all carry the NTH over a series of man-made ditches that collect flow from numerous, rills, gullies, and small ephemeral channels on the upslope side of the roadway and convey it under the roadway. These ditches are intermittently flooded, with surface water typically only present in direct response to rain events (NWI 2020). At each bridge crossing, the maintained ditch/channel alignment is evident at the bridge crossing and branches off into smaller channels typical of an alluvial fan upstream and downstream. The channels range from approximately 30 to 80 feet across at their widest points. In addition, some channels have a narrow floodplain that extends several feet beyond the ordinary high water mark (OHWM) on both sides. Ephemeral ditches make up approximately 5 acres (4%) of the Project area.

All surface waters within the Project area are not considered traditionally navigable waters or tributary to such waters. Therefore, these surface waters are not under the jurisdiction of the USACE and would not be subject to a Section 404 permit. While there are no waters subject to the jurisdiction of the USACE, the ephemeral ditches are subject to the State Water Code (Porter-Cologne Act). Discharges to the ditches would require coordination through the Colorado River RWQCB who may issue WDRs for the Project. See Section 2.3.2 Wetlands and Other Waters for additional information.

The soils in the area have low water holding capacity and the water table is more than 6 feet below the surface. Therefore, there is little surface water present along the NTH. Water is typically only present within the ephemeral ditches spanned by the 10 bridges during storm events; therefore, the area is arid with these ephemeral ditches most often dry with little, if any, presence of water.

Environmental Consequences

Temporary

Water Quality and Storm Water Runoff Impact #1: Temporary Construction (ephemeral ditches)

The Project would result in temporary impacts to approximately 1.10 acres of ephemeral ditches during construction activities, when the Project would require the creation of a temporary road realignment with a low water crossing at each bridge, as well as staging and access areas for the installation of the new bridge. Construction of the proposed Project would cause disturbances to

the ground surface from earthwork, including excavating and grading. These activities would potentially increase the amount of sediments entering ephemeral ditches. However, the ditches would be dry at the time of construction. Therefore, no impacts to water quality are anticipated to occur. Implementation of measures **BIO-1** through **BIO-7**, discussed under Biological Environment, would ensure water quality impacts to the ephemeral ditches remain minimal.

Permanent

Water Quality and Storm Water Runoff Impact #2: Impervious Surfaces

The Project would not result in any permanent increase in impervious surface. Therefore, there are no permanent impacts to water quality as a result of the proposed Project.

Avoidance, Minimization, and/or Mitigation Measures

All surface waters within the Project area are not considered traditionally navigable waters or tributary to such waters. Therefore, these surface waters are not under the jurisdiction of the USACE and would not be subject to a Section 404 permit.

BMPs related to erosion control and field measures that would be implemented to protect the water quality of the ephemeral ditches during temporary construction activity are identified in Measures **BIO-1** through **BIO-7** and discussed under the Biological Environment section of this document.

GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY

Regulatory Setting

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

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using Caltrans'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.

Affected Environment

The Project area occurs within the Desert Region of San Bernardino County. The Project area spans over 30 miles with elevation within the Project area ranging from 620 to 1,620 feet above mean sea level. Amboy, elevation 627 feet, and Bristol Ditch are on the west end of the Project; the highway gains elevation as it travels toward Essex, at 1,732 feet, and over Adena Ditch at the east end of the Project. Topographical features are flat near the highway with hillsides and small ridgelines in the distance to the north and south.

The land along the NTH is extremely gravelly with sandy loam. Soils in the Project area include Sunrock-Lava flows complex, 4 to 15 percent slopes, extremely stony in the Mojave Desert Area. However, much of the area of interest identified in the Web Soil Survey stated No Digital Data Available and the Sunrock-Lava flows complex was the only soil type identified.

Geologic Hazards

Faulting and Seismicity

No major faults traverse through the Project site. The California Division of Mines and Geology has not identified Alquist-Priolo Fault Zones through the site. Therefore, the risk of ground surface rupture and related hazards at the Project site is expected to be low.

Liquefaction Potential

According to the San Bernardino County General Plan Geologic Hazard Overlays, areas of liquefaction susceptibility do not occur within the Project area.

Landslides

Mountainous areas of the Desert region are more susceptible to landslides, particularly associated with large earthquakes. The Project site is relatively flat desert landscape and not near the mountainous area. According to the San Bernardino County General Plan Geologic Hazard Overlays, areas of landslide susceptibility do not occur within the Project area.

Seiches and Tsunamis

A seiche is a to and from vibration of a waterbody that is similar to the slopping of water in a basin. Once initiated, oscillation within the waterbody can continue independently. Seiches are often triggered by earthquakes. According to the County of San Bernardino General Plan, the most likely area that could be subject to seiche is mountain area that includes various lakes.

The County is located far enough inland from the Pacific Ocean that it is not subject to inundation by an earthquake-generated tsunami.

Erosive Soils

Desert soils are susceptible to erosion where disturbed due to the limited vegetation and low moisture content, and common high winds and infrequent high intensity rainfall events that may occur.

Environmental Consequences

Temporary

Geology/Soils/Seismic/Topography Impact #1: Seismic and Geologic Hazards

Construction of the Project would comply with the most current Department procedures regarding seismic design, and standard engineering practices are anticipated to prevent any adverse effects related to seismic and geologic hazards. Therefore, the Project is not anticipated to result in or contribute to seismic related hazard risk to construction workers or the travelling public during construction.

Permanent

Geology/Soils/Seismic/Topography Impact #2: Seismic and Geologic Hazards

The Project site is not within areas that are susceptible to liquefaction or landslide risk. Furthermore, the bridge replacements are not anticipated to adversely affect geologic or topographic conditions or be affected by fault rupture within the Project limits. The bridge replacements would be designed to meet Caltrans seismic design standards to minimize geologic and seismic hazards. No structures would be constructed that would increase the current risk of loss, injury, or death as a result of ground shaking or seismically induced effects. The proposed Project would not increase the risk of exposing people or structures to potential adverse effects because of seismic activities or seismic-related ground failure beyond existing conditions.

Avoidance, Minimization, and/or Mitigation Measures

All bridges will be designed in accordance with standard engineering practices and Caltrans' Standard Specifications. Because no substantial adverse effects under NEPA or significant impacts under CEQA would occur related to geology, soils, topography, and seismicity, no avoidance, minimization, and/or mitigation measures are required. Implementation of BMPs related to erosion control are identified in Measure **BIO-1** discussed in Biological Environment.

HAZARDOUS WASTE/MATERIALS

Regulatory Setting

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

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

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

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

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

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

Affected Environment

Information from this section is based on the December 2021 Hazardous Waste Initial Site Assessment (ISA) prepared for this Project. This effort included an Environmental Data Resources (EDR) records search, which consists of a review of standard federal, state, and local listings of known hazardous substance sites, historic topographic and aerial maps, groundwater maps, and naturally-occurring asbestos maps. Furthermore, a site reconnaissance was conducted on February 25, 2020.

Recognized Environmental Conditions (REC)s

Based on the records search and site reconnaissance, the following RECs shown in the below Table were observed to occur within the Project boundaries:

Table 3. REC Evidence

Location	Description of REC Evidence Found	Description of Associated AUL	Risk to Project
Striping to be removed within project boundaries on each of the 10 bridges along the NTH.	Potential lead and heavy metals associated with pavement striping. Implementation of improvements may require the removal and disposal of yellow traffic stripe and pavement marking materials (paint, thermoplastic, permanent tape, and temporary tape). Yellow paints made prior to 1995 may exceed hazardous waste criteria under Title 22, California Code of Regulations, and require disposal in a Class I disposal site.	Striping present on each bridge	Low
Along unpaved shoulders near each of the 10 bridges along the NTH.	Implementation of improvements may require the disturbance and removal of contaminated soils. However, less than 50 ppm for lead and chromium were found at two other bridge project sites (Dola and Lanzit) near Amboy on the NTH. Therefore, due to the low threshold, ADL is not a concern for any of the ten bridges.	Potential ADL in unpaved shoulders	Low to None
Supports under each of the 10 bridges along the NTH proposed to be removed.	Wood timbers in the barriers and supporting the existing bridges. Potential treated wood waste should be managed in accordance with standards under Title 22, CA Code of Regulations Division 4.5 Chapter 34.	Treated timbers bridge supports and barriers	Low
Barriers on each of the 10 bridges along the NTH proposed to be removed.	Potentially lead-based paint on the wood timbers and on the railings that make up the bridge barriers. Structures constructed prior to 1978 are presumed to contain lead-based paint unless proven otherwise. However, structures constructed after 1978 may also contain lead-based paints.	Wood and metal railings that make bridge barriers	Low

Limitations of the Site Assessments or Investigations

The hazardous waste analysis for the Project was performed in general accordance with the Caltrans procedures and guidelines for performing and preparing ISA's. During the performance

of the assessment, all readily available materials pertaining to the Project site were collected and reviewed to prepare this document. This assessment is not a full-scale environmental site investigation to prove that the Project site is environmentally devoid of hazardous or toxic materials. Information and data were provided by presumably competent third parties with knowledge about the site and surrounding areas. The presence of radioactive materials, agricultural chemicals, ACMs, and biological hazards was not specifically investigated.

The ISA from which this section is based upon consists of professional opinions and recommendations made in accordance with generally accepted environmental principles and practices. The conclusions are based upon an evaluation of the information gathered and general observations of conditions prevalent at the Project site during the site visit. The ISA does not otherwise provide any implied or expressed guarantees regarding the characteristics or conditions of environmental media at the Project site.

The Project spans over 30 miles with public and private ownership of properties along the highway; direct interviews were not performed with the owners of properties adjacent to the Project boundaries. Due to the availability of regulatory agency data associated with potential REC's on these properties, the lack of direct interviews with property owners adjacent to the Project boundaries does not present a significant data gap in the hazardous waste analysis.

Environmental Consequences

Temporary

Hazardous Waste/Materials Impact #1: Asbestos-Containing Material (ACM)

Based on the site reconnaissance, the existing bridges, built in 1930, the potential for ACM was observed in the concrete and bridge supports. Federal Occupational Safety and Health Administration (OSHA), and National Emissions Standards for Hazardous Air Pollutants (NESHAP) define an ACM as any material containing more than one percent (>1.0%) asbestos.

The Asbestos and Lead-Based Paint Survey Report prepared for an adjacent bridge, the Lanzit Ditch Bridge (2015), identified no ACM within the bridge components including vibration dampers and concrete form wrap based on six samples collected and submitted for laboratory analysis. As The 10 bridges along NTH are comprised of the same components and material as the Lanzit Ditch Bridge and located on the same stretch of highway. Therefore, it is presumed that the other bridges contain no ACM and Phase II investigations are not necessary and are not proposed.

Hazardous Waste/Materials Impact #2: Yellow Traffic Stripe and Pavement Markings

Based on the site reconnaissance, the potential for lead and heavy metals associated with pavement striping was observed along the National Trails Highway on each of the 10 existing bridges to be replaced. Temporary construction activity associated with the proposed replacement of each bridge may require the removal and disposal of yellow traffic stripe and pavement marking materials (paint, thermoplastic, permanent tape, and temporary tape). Yellow paints made prior to 1995 may exceed hazardous waste criteria under Title 22, California Code of Regulations, and require disposal in a Class I disposal site. Implementation of measure **HAZ-1** would ensure proper handling, storage, transportation, and disposal of yellow striping and pavement marking materials during construction.

Hazardous Waste/Materials Impact #3: Aerially deposited Lead (ADL)

Aerially deposited lead (ADL) from the historical use of leaded gasoline exists along roadways throughout California. There is the likely presence of soils with elevated concentrations of lead as

a result of ADL on the state highway system right-of-way within the limits of the Project alternatives. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, ADL Agreement between Caltrans and the California Department of Toxic Substances Control. This ADL Agreement allows such soils to be safely reused within the Project limits as long as all requirements of the ADL Agreement are met.

Temporary construction activities associated with the proposed Project may require the disturbance and removal of potentially contaminated soils at each proposed bridge replacement site. However, less than 50 ppm for lead and chromium were found at two other bridge project sites (Dola and Lanzit) near Amboy on the NTH. Therefore, due to the low threshold, ADL is not a concern for any of the 10 bridges. ADL release during temporary construction activity is not a concern for any of the 10 bridges to be replaced. No mitigation or minimization measures are proposed.

Hazardous Waste/Materials Impact #4: Lead-based Paint

Based on the site reconnaissance, the potential for lead-based paint were observed on the wood timbers and on the metal railings that make up the bridge barriers. Structures constructed prior to 1978 are presumed to contain lead-based paint unless proven otherwise. However, structures constructed after 1978 may also contain lead-based paints. Lead-based paint is presumed to be present within the bridge barriers and contractors will be directed to handle accordingly.

Temporary construction activity associated with the proposed Project may require the disturbance and removal of railings containing lead-based paint. Implementation of measure **HAZ-2** will ensure that the presence of lead-based paint within the bridge barriers is identified prior to construction, as well as the proper handling, storage, transportation, and disposal of materials containing lead-based paint.

Hazardous Waste/Materials Impact #5: Treated Wood Waste (TWW)

Temporary construction activity associated with the proposed Project may result in treated wood waste (TWW) from wood timbers in the barriers and supporting the existing bridges. Implementation of measure **HAZ-3** would ensure proper handling, storage, transportation, and disposal of TWW during construction.

Permanent

Upon completion of the proposed Project, no permanent impacts would occur. Implementation of measures **HAZ-1** through **HAZ-4** would ensure that risk associated with hazardous waste/materials remain minimal.

Avoidance, Minimization, and/or Mitigation Measures

HAZ-1: It is anticipated that yellow pavement striping will be removed since it is present over each bridge along NTH. Removal of yellow striping and pavement marking materials would be performed in accordance with latest Caltrans Standard Special Provision for REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS. If yellow striping is removed in conjunction with the existing pavement, the paint striping can be considered non-hazardous material and a provision for handling the paint is not required.

HAZ-2: Lead-based paint is presumed to be present within the bridge barriers. The contractor shall ensure lead-based paint is properly managed and removed from the Project site

in accordance with the latest Caltrans Standard Special Provision for DISTURBANCE OF EXISTING PAINT SYSTEMS ON BRIDGES.

HAZ-3: Treated wood along bridge deck barriers and supports underneath each bridge contain chemicals, e.g., creosote, which pose a risk to human health and the environment and must be handled in accordance with CCR, Title 22, Division 4.5 implemented by the Department of Toxic Substances Control (DTSC). Section 14-11.14 provides guidelines on handling, storing, transporting, and disposing of Treated Wood Waste (TWW). Caltrans follows the regulations adopted by DTSC regarding TWW, which may be handled as a regulated solid waste and disposed of in a State Water Resources Control Board certified solid waste landfill.

The contractor shall ensure that removal of TWW would be performed in accordance with the latest Caltrans Standard Special Provision for TREATED WOOD WASTE.

HAZ-4: As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during project construction (such as previously undetected petroleum hydrocarbon contamination from former underground storage tanks). If known or previously unknown hazardous waste/material is encountered during construction, the procedures outlined in the Caltrans Hazards Procedures for Construction shall be followed.

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 2.3.5 Threatened and Endangered Species. Wetlands and other waters are also discussed below in 2.3.2).

2.3.1.2 Affected Environment

The information presented in this section is based on the April 2021 Natural Environment Study (NES) and the October 2021 Biological Assessment (BA) prepared for this Project, which include the findings of the biological survey conducted on October 21, 2020. Database searches and literature review were used to inform the discussion in the NES of the potential for special status plant species to occur within the Biological Study Area (BSA), which was defined around the Project area at each bridge location, encompassing all areas necessary for construction, plus an approximate 50 to 150-foot buffer around these areas.

The dominant natural habitats within the Project area are creosote bush scrub and ephemeral ditches (**Figure 5. Waters and Vegetation Communities within the BSA**). These ephemeral ditches are considered waters of the State, under the jurisdiction of the SWRCB, Colorado River Basin RWQCB, and CDFW, and will be discussed in detail in Section 2.3.2 Wetlands and Other Waters. Creosote bush scrub will be discussed in this section as a natural community.

Creosote bush scrub is a natural habitat that is not considered to be of special concern; however, this vegetation community provides suitable habitat for special status plant and wildlife species and has a high potential to support the state and federally listed desert tortoise (see Section 2.3.5 Threatened and Endangered Species). The creosote bush scrub within the Project area has been previously disturbed by human and vehicle traffic due to its proximity to the NTH.

2.3.1.2 Environmental Consequences

Construction of the proposed Project would result in both temporary and permanent impacts to creosote bush scrub at each of the 10 replacement bridge sites, as shown in the below Table (**Figure 6. Project Impacts to Natural Communities**).

Table 4. Impacts on Creosote Bush Scrub

Bridge Site	Temporary Impacts	Permanent Impacts
Adena Ditch	1.282	0.061
Beacon Ditch	1.186	0.080
Bristol Ditch	1.486	0.088
Cerro Ditch	1.208	0.103
Cerulia Ditch	1.367	0.098
Gordo Ditch	1.222	0.104
Larissa Ditch	1.273	0.139
Leith Ditch	1.145	0.098

Sombra Ditch	1.608	0.161
Terra Ditch	1.358	0.118
Total*	**13.14**	**1.05**

rounded to nearest hundredth

Temporary

Natural Communities Impact #1: Temporary impacts to creosote bush scrub

Construction of the Build Alternative would require temporary disturbance to creosote bush scrub for staging and access to the bridge, as well as for the construction of the temporary low-water crossing detours that would be implemented at each bridge. Temporary impacts to creosote bush scrub would total in approximately 13.14 acres across all 10 bridge sites. Measure **BIO-8** would ensure that temporarily impacted areas would be decompacted, regraded, and seeded with a native desert shrub seed mix following construction, kickstarting the cycle of natural recruitment and allowing the site to regenerate to preconstruction conditions.

Permanent

Natural Communities Impact #2: Permanent impacts to creosote bush scrub

The Build Alternative requires the placement of rock slope protection around new bridge abutments, which would cause permanent impacts to creosote bush scrub habitat. Permanent impacts to creosote bush scrub habitat within the Project area due to the placement of rock slope protection would total in approximately 1.05 acres across the 10 bridge sites.

The anticipated permanent impacts to creosote bush scrub would occur where this natural community is adjacent to the existing paved NTH. This disturbed creosote bush scrub habitat has been regularly impacted by vehicle traffic, trash, and oils along the NTH. Additionally, rock slope protection would not affect the movement of wildlife through the Project area. As such, permanent impacts to creosote bush scrub would not be occurring to previously pristine habitat and are not expected to have significant impacts to wildlife corridors and migration routes.

2.3.1.3 Avoidance, Minimization, and/or Mitigation Measures

The following minimization measures taken from the Project's April 2021 NES and October 2021 BA would be implemented in order to allow natural communities to regenerate in impacted areas following the completion of construction.

BIO-1: Best Management Practices (BMPs):

- Disturbed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Disturbed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities.
- All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.

- All construction materials, vehicles, stockpiles, and staging areas would be situated outside of ephemeral ditches as feasible. All stockpiles would be covered, as feasible.

- All erosion control measures and storm water control measures would be properly maintained until final grading has been completed and permanent erosion control measures have been implemented.

- All disturbed areas would be restored to pre-construction contours so that hydrologic function of the ephemeral ditches is not permanently impacted.

- All construction materials would be hauled off-site after completion of construction.

BIO-2: Refueling or maintenance of equipment shall not be permitted to occur within the ephemeral ditches at the Project site. Refueling and maintenance shall occur on the existing paved roadways rather than within natural communities when feasible. When refueling and maintenance activities occurs in natural communities, plastic sheeting or other secondary containment measures will be used to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).

BIO-3: Equipment will be checked daily for leaks and will be well maintained to prevent lubricants and any other deleterious materials from entering natural environments.

BIO-4: A chemical spill kit must be kept onsite and available for use in the event of a spill.

BIO-5: Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all equipment/materials located in a natural area (ephemeral ditch or creosote bush scrub habitat) as needed to prevent petroleum products or other chemicals from contaminating the soil or from spilling directly into ephemeral ditches. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).

BIO-6: Project activities will not occur during any periods of precipitation or surface water flow in the ephemeral ditches within the BSA. In the Mojave Desert, this is most likely to occur between November and April, and during the summer monsoon season from July to September. When precipitation is occurring or surface water is flowing, Project work within the ephemeral ditch channels will be halted in order to minimize disturbance to aquatic resources and desert wildlife, which is most active during this critical time when water is available.

BIO-8: Following construction, soil within impact areas will be decompacted and a seed mix of locally native desert shrubs will be applied to natural areas disturbed by construction activities in order to kick start the site's natural cycle of plant recruitment.

Biological Study Area

National Trails Highway

Vegetation Community

Creosote Bush Scrub

Urban/Barren

Ephemeral Ditch

Kelbaker Rd.

Page 11

Danby Rd.

National Trail Highway

Crafer Road

Page 2

Page 3

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National Trails Highway

Amboy Rd.

Cadiz Rd.

V:\2690-NTH at 10 Bridges\EIR_EAF\5_Waters&VegComm.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 8,750 feet

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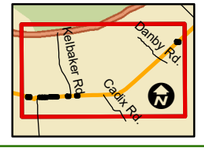
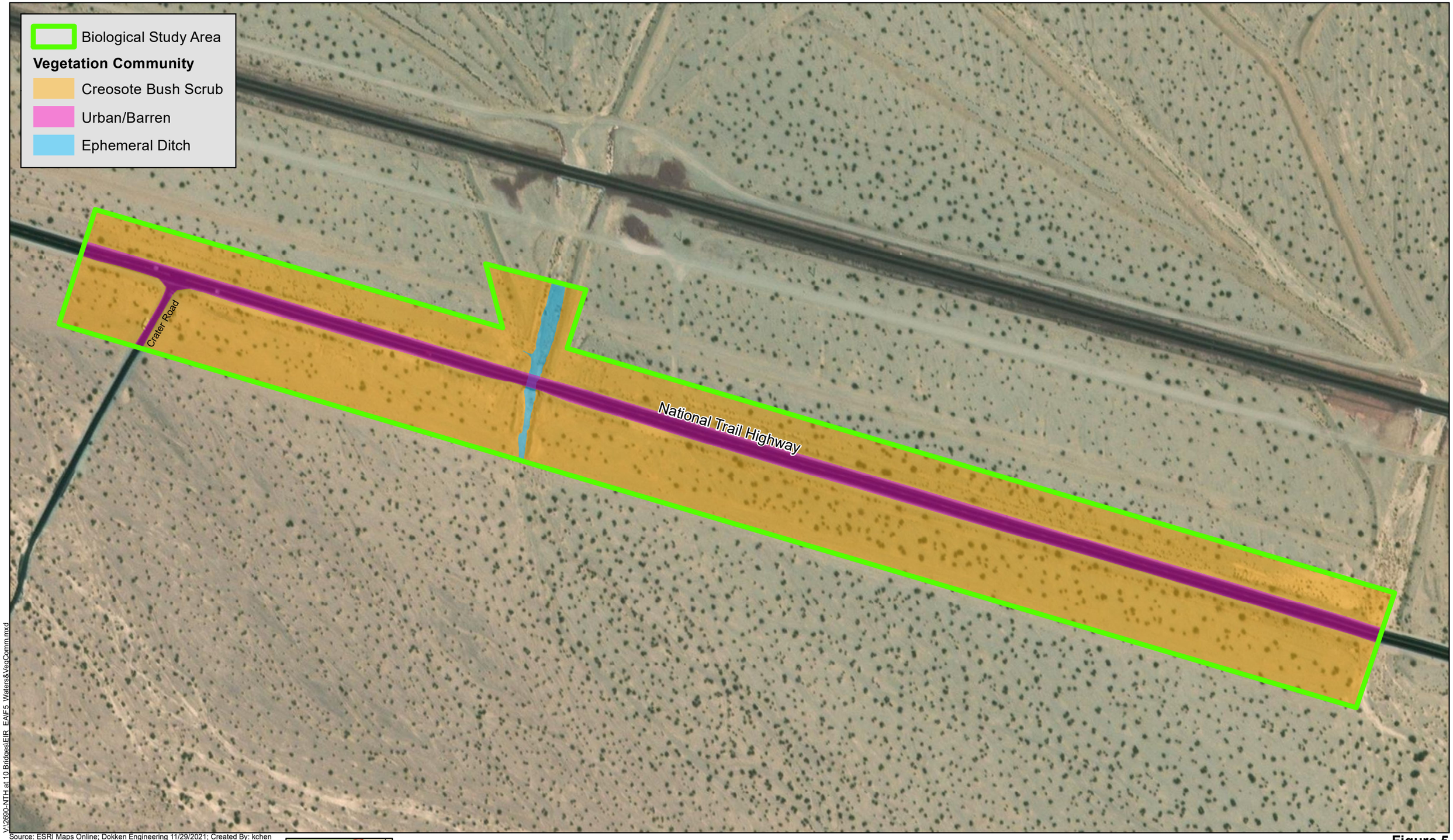


Figure 5
Page 1 of 11
Waters and Vegetation Communities within the BSA - All 10 Bridges
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\12690-NTH at 10 Bridges\EIR_EAIF5_Waters&VegComm.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 200 feet

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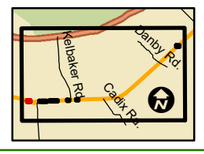


Figure 5
Page 2 of 11
Waters and Vegetation Communities within the BSA - Bristol Ditch (54C0272)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF\5_Waters&VegComm.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

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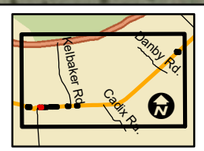


Figure 5
Page 3 of 11
Waters and Vegetation Communities within the BSA - Cerro Ditch (54C0275)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Biological Study Area

Vegetation Community

Creosote Bush Scrub

Urban/Barren

Ephemeral Ditch

National Trail Highway

V:\12690-NTH at 10 Bridges\EIR_EAIF5_Waters&VegComm.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

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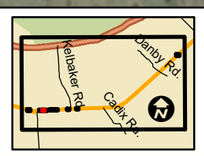
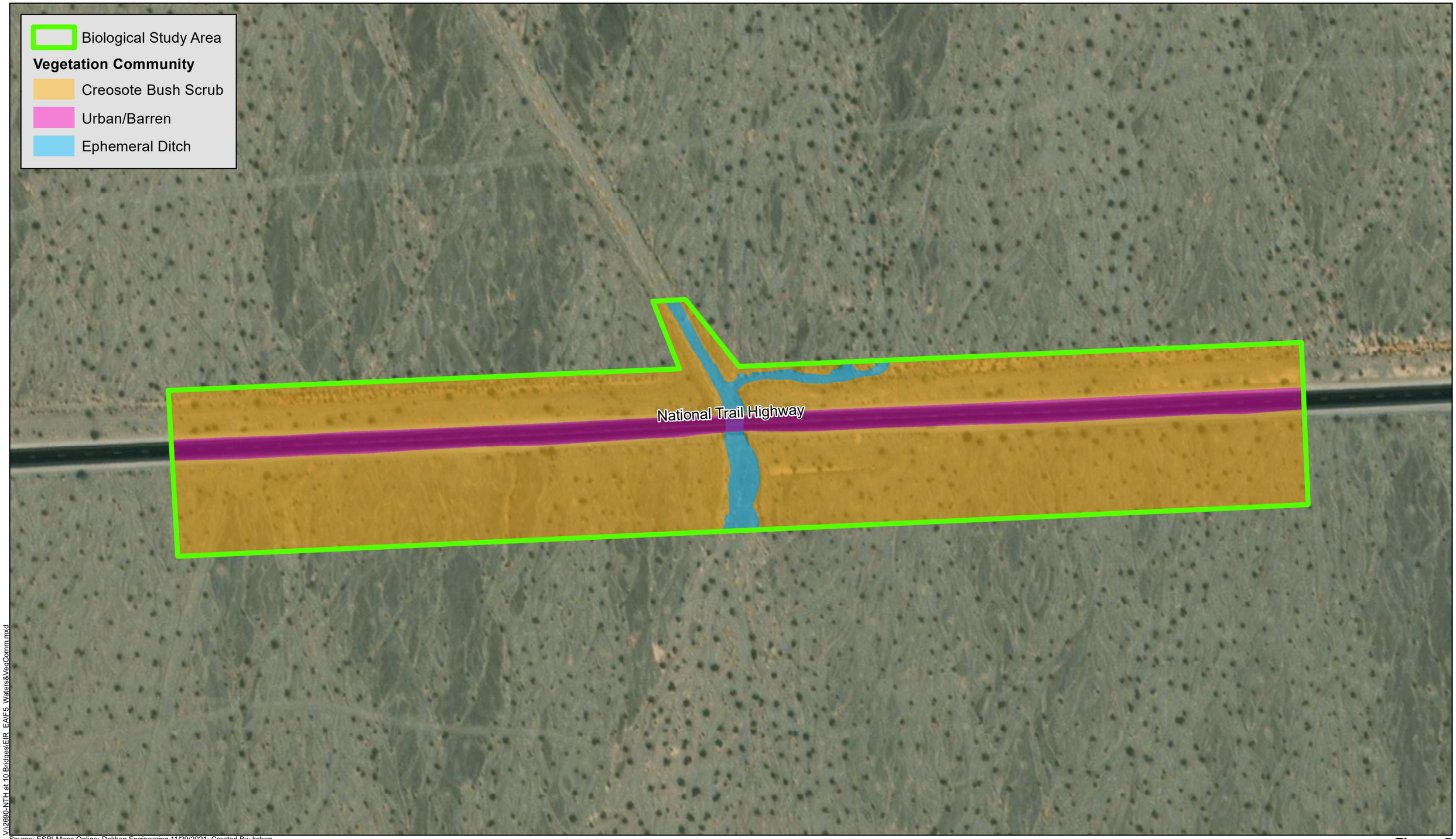


Figure 5
Page 4 of 11
Waters and Vegetation Communities within the BSA - Gordo Ditch (54C0276)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



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Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

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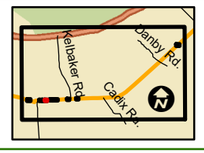
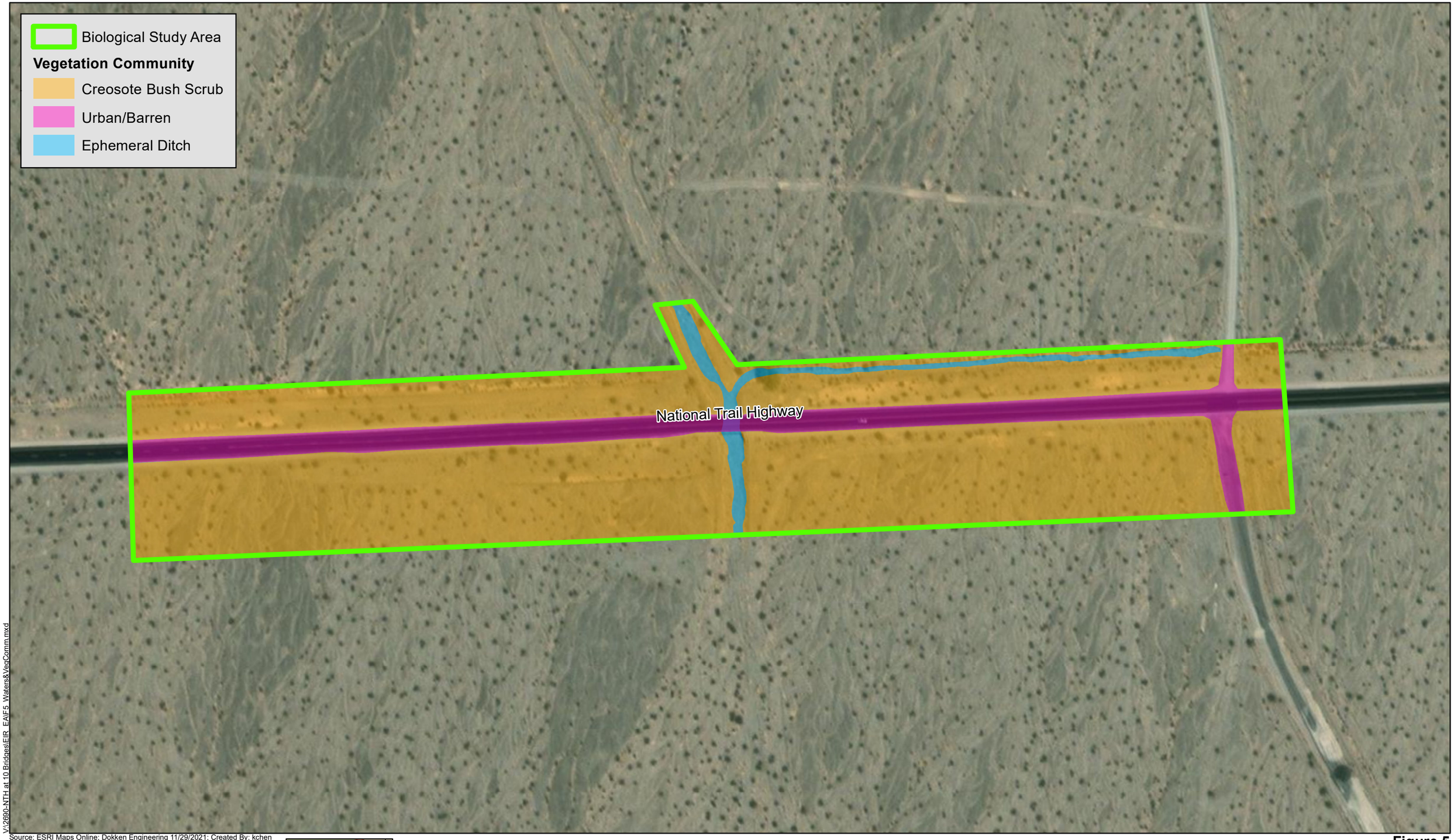


Figure 5
Page 5 of 11
Waters and Vegetation Communities within the BSA - Cerulia Ditch (54C0277)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\12690-NTH at 10 Bridges\EIR_EAF5_Waters&VegComm.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

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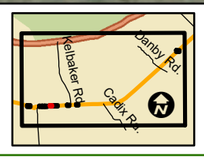
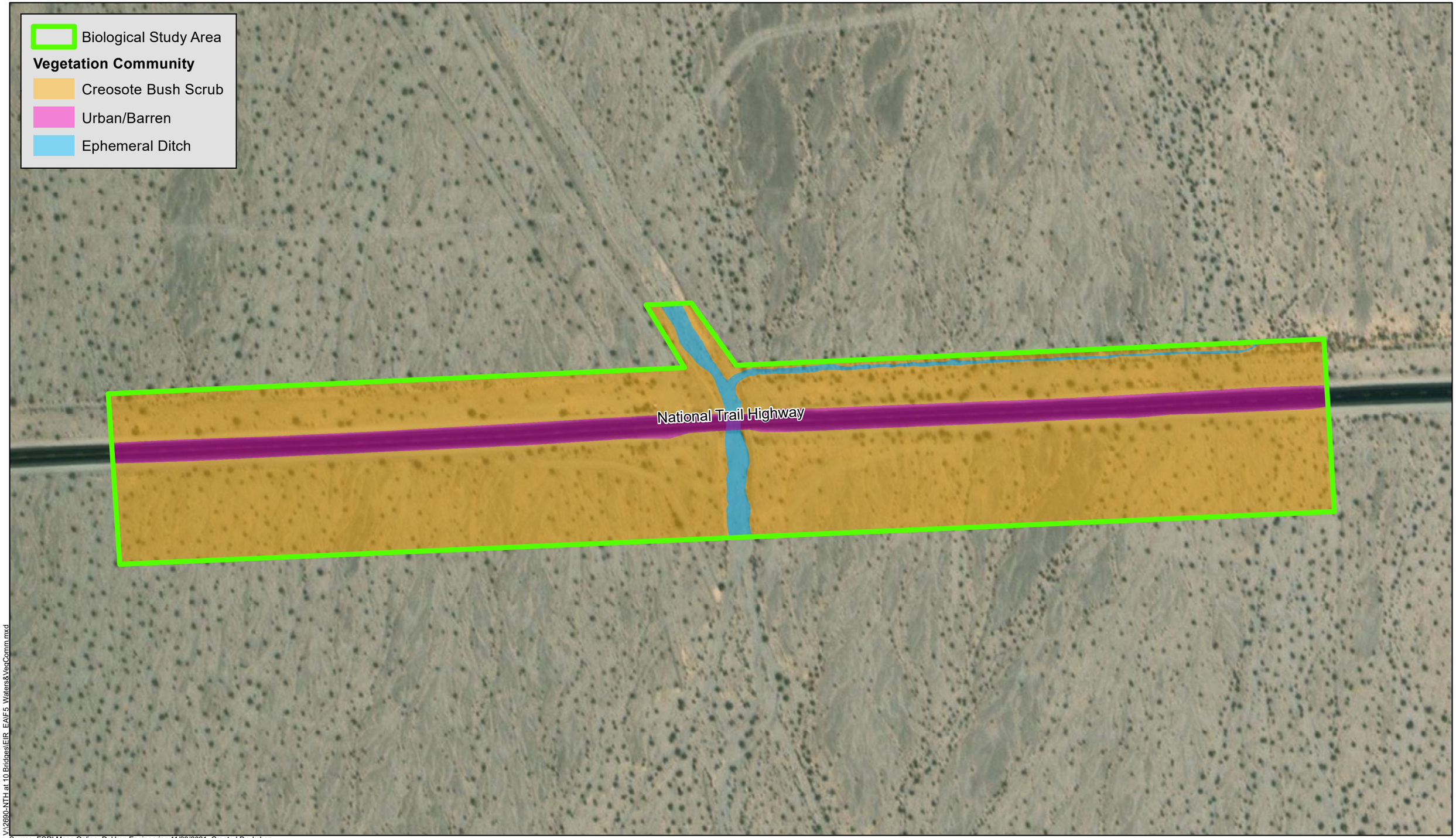


Figure 5
Page 6 of 11
Waters and Vegetation Communities within the BSA - Leith Ditch (54C0279)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF 5_Waters&VegComm.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

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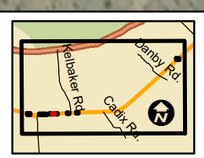
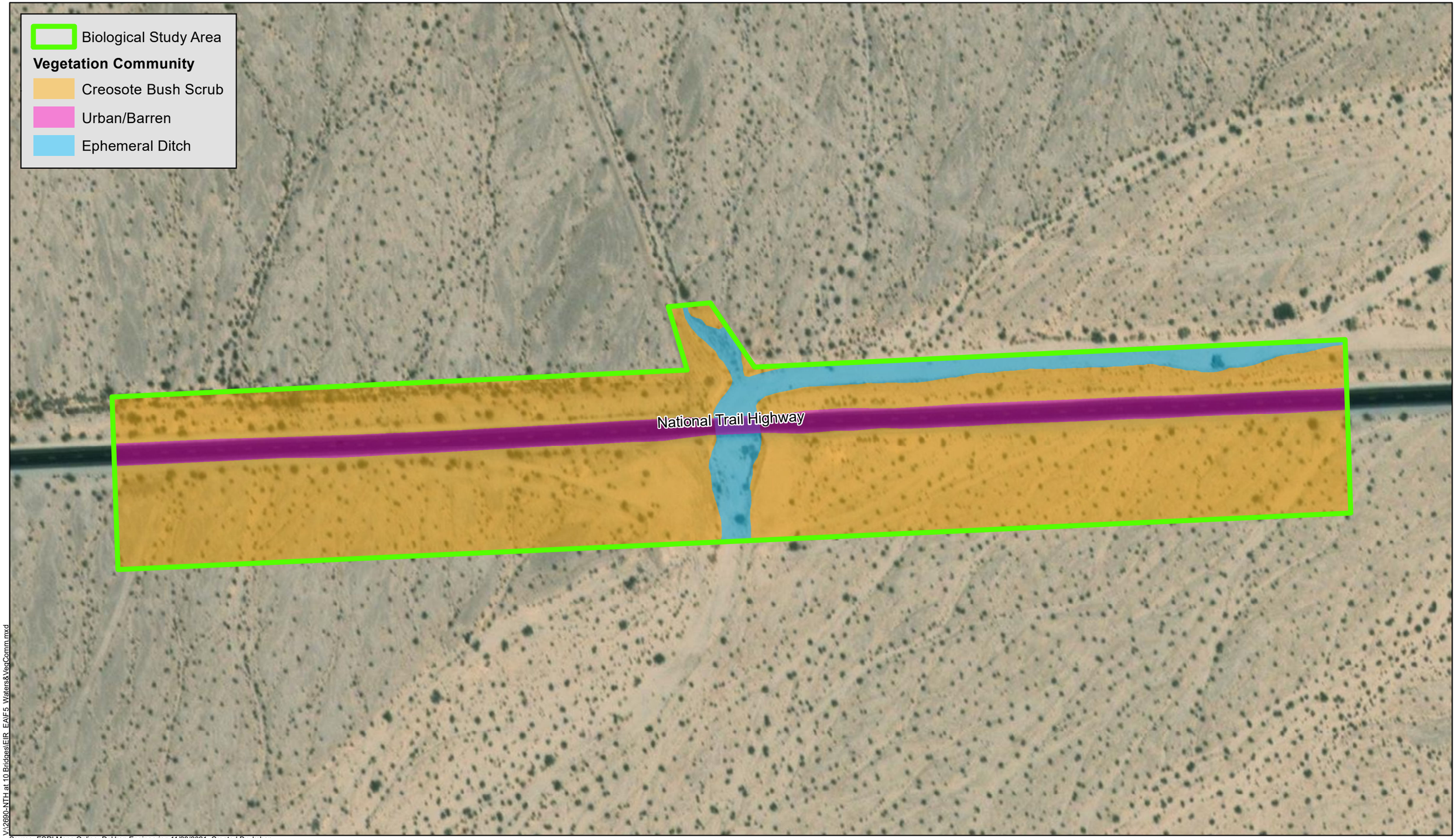


Figure 5
Page 7 of 11
Waters and Vegetation Communities within the BSA - Terra Ditch (54C0280)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF\5_Waters&VegComm.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

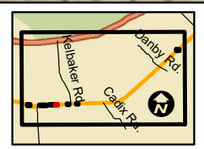


Figure 5
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Waters and Vegetation Communities within the BSA - Sombra Ditch (54C0281)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF5_Waters&VegComm.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

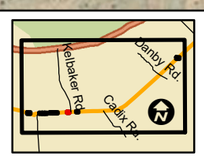
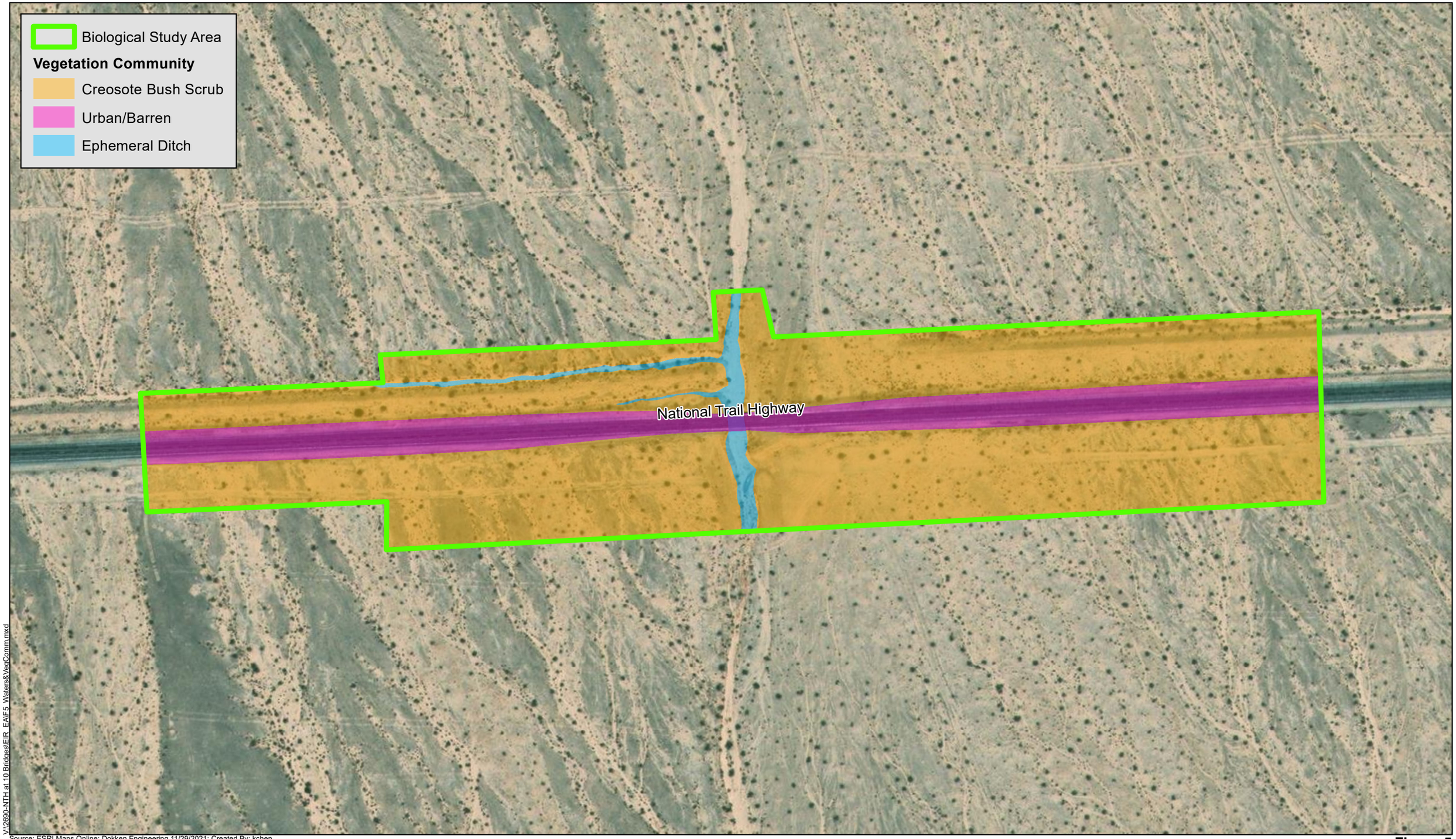


Figure 5
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Waters and Vegetation Communities within the BSA - Beacon Ditch (54C0282)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF\5_Waters&VegComm.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

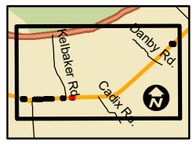
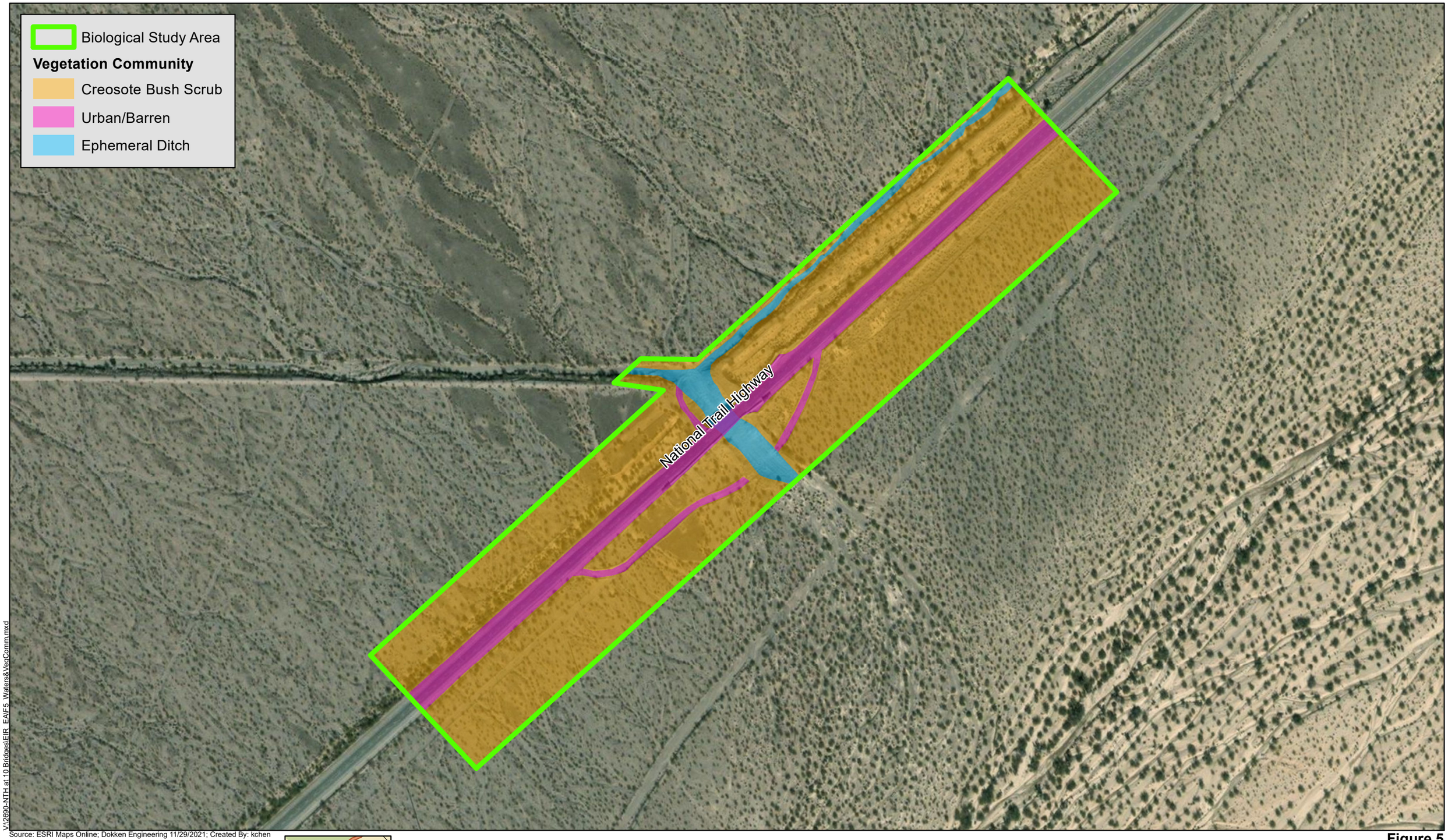


Figure 5
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Waters and Vegetation Communities within the BSA - Larissa Ditch (54C0284)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF\5_Waters&VegComm.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 200 feet

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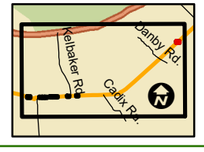
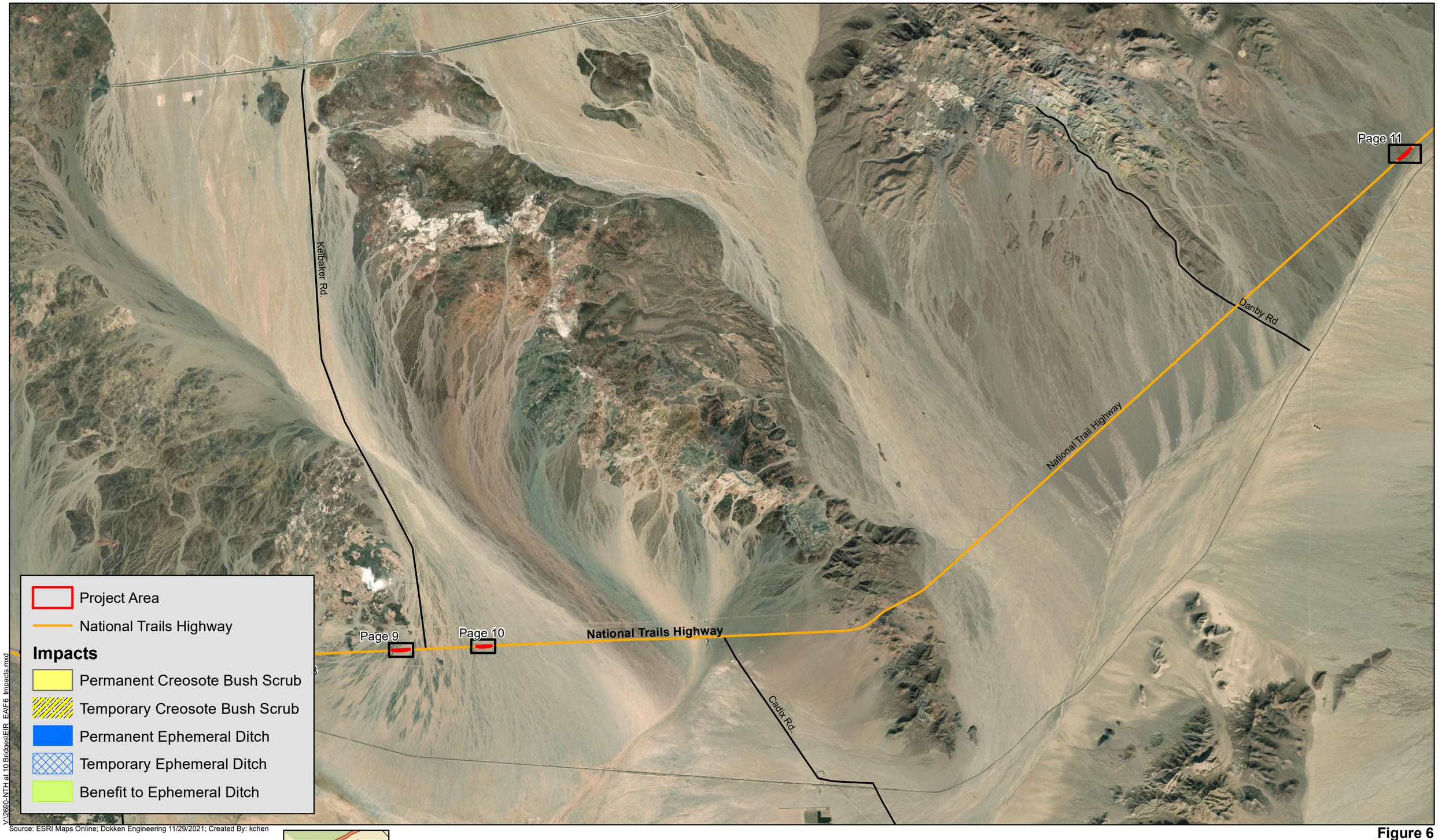


Figure 5
Page 11 of 11
Waters and Vegetation Communities within the BSA - Adena Ditch (54C0315)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF\6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 8,750 feet

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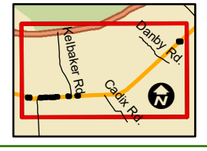


Figure 6
Page 1 of 11
Project Impacts to Natural Communities - All 10 Bridges
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 200 feet

0 100 200 300 400 Feet

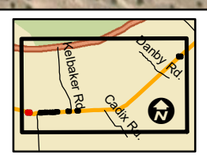


Figure 6
Page 2 of 11
Project Impacts to Natural Communities - Bristol Ditch (54C0272)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\12690-NTH at 10 Bridges\EIR_EAIF6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

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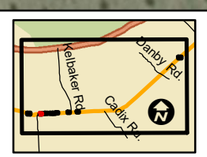


Figure 6
Page 3 of 11
Project Impacts to Natural Communities - Cerro Ditch (54C0275)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

National Trail Highway

Project Area

Impacts

- Permanent Creosote Bush Scrub
- Temporary Creosote Bush Scrub
- Permanent Ephemeral Ditch
- Temporary Ephemeral Ditch
- Benefit to Ephemeral Ditch

V:\2690-NTH at 10 Bridges\EIR_EAF\6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

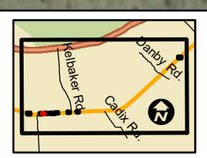


Figure 6
Page 4 of 11
Project Impacts to Natural Communities - Gordo Ditch (54C0276)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

National Trail Highway

Project Area

Impacts

- Permanent Creosote Bush Scrub
- Temporary Creosote Bush Scrub
- Permanent Ephemeral Ditch
- Temporary Ephemeral Ditch
- Benefit to Ephemeral Ditch

V:\2690-NTH at 10 Bridges\EIR_EAIF6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

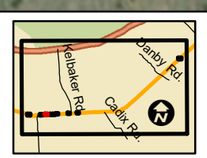


Figure 6
Page 5 of 11
Project Impacts to Natural Communities - Cerulia Ditch (54C0277)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

National Trail Highway

Project Area

Impacts

- Permanent Creosote Bush Scrub
- Temporary Creosote Bush Scrub
- Permanent Ephemeral Ditch
- Temporary Ephemeral Ditch
- Benefit to Ephemeral Ditch

V:\2690-NTH at 10 Bridges\EIR_EAF\6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

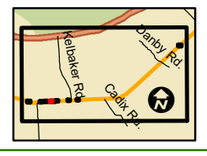
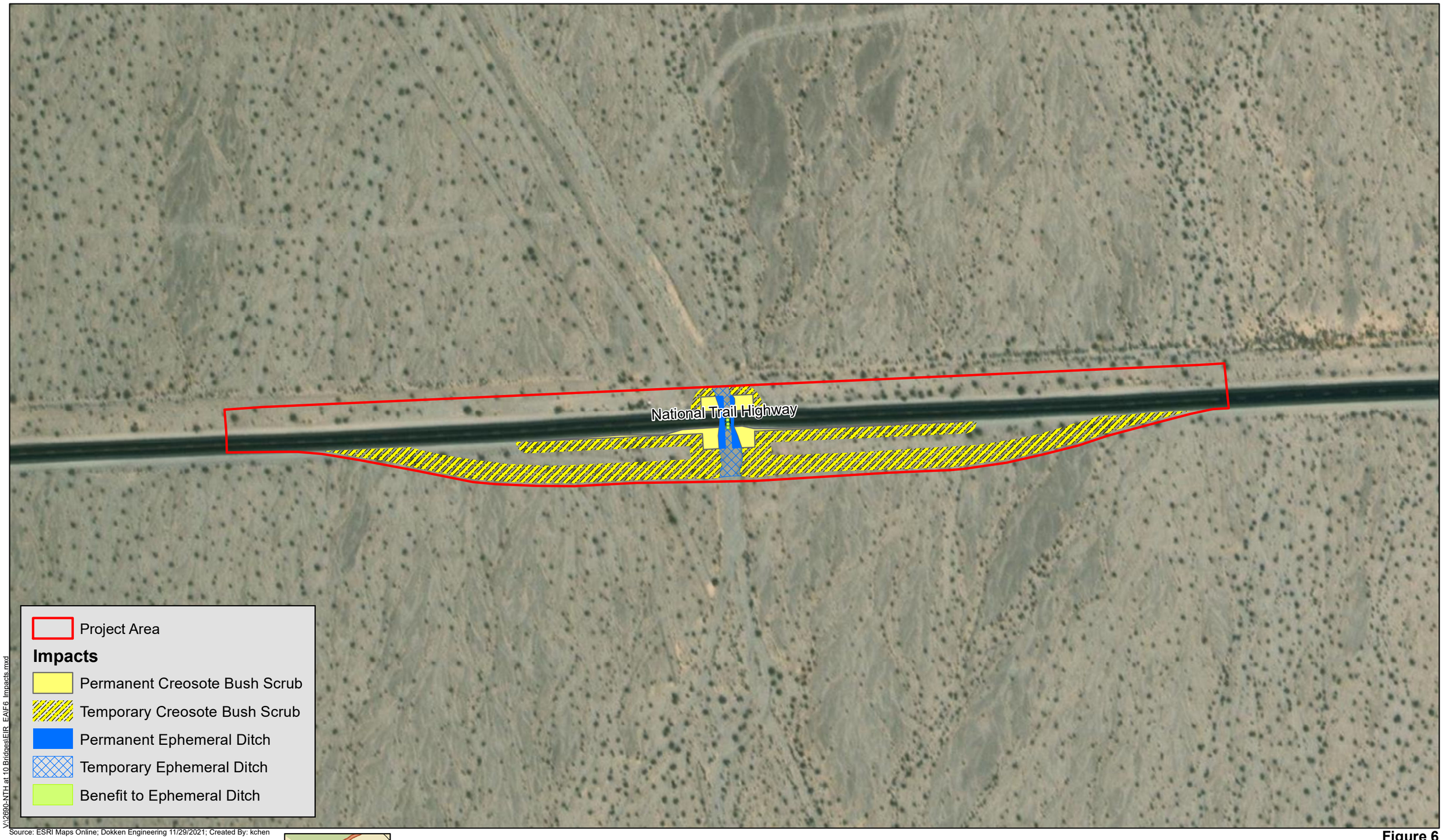


Figure 6
Page 6 of 11
Project Impacts to Natural Communities - Leith Ditch (54C0279)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\26990-NTH at 10 Bridges\EIR_EAF6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

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0 100 200 300 400 Feet

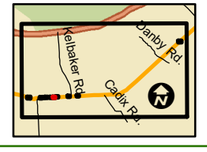


Figure 6
Page 7 of 11
Project Impacts to Natural Communities - Terra Ditch (54C0280)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

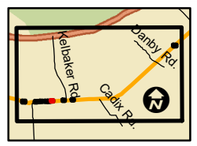


Figure 6
Page 8 of 11
Project Impacts to Natural Communities - Sombra Ditch (54C0281)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

National Trail Highway

Project Area

Impacts

- Permanent Creosote Bush Scrub
- Temporary Creosote Bush Scrub
- Permanent Ephemeral Ditch
- Temporary Ephemeral Ditch
- Benefit to Ephemeral Ditch

V:\2690-NTH at 10 Bridges\EIR_EAIF6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

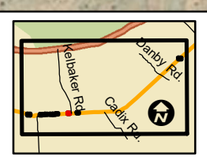


Figure 6
Page 9 of 11
Project Impacts to Natural Communities - Beacon Ditch (54C0282)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

National Trail Highway

Project Area

Impacts

- Permanent Creosote Bush Scrub
- Temporary Creosote Bush Scrub
- Permanent Ephemeral Ditch
- Temporary Ephemeral Ditch
- Benefit to Ephemeral Ditch

V:\2690-NTH at 10 Bridges\EIR_EAF6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

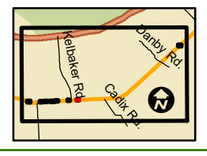
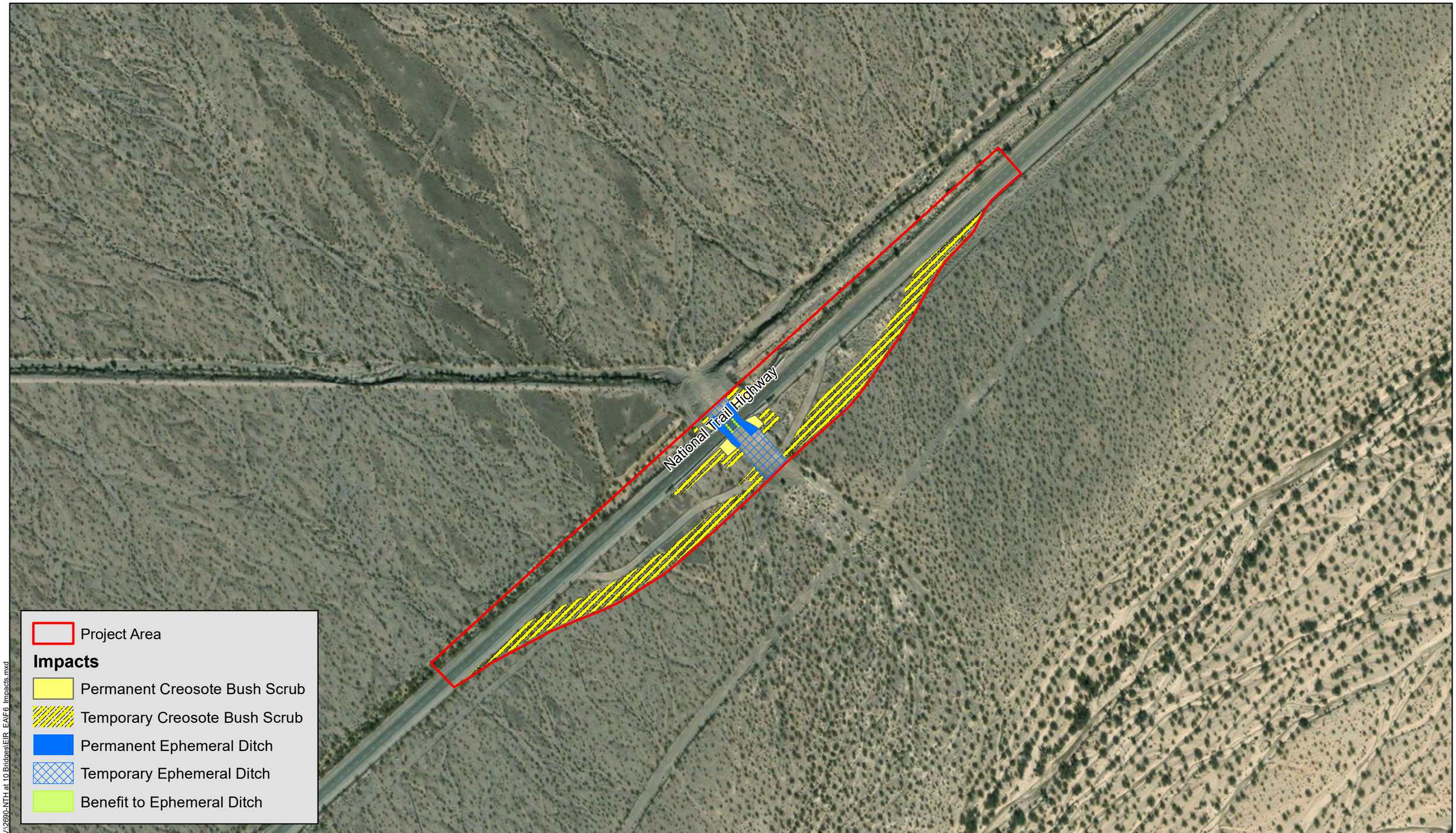


Figure 6
Page 10 of 11
Project Impacts to Natural Communities - Larissa Ditch (54C0284)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF6_Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 200 feet

0 100 200 300 400 Feet

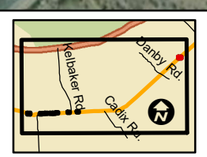


Figure 6
Page 11 of 11
Project Impacts to Natural Communities - Adena Ditch (54C0315)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

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] Part 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 were 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 Caltrans, 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

The information presented in this section is based on the Natural Environment Study (NES) prepared for this Project, dated April 2021, which includes the findings of a biological survey conducted on October 21, 2020, database searches, and literature review were used to inform the discussion in the NES of the potential for special status plant species to occur within the BSA), which was defined around the Project area at each bridge location, encompassing all areas necessary for construction, plus an approximate 50 to 150-foot buffer around these areas.

During the biological survey, a series of man-made ditches were observed that collect flow from numerous, rills, gullies, and small ephemeral channels on the upslope side of the roadway and convey it under the roadway were observed within the Project area at each of the 10 bridge sites. These ditches are intermittently flooded, with surface water typically only present in direct response to rain events (NWI 2020). At each bridge crossing, the maintained ditch/channel alignment is evident at the bridge crossing and branches off into smaller channels typical of an alluvial fan upstream and downstream. The channels range from approximately 30 to 80 feet across at their widest points. In addition, some channels have a narrow floodplain that extends several feet beyond the OHWM on both sides.

It was determined that the ephemeral ditches in the Project area are not under the jurisdiction of USACE as a water of the U.S., as they are not considered a traditionally navigable water nor are they a tributary to such a water. However, the ephemeral ditches are under the jurisdiction of the SWRCB and RWQCB as a water of the State and under the jurisdiction of CDFW as riverine habitat (Figure 7. Jurisdictional Waters within the BSA).

2.3.2.3 Environmental Consequences

Construction of the proposed Project would result in both temporary and permanent impacts to ephemeral ditches at each of the 10 replacement bridge sites, as shown in **Table 5**.



V:\2690-NTH at 10 Bridges\EIR_EA\F7_JurisdictionalWaters.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 8,750 feet

2,000 0 2,000 4,000 Feet

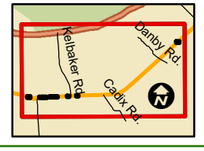


Figure 7
Page 1 of 11
Jurisdictional Waters within the BSA - All 10 Bridges
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF7_JurisdictionalWaters.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 200 feet

0 100 200 300 400 Feet

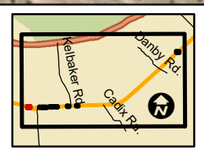


Figure 7
Page 2 of 11
Jurisdictional Waters within the BSA - Bristol Ditch (54C0272)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF\7_JurisdictionalWaters.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

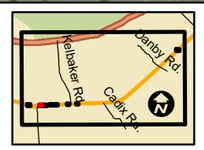
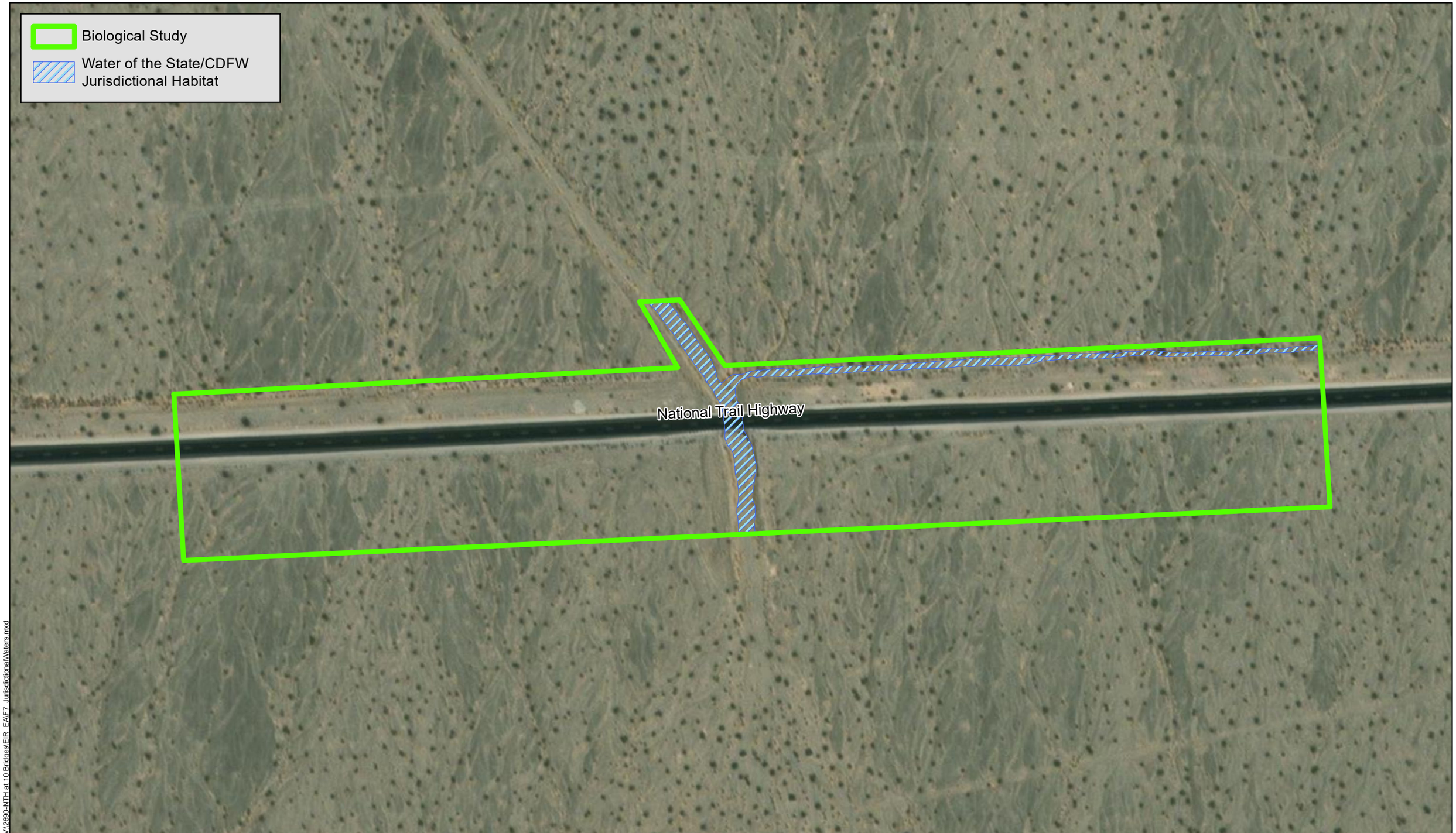


Figure 7
Page 3 of 11
Jurisdictional Waters within the BSA - Cerro Ditch (54C0275)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF7_JurisdictionalWaters.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

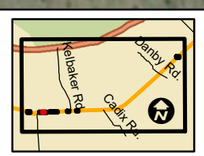


Figure 7
Page 4 of 11
Jurisdictional Waters within the BSA - Gordo Ditch (54C0276)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\12690-NTH at 10 Bridges\EIR_EAF7_JurisdictionalWaters.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

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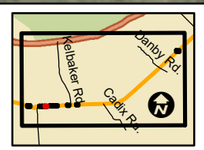


Figure 7
Page 5 of 11
Jurisdictional Waters within the BSA - Cerulia Ditch (54C0277)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF7_JurisdictionalWaters.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

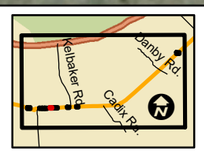
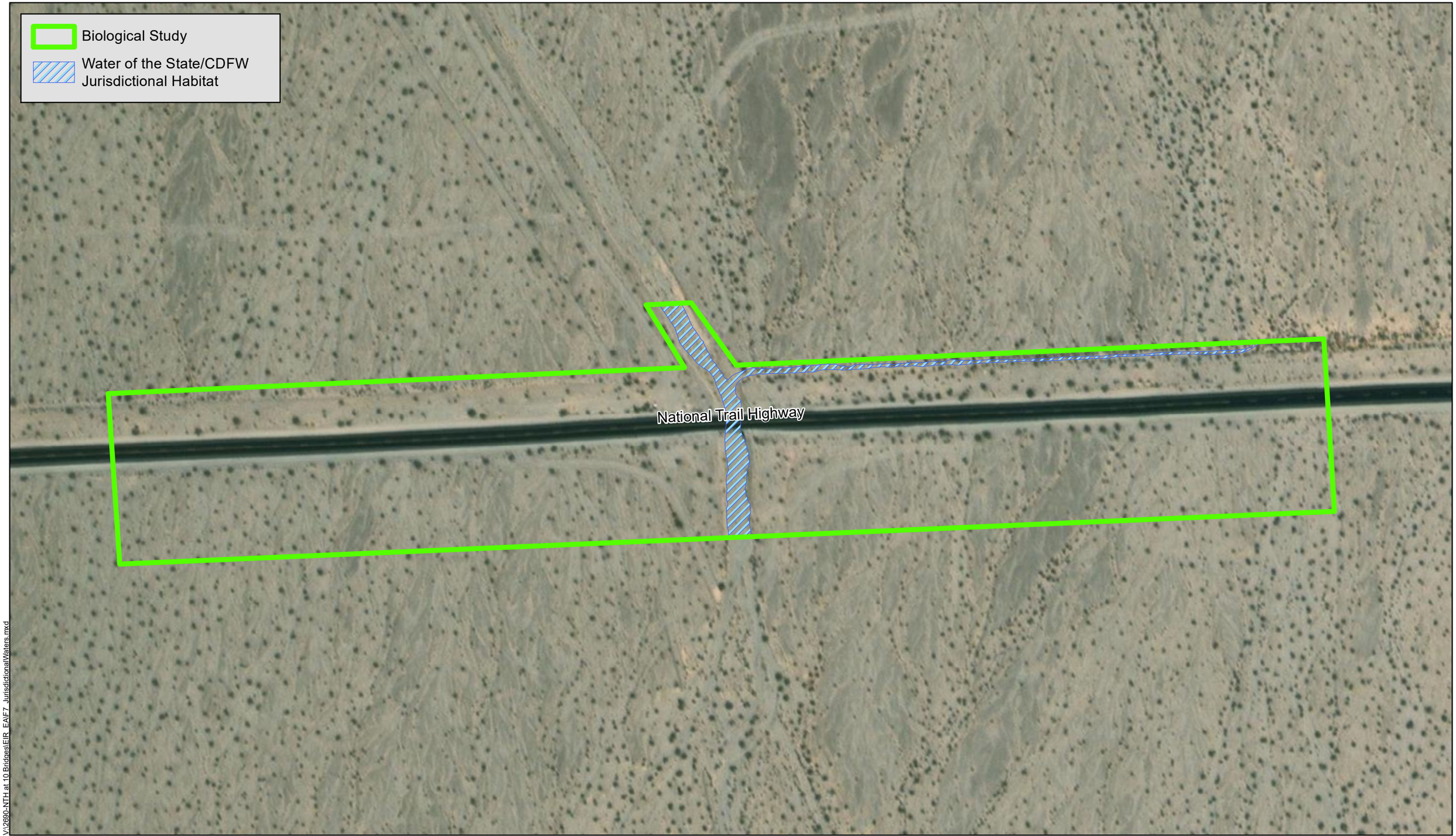


Figure 7
Page 6 of 11
Jurisdictional Waters within the BSA - Leith Ditch (54C0279)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF7_JurisdictionalWaters.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

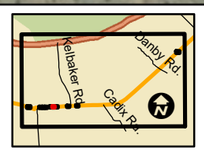


Figure 7
Page 7 of 11
Jurisdictional Waters within the BSA - Terra Ditch (54C0280)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF7_JurisdictionalWaters.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

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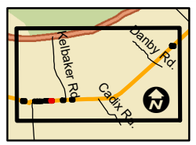


Figure 7
Page 8 of 11
Jurisdictional Waters within the BSA - Sombra Ditch (54C0281)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF7_JurisdictionalWaters.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

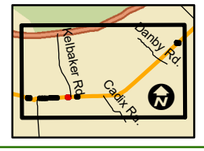


Figure 7
Page 9 of 11
Jurisdictional Waters within the BSA - Beacon Ditch (54C0282)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF7_JurisdictionalWaters.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

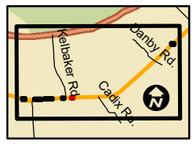


Figure 7
Page 10 of 11
Jurisdictional Waters within the BSA - Larissa Ditch (54C0284)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



Figure 7
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Jurisdictional Waters within the BSA - Adena Ditch (54C0315)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Table 5. Impacts on Ephemeral Ditches

Bridge Site	Jurisdiction	Temporary Impacts (acres)	Permanent Impacts (acres)
Adena Ditch	Water of the State, CDFW Jurisdictional Habitat	0.221	0.056
Beacon Ditch	Water of the State, CDFW Jurisdictional Habitat	0.093	0.030
Bristol Ditch	Water of the State, CDFW Jurisdictional Habitat	0.082	0.00
Cerro Ditch	Water of the State, CDFW Jurisdictional Habitat	0.076	0.047
Cerulia Ditch	Water of the State, CDFW Jurisdictional Habitat	0.092	0.048
Gordo Ditch	Water of the State, CDFW Jurisdictional Habitat	0.073	0.045
Larissa Ditch	Water of the State, CDFW Jurisdictional Habitat	0.102	0.040
Leith Ditch	Water of the State, CDFW Jurisdictional Habitat	0.058	0.031
Sombra Ditch	Water of the State, CDFW Jurisdictional Habitat	0.231	0.018
Terra Ditch	Water of the State, CDFW Jurisdictional Habitat	0.071	0.035
	Total*	**1.10**	**0.35**

rounded to nearest hundredth

As the ephemeral ditches identified at each of the bridge locations are ephemerally flooded, not considered traditional navigable waters, and are not tributary to such a water, they are not considered jurisdictional waters of the U.S. However, the ephemeral ditches in the BSA are under the jurisdiction of the SWRCB and RWQCB as a water of the State and under the jurisdiction of CDFW as riverine habitat. With anticipated permanent and temporary impacts to waters of the State and CDFW jurisdictional habitat, the Project would obtain a §1600 Streambed Alteration Agreement issued by CDFW and Waste Discharge Requirements (WDRs) from the Colorado River Basin RWQCB.

Temporary

Wetlands and Other Waters Impact #1: Temporary Impacts to Ephemeral Ditches

Construction of the build alternative would involve temporary impacts to approximately 1.10 acres of ephemeral ditch habitat due to construction access required during pier removal and installation, as well as the construction of temporary low-water crossing detours. Work would be conducted when ephemeral ditches are dry, avoiding impacts to water quality. Implementation of measure **BIO-7** would ensure that following the completion of construction, areas within ephemeral ditches that have been impacted by construction activities would be regraded so that natural water flow would be allowed to return through the Project area following the next precipitation event.

Permanent

Wetlands and Other Waters Impact #2: Permanent Impacts to Ephemeral Ditches

The Build Alternative would involve the placement of rock slope protection, causing permanent impacts to approximately 0.35 acres of ephemeral ditch habitat across all 10 bridge sites. Rock slope protection and post-construction grading would be done in such a way as to not impede the natural flow of water through the ephemeral ditches following a rain event. As work would not be conducted in flowing water and natural flow patterns would be restored following construction, the Project would largely avoid substantial permanent impacts to waters of the State.

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

The following measure taken from the Project's April 2021 NES and October 2021 BA would be implemented in order to return temporarily impacted ephemeral ditches to preconstruction contours.

BIO-7: Following the completion of project activities, areas that have been disturbed by project activities within the BSA will be re-graded to pre-construction conditions. Specifically, the sandy ephemeral ditches that flow under the existing bridges will be re-graded so that natural water flow would be allowed to return through the Project area following the next precipitation event.

2.3.3 PLANT SPECIES

2.3.3.1 Regulatory Setting

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

The information presented in this section is based on the April 2021 NES and October 2021 BA prepared for this Project, which includes the findings of the biological survey conducted on October 21, 2020. Database searches and literature review were used to inform the discussion in the NES of the potential for special status plant species to occur within the Project area.

The USFWS IPaC, CNDDB, and CNPS online databases indicate that seven plant species designated as special status by CNPS have the potential to occur within the Project vicinity. No federally or state listed plant species were identified in database searches as having potential to occur within the Project vicinity. After field surveys and literature review, three special status plant species were determined to have the potential to occur within the Project area: glandular ditaxis (*Ditaxis claryana*), small-flowered androstephium (*Adrostephium breviflorum*), and pointed dodder (*Cuscuta californica var. apiculata*). **Table 6** below summarizes the special status plant species identified in database searches and includes the rationale and potential for each species to occur within the Project area.

Table 6. Plant Species

Common Name	Scientific Name	Status	Habitat Requirements	Potential to Occur	Rationale
Clokey’s cryptantha	*Cryptantha clokeyi*	CNPS Rank 1B.2	Rocky, gravelly slopes; desert woodland, creosote bush scrub, Mojavean desert scrub	Absent	Suitable habitat present but Project area is outside of species’ elevation range.
Emory’s crucifixion-thorn	*Castela emoryi*	CNPS Rank 2B.2	Gravelly dry washes, playas; creosote bush	Absent	Suitable habitat present but nearby

Common Name	Scientific Name	Status	Habitat Requirements	Potential to Occur	Rationale
			scrub, Mojavean desert scrub, Sonoran desert scrub		occurrences extirpated.
Glandular ditaxis	*Ditaxis claryana*	CNPS Rank 2B.2	Sandy soils; desert wash, creosote bush scrub, Mojavean desert scrub, Sonoran desert scrub	Low-Moderate	Suitable habitat present and recent, nearby occurrences reported.
Orocopia Mountains spurge	*Euphorbia jaegeri*	CNPS Rank 1B.1	Gravelly, rocky crevices; hillsides and arroyos; granitic, carbonate, metamorphic soils; Mojavean desert scrub	Absent	No suitable habitat present
Small-flowered androstephium	*Androstephium breviflorum*	CNPS Rank 2B.2	Sandy, rocky soils; dunes, bajadas, Mojavean desert scrub	Low-Moderate	Suitable habitat present and recent, nearby occurrences reported.
Pointed dodder	*Cuscuta californica var. apiculate*	CNPS Rank 3	Sandy soils; Mojavean desert scrub, Sonoran desert scrub	Low-Moderate	Suitable habitat present and recent, nearby occurrences reported.
Orocopia sage	*Salvia greatae*	CNPS Rank 1B.3	Alluvial slopes; Mojavean desert scrub, Sonoran desert scrub	Absent	Suitable habitat but no nearby occurrences and species was not observed during surveys.

2.3.3.3 Environmental Consequences

No special status plant species have been identified as present within the Project area; however, three species (glandular ditaxis, small-flowered androstephium, and pointed dodder) were determined to have a low-moderate potential to occur in the BSA.

Temporary

Plant Species Impact #1: Temporary Impacts to Special Status Plant Species

Temporary impacts to special status plant species, including glandular ditaxis, small-flowered androstephium, and pointed dodder, could occur due to construction activities such as staging, grading, and vegetation removal. With the implementation of measures **BIO-9** through **BIO-11**, temporary impacts to special status plant species are not anticipated.

Permanent

Plant Species Impact #2: Permanent Impacts to Special Status Plant Species

Permanent impacts to special status plant species, including glandular ditaxis, small-flowered androstephium, and pointed dodder, could occur due to construction activities such as staging, grading, and vegetation removal. With the implementation of measures **BIO-9** through **BIO-11**, permanent impacts to special status plant species are not anticipated.

The Project also has the potential to result in indirect impacts to special status plant species that may occur within habitat surrounding the Project area, through the accidental spread of non-native, invasive species that would lead to competition with native plants. Implementation of measure **BIO-23** would minimize the spread of invasive plants.

2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

The following avoidance/minimization measures taken from the Project's April 2021 NES and October 2021 BA would be implemented in order to ensure that the Project would not impact special status plant species that may occur within the Project area. These measures would function to inform construction personnel of the potential presence of special status plants, identify any existing populations of special status plants within the Project area prior to construction, to minimize clearing and grubbing of special status plant habitat, and to reduce the spread of invasive plants.

BIO-9: Environmental awareness training shall be conducted prior to the onset of project work for all construction personnel discussing the special status plant and wildlife species with the potential to occur in the BSA. The training will also discuss how to proceed if there are any encounters of special status species within the work area, as well as measures and BMPs that will be implemented to avoid impacts to such species.

BIO-10: During the ideal blooming period prior to the beginning of construction activities, a rare plant survey will be conducted by an authorized biologist. If individuals or populations of rare plants are observed within the BSA during this survey, the area around the rare plant will be marked with high-visibility Environmentally Sensitive Area (ESA) fencing. project activities will not be permitted to encroach upon the fencing and vegetation removal will not be authorized within the boundaries of said fencing.

BIO-11: All vegetation removal will be minimized to the greatest extent feasible. When possible, vegetation removal will be accomplished with the use of hand tools. Trees and shrubs shall be trimmed rather than removed unless absolutely necessary for project activities.

BIO-23: Prior to the initial arrival at the first bridge of the Project site and prior to leaving at the completion of construction, equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.

2.3.4 ANIMAL SPECIES

2.3.4.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The USFWS, NOAA Fisheries), and 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 Section 2.3.5 Threatened and Endangered Species below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS candidate species. The Project is located outside of NOAA Fisheries jurisdiction; therefore, NOAA Fisheries listed species are not discussed.

Federal laws and regulations relevant to wildlife include the following:

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

State laws and regulations relevant to wildlife include the following:

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

2.3.4.2 Affected Environment

The information presented in this section is based on the April 2021 NES and October 2021 BA, which includes the findings of the biological survey conducted on October 21, 2020. Database searches and literature review were used to inform the discussion in the NES of the potential for special status animal species to occur within the Project area.

The following special status bird, mammal, and reptile species shown in **Table 7** and discussed below were identified as having potential to occur within the Project area during database searches and literature review.

Table 7. Wildlife Species

Common Name	Scientific Name	Status	Habitat Requirements	Potential to Occur	Rationale
Bird Species					
Prairie falcon	*Falco mexicanus*	CDFW WL	Dry, open terrain; cliff ledges; perennial grasslands, savannahs, rangeland, agricultural fields, desert scrub	Absent	No suitable breeding habitat present.
Mammal Species					
Desert bighorn sheep	*Ovis canadensis nelsoni*	CDFW FP	Alpine dwarf-shrub, sagebrush, bitterbrush, pinyon-	Low-Moderate	Suitable foraging habitat present and historic,

Common Name	Scientific Name	Status	Habitat Requirements	Potential to Occur	Rationale
			juniper, palm oasis, desert riparian, desert succulent shrub, desert scrub, subalpine conifer, perennial grassland, montane chaparral, montane riparian habitats		nearby occurrences.
Reptile Species					
Desert tortoise	*Gopherus agassizii*	Federally Threatened, State Endangered	Flat and rocky slopes; creosote bush scrub, blackbrush scrub, juniper woodland, Mojavean desert scrub, Sonoran desert scrub	High*****	Suitable habitat present, recent occurrences within Project area (2008; Adena Ditch), critical habitat within Project area.
Mojave fringe-toed lizard	*Uma scoparia*	CDFW SSC	Fine, windblown sand; dunes, flats, hummocks, washes, riverbanks	Absent	No suitable habitat present.

*******The Adena Ditch Bridge is located within designated final critical habitat for the desert tortoise. Due to this, the potential for the species to occur is high at this location. There is low potential for the species to occur at the nine remaining bridges.*

Bird Species

Common bird species identified within the Project area during biological surveys include common raven (*Corvus corax*) and Say's phoebe (*Sayornis nigricans*). Database research identified that prairie falcon (*Falco mexicanus*), a species that is on the watch list for special status species status by CDFW, has the potential to occur within the Project vicinity. However, the Project area lacks suitable breeding sites and nearby occurrences of the species, and it was not observed during biological surveys; therefore, the prairie falcon is presumed absent from the Project area.

Mammal Species

No mammal species were observed within the Project area during field surveys; however, evidence of mammalian use of the Project area was observed, including burrows and feces. Additionally, bats may utilize the bridge structures for roosting and the formation of maternity colonies. Database research indicates that one special status mammal species has the potential to occur within the Project vicinity, the desert bighorn sheep (*Ovis canadensis nelsoni*), which is listed as fully protected by CDFW. After field surveys and literature review, it was determined that the species has a low-moderate potential to occur within the Project area due to suitable foraging habitat and nearby historic occurrences of the species.

Reptile Species

Locally common reptile species observed during biological surveys of the Project area include Great Basin whiptail (*Aspidoscelis tigris tigris*) and western zebra-tailed lizard (*Callisaurus*

draconoides rhodostictus). In addition, database research indicates that two special status reptile species have the potential to occur within the Project vicinity: desert tortoise (*Gopherus agassizii*) and Mojave fringe-toed lizard (*Uma scoparia*). Following field surveys, literature review, and a focused desert tortoise habitat assessment, it was determined that the Mojave fringe-toed lizard is absent from the Project area and that the desert tortoise has a high potential to occur. The desert tortoise, a state and federally listed species, will be discussed in detail in Section 2.3.5 Threatened and Endangered Species**.**

2.3.4.3 Environmental Consequences

Temporary

Animal Species Impact #1: Temporary Impacts to Bird Species

The prairie falcon is presumed absent from the Project area and temporary impacts to the species are not anticipated. Construction activities would temporarily impact habitat for nesting bird species protected by the Migratory Bird Treaty Act and potentially cause disturbances such as increased noise, vibrations, and dust. These effects would be minimized via the implementation of measure **BIO-24**.

Animal Species Impact #2: Temporary Impacts to Bats

Bats may utilize bridge structures for roosting and the formation of maternity colonies, which may be disturbed during construction activities. Implementation of measure **BIO-25** would ensure temporary impacts to bats remain minimal.

Animal Species Impact #3: Temporary Impacts to Desert Bighorn Sheep

The special status desert bighorn sheep is known to descend mountain ranges in order to forage in wetted, vegetated areas in the spring. The habitat found in the Project is suitable for this usage and the species may travel through the area during certain times of the year. While desert bighorn sheep are not anticipated to be encountered within the Project area during construction, implementation of measure **BIO-12** would ensure impacts are minimal.

Other temporary effects to desert bighorn sheep during construction may include a temporary loss of suitable foraging habitat and water resources, which is critical in the desert where surface water accessibility is rare and infrequent. This loss would only be temporary, occurring during construction activities when vegetation has been removed and access to shade provided by the bridges is obstructed by construction equipment and materials. Following construction, impacted habitat areas would be regraded and seeded with a native desert seed mix, kickstarting natural recruitment.

Animal Species Impact #4: Temporary Impacts to Mojave Fringe-Toed Lizard

The Mojave fringe-toed lizard is presumed absent from the Project area due to a lack of suitable habitat and no temporary impacts to the species are anticipated.

Permanent

Animal Species Impact #5: Permanent Impacts to Bird Species

Due to the lack of suitable habitat, the Project would not impact or cause take of the prairie falcon. However, clearing and grubbing, as well as bridge demolition, have the potential to impact or cause take of bird species protected by the Migratory Bird Treaty Act. Implementation of measure

BIO-24 shall ensure that standard nesting bird clearance surveys would be completed prior to the start of construction and would avoid impacts to any birds nesting within the Project area.

Animal Species Impact #6: Permanent Impacts to Bats

Bats may utilize bridge structures for roosting and the formation of maternity colonies, which may be disturbed during construction activities. Implementation of measure **BIO-25** would ensure permanent impacts to bats remain minimal.

Animal Species Impact #7: Permanent Impacts to Bighorn Sheep

While there is a low-moderate potential for desert bighorn sheep to occur within the Project area during construction, it is unlikely that direct take of the species would occur due to the large and conspicuous nature of the animals, as well as avoidance measures that would be implemented. In addition, the species is only likely to enter the Project area during specific periods of water availability (in the springtime and during wetter years). Because the species is only likely to use the Project area seasonally, it is unlikely that the species would be encountered during construction. As such, permanent impacts and/or take of the desert bighorn sheep is not anticipated.

Animal Species Impact #8: Permanent Impacts to Mojave Fringe-Toed Lizard

No permanent impacts to the Mojave fringe-toed lizard are anticipated as the Project area lacks suitable habitat and the species is presumed absent.

2.3.4.4 Avoidance, Minimization, and/or Mitigation Measures

Measures from the Project's NES would be implemented in order to avoid and minimize impacts to special status bird, reptile, and mammal species that may occur within the Project area, as well as general wildlife species that may utilize habitat within and adjacent to the Project area.

Bird Species

BIO-24: The construction contractor shall avoid removing any vegetation or performing structure demolition during the nesting bird season (February 15-August 31). If either of these activities must occur within the nesting season, a pre-construction nesting bird survey must be conducted no more than 3 days prior to the activity commencing. Structure demolition or vegetation removal must occur within 3 days from the nesting bird survey.

A no-disturbance buffer will be established around any active nest of migratory birds and raptor species. Standard no-disturbance buffers of 100 feet for migratory birds and 300 feet for raptor species may be altered at the discretion of the Project biologist, based on species, location of the nest, and the biologist's expertise. The contractor must immediately stop work in the nesting area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the Project biologist and in coordination with the County) in the buffer area until a qualified biologist determines the young have fledged.

BIO-26: All construction crew members will allow wildlife enough time to escape initial clearing and grubbing activities. Where determined appropriate by the Project biologist, initial clearing and grubbing must be accomplished through the use of hand tools. If initial clearing and grubbing through the use of hand tools is not feasible, then heavy equipment may be used if operated at speeds less than 3 miles per hour.

Reptile Species

Avoidance and minimization measures for special status reptile species include general measure **BIO-26**, as well as desert tortoise-specific measures **BIO-13** through **BIO-22** and **BIO-29** (see Section 2.3.5 Threatened and Endangered Species).

Mammal Species

BIO-12: If desert bighorn sheep are observed within the Project area, work will be halted until the individual(s) have left the Project area. Construction personnel is not authorized to come into direct contact with desert bighorn sheep. The species must be allowed to move throughout the Project area undisturbed by humans, vehicles, or construction machinery.

BIO-25: Prior to construction, a qualified biologist must conduct a focused bat survey on the existing bridge structures within all 10 project sites. If a maternity colony is found within the Project area, a qualified bat biologist shall prepare a bat eviction plan in order to evict bats during the appropriate non-pupping season, from September 1 to October 15 or March 15 to April 15. If no maternity colony or potential maternity colony is identified, work may proceed as scheduled and no additional considerations for bat species are required.

BIO-27: The contractor must dispose of all food-related trash in closed containers and must remove it from the Project area each day during construction. Construction personnel must not feed or attract wildlife to the Project area.

BIO-28: The contractor must not apply rodenticide or herbicide within the BSA during construction.

2.3.5 THREATENED AND ENDANGERED SPECIES

2.3.5.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is 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 FHWA (and Caltrans, as assigned), are required to consult with the USFWS and the NOAA Fisheries 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, 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. CDFW is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

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

2.3.5.2 Affected Environment

The information presented in this section is based on the April 2021 NES and October 2021 BA prepared for this Project, which include the findings of the biological survey conducted on October 21, 2020, database searches, and literature review and discuss the potential for threatened and endangered species to occur within the Project area.

Species lists obtained from the USFWS IPaC and CDFW CNDDB indicate that only one federally and/or state listed species has the potential to occur within the Project vicinity; the federally threatened and state endangered desert tortoise. Desert tortoise final critical habitat is present within the BSA at the Adena Ditch Bridge site. Additionally, general biological surveys and a habitat assessment and focused desert tortoise surveys indicate that the species has a high potential to occur within the Project area at the Adena Ditch Bridge, due to the designated final critical habitat present. There is low potential for the species to occur at the nine remaining bridges

due to the sparse population mapping and heat/dryness associated with the lower elevation. The findings are shown in the below table.

Table 8. FESA Preliminary Effect Findings

Common Name	Scientific Name	Federal Status	Effect Finding	Effect Finding for Critical Habitat
Desert tortoise	*Gopherus agassizii*	Threatened	May affect, not likely to adversely affect	May affect, not likely to adversely affect

Caltrans has determined that the Project will result in no take of the desert tortoise pursuant to CESA. In addition, Caltrans has determined that the Project may affect, but is not likely to adversely affect the desert tortoise and its critical habitat in accordance with Section 7 of the FESA. A BA was prepared in October 2021 and Caltrans initiated consultation with USFWS under Section 7 of the FESA on October 22, 2021. The USFWS issued a letter of concurrence on January 3, 2022, concurring on Caltrans' determinations that the Project may affect but is not likely to adversely affect the desert tortoise with implementation of avoidance measures (**BIO-13** through **BIO-22**, and **BIO-29**) as the desert tortoise is not likely to be present in the Project area and that should a tortoise be discovered during preconstruction surveys that the tortoise be allowed to leave prior to commencing any exclusion fencing, on-site constructing preparation activities, or construction activities. The USFWS also concurred with Caltrans' determination that the Project is not likely to adversely affect desert tortoise critical habitat as the critical habitat within the Project area is already moderately disturbed and as temporary impact acreage is exceedingly small when considered in context with the size of both the Chemehuevi Critical Habitat Unit (937,400 acres) and the designated critical habitat in the broader Colorado Desert Recovery Unit (2,411,800 acres). Based on the limited habitat disturbance, the moderately disturbed habitat, and the temporary nature of the impacts, the USFWS concluded that the bridge replacements would have an insignificant effect on the physical and biological features present in the Project area.

2.3.5.3 Environmental Consequences

Temporary

Threatened and Endangered Species Impact #1: Temporary Impacts to Desert Tortoise

Construction of the Build Alternative would lead to temporary stressors which may affect but are not likely to adversely affect the desert tortoise. Such temporary stressors include increased noise and vibrations related to construction, which have the potential to affect desert tortoise should they be present within the construction area during construction. In addition, vegetation would be removed along the path of the temporary low-water crossings to allow for a safe vehicle detour and access route during construction. Approximately 13.14 acres of creosote bush scrub habitat would be temporarily impacted by project activities. Approximately 1.28 acres of this impacted creosote bush scrub habitat is located within desert tortoise final critical habitat at the Adena Ditch Bridge location (**Figure 8. Impacts to Desert Tortoise Habitat**). Following construction, all natural areas that have experienced vegetation removal and disturbance for construction access purposes would be seeded with a desert creosote bush scrub native seed mix and allowed to return to pre-construction conditions. However, this temporary loss of vegetation could cause reduced shelter and forage opportunities for the desert tortoise, although this would likely be a minor stressor as the Project would mostly impact vegetation that is adjacent to urban, paved areas that are already unvegetated.

As there is a potential for temporary effects such as noise, vibrations, and vegetation removal from suitable habitat to impact the desert tortoise during construction, species-specific protective measures, **BIO-13** through **BIO-22**, would be implemented at all ten bridge sites in order to avoid and minimize temporary construction related stressors on desert tortoises in the Project area. Measures **BIO-7** and **BIO-8** would also further minimize temporary impacts to desert tortoise.



V:\2690-NTH at 10 Bridges\EIR_EA\F8_Impacts to DT Habitat.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

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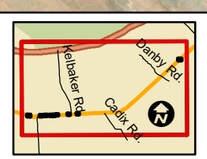


Figure 8
Page 1 of 11
Impacts to Desert Tortoise Habitat - All 10 Bridges
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF 8_Impacts to DT Habitat.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

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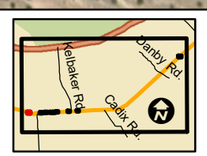
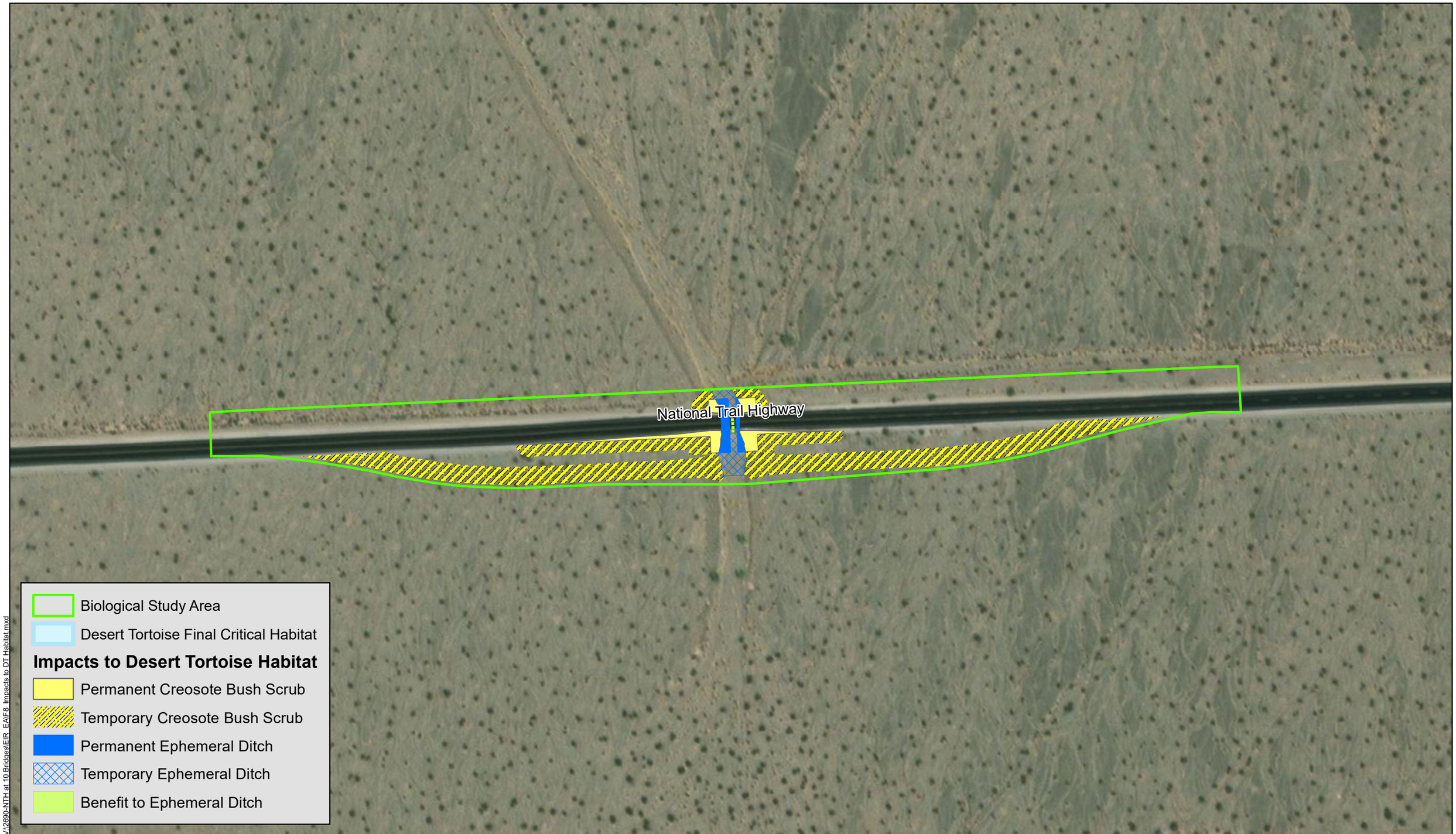


Figure 8
Page 2 of 11
Impacts to Desert Tortoise Habitat - Bristol Ditch (54C0272)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAIF 8_Impacts to DT Habitat.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

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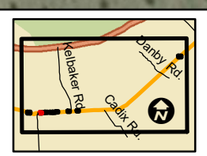
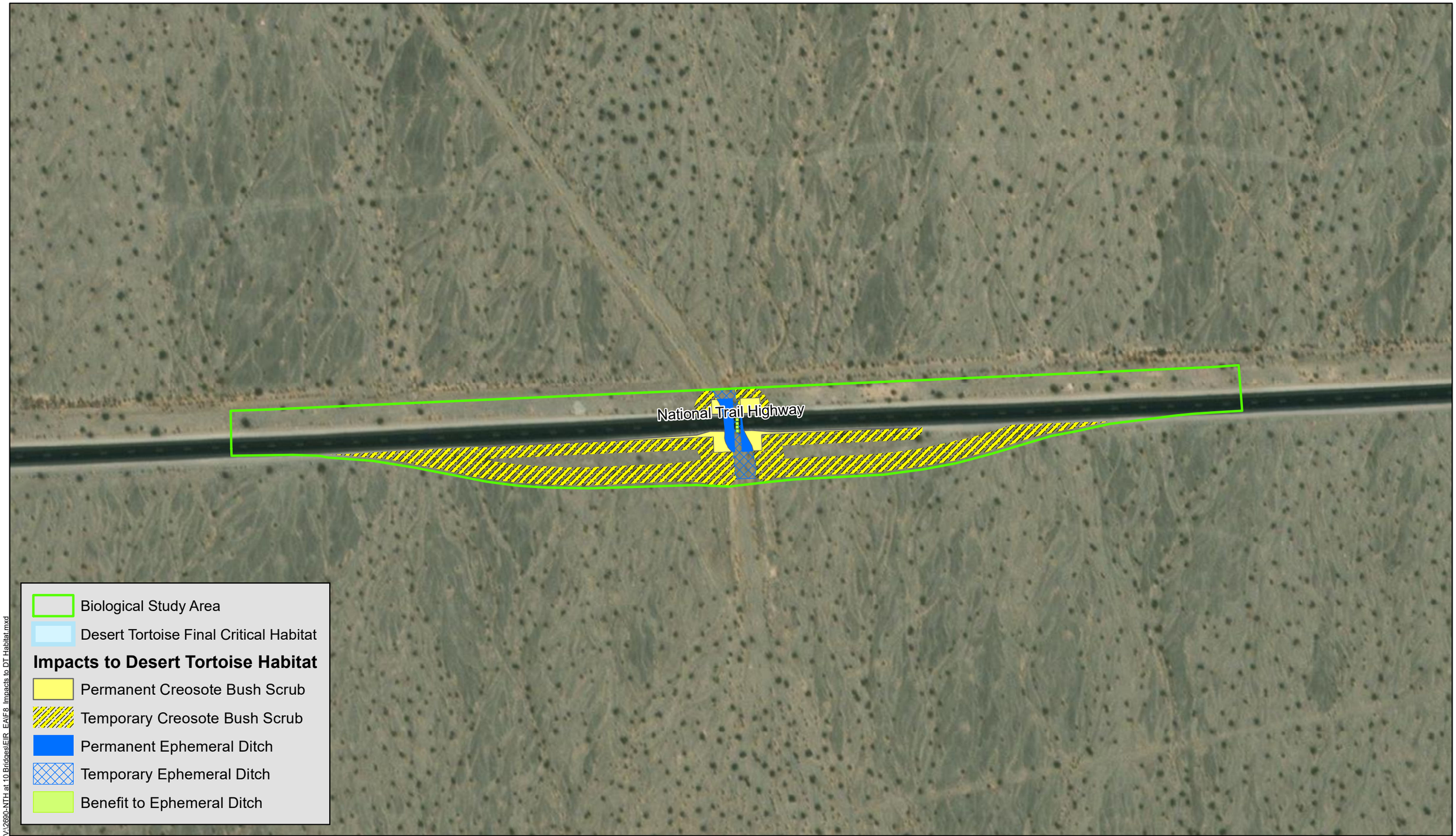


Figure 8
Page 3 of 11
Impacts to Desert Tortoise Habitat - Cerro Ditch (54C0275)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF\8_Impacts to DT Habitat.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

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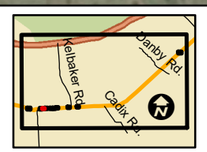


Figure 8
Page 4 of 11
Impacts to Desert Tortoise Habitat - Gordo Ditch (54C0276)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

National Trail Highway

Biological Study Area

Desert Tortoise Final Critical Habitat

Impacts to Desert Tortoise Habitat

Permanent Creosote Bush Scrub

Temporary Creosote Bush Scrub

Permanent Ephemeral Ditch

Temporary Ephemeral Ditch

Benefit to Ephemeral Ditch

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Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

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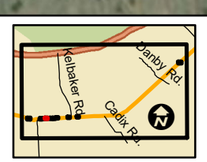
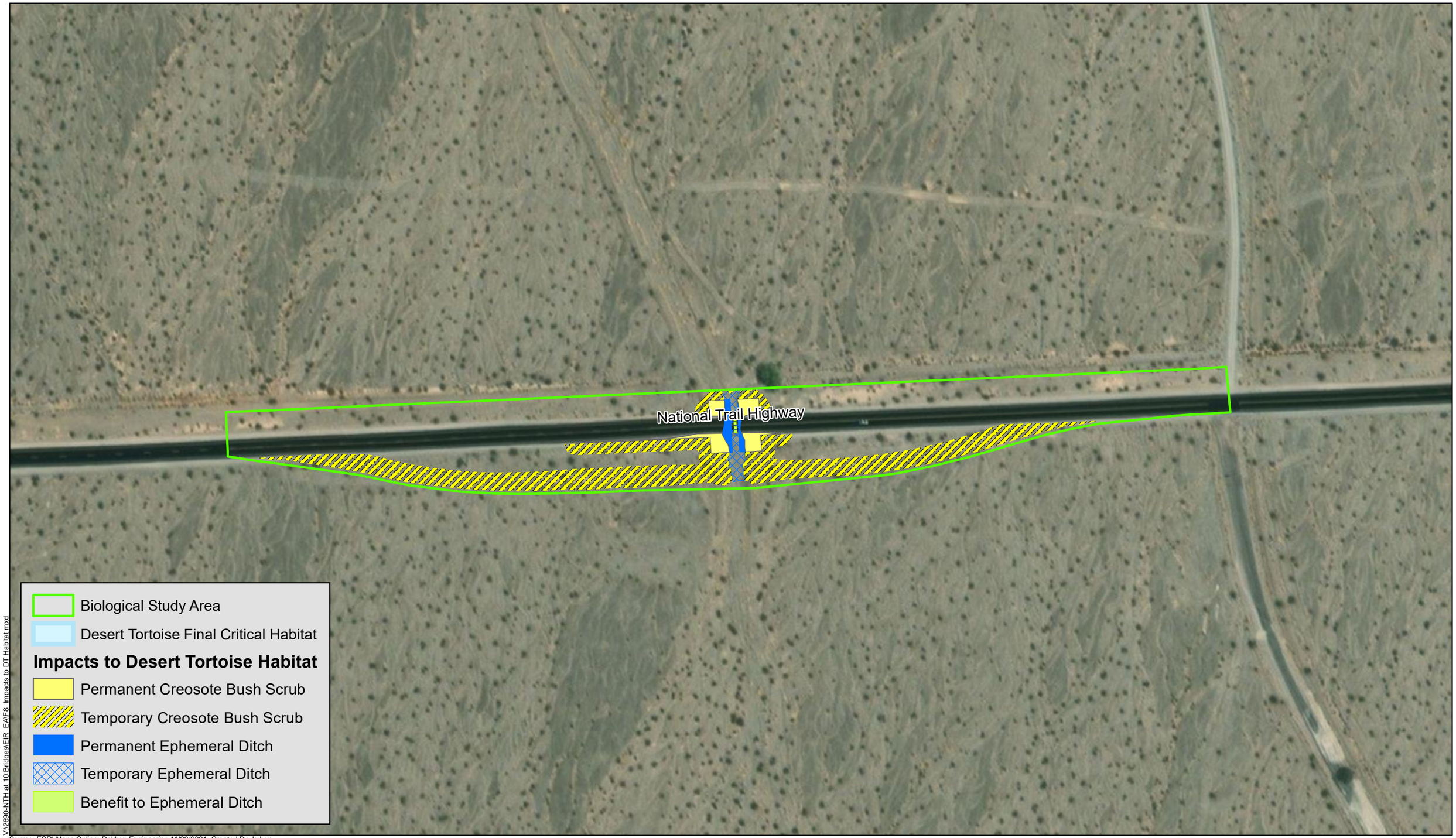


Figure 8
Page 5 of 11
Impacts to Desert Tortoise Habitat - Cerulia Ditch (54C0277)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF\8_Impacts to DT Habitat.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

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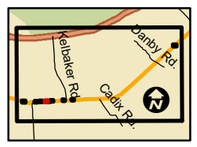


Figure 8
Page 6 of 11
Impacts to Desert Tortoise Habitat - Leith Ditch (54C0279)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

National Trail Highway

Biological Study Area

Desert Tortoise Final Critical Habitat

Impacts to Desert Tortoise Habitat

Permanent Creosote Bush Scrub

Temporary Creosote Bush Scrub

Permanent Ephemeral Ditch

Temporary Ephemeral Ditch

Benefit to Ephemeral Ditch

V:\2690-NTH at 10 Bridges\EIR_EAF\8_Impacts to DT Habitat.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

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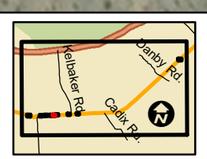


Figure 8
Page 7 of 11
Impacts to Desert Tortoise Habitat - Terra Ditch (54C0280)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

National Trail Highway

Biological Study Area

Desert Tortoise Final Critical Habitat

Impacts to Desert Tortoise Habitat

Permanent Creosote Bush Scrub

Temporary Creosote Bush Scrub

Permanent Ephemeral Ditch

Temporary Ephemeral Ditch

Benefit to Ephemeral Ditch

V:\2690-NTH at 10 Bridges\EIR_EA\F8_Impacts to DT Habitat.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

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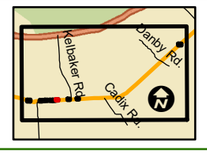


Figure 8
Page 8 of 11
Impacts to Desert Tortoise Habitat - Sombra Ditch (54C0281)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

National Trail Highway

Biological Study Area

Desert Tortoise Final Critical Habitat

Impacts to Desert Tortoise Habitat

Permanent Creosote Bush Scrub

Temporary Creosote Bush Scrub

Permanent Ephemeral Ditch

Temporary Ephemeral Ditch

Benefit to Ephemeral Ditch

V:\2690-NTH at 10 Bridges\EIR_EA\F8_Impacts to DT Habitat.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

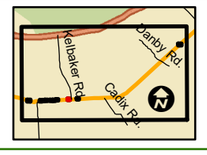


Figure 8
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Impacts to Desert Tortoise Habitat - Beacon Ditch (54C0282)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

National Trail Highway

Biological Study Area

Desert Tortoise Final Critical Habitat

Impacts to Desert Tortoise Habitat

Permanent Creosote Bush Scrub

Temporary Creosote Bush Scrub

Permanent Ephemeral Ditch

Temporary Ephemeral Ditch

Benefit to Ephemeral Ditch

V:\2690-NTH at 10 Bridges\EIR_EAIF\8_Impacts to DT Habitat.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 150 feet

0 100 200 300 400 Feet

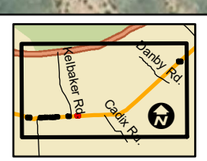
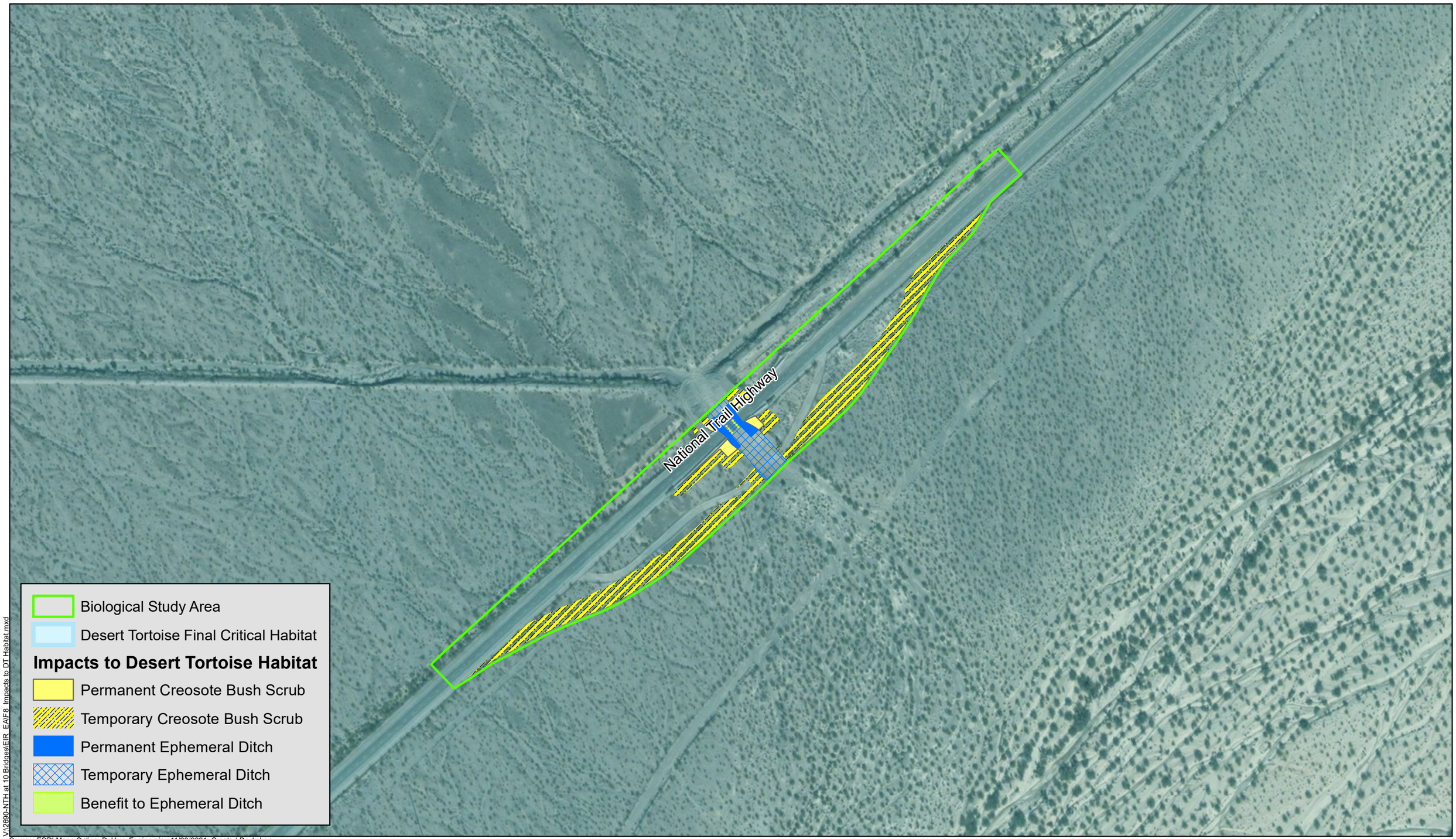


Figure 8
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Impacts to Desert Tortoise Habitat - Larissa Ditch (54C0284)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\EIR_EAF\8_Impacts to DT Habitat.mxd

Source: ESRI Maps Online; Dokken Engineering 11/29/2021; Created By: kchen

1 inch = 200 feet

0 100 200 300 400 Feet

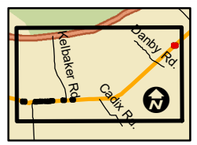


Figure 8
Page 11 of 11
Impacts to Desert Tortoise Habitat - Adena Ditch (54C0315)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Permanent

Threatened and Endangered Species Impact #2: Permanent Impacts to Desert Tortoise

The Project's Build Alternative would cause minor permanent impacts in the form of rock slope protection installed within desert tortoise habitat and critical habitat. These impacts would be permanent; however, the quantity of rock slope protection to be installed at each bridge site within the Project area would be minor in comparison to the availability of habitat within close proximity to these areas. Rock slope protection would be installed over approximately 1.05 acres of creosote bush scrub habitat, including approximately 0.061 acres of desert tortoise final critical habitat at the Adena Ditch Bridge, reducing the availability of forage species, burrow sites, suitable substrates, and vegetation for shelter over a small area adjacent to the NTH. While the installation of rock slope protection would affect these qualities of critical habitat, the area over which these impacts would occur is anticipated to be minor. In addition, these effects would not extend to nearby undisturbed critical habitat and would not impact the quality of desert tortoise critical habitat as a whole. Conservation measure **BIO-29** would be implemented to ensure that rock slope protection is installed in such a way that would not cause direct harm to desert tortoise. Measure **BIO-29** requires the interstitial spaces within the rock slope protection to be filled with substrate to prevent trapping of desert tortoise. Therefore, permanent effects due to rock slope protection installed within the Project area may affect but are not likely to adversely affect desert tortoise critical habitat.

2.3.5.4 Avoidance, Minimization, and/or Mitigation Measures

The following desert tortoise species-specific measures (**BIO-13** through **BIO-22**) have been adapted from recommendations from the USFWS and the Desert Tortoise Council (USFWS 2009; DTC 2017). The implementation of these measures would avoid and minimize impacts to the desert tortoise within the Project area as a result of construction activities. Numbering of these measures is kept consistent with the Project's NES and BA.

BIO-13: An authorized project biologist, approved by CDFW and USFWS, will monitor initial ground disturbing activities at the Project site which may cause take of the desert tortoise. The authorized biologist will also oversee the implementation of all avoidance and minimization measures put in place to protect the desert tortoise.

BIO-14: Approximately 2-4 weeks in advance of construction activities, a survey for desert tortoise and their burrows within the Project area shall occur by the authorized biologist. Additionally, within 24 hours of the start of soil disturbance, another preconstruction clearance survey for desert tortoise will be conducted by the authorized biologist. If a tortoise or tortoise sign is found in the impact areas or within the immediate vicinity during either pre-construction survey, USFWS and CDFW shall be contacted immediately and the tortoise shall be allowed to move outside the construction area/exclusionary area on their own before the Project can commence installation of exclusionary fencing, on-site construction preparation activities, or any construction activities.

BIO-15: Construction impact areas shall be staked in order to contain construction activities within the Project boundaries. These areas shall be marked with temporary desert tortoise exclusion fencing marked with high visibility flagging. The desert tortoise fencing must be in compliance with the standards outlined in the 2009 *USFWS Desert Tortoise (Mojave Population) Field Manual*. The desert tortoise exclusion fencing ESAs shall be delineated in coordination with the authorized project biologist.

BIO-16: Desert tortoise exclusion fencing will be inspected monthly and immediately after precipitation events during project activities by the authorized project biologist and

repaired as needed. Repairs must occur within two days. Any debris that accumulates along the fence should be removed as the fence is inspected.

BIO-17: The Project biologist shall monitor initial ground disturbing activities for tortoise activity. Should a desert tortoise be found within the Project limits, construction activities shall cease and the USFWS and CDFW shall be contacted immediately. The tortoise shall be allowed to leave the Project area limits undisturbed. Construction may only recommence at the Project biologist's authority and once the desert tortoise is outside of project limits.

BIO-18: Project personnel shall carefully check under parked vehicles or equipment for desert tortoises before moving said vehicles or equipment. Should a desert tortoise be found, the protocol outlined in measure **BIO-17** shall be followed.

BIO-19: Construction and maintenance vehicles shall not exceed 15 mph in tortoise habitat, which includes all natural communities within the BSA, during periods of higher tortoise activity, March 1 through November 1. Outside of this window, vehicles shall not exceed 25 mph in tortoise habitat.

BIO-20: Open trenches, auger holes, or other excavations that may act as pitfall traps shall be inspected prior to working in or around the excavation and prior to backfilling. Other excavations that remain open overnight shall be covered to prevent them from becoming pitfall traps. Any animals found within the excavations shall be relocated by the Project biologist. Should any listed or sensitive species be found within these excavations, the appropriate wildlife agency shall be contacted immediately, and subsequent action shall be performed under the direction of the lead wildlife agencies.

BIO-21: Should a desert tortoise be injured as a result of project related activities; it shall be immediately taken to a CDFW approved rehabilitation facility by the authorized biologist. The CDFW approved rehabilitation facility in the vicinity of the Project area is the Big Bear Alpine Zoo (909) 584-1299. Any veterinarian bills for such injured tortoises shall be paid by San Bernardino County. The CDFW and USFWS shall be notified within five calendar days of the incident. Notification shall include the date, time, location, and circumstances of the incident.

BIO-22: Should a desert tortoise be killed by project related activities or found dead within the construction area, remains shall be collected by the Project biologist and frozen as soon as possible. CDFW and USFWS shall be notified and a written report shall be sent within five calendar days of the incident. Notification shall include the date, time, location, and circumstances of the finding.

In addition to the measures from the 2021 NES listed above, the following measure (**BIO-29**) from the 2021 BA will be incorporated into the Project.

BIO-29: Placement and construction of rock slope protection will require the interstitial spaces within the rock slope protection to be filled with substrate to prevent trapping of desert tortoise.

The following measures (**BIO-7** and **BIO-8**), taken from the Project's NES and BA, would be implemented in order to mitigate for all temporary impacts to habitat for threatened and endangered species.

BIO-7: Following the completion of project activities, areas that have been disturbed by project activities within the BSA will be re-graded to pre-construction conditions. Specifically, the sandy ephemeral ditches that flow under the existing bridges will be re-graded so

that natural water flow would be allowed to return through the Project area following the next precipitation event.

BIO-8: Following construction, temporarily impacted creosote bush scrub will be decompacted and a seed mix of locally native desert shrubs will be applied to natural areas disturbed by construction activities in order to kick start the site's natural cycle of plant recruitment.

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

The information presented in this section is based on the Natural Environment Study (NES) prepared for this Project, dated April 2021, which includes the findings of a biological survey conducted on October 21, 2020. Database searches and literature review were used to inform the discussion in the NES of the potential for invasive species to occur within the Project area.

One invasive plant species was observed within the Project area during survey efforts – schismus (*Schismus sp.*), which has a Cal-IPC invasive rating of Limited. This species is common within the BSA but does not dominate over natives. The majority (~91%) of plant species observed within the Project area during survey efforts were native species. No invasive animal species were identified within the Project area during biological surveys. The lack of invasive species within the BSA is indicative of the remote location of the Project and the harsh conditions of the desert.

2.3.6.3 Environmental Consequences

Temporary

Invasive Species Impact #1: Transport of Invasive Species during Construction

Construction activities have the potential to transport invasive species from other work sites to the Project area or between work sites within the Project area. Additionally, bare ground left as a result of construction could create favorable conditions for invasive plants and promote the spread of plant species, although this effect would likely not be substantial due to the harsh desert conditions within the Project area that are unsuitable for many common California invasive plants. Measure **BIO-23** will be implemented to ensure that the Project does not cause or promote the introduction or spread of invasive species, including inspections and cleaning of construction equipment prior to arrival at the site, and ensuring that seed mixes used on site are composed entirely of native plant species.

Permanent

While there is the potential for the spread of invasive plant and animal species to occur on any project site, the proposed replacement of the 10 NTH bridges would not increase the risk of this spread above the existing baseline.

1.6.3.4 Avoidance, Minimization, and/or Mitigation Measures

To ensure that the Build Alternative does not promote the introduction or spread of invasive plant or wildlife species within the Project area, measure **BIO-23** (also discussed under Plant Species), shall be implemented:

BIO-23: Prior to the initial arrival at the first bridge of the Project site and prior to leaving at the completion of construction, equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.

2.4 Cumulative Impacts

2.4.1 Regulatory Setting

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

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

CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under NEPA can be found in 40 CFR Section 1508.7.

2.4.2 Methodology

Caltrans, in conjunction with the FHWA and U.S. EPA, developed a guidance document entitled *Guidance for Preparers of Cumulative Impact Analysis* (2005). The following analysis is based on the guidance, which involves the following eight step process:

1. Identify the resources to consider in the cumulative impact analysis by gathering input from knowledgeable individuals and reliable information sources. This project is initiated during project scoping and continues throughout the NEPA/CEQA analysis.

2. Define the geographic boundary or Resource Study Area (RSA) for each resource to be addressed in the cumulative impact analysis.

3. Describe the current health and historical context of each resource.

4. Identify the direct and indirect impacts of the proposed project that might contribute to a cumulative impact on the identified resources.

5. Identify a set of other current and reasonably foreseeable future actions or projects and their associated environmental impacts to include in the cumulative impact analysis.

6. Assess cumulative impacts.

7. Report the results of the cumulative impact analysis.

8. Assess the need for mitigation and/or recommendations for actions by other agencies to address a cumulative impact.

As specified in the guidance, if a project will not cause direct or indirect impacts on a resource, it will not contribute to a cumulative impact on that resource. A cumulative impact analysis should focus on those resources significantly impacted by the Project or those resources currently in poor or declining health or at risk, even if project impacts are relatively small or less than significant.

In addition to the Project, there are a number of development and transportation projects that have been identified as planned, approved, or recently constructed projects within the general Project vicinity. Each project would be subject to all applicable federal and state environmental compliance requirements, as applicable. The following list of projects, considered in this cumulative analysis is provided below.

Table 9. Future Projects in the Project Vicinity

Name	Location	Description	Status
Bridge Replacements at Dola Ditch and Lanzit Ditch	Approximately 2.08 and 2.77 miles respectively, east of Kelbaker Road, east of the unincorporated community of Amboy	The project entailed removing the existing timber trestle bridges along NTH	Construction completed in 2017; however due to structural failures related to timber trestles, both bridges need to be replaced
Bridge Replacements on NTH at 19 Bridges	Located in the unincorporated communities of Amboy and Essex	The replacement of 19 timber bridges along NTH	Contract awarded for Design Services in 2023
NTH 33 Bridges Project	Located along NTH, in the Daggett, Amboy, and Ludlow areas	The replacement of 33 timber bridges along NTH	Design Services RFP – Summer 2023
Remaining 81 bridges along NTH	Located along NTH	The replacement of the remaining 81 timber bridges along NTH	No known date for Design Services RFP

2.4.3 Resources Excluded from the Cumulative Impact Analysis

The relevant environmental resources and topics that would not be significantly impacted by the Project are discussed in Chapter 2, Topics Considered but Determined Not to be Relevant. These topics are as follows and will not be evaluated for potential cumulative impacts.

- Utilities/Emergency Services
- Traffic and Transportation/Pedestrian and Bicycle Facilities
- Geology/Soils/Seismic/Topography
- Hazardous Waste/Materials
- Land Use
- Consistency with State, Regional, and Local Plans and Programs

- Coastal Zone
- Wild and Scenic Rivers
- Farmlands
- Timberlands
- Growth
- Community Character and Cohesion
- Relocations and Real Property Acquisition
- Environmental Justice
- Hydrology and Floodplains
- Water Quality and Storm Water Runoff
- Paleontology
- Air Quality
- Noise
- Energy
- Fisheries
- Wildfire

2.4.4 Resources Evaluated for Potential Cumulative Impacts

The following environmental resources and/or topics will be discussed in the cumulative impacts analysis.

- Parks and Recreational Facilities
- Visual/Aesthetics
- Cultural Resources
- Natural Communities
- Wetlands and Other Waters
- Plant Species
- Animal Species
- Threatened and Endangered Species
- Invasive Species

2.4.4.1 Parks and Recreational Facilities/Section 4(f) Resources

While there are no parks/recreation facilities, there are Section 4(f) Resources. The RSA for cumulative impacts on Section 4(f) resources encompasses all bridges along the NTH between the community of Daggett on the west to Mountain Springs Road on the east. While there are no public parks or recreation areas located within or immediately adjacent to the Project area, there are five historic properties which are considered resources under Section 4(f), the National Old Trails Road/Route 66 (CA-SBR-2910H) alignment between Daggett and Mountain Springs Road, the Adena Ditch Bridge, concrete boundary markers called "C-Markers", Late 1950s Paddleboards, and the Desert Training Center and California – Arizona Maneuver Area. These resources are located throughout the RSA and the proposed Project will impact all these resources except the Desert Training Center and California - Arizona Maneuver Area. There are 126 timber brides along NTH that are in need of rehabilitation or replacement. Therefore, the proposed Project, considered in conjunction with the planned rehabilitation or replacement of the existing 126 timber bridges along this segment of the NTH, has the potential to contribute to cumulative impacts to Section 4(f) resources. An adverse/cumulative impact is anticipated for the overall National Old Trails Road/Route 66 (CA-SBR-2910H) and its character defining feature, the Adena Ditch Bridge. This constitutes a "use" under Section 4(f). For a more complete discussion regarding cumulative impacts to Section 4(f) resources, see discussion contained in Chapter 2.4.4.3.

2.4.4.2 Visual/Aesthetics

The RSA for cumulative impacts on visual resources encompasses all bridges along the NTH between the community of Daggett on the west to Mountain Springs Road on the east. Visual resources along the proposed Project area and RSA include the surrounding open desert landscape, NTH, the existing bridges, C-Markers, and Late 1950s Paddleboards. Viewer groups affected by the visual surroundings include nearby residents and motorists on the NTH. Viewer response in the Project area is primarily concerned with the preservation of scenic views from the desert communities and from the NTH itself.

The RSA is located in the Desert Region of San Bernardino County. The visual character of the Desert Region is defined by its arid landscape, consisting of sparsely vegetated mountain ranges and broad valleys with expansive bajadas and scattered dry lakes. The region provides a scope of extensive open space and expansive vistas. Additionally, a majority of this area is zoned as RC – Resource Conservation. This zoning provides sites for open space and recreational activities, single family homes on very large parcels, and similar/compatible uses. The Desert Region within the RSA is in good condition due to the lack of major urban development in the area.

The bridges constructed along the highway were a uniform width and followed the typical designs of the time and were modified to match the span of the crossing. The bridges were typically timber trestles with timber railings. Nearly all the bridges built between 1929 to 1931 were modified between 1944 to 1953 to match the widening of the adjacent roadway and were also redecked at that time.

In 1926, federal highway officials adopted a list of numbered federal highways and the National Old Trails Highway in California became part of U.S. Route 66 (Hatheway 2010). From 1926 until 1929, the newly designated U.S. Route 66 alignment simply followed the existing National Old Trails Highway alignment. The alignment was marked with concrete "C" blocks, also known as "C-Markers" that are in generally very good condition. Lastly, the paddleboards were installed in the late 1950s and early 1960s when I-40 was completed. The integrity of the pre-1958 paddleboards is generally good since the markers are metal plates mounted on metal posts. The paint on the markers, however, has begun to fade, making those aspects of integrity somewhat

compromised. Through the years, the bridges have been modified by various maintenance and repair work with the intent of maintaining public safety and prolonging the service life of the bridges.

Visual impacts associated with the current Project include temporary visual obstructions during construction and visual changes associated with the introduction of thousands of feet of improved roadway and the replacement of timber bridge materials with concrete.

There are 126 timber brides along NTH that are in need of rehabilitation or replacement. Since these future actions are similar in scope as the current Project, it is reasonable to assume that visual impacts as a result of these future actions would most likely be the same. Therefore, the proposed Project, considered in conjunction with the planned rehabilitation or replacement of the existing 126 timber bridges along this segment of the NTH (**see Table 9**), has the potential to contribute to cumulative impacts to visual resources.

To mitigate the potential cumulative impact, mitigation measures **CUL-3a** and **CUL-3b** will be implemented. Mitigation measure **CUL-3a** proposes to apply treatments for historical railing design on the replacement bridge railings to better match the historic feel. Mitigation measure **CUL-3b** will ensure the C-Markers and Late 1950s Historic Paddleboards are preserved and rehabilitated during construction and reinstalled upon completion of construction. Rehabilitation will involve painting the Late 1950s Historic Paddleboards to better match their original coloration, thereby providing a positive visual impact. Additionally, the Project would not encourage future development since it would not alter vehicle capacity of the bridges, change traffic volumes on the NTH, or change land use within the area. Lastly, the Project only accounts for 10 out of the 126 bridges that are in need of rehabilitation or replacement. Therefore, the incremental contribution of the proposed Project to the cumulative impact on visual resources would be cumulatively minor and therefore less than substantial under NEPA. Further, based on this analysis and review, under CEQA, no significant contributions to cumulative impacts to visual resources would result from the proposed Project.

2.4.4.3 Cultural Resources

The RSA for cumulative impacts on cultural resources encompasses the area along the NTH between the community of Daggett on the west to Mountain Springs Road on the east. Cultural resources along this area include NTH itself, all the existing bridges along NTH, C-markers, postmile markers, flood control dikes, Amboy Townsite (P-36-003284/CA-SBR-3284H; MR# D), a military encampment site, and isolated historical refuse along NTH. Of these cultural resources present in the RSA, National Old Trails Road/Route 66, Adena Ditch Bridge, C-Markers, and historic paddleboards have been determined eligible for NRHP.

NTH, the highway between the community of Daggett and Mountain Springs Road, was built between 1929 to 1931 by the California Division of Highways. This greatly improved travel through the desert and served as the principal route through this part of the Mojave Desert until it was bypassed by I-40 in the late 1950s. The bridges along the highway were a uniform width and followed they typical designs of the time and were modified to match the span of the crossing. The bridges were typically timber trestles with timber railings and were built across many Mojave Desert draws (dry creek beds that carry flood waters during flash floods that occur nearly every winter) in part to keep flood waters from destroying NTH.

The use of NTH continued until well into the 1930s. In 1926, federal highway officials adopted a list of numbered federal highways and the National Old Trails Highway in California became part of U.S. Route 66 (Hatheway 2010). From 1926 until 1929, the newly designated U.S. Route 66 alignment simply followed the existing National Old Trails Highway alignment. The alignment was marked with concrete “C” blocks, also known as “C-Markers.” Lastly, the paddleboards were

installed in the late 1950s and early 1960s when I-40 was completed. Nearly all the bridges built between 1929 to 1931 were modified between 1944 to 1953 to match the widening of the adjacent roadway and were also redecked at that time. Through the years, the bridges have been modified by various maintenance and repair work with the intent of maintaining public safety and prolonging the service life of the bridges.

The proposed Project would replace the existing 10 timber bridges with concrete bridges. Replacement of the bridges would also involve the installation of new bridge railings and improved roadway on either end of each bridge, resulting in a slight "feathering" or tapered widening of the approach roadway as it transitions from the existing roadway width to the slightly wider replacement bridge width. These new railings and roadway improvements will introduce new materials that will diminish the overall integrity and significance of the National Old Trails Road/Route 66 (CA-SBR-2910H) due to the modern materials, tapered width, and slight vertical profile raise associated with the new bridges. The Project will have a no adverse effect with conditions imposed on the Late 1950s Paddleboards and C-Markers. The Project will also have a no adverse effect on the DTC/C-AMA, as no component of the historic property is located within the APE. The Project will have direct impacts to cultural resources within the RSA, specifically the National Old Trails Road/Route 66, including the Late 1950s Paddleboards, C-Markers, and the Adena Ditch Bridge which are character defining features of the National Old Trails Road/Route 66.

While the Project involves the replacement of 10 timber bridges, there are a total of 126 timber bridges along NTH that are in need of rehabilitation or replacement, as listed in **Table 9**. Since these future actions are similar in scope as the current Project, it is reasonable to assume that cultural resources impacts as a result of these future actions would most likely be the same. Therefore, the proposed Project, when considered in conjunction with the planned rehabilitation or replacement of the existing 126 timber bridges along this segment of the NTH, has the potential to contribute to cumulative impacts to cultural resources through the introduction of thousands of feet of improved roadway and the replacement of timber bridge materials with concrete.

To mitigate the anticipated cumulative impact, mitigation measures **CUL-3a** through **3e** will be implemented to resolve adverse impacts to the National Old Trails Road/Route 66 (CA-SBR-2910H) alignment between Daggett and Mountain Springs Road, and to the Adena Ditch Bridge, a character defining feature to the National Old Trails Road/Route 66 (CA-SBR-2910H). **CUL-3a** through **3e** consists of a proposed MOA between the County, Caltrans, and the SHPO. The MOA is currently in the process of being finalized and is anticipated to be executed in Fall 2023. The MOA outlines proposed measures to develop a County hosted website which will contain historical information compiled on the National Old Trails Road/Route 66 (CA-SBR-2910H) and to submit a National Register of Historic Places Nomination Form for the entire 111-mile long National Old Trails Road/Route 66 (CA-SBR-2910H) alignment.

Further, mitigation measure **CUL-3a** proposes to apply treatments for historical railing design on the replacement bridge railings to better match the historic feel.

Last, while the Late 1950s Paddleboards and C-Markers, which are also considered character defining features to the National Old Trails Road/Route 66 (CA-SBR-2910H), would be damaged or destroyed if left in place during construction, implementation of mitigation measure **CUL-3b** will ensure that these resources will be temporarily removed during construction, stored in protective materials, and reinstalled upon the conclusion of construction activities. Further, the Late 1950s Paddleboards will be repainted to better match their original coloration, consistent with the Secretary of the Interior's standards for historic property rehabilitation (for more details, see the Cultural Resources discussion in Chapter 2.1). The rehabilitation efforts, temporary removal during construction, and reinstallation at the close of construction would not be considered an

adverse effect and would also not be considered a cumulative impact to the overall National Old Trails Road/Route 66 (CA-SBR-2910H), through implementation of **CUL-3b**.

While the cumulative effects of the combined projects are potentially substantial under NEPA, the cumulative effects attributable to the proposed project will be reduced to less than substantial levels under NEPA through implementation of the proposed measures. However, under CEQA, cumulatively considerable effects, as a result of the proposed Project, would be considered significant and unavoidable.

2.4.4.4 Natural Communities

The Project area is located in the Mojave Desert ecoregion, as defined by the United States Department of Agriculture (USDA). However, due to the large size of the ecoregion, the RSA for cumulative impacts for natural communities is defined as the area within the Mojave Desert ecoregion under 2,000 feet in elevation. Although developed land within this ecoregion is limited, the City of Palmdale, the desert suburbs of the Los Angeles metropolitan area, and the Las Vegas Region have had significant growth between 1973 and 2000. The Mojave Desert ecoregion has long supported human activities such as livestock grazing, mining, military training, and recreation, all of which have had some effect on the desert landscape (Lovich and Bainbridge, 1999). Agriculture, although not extensive, takes place along the Colorado and Mojave Rivers. Mining, which historically has been an important land-use activity, is found throughout the ecoregion wherever mineral resources are available. Recreation activities have become increasingly important in the ecoregion, with millions of people each year visiting Death Valley National Park, Mojave National Preserve, and Lake Mead National Recreation Area, as well as numerous open access BLM lands.

The dominant natural communities within the Project area are creosote bush scrub and ephemeral ditches. Cumulative impacts to ephemeral ditch habitat are discussed in Chapter 2.4.4.5. Creosote bush scrub is a natural habitat that is not considered to be of special concern; however, this vegetation community provides suitable habitat for special status plant and wildlife species and has a high potential to support the state and federally listed desert tortoise. Creosote bush scrub is dominant and abundant throughout the landscape and is in good condition.

The proposed Project would temporarily impact approximately 13.14 acres and permanently impact approximately 1.05 acres of creosote bush scrub habitat. Population growth and urbanization is concentrated in the western regions near Palmdale and the desert suburbs of the Los Angeles metropolitan area and the Las Vegas Region. There are foreseeable actions that will contribute to continued urbanization in these areas; however, the Project is located just south of the Mojave National Preserve, which remains largely intact and a majority is protected from conversion of natural land cover. Additionally, a majority of this area is zoned as RC – Resource Conservation. This zoning provides sites for open space and recreational activities, single family homes on very large parcels and similar and compatible uses. Therefore, the reasonably foreseeable projects include the 126 timber bridges along NTH within San Bernardino County that have become structurally deficient and functionally obsolete and are in need of rehabilitation or replacement (**see Table 9**). Since these future actions are similar in scope as the current Project, it is reasonable to assume that impacts to natural communities as a result of these future actions would most likely be the same. Due to the County's efforts to replace timber bridges along NTH, the proposed Project has the potential to contribute to a cumulative impact to natural communities.

The context and extent of the proposed Project's contribution to cumulative impact related to natural communities was considered, noting that the impacts would occur in an existing transportation corridor, temporary impacts would be addressed through implementation of **BIO-1** through **BIO-8**, and permanent impacts would be minor at each site and occur within close proximity to the existing bridge and roadway. Additionally, the proposed Project will replace

existing timber bridges that have extended past their service life in order to enhance safety and to meet structural design standards. This Project would also not encourage future development since it would not alter vehicle capacity of the bridges, change traffic volumes on the NTH, or change land use within the area. These factors indicate that the incremental contribution of the Project to the cumulative impact of past, present, and reasonably foreseeable future projects would be cumulatively minor and considered less than substantial under NEPA. Additionally, based on this analysis and review, under CEQA, no significant contributions to cumulative impacts to natural communities would result from the proposed Project.

2.4.4.5 Wetlands and Other Waters

The RSA for wetlands and other waters is the Southern Mojave Watershed, where the proposed Project is located. The hydrology of the watershed is primarily characterized by intermittent streams, ephemeral washes, and dry lakebeds. The snowpack in the watershed is generally low, with limited contributions to surface water. Surface water in this region is generally scarce and unreliable, but is sustained by winter precipitation, spring runoff, and occasional flash floods. The watershed has experienced drought conditions in recent years, leading to increased concerns about water availability and management. Therefore, the resource is considered to be poor but stable condition.

The 10 bridges within the proposed Project carry the NTH over a series of ephemeral ditches, built in the late 1920s and early 1930s in conjunction with construction of the existing bridges, that collect flow from numerous, rills, gullies, and small ephemeral channels on the upslope side of the roadway and convey it under the roadway. As mentioned previously, these ditches are intermittently flooded, with surface water typically only present in direct response to rain events (NWI 2020). Therefore, the area is arid with these ephemeral ditches most often dry with little, if any, presence of water.

The Project would have temporary impacts of approximately 1.10 acres and permanent impacts of approximately 0.35 acres to ephemeral ditches, which are considered waters of the State and CDFW jurisdictional habitat (but not waters of the U.S.).

The Southern Mojave Watershed encompasses the area in between the Mojave National Preserve and Joshua Tree National Park. This area remains largely intact and a majority is protected from conversion of natural land cover. Additionally, a majority of this area is zoned as RC – Resource Conservation. This zoning provides sites for open space and recreational activities, single family homes on very large parcels and similar and compatible uses. Therefore, reasonably foreseeable projects include the 126 timber bridges along NTH within San Bernardino County that have become structurally deficient and functionally obsolete and are in need of rehabilitation or replacement (**see Table 9**). Since these future actions are similar in scope as the current Project, it is reasonable to assume that impacts to wetlands and other water as a result of these future actions would most likely be the same. Due to the County's efforts to replace timber bridges along NTH, the proposed Project has the potential to contribute to a cumulative impact to this resource.

The context and extent of the proposed Project's contribution to this cumulative impact was considered, noting that the impacts would occur in an existing transportation corridor, would be addressed through implementation of **BIO-1** through **BIO-7**, and permanent impacts would be minor at each bridge site and rock slope protection would not impede the natural flow patterns of the ephemeral ditches. Additionally, the proposed Project will replace existing timber bridges that have extended past their service life in order to enhance safety and to meet structural design standards. This Project would also not encourage future development since it would not alter vehicle capacity of the bridges, change traffic volumes on the NTH, or change land use within the area. These factors indicate that the incremental contribution of the Project to the cumulative impact of past, present, and reasonably foreseeable future projects would be cumulatively minor

and considered less than substantial under NEPA. Further, based on this analysis and review, under CEQA, no significant contributions to cumulative impacts to wetlands and other waters would result from the proposed Project.

2.4.4.6 Plant Species

The Project area is located in the Mojave Desert ecoregion, as defined by the United States Department of Agriculture (USDA). However, due to the large size of the ecoregion, the RSA for cumulative impacts for plant species is the area within the Mojave Desert ecoregion under 2,000 feet in elevation. Although developed land within this region is limited, the City of Palmdale, the desert suburbs of the Los Angeles metropolitan area, and the Las Vegas Region have significant growth between 1973 and 2000. The Mojave Basin and Range Ecoregion has long supported human activities such as livestock grazing, mining, military training, and recreation, all of which have had some effect on the desert landscape (Lovich and Bainbridge, 1999). Agriculture, although not extensive, takes place along the Colorado and Mojave Rivers. Mining, which historically has been an important land-use activity, is found throughout the ecoregion wherever mineral resources are available. Recreation activities have become increasingly important in the ecoregion, with millions of people each year visiting Death Valley National Park, Mojave National Preserve, and Lake Mead National Recreation Area, as well as numerous open access BLM lands.

No special status plant species have been identified as present within the Project area; however, three species (glandular ditaxis, small-flowered androstephium, and pointed dodder) were determined to have a low-moderate potential to occur in the BSA. The Project would result in permanent and temporary impacts to creosote bush scrub and ephemeral ditch habitat, which has the potential to support populations of special status plant species, such as glandular ditaxis, small-flowered androstephium, and pointed dodder. Population growth and urbanization is concentrated in the western regions near Palmdale and the desert suburbs of the Los Angeles metropolitan area and the Las Vegas Region. There are foreseeable actions that will contribute to continued urbanization in these areas; however, the Project is located just south of the Mojave National Preserve, which remains largely intact and a majority is protected from conversion of natural land cover. Additionally, a majority of this area is zoned as RC – Resource Conservation. This zoning provides sites for open space and recreational activities, single family homes on very large parcels and similar and compatible uses. Therefore, the reasonably foreseeable projects include the 126 timber bridges along NTH within San Bernardino County that have become structurally deficient and functionally obsolete and are in need of rehabilitation or replacement (**see Table 9**). Since these future actions are similar in scope as the current Project, it is reasonable to assume that impacts to plant species as a result of these future actions would most likely be the same. Due to the County's efforts to replace timber bridges along NTH, the proposed Project has the potential to contribute to a cumulative impact to plant species.

The context and extent of the proposed Project's contribution to cumulative impact related to plant species was considered, noting that the impacts would occur in an existing transportation corridor, would be addressed through implementation of **BIO-9** through **BIO-11**, and that the proposed Project will replace existing timber bridges that have extended past their service life in order to enhance safety and to meet structural design standards. Additionally, Project would not encourage future development since it would not alter vehicle capacity of the bridges, change traffic volumes on the NTH, or change land use within the area. These factors indicate that the incremental contribution of the Project to the cumulative impact of past, present, and reasonably foreseeable future projects would be cumulatively minor and considered less than substantial under NEPA. Further, based on this analysis and review, under CEQA, no significant contributions to cumulative impacts to plant species would result from the proposed Project.

2.4.4.7 Animal Species

The Project area is located in the Mojave Desert ecoregion, as defined by USDA. However, due to the large size of the ecoregion, the RSA for cumulative impacts for animal species is the area within the Mojave Desert ecoregion under 2,000 feet in elevation. Although developed land within this region is limited, the City of Palmdale, the desert suburbs of the Los Angeles metropolitan area, and the Las Vegas Region have significant growth between 1973 and 2000. The Mojave Basin and Range Ecoregion has long supported human activities such as livestock grazing, mining, military training, and recreation, all of which have had some effect on the desert landscape (Lovich and Bainbridge, 1999). Agriculture, although not extensive, takes place along the Colorado and Mojave Rivers. Mining, which historically has been an important land-use activity, is found throughout the ecoregion wherever mineral resources are available. Recreation activities have become increasingly important in the ecoregion, with millions of people each year visiting Death Valley National Park, Mojave National Preserve, and Lake Mead National Recreation Area, as well as numerous open access BLM lands.

Special status bird, mammal, and reptile species listed in **Table 7** (located in Chapter 2.3.4) were identified as having potential to occur within the Project area during database searches and literature review. However, after field surveys, only two special status animal species were found to have the potential to occur: desert bighorn sheep and desert tortoise. For more discussion on cumulative impacts to the desert tortoise, please see Chapter 2.4.4.8. The Project would result in permanent and temporary impacts to creosote bush scrub and ephemeral ditch habitat, which can be used as foraging habitat for special status animal species, such as desert bighorn sheep.

Population growth and urbanization is concentrated in the western regions near Palmdale and the desert suburbs of the Los Angeles metropolitan area and the Las Vegas Region. There are foreseeable actions that will contribute to continued urbanization in these areas; however, the Project is located just south of the Mojave National Preserve, which remains largely intact and a majority is protected from conversion of natural land cover. Additionally, a majority of this area is zoned as RC – Resource Conservation. This zoning provides sites for open space and recreational activities, single family homes on very large parcels and similar and compatible uses. Therefore, reasonably foreseeable projects include the 126 timber bridges along NTH within San Bernardino County that have become structurally deficient and functionally obsolete and are in need of rehabilitation or replacement (**see Table 9**). Since these future actions are similar in scope as the current Project, it is reasonable to assume that impacts to animals species as a result of these future actions would most likely be the same. Due to the County's efforts to replace timber bridges along NTH, the proposed Project has the potential to contribute to a cumulative impact to animal species.

The context and extent of the proposed Project's contribution to cumulative impact related to animal species was considered, noting that the impacts would occur in an existing transportation corridor, would be addressed through implementation of **BIO-6** through **BIO-12**, and that the proposed Project will replace existing timber bridges that have extended past their service life in order to enhance safety and to meet structural design standards. Additionally, this Project would not encourage future development since it would not alter vehicle capacity of the bridges, change traffic volumes on the NTH, or change land use within the area. These factors indicate that the incremental contribution of the Project to the cumulative impact of past, present, and reasonably foreseeable future projects would be cumulatively minor and considered less than substantial under NEPA. Further based on this analysis and review, under CEQA, no significant contributions to cumulative impacts to animal species would result from the proposed Project.

2.4.4.8 Threatened and Endangered Species

Only one federally and/or state listed species has the potential to occur within the Project vicinity; the federally threatened and state endangered desert tortoise. The RSA for threatened and endangered species encompasses the BSA for the proposed Project and the final critical habitat for desert tortoise. Historically, the desert tortoise's range was large and uninterrupted, spanning the Mojave, Sonoran, and Colorado deserts where desert scrub, desert wash, and Joshua tree habitats are present. The species has been described in a number of other arid and semiarid desert habitats as well (Zeiner et al. 1988-1990). The condition of desert tortoise habitat has declined in many areas with increased anthropogenic influences. Human activity disrupts open, sufficiently vegetated land and reduces foraging habitat for the species. In addition, roadways have fragmented habitat and reduced safe transit opportunities across an individual tortoise's home range. With a decrease in the value of some habitat and reduced access across its range, the desert tortoise has suffered from a decline in population. This resource is considered to be in poor condition.

The Project would have temporary impacts of approximately 14.24 acres and permanent impacts of approximately 1.40 acres to desert tortoise habitat (approximately 1.50 acres of temporary and 0.12 acres of permanent impacts to desert tortoise critical habitat).

The RSA remains largely intact and a majority is protected from conversion of natural land cover. Additionally, a majority of this area is zoned as RC – Resource Conservation. This zoning provides sites for open space and recreational activities, single family homes on very large parcels and similar and compatible uses. Therefore, reasonably foreseeable projects include the 126 timber bridges along NTH within San Bernardino County that have become structurally deficient and functionally obsolete and are in need of rehabilitation or replacement (**see Table 9**). Since these future actions are similar in scope as the current Project, it is reasonable to assume that impacts to threatened and endangered species as a result of these future actions would most likely be the same. Due to the County's efforts to replace timber bridges along NTH, the proposed Project has the potential to contribute to a cumulative impact to threatened and endangered species.

The context and extent of the proposed Project's contribution to cumulative impact related to threatened and endangered species was considered, noting that the Project has gone through Section 7 consultation with USFWS, who concurred with the not likely to adversely affect determination, impacts would occur in an existing transportation corridor, and impacts would be addressed through implementation of **BIO-13** through **BIO-22**. Additionally, the proposed Project will replace existing timber bridges that have extended past their service life in order to enhance safety and to meet structural design standards. This Project would also not encourage future development since it would not alter vehicle capacity of the bridges, change traffic volumes on the NTH, or change land use within the area. These factors, along with USFWS's concurrence with a not likely to adversely affect determination, indicate that the incremental contribution of the Project to the cumulative impact of past, present, and reasonably foreseeable future projects in the vicinity of the Project would be cumulatively minor and considered less than substantial under NEPA. Further, based on this analysis and review, under CEQA, no significant contributions to cumulative impacts to visual resources would result from the proposed Project.

2.4.4.9 Invasive Species

The Project area is located in the Mojave Desert ecoregion, as defined by USDA. However, due to the large size of the ecoregion, the RSA for cumulative impacts for invasive species is the area within the Mojave Desert ecoregion under 2,000 feet in elevation. Although developed land within this region is limited, the City of Palmdale, the desert suburbs of the Los Angeles metropolitan area, and the Las Vegas Region have significant growth between 1973 and 2000. The Mojave Basin and Range Ecoregion has long supported human activities such as livestock grazing,

mining, military training, and recreation, all of which have had some effect on the desert landscape (Lovich and Bainbridge, 1999). Agriculture, although not extensive, takes place along the Colorado and Mojave Rivers. Mining, which historically has been an important land-use activity, is found throughout the ecoregion wherever mineral resources are available. Recreation activities have become increasingly important in the ecoregion, with millions of people each year visiting Death Valley National Park, Mojave National Preserve, and Lake Mead National Recreation Area, as well as numerous open access BLM lands.

One invasive plant species was observed within the Project area during survey efforts – schismus (*Schismus sp.*), which has a Cal-IPC invasive rating of Limited. This species is common within the BSA but does not dominate over natives. The majority (~91%) of plant species observed within the Project area during survey efforts were native species. No invasive animal species were identified within the Project area during biological surveys. The lack of invasive species within the BSA is indicative of the remote location of the Project and the harsh conditions of the desert.

Implementation of the proposed Project has the potential to spread invasive species by entering and existing construction areas with contaminated equipment, from seed mixtures and mulch that contain invasive species, and by the improper removal and disposal of invasive species in which seeds are spread along the highway.

Population growth and urbanization is concentrated in the western regions near Palmdale and the desert suburbs of the Los Angeles metropolitan area and the Las Vegas Region. There are foreseeable actions that will contribute to continued urbanization in these areas; however, the Project is located just south of the Mojave National Preserve, which remains largely intact and a majority is protected from conversion of natural land cover. Additionally, a majority of this area is zoned as RC – Resource Conservation. This zoning provides sites for open space and recreational activities, single family homes on very large parcels and similar and compatible uses. Therefore, the reasonably foreseeable projects include the 126 timber bridges along NTH within San Bernardino County that have become structurally deficient and functionally obsolete and are in need of rehabilitation or replacement (**see Table 9**). Since these future actions are similar in scope as the current Project, it is reasonable to assume that impacts related to invasive species as a result of these future actions would most likely be the same. Due to the County's efforts to replace timber bridges along NTH, the proposed Project has the potential to contribute to a cumulative impact to animal species.

The context and extent of the proposed Project's contribution to cumulative impact related to invasive species was considered, noting that the impacts would be addressed through implementation of **BIO-8** and **BIO-23**. Additionally, the proposed Project will replace existing timber bridges that have extended past their service life in order to enhance safety and to meet structural design standards. This Project would also not encourage future development since it would not alter vehicle capacity of the bridges, change traffic volumes on the NTH, or change land use within the area. These factors indicate that the incremental contribution of the Project to the cumulative impact of past, present, and reasonably foreseeable future projects in the vicinity of the Project would be cumulatively minor and considered less than substantial under NEPA. Further, based on this analysis and review, under CEQA, no significant contributions to cumulative impacts to visual resources would result from the proposed Project.

Chapter 3 – California Environmental Quality Act (CEQA) Evaluation

3.1 Determining Significance under CEQA

The Project is subject to federal, as well as County of San Bernardino and state environmental review requirements because the County of San Bernardino proposes the use of federal funds from the FHWA and/or the Project requires an approval from FHWA. Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. The County of San Bernardino is the Project proponent and the lead agency under CEQA. 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.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (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 identification of 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.

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?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☒	☐	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

CEQA Significance Determinations for Aesthetics

a, c) <u>Less than Significant</u>

The entire stretch of the NTH on which the 10 existing bridges are within has been designated a National Scenic Byway by the United States Department of Transportation. The existing raised roadbed of the NTH allows for views of the surrounding desert landscape. Therefore, the existing visual character of the sites consist of a scenic vista.

The bridge lengths would match the existing lengths if possible but would be lengthened as needed to convey storm flows. The width of each replacement bridge would be increased from the existing 27-28 feet to 34 feet to accommodate two 11-foot lanes, two 4-foot shoulders and the two 2-foot railings. The vertical profile of the bridges will remain close to the existing profile except for those bridge locations that require additional vertical clearance to provide sufficient water conveyance, in which case it is anticipated the changes in vertical profiles would be 2 feet or less, with the elevation gradually conforming to the existing roadway elevations. The alignment would remain unchanged; however, approach road work, up to 800 feet, on either side of each bridge may be needed to conform to the existing roadway vertical profile.

The widening and slight vertical profile increase of each of the 10 replacement bridges would not substantially degrade or block valued desert landscape views for motorists or nearby residents. The proposed Project would not diminish the views that make the highway eligible for scenic status. Therefore, the Project as designed would not substantially degrade the visual character and quality of the site and would have less than significant impacts to scenic vistas and visual character.

b) <u>Less Than Significant with Mitigation Incorporated</u>

As discussed in the Visual/Aesthetics section in Chapter 2, scenic resources associated with the proposed Project include the NTH itself. Defining visual aspect features of the NTH include

the elevated roadway alignment, the 10 proposed bridge replacements, Late 1950s Paddleboards, C-Markers, ditch/dike systems, and an open desert landscape. Each of these components is viewed by motorists and discussed below.

While the existing bridges are timber, the deck of each bridge is asphalt. As such, no component of the timber bridges is visible to motorists, with the exception of the timber wingwalls which are briefly visible at some bridge locations as motorists travel across the bridge. The demolition of the existing timber bridges will also result in the removal of these timber wingwalls; however, due to the rate of travelling speed (approximately 55 mph), the concrete replacement wingwalls will only be briefly visible to motorists and does not constitute a significant change.

While the bridge railings would also be replaced, each replacement railing would either be steel California ST-75 Bridge Rail or Concrete Barrier Type 85, painted white, which are both Manual for Assessing Safety Hardware (MASH) approved, and which best match the aesthetic of both the original and modern bridge railings. This will ensure that the motorist would experience a minimal change in their viewshed, and it does not constitute a significant change.

Late 1950s Paddleboards are present at three of the bridge locations (Bristol Ditch, Cerulia Ditch, Leith Ditch, and Terra Ditch). If left in place, these paddleboards would be damaged or destroyed during construction, which would degrade the NTH viewshed for motorists. To prevent this impact, each Late 1950s Paddleboard will be removed prior to construction, refurbished to better match their original coloration, and reinstalled following construction, through implementation of **CUL-3b,** discussed in greater detail in Chapter 2.1 Cultural Resources discussion and Appendix A Section 4(f) Analysis. This will provide a visual benefit to motorists along the NTH.

The C-Markers, or concrete right-of-way markers, are present at six bridge locations (Cerro Ditch, Gordo Ditch, Cerulia Ditch, Terra Ditch, Larissa Ditch, and Adena Ditch). Due to their small size and non-distinctive coloration, these markers are not very visible to motorists due to the rate of travelling speed (approximately 55 mph). If left in place, the C-Markers would be damaged or destroyed during construction, which would degrade the NTH viewshed for motorists. Implementation of **CUL-3b** will ensure that each C-Marker will be removed prior to construction, stored in protective materials during construction, and reinstalled following completion of construction, ensuring their preservation. Therefore, there would be no permanent impact to the C-Markers.

The overall alignment of the NTH would remain the same as no alterations would occur to the alignment. The width of each bridge and the corresponding roadway approaches would be wider to meet current safety standards, but due to the high rate of travelling speed by motorists (approximately 55 mph) and as this change would be restricted to the bridge areas as opposed to the entire alignment between Daggett and Mountain Springs Road, this slight change in existing width would be minimal.

Similarly, while the ditch/dike system present at each bridge location will be slightly widened/lengthen to account for replacement bridge dimensions, these water control systems are ever changing in dimensions as they have been subject to continual modification and alteration since their inception. An additional, minimal modification would not constitute a significant change to motorists.

Finally, the open desert landscape which surrounds the NTH will not be obscured from view or otherwise impacted by the Project. Motorists will still have the open desert landscape as a backdrop while utilizing the NTH.

While various components of the NTH will be replaced, the overall NTH feel, which includes the raised NTH roadway, presence of bridges, Late 1950s Paddleboards, C-Markers, ditch/dike system, and the open desert landscape will remain the same from the viewpoint of motorists and nearby residents. While the timber components of the original bridges will be removed, the only view of timber components that motorists currently see are the wingwalls, which are only briefly visible as they pass across each bridge. The replacement concrete wingwalls will also only be briefly visible as motorists pass over the bridges, due to their rate of travelling speed (approximately 55 mph). As the elevated and straight NTH alignment would remain, the C-Markers will be preserved, the Late 1950s Paddleboards will be preserved/rehabilitated, the replacement railings will better match both the original and existing railings, the ditches/dikes would be minimally improved to match the lengthened bridges, and as the open desert landscape would remain unobscured, visual impacts to the overall NTH would be minimal through implementation of **CUL-3b**; therefore, there would be no significant impact with mitigation incorporated.

d) Less than Significant

Temporary visual impacts could result from detour signage, equipment storage, and night-time construction that would require additional lighting. These construction activities may temporarily obscure views. Construction of the proposed improvements is expected to start in 2024 and last approximately 24 months. Motorists would be exposed to temporary signage and lighting very briefly as they travel through the low-water crossing shoo-fly detour.

However, upon completion of construction, the proposed Project would not include new lighting elements in an area in which there is currently no lighting. Therefore, impacts would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

CUL-3b: SOIS Action Plan. An Action Plan for compliance with the Secretary of the Interior's Standards for Rehabilitation (36 CFR 67) (SOIS Action Plan) was approved by Caltrans to avoid adverse effects to the late 1950s Paddleboards (metal postmile markers) located at four of the 10 bridges (Bristol Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, and Leith Ditch Bridge) and 9 C-Markers located at six bridges (Larissa Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, Cerro Ditch Bridge, Adena Ditch Bridge, and Gordo Ditch Bridge) pursuant to the FHWA/Caltrans Section 106 PA Stipulation X.B.1.b. Caltrans shall ensure the SOIS Action Plan, included as MOA Attachment 4, is implemented by the Responsible Parties identified in the plan at the milestones specified therein In general, the SOIS Action Plan involves temporarily removing the C-Markers and Late 1950s Paddleboards prior to construction, storing them in protective materials during construction, and reinstalling them following construction. The Late 1950s Paddleboards will be rehabilitated in accordance with the SOIS standards through paint refurbishment to better match the original coloration.

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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

CEQA Significance Determinations for Agriculture and Forest Resources

a) <u>No Impact</u>

According to the California Department of Conservation – San Bernardino County Important Farmland 2006 overlay maps dated June 2007, there is no farmland present within the Project area.

b) <u>No Impact</u>

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

c, d) <u>No Impact</u>

There are no forest or timberlands within the Project limits.

e) <u>No Impact</u>

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

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?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non- attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

CEQA Significance Determinations for Air Quality

a, b, c, d) <u>Less Than Significant</u>

The proposed Project is located in the Mojave Desert Air Basin 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 SCAG, 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 will have no impact on traffic volumes and would generate a less than significant amount of pollutants during construction due to the very short duration of project construction. The proposed Project in included in SCAG's most recent RTP and RTIP both of which were found to be conforming. Therefore, the proposed Project will not conflict with the AQMP, violate any air quality standard, result in a net increase of any criteria pollutant, or expose sensitive receptors to substantial pollutant concentrations. Impacts will be less than significant.

Temporary construction activities could generate fugitive dust from the operation of construction equipment. The Project will comply with construction standards adopted by the Mojave Desert Air Quality Management District (MDAQMD) as well as Caltrans standardized procedures for minimizing air pollutants during construction. Impacts will be less than significant.

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, U.S. Fish and Wildlife Service, or NOAA Fisheries?	☐	☒	☐	☐
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 U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

CEQA Significance Determinations for Biological Resources

a) <u>Less Than Significant with Mitigation Incorporated</u>

Database searches, literature review, habitat assessment, and biological surveys conducted on October 19, 2020 determined that there are five special status plant and wildlife species with the potential to occur in the Project area including: glandular ditaxis (*Ditaxis claryana*), small-flowered androstephium (*Androstephium breviflorum*), pointed dodder (*Cuscuta californica var. apiculata*), desert bighorn sheep (*Ovis canadensis nelsoni*), and desert tortoise (*Gopherus agassizii*). The Project will result in temporary disturbance of potentially suitable habitat for all five species; however, with the incorporation of avoidance, minimization, and mitigation measures **BIO-1** through **BIO-11** and **BIO-23** through **BIO-28**, the Project is not anticipated to result in direct impact to glandular ditaxis, small flowered androstephium, pointed dodder, or desert bighorn sheep. Impacts would be less than significant with mitigation incorporated.

The Project would lead to temporary stressors which may affect but are not likely to adversely affect the desert tortoise. Such temporary stressors include increased noise and vibrations related to construction, which have the potential to affect desert tortoise should they be present within the construction area during construction. In addition, vegetation would be removed along the path of the temporary low-water crossings to allow for a safe vehicle detour and access route during construction. Approximately 13.14 acres of creosote bush scrub habitat would be temporarily impacted by project activities. Approximately 1.28 acres of this impacted creosote bush scrub habitat is located within desert tortoise final critical habitat at the Adena Ditch bridge location. Following construction, all natural areas that have experienced vegetation removal and disturbance for construction purposes would be seeded with a desert creosote bush scrub native seed mix and allowed to return to pre-construction conditions. However, this temporary loss of vegetation could cause reduced shelter and forage opportunities for the desert tortoise, although this would likely be a minor stressor as the Project would mostly impact vegetation that is adjacent to urban, paved areas that are already unvegetated.

The Project would also cause minor permanent impacts in the form of rock slope protection installed within desert tortoise habitat and critical habitat. These impacts would be permanent; however, the quantity of rock slope protection to be installed at each bridge site within the Project area would be minor in comparison to the availability of habitat within close proximity to these areas. Rock slope protection would be installed over approximately 1.05 acres of creosote bush scrub habitat, including approximately 0.061 acres of desert tortoise final critical habitat at the Adena Ditch Bridge, reducing the availability of forage species, burrow sites, suitable substrates, and vegetation for shelter over a small area adjacent to the NTH. While the installation of rock slope protection would affect these qualities of critical habitat, the area over which these impacts would occur is anticipated to be minor. In addition, these effects would not extend to nearby undisturbed critical habitat and would not impact the quality of desert tortoise critical habitat as a whole. With the incorporation of mitigation measures **BIO-13** through **BIO-22** and **BIO-29**, the Project may affect, but is not likely to adversely affect desert tortoise and its critical habitat.

Impacts to the desert tortoise and other special status species would be less than significant with mitigation incorporated.

b, c) <u>Less Than Significant with Mitigation Incorporated</u>

The natural communities identified within the BSA are ephemeral ditches and creosote bush scrub. Ephemeral ditches are present under each bridge in the Project area and are intermittently wetted. Creosote bush scrub is also present at each bridge location. This vegetation community is dominated by creosote bush (*Larrea tridentata*) and provides potentially suitable habitat for special status plant and wildlife species, including the state and federally listed desert tortoise. The creosote bush scrub within the Project area has been previously disturbed by human and vehicle traffic due to its proximity to the NTH.

The proposed Project would potentially result in permanent and temporary impacts to ephemeral ditches and creosote bush scrub. **Table 9** outlines the quantities of permanent and temporary impacts at each bridge location within the project area.

Table 10. Project Impacts to Natural Communities

Bridge	Habitat Type	Temporary Impacts (acres)	Permanent Impacts (acres)
Adena Ditch	Ephemeral Ditches	1.282	0.061
	Creosote Bush Scrub	0.221	0.056
Beacon Ditch	Ephemeral Ditches	1.186	0.080
	Creosote Bush Scrub	0.093	0.030
Bristol Ditch	Ephemeral Ditches	1.486	0.088
	Creosote Bush Scrub	0.082	0.00
Cerro Ditch	Ephemeral Ditches	1.208	0.103
	Creosote Bush Scrub	0.076	0.047
Cerulia Ditch	Ephemeral Ditches	1.367	0.098
	Creosote Bush Scrub	0.092	0.048
Gordo Ditch	Ephemeral Ditches	1.222	0.104
	Creosote Bush Scrub	0.073	0.045
Larissa Ditch	Ephemeral Ditches	1.273	0.139
	Creosote Bush Scrub	0.102	0.040
Leith Ditch	Ephemeral Ditches	1.145	0.098
	Creosote Bush Scrub	0.058	0.031
Sombra Ditch	Ephemeral Ditches	1.608	0.161
	Creosote Bush Scrub	0.231	0.018
Terra Ditch	Ephemeral Ditches	1.358	0.118
	Creosote Bush Scrub	0.071	0.035
Total	Ephemeral Ditches	***1.10***	***0.35***
	Creosote Bush Scrub	***13.14***	***1.05***

Impacts to Ephemeral Ditches

There are 10 ephemeral ditches identified within the BSA that are under the jurisdiction of the SWRCB, Colorado River Basin RWQCB, and CDFW. All 10 ephemeral ditches are jurisdictional waters of the State but are not considered waters of the U.S. due to their lack of connectivity to navigable or interstate waters.

The Project would have temporary impacts to approximately 1.10 total acres of ephemeral ditches within the BSA. These impacts would occur during construction activities, when the Project would require the creation of a temporary road realignment with a low water crossing at each bridge, as well as staging and access areas for the installation of the new bridge. The ditches would be dry at the time of construction and thus impacts to species utilizing aquatic habitats would not occur. The Project would also have permanent impacts to approximately 0.35 acres of ephemeral ditches due to the placement of rock slope protection. Permanent impacts to ephemeral ditches would occur immediately adjacent to the NTH and where the existing bridges occur. Rock slope protection would not impede the natural flow of water through the ephemeral ditches.

With implementation of measures **BIO-1** through **BIO-7**, impacts to ephemeral ditches would be less than significant with mitigation incorporated.

Impacts to Desert tortoise Final Critical Habitat

The desert tortoise (*Gopherus agassizii*) is a State and Federally listed species for which critical habitat has been designated by the USFWS. Critical habitat is designated within geographic areas that are essential to the conservation of specific listed species and may require special management considerations. The Adena Ditch Bridge is located within final critical habitat for the desert tortoise and project activities would result in temporary modifications of approximately 1.50 acres and permanent impacts to approximately 0.12 acres of designated desert tortoise final critical habitat.

Implementation of measures **BIO-1** through **BIO-6** would avoid and minimize impacts to desert tortoise final critical habitat and measures **BIO-7** and **BIO-8** would mitigate for these impacts. Furthermore, desert tortoise specific measures, **BIO-13** through **BIO-22** and **BIO-29**, would protect desert tortoise habitat and avoid take of desert tortoise within final critical habitat. With the incorporation of these measures, permanent impacts to desert tortoise final critical habitat would be less than significant.

d) No Impact

No essential fish habitat (EFH) is present within the BSA; therefore, no EFH consultation is required.

The existing NTH and railroad tracks to the south are the largest barriers to wildlife movement within the BSA, mainly effecting small terrestrial species, such as the desert tortoise, that are more likely to be harmed by vehicle traffic. Additionally, according to CDFW's Habitat Connectivity Viewer, the area between the Marble Mountains to the north and the Ship and Old Woman Mountains to the southeast of the NTH is considered a Conservation Planning Linkage which connects the core natural areas, the mountain ranges located to the north and south of the NTH (CDFW 2020b). Wildlife species that inhabit the mountainous terrain in the vicinity of the BSA may utilize the valley in which the NTH sits as a corridor for movement between key habitats. The Project would consist of improvements to the existing NTH that would not further impede wildlife movement.

This Project will not affect any migratory wildlife corridors or the movement of any native resident or migratory fish or wildlife species. This Project will not impede the use of native wildlife nursery sites.

e) No Impact

This Project will be conducted in accordance with all San Bernardino environmental policies and ordinances.

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

f) No Impact

The Project is not within a Habitat Conservation Plan or Natural Community Conservation Plan area; nor is it within another local, regional, or state habitat conservation plan.

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

Avoidance, Minimization, and/or Mitigation Measures

BIO-1: Best Management Practices (BMPs):

- Disturbed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Disturbed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities.
- All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.
- All construction materials, vehicles, stockpiles, and staging areas would be situated outside of ephemeral ditches as feasible. All stockpiles would be covered, as feasible.
- All erosion control measures and storm water control measures would be properly maintained until final grading has been completed and permanent erosion control measures have been implemented.
- All disturbed areas would be restored to pre-construction contours so that hydrologic function of the ephemeral ditches is not permanently impacted.
- All construction materials would be hauled off-site after completion of construction.

BIO-2: Refueling or maintenance of equipment shall not be permitted to occur within the ephemeral ditches at the Project site. Refueling and maintenance shall occur on the existing paved roadways rather than within natural communities when feasible. When refueling and maintenance activities occurs in natural communities, plastic sheeting or other secondary containment measures will be used to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).

BIO-3: Equipment will be checked daily for leaks and will be well maintained to prevent lubricants and any other deleterious materials from entering natural environments.

BIO-4: A chemical spill kit must be kept onsite and available for use in the event of a spill.

BIO-5: Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all equipment/materials located in a natural area (ephemeral ditch or creosote bush scrub habitat) as needed to prevent petroleum products or other chemicals from contaminating the soil or from spilling directly into ephemeral ditches. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).

BIO-6: Project activities will not occur during any periods of precipitation or surface water flow in the ephemeral ditches within the BSA. In the Mojave Desert, this is most likely to occur between November and April, and during the summer monsoon season from July to September. When precipitation is occurring or surface water is flowing, Project work

within the ephemeral ditch channels will be halted in order to minimize disturbance to aquatic resources and desert wildlife, which is most active during this critical time when water is available.

BIO-7: Following the completion of project activities, areas that have been disturbed by project activities within the BSA will be re-graded to pre-construction conditions. Specifically, the sandy ephemeral ditches that flow under the existing bridges will be re-graded so that natural water flow would be allowed to return through the Project area following the next precipitation event.

BIO-8: Following construction, soil within impact areas will be decompacted and a seed mix of locally native desert shrubs will be applied to natural areas disturbed by construction activities in order to kick start the site's natural cycle of plant recruitment.

BIO-9: Environmental awareness training shall be conducted prior to the onset of project work for all construction personnel discussing the special status plant and wildlife species with the potential to occur in the BSA. The training will also discuss how to proceed if there are any encounters of special status species within the work area, as well as measures and BMPs that will be implemented to avoid impacts to such species.

BIO-10: During the ideal blooming period prior to the beginning of construction activities, a rare plant survey will be conducted by an authorized biologist. If individuals or populations of rare plants are observed within the BSA during this survey, the area around the rare plant will be marked with high-visibility Environmentally Sensitive Area (ESA) fencing. project activities will not be permitted to encroach upon the fencing and vegetation removal will not be authorized within the boundaries of said fencing.

BIO-11: All vegetation removal will be minimized to the greatest extent feasible. When possible, vegetation removal will be accomplished with the use of hand tools. Trees and shrubs shall be trimmed rather than removed unless absolutely necessary for project activities.

BIO-12: If desert bighorn sheep are observed within the Project area, work will be halted until the individual(s) have left the Project area. Construction personnel is not authorized to come into direct contact with desert bighorn sheep. The species must be allowed to move throughout the Project area undisturbed by humans, vehicles, or construction machinery.

BIO-13: An authorized project biologist, approved by CDFW and USFWS, will monitor initial ground disturbing activities at the Project site which may cause take of the desert tortoise. The authorized biologist will also oversee the implementation of all avoidance and minimization measures put in place to protect the desert tortoise.

BIO-14: Approximately 2-4 weeks in advance of construction activities, a survey for desert tortoise and their burrows within the Project area shall occur by the authorized biologist. Additionally, within 24 hours of the start of soil disturbance, another preconstruction clearance survey for desert tortoise will be conducted by the authorized biologist. If a tortoise or tortoise sign is found in the impact areas or within the immediate vicinity during either pre-construction survey, USFWS and CDFW shall be contacted immediately and the tortoise shall be allowed to move outside the construction area/exclusionary area on their own before the Project can commence installation of exclusionary fencing, on-site construction preparation activities, or any construction activities.

BIO-15: Construction impact areas shall be staked in order to contain construction activities within the Project boundaries. These areas shall be marked with temporary desert

tortoise exclusion fencing marked with high visibility flagging. The desert tortoise fencing must be in compliance with the standards outlined in the 2009 *USFWS Desert Tortoise (Mojave Population) Field Manual*. The desert tortoise exclusion fencing ESAs shall be delineated in coordination with the authorized project biologist.

BIO-16: Desert tortoise exclusion fencing will be inspected monthly and immediately after precipitation events during project activities by the authorized project biologist and repaired as needed. Repairs must occur within two days. Any debris that accumulates along the fence should be removed as the fence is inspected.

BIO-17: The Project biologist shall monitor initial ground disturbing activities for tortoise activity. Should a desert tortoise be found within the Project limits, construction activities shall cease and the USFWS and CDFW shall be contacted immediately. The tortoise shall be allowed to leave the Project area limits undisturbed. Construction may only recommence at the Project biologist's authority and once the desert tortoise is outside of project limits.

BIO-18: Project personnel shall carefully check under parked vehicles or equipment for desert tortoises before moving said vehicles or equipment. Should a desert tortoise be found, the protocol outlined in measure **BIO-17** shall be followed.

BIO-19: Construction and maintenance vehicles shall not exceed 15 mph in tortoise habitat, which includes all natural communities within the BSA, during periods of higher tortoise activity, March 1 through November 1. Outside of this window, vehicles shall not exceed 25 mph in tortoise habitat.

BIO-20: Open trenches, auger holes, or other excavations that may act as pitfall traps shall be inspected prior to working in or around the excavation and prior to backfilling. Other excavations that remain open overnight shall be covered to prevent them from becoming pitfall traps. Any animals found within the excavations shall be relocated by the Project biologist. Should any listed or sensitive species be found within these excavations, the appropriate wildlife agency shall be contacted immediately, and subsequent action shall be performed under the direction of the lead wildlife agencies.

BIO-21: Should a desert tortoise be injured as a result of project related activities; it shall be immediately taken to a CDFW approved rehabilitation facility by the authorized biologist. The CDFW approved rehabilitation facility in the vicinity of the Project area is the Big Bear Alpine Zoo (909) 584-1299. Any veterinarian bills for such injured tortoises shall be paid by San Bernardino County. The CDFW and USFWS shall be notified within five calendar days of the incident. Notification shall include the date, time, location, and circumstances of the incident.

BIO-22: Should a desert tortoise be killed by project related activities or found dead within the construction area, remains shall be collected by the Project biologist and frozen as soon as possible. CDFW and USFWS shall be notified and a written report shall be sent within five calendar days of the incident. Notification shall include the date, time, location, and circumstances of the finding.

BIO-23: Prior to the initial arrival at the first bridge of the Project site and prior to leaving at the completion of construction, equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.

BIO-24: The construction contractor shall avoid removing any vegetation or performing structure demolition during the nesting bird season (February 15-August 31). If either of these activities must occur within the nesting season, a pre-construction nesting bird survey

must be conducted no more than 3 days prior to the activity commencing. Structure demolition or vegetation removal must occur within 3 days from the nesting bird survey.

A no-disturbance buffer will be established around any active nest of migratory birds and raptor species. Standard no-disturbance buffers of 100 feet for migratory birds and 300 feet for raptor species may be altered at the discretion of the Project biologist, based on species, location of the nest, and the biologist's expertise. The contractor must immediately stop work in the nesting area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the Project biologist and in coordination with the County) in the buffer area until a qualified biologist determines the young have fledged.

BIO-25: Prior to construction, a qualified biologist must conduct a focused bat survey on the existing bridge structures. If a maternity colony is found within the Project area, a qualified bat biologist shall prepare a bat eviction plan in order to evict bats during the appropriate non-pupping season, from September 1 to October 15 or March 15 to April 15. If no maternity colony or potential maternity colony is identified, work may proceed as scheduled and no additional considerations for bat species are required.

BIO-26: All construction crew members will allow wildlife enough time to escape initial clearing and grubbing activities. Where determined appropriate by the Project biologist, initial clearing and grubbing must be accomplished through the use of hand tools. If initial clearing and grubbing through the use of hand tools is not feasible, then heavy equipment may be used if operated at speeds less than 3 miles per hour.

BIO-27: The contractor must dispose of all food-related trash in closed containers and must remove it from the Project area each day during construction. Construction personnel must not feed or attract wildlife to the Project area.

BIO-28: The contractor must not apply rodenticide or herbicide within the BSA during construction.

BIO-29: Placement and construction of rock slope protection will require the interstitial spaces within the rock slope protection to be filled with substrate to prevent trapping of desert tortoise.

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 §15064.5?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

CEQA Significance Determinations for Cultural Resources

a) Significant and Unavoidable Impact

In an effort to identify archaeological resources that might be affected by project activities, pedestrian surveys, background research, and consultations with organizations and individuals were conducted. As detailed in the Cultural Resources section in Chapter 2.1, there are five cultural resources which were determined eligible to be listed on the National Register of Historic Places (NRHP). These resources include:

- National Trails Highway alignment between Daggett and Mountain Springs Road (MR# F)
- Adena Ditch Bridge (MR# 111)
- C-Markers (multiple, discussed here as a group) (MR# A)
- Late 1950s Paddleboards (multiple, discussed here as a group) (MR# B)
- Desert Training Center and California – Arizona Maneuver Area (MR# G)

For their locations, please see **Figure 4**. It should be noted the "Map Reference #" refers to a number callout on the **Figure 4** map.

The National Old Trails Road/Route 66 (CA-SBR-2910H) consists of the roadway alignment, bridges, C-Markers, and Late 1950s Paddleboards located between the community of Daggett on the west to Mountain Springs Road on the east. The current Project proposes to replace 10 bridges along this eligible segment. Of these, the Adena Ditch Bridge was found to be a character defining feature of the National Old Trails Road/Route 66 (CA-SBR-2910H) while the other nine bridges were found to be non-contributing during consultation with the State Historic Preservation Officer (SHPO) for a separate project in 2014. Additionally, as part of the identification efforts conducted for this Project, additional associated features, such as the C-Markers (right-of-way boundary monuments), and Late 1950s Paddleboards (postmile markers) were also recorded and considered character defining features of the overall National Old Trails Road/Route 66 (CA-SBR-2910H) resource. As these resources are considered to be eligible for listing on the NRHP, they are considered historic properties under the National Historic Preservation Act (NHPA). As the California Register of Historical Resources (CRHR) contains eligibility criteria that are based upon the NRHP eligibility criteria, these resources are also considered eligible for listing on the CRHR and are therefore considered historical resources under CEQA. The proposed Project would replace the existing 10 timber bridges with concrete bridges. Replacement of the bridges would also involve the

installation of new bridge railings and improved roadway on either end of each bridge, resulting in a slight "feathering" or tapered widening of the approach roadway as it transitions from the existing roadway width to the slightly wider replacement bridge width. These new railings and roadway improvements will introduce new materials that will diminish the overall integrity and significance of the National Old Trails Road/Route 66 (CA-SBR-2910H) due to the modern materials, tapered width, and slight vertical profile raise associated with the new bridges. Taken together on all 10 bridges, these modifications will constitute a cumulative effect to the National Old Trails Road/Route 66 (CA-SBR-2910H) and its character defining feature, the Adena Ditch Bridge. To reduce the cumulative impacts, the Project will implement **CUL-3a** through **CUL-3e** which consists of a Memorandum of Agreement between the County, Caltrans, and the SHPO. The MOA outlines measures to further develop the County's existing website which contains historical information compiled on the National Old Trails Road/Route 66 (CA-SBR-2910H) and to submit a National Register of Historic Places Nomination Form for the entire 111-mile long National Old Trails Road/Route 66 (CA-SBR-2910H) alignment and its character defining features, including the Adena Ditch Bridge. While mitigation measure **CUL-3a** through **3e** will reduce Project impacts to the National Old Trails Road/Route 66 (CA-SBR-2910H) and the Adena Ditch Bridge, these impacts cannot be mitigated to a less than significant level under CEQA; therefore, Project impacts would result in a significant and unavoidable impact to the overall National Old Trails Road/Route 66 (CA-SBR-2910H), and its character defining feature, the Adena Ditch Bridge, which are both considered historical resources.

The Project would also impact additional National Old Trails Road/Route 66 (CA-SBR-2910H) character defining features, the Late 1950s Paddleboards and C-Markers. To mitigate this impact, the Project will implement **CUL-3b**, which consists of a SOIS Action Plan that outlines how both resource types will be temporarily removed during construction, stored in protective materials, and reinstalled upon the conclusion of construction activities. Further, the Late 1950s Paddleboards will be repainted to better match their original coloration, consistent with the Secretary of the Interior's standards for historic property rehabilitation. For more details, see the Cultural Resources discussion in Chapter 2.1. Through implementation of **CUL-3b**, Project impacts would be considered less than significant with mitigation.

The last cultural resource located within the APE is the Desert Training Center and California – Arizona Maneuver Area (DTC/C-AMA).The DTC/C-AMA is a 1940s military training/maneuver area that is currently being documented as a historical cultural landscape composed of numerous site types (i.e., maneuver areas, divisional camps, small unit training areas, air facilities and crash sites, bivouacs, as well as hospital and medical features), features (i.e., anti-tank ditches, camouflage areas, foxholes, minefields, observation positions, obstacles, refuse scatter and dumps, reuse of existing facilities, roads, rock features, rock insignias or cairns, rock walls, slit trenches, tank tracks, and tank traps), and military and non-military artifacts. The DTC/C-AMA stretches from Indio, California eastward toward Prescott, Arizona and from Yuma, Arizona to Searchlight, Nevada and covers approximately 18,000 square miles. The DTC/C-AMA has been registered and listed on the California Register of Historical Resources (CRHR) and is therefore considered a historical resource under CEQA. The DTC/C-AMA stretches from Indio, California eastward toward Prescott, Arizona and from Yuma, Arizona to Searchlight, Nevada and covers approximately 18,000 square miles. While the recorded boundary of the DTC/C-AMA encompasses the entire APE, no features associated with the DTC/C-AMA were identified within the APE. As there are no DTC/C-AMA features or artifacts identified within the APE, the Project would not physically destroy or damage any component of the resource, nor would the Project change the character of the historical resource's use/physical features within the resource's setting. Further, the Project would not introduce a new visual, atmospheric, or audible element as it involves replacement of existing bridges, both of which pre-date the resource's period of significance. For these reasons, the undertaking will not have a less than significant effect to the DTC/C-AMA.

b, c) Less Than Significant with Mitigation Incorporated

In an effort to identify archaeological resources that might be affected by project activities, pedestrian surveys, background research, and consultations with organizations and individuals were conducted. A review of local geological formations, relevant landforms, soils, and spatial context, combined with the mild to moderate ground disturbances from transportation activities, suggest that the APE for each bridge has a low potential for both prehistoric and historic surface archaeological and buried archaeological sites. The pedestrian survey and map research confirmed that the APE has been subject to extensive disturbance associated with infrastructure construction and maintenance. While several isolated occurrences of historic-era refuse were noted at each of the 10 bridge locations, these isolated artifacts are not considered an archaeological site.

While there were no archaeological sites identified within the APE and the potential for buried archaeological sites to be present within the APE is low, there is always the possibility that buried archaeological resources or unknown human remains may be encountered during project construction. With the implementation of avoidance/minimization measures **CUL-1, CUL-2, TCR-1**, and **TCR-2**, impacts to archaeological resources and human remains would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

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

CUL-2: If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact District 8 Division of Environmental Planning; Andrew Walters, DEBC: (909)383-2647 so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

CUL-3: Per the proposed *Memorandum of Agreement Between the California Department of Transportation and the California State Historic Preservation Officer Regarding the National Trails Highway at 10 Bridges Project, San Bernadino County, California* (MOA), the following measures shall be implemented to resolve adverse effects to the National Old Trails Road/Route 66 (CA-SBR-2910H) and its character defining features:

- **CUL-3a: Architectural Treatment of Bridge Railings on 10 New Bridges.** County shall direct the contractor to apply treatments for historical railing design considerations as depicted in MOA Attachment 3 to the replaced bridge railings on all 10 NTH/Route 66 replacement bridges. Attachment 3 depicts railings designs for replacement bridge projects on the NTH/Route 66 which were previously approved by Caltrans. Consistency of treatments with this measure, and any future revisions to the treatments, will be determined through review of project plans by Caltrans. County shall submit the design plans and specifications for the Undertaking to District 8 Cultural Studies prior to the commencement of construction and request review by a Caltrans Professionally Qualified Staff Principal Architectural Historian. Following Caltrans approval, the

SHPO shall also be afforded the opportunity to review the design plans and specifications for a 30-day review period.

- **CUL-3b: SOIS Action Plan.** An Action Plan for compliance with the Secretary of the Interior's Standards for Rehabilitation (36 CFR 67) (SOIS Action Plan) was approved by Caltrans to avoid adverse effects to the late 1950s Paddleboards (metal postmile markers) located at four of the 10 bridges (Bristol Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, and Leith Ditch Bridge) and 9 C-Markers located at six bridges (Larissa Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, Cerro Ditch Bridge, Adena Ditch Bridge, and Gordo Ditch Bridge) pursuant to the FHWA/Caltrans Section 106 PA Stipulation X.B.1.b. Caltrans shall ensure the SOIS Action Plan, included as MOA Attachment 4, is implemented by the Responsible Parties identified in the plan at the milestones specified therein. In general, the SOIS Action Plan involves temporarily removing the C-Markers and Late 1950s Paddleboards prior to construction, storing them in protective materials during construction, and reinstalling them following construction. The Late 1950s Paddleboards will be rehabilitated in accordance with the SOIS standards through paint refurbishment to better match the original coloration.

- **CUL-3c: Construction Monitoring.** County shall prepare a construction monitoring plan and conduct periodic monitoring of construction activities to ensure the project is conducted in a manner that meets the stipulations outlined in the MOA. The monitoring plan and its ongoing status will be included in the annual reports submitted pursuant to MOA Stipulation IV.F. Caltrans shall ensure that the construction monitoring plan is implemented. Within three months following the completion of construction and prior to the expiration of the MOA, a monitoring report shall be prepared and submitted to the SHPO to document project completion and compliance with the treatment of Historic Properties outlined in the MOA. The monitoring report may be combined with the final annual report prepared for the Undertaking pursuant to MOA Stipulation IV.F. The monitor shall meet the appropriate professional qualifications standards in accordance with MOA Stipulation IV.A.3.

- **CUL-3d: National Register of Historic Places (NRHP) Nomination**. Caltrans shall ensure that the County has prepared an NRHP Nomination form for the entire 111-mile long NTH/Route 66 segment between Daggett and the Mountain Springs Road exit for submittal to the California SHPO for review by the State Historical Resources Commission, prior to the 2024 Annual Report prepared for the MOA.

- **CUL-3e: Interpretive Website.** The County will develop a website to share historic and other Route 66 road-related information for the benefit of the general public. Information to be included on the website is detailed in the website outline, included as Attachment 5 to the MOA. The final content of the website to be created as part of the MOA will be determined through consultation with the Caltrans District 8 cultural staff and the interested consulting parties and will be focused on the segment of the NTH/Route 66 between Daggett and the Mountain Springs Road exit, with an emphasis on information specific to parts of the NTH/Route 66 within the Project's APE, if available. The website shall be maintained by the County and accessible to the public for their use, information, and enjoyment. The County shall commence development of the website prior to the 2024 Annual Report prepared for the MOA and shall publish the website prior to the 2027 Annual Report.

TCR-1: The San Manuel Band of Mission Indians Cultural Resources Department shall be contacted should any indigenous cultural resources be discovered during Project implementation and be provided information regarding the nature of the discovery, so that the San Manuel Band of Mission Indians can provide input with regards to significance and treatment. If cultural resources are discovered which are considered historical resources and/or tribal cultural resources as defined under the California Environmental Quality Act, and avoidance cannot be ensured, a qualified archaeologist meeting the Secretary of Interior Professional Qualification Standards shall develop an Archaeological Monitoring and Treatment Plan in coordination with the County and Caltrans, as specified in **CUL-3b**. If the discovery involves indigenous resources, the Archaeological Monitoring and Treatment Plan shall allow for a monitor to be present that represents the San Manuel Band of Mission Indians for the remainder of the Project's ground disturbing activities in the area of the indigenous resource discovery, should the San Manuel Band of Mission Indians elect to place a monitor on-site. The drafts of the Archaeological Monitoring and Treatment Plan shall also be provided to San Manuel Band of Mission Indians Cultural Resources Department for review and comment. An archaeological monitor shall implement the Archaeological Monitoring and Treatment Plan accordingly and shall apply the plan to all subsequent cultural resource discoveries.

TCR-2: Any and all archaeological/cultural documents created as a part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the County for dissemination to San Manuel Band of Mission Indians. The County shall, in good faith, consult with San Manuel Band of Mission Indians throughout the life of the Project.

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?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

CEQA Significance Determinations for Energy

a, b) <u>Less than Significant</u>

The Project would use a minimal amount of energy during construction activities, such as excavation, road cut and fill, demolition, and other construction-related activities. Construction-related effects on energy would likely be greatest during the site preparation phase because of energy use associated with the excavation, handling, and transport of soils and construction debris to and from the site. However, these construction activities would be short-term in duration, and, therefore, would not result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction. During project operation, the Project would accommodate existing traffic demand, and would not create new traffic demand. As such, the operation of the Project would not result in a wasteful, inefficient, or unnecessary consumption of energy resources. Further, as the Project would replace existing bridges, it would not be in conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

GEOLOGY AND SOILS

Would the Project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

CEQA Significance Determinations for Geology and Soils

a, c) Less than Significant

The Project site is not within areas that are susceptible to liquefaction or landslide risk. Furthermore, the bridge replacements are not anticipated to adversely affect geologic or topographic conditions or be affected by fault rupture within the Project limits. The bridge replacements would be designed to meet Caltrans seismic design standards to minimize geologic and seismic hazards. No structures would be constructed that would increase the current risk of loss, injury, or death as a result of ground shaking or seismically induced effects. The proposed Project would not increase the risk of exposing people or structures to potential adverse effects because of seismic activities or seismic-related ground failure beyond existing conditions. Therefore, impacts would be less than significant.

b) Less than Significant with Mitigation Incorporated

Construction of the proposed Project would cause disturbances to the ground surface from earthwork, including excavating and grading, which would result in a potential for soil erosion. Implementation of measure **BIO-1** discussed under Biological Environment would ensure impacts related to soil erosion are Less than Significant with Mitigation Incorporated.

d) Less than Significant

Much of the Desert Region of San Bernardino County has low to moderately expansive soils. Expansive soils are typically characterized by clay-ey material that shrinks and swells as it dries or becomes wet, respectively. Sunrock-Laval Flows complex, 4 to 15 percent slopes, was the only soil type identified in the Project area, which have a clay content that averages 5 to 18 percent (USDA Soilseries, December 2015).

The proposed bridge replacements would be designed to meet Caltrans seismic design standards to minimize geologic and seismic hazards. Therefore, impacts related to expansive soils would be less than significant.

e) No Impact

The proposed Project does not include development that would use septic tanks. There would be no impacts to septic tanks or wastewater disposal systems.

f) Less than Significant with Mitigation Incorporated

A Paleontological Identification and Evaluation Report was prepared for the Project in June 2021. The report found the Project area to be underlain by alluvial fan sediments that typically do not yield fossils. Due to the arid nature of the region, the location of all bridges on alluvial fans, the lack of potential for burial, and observations during the field survey, all bridge replacement areas within the Project are assigned a low sensitivity for paleontological resources. If unanticipated discoveries of paleontological resources occur during construction, measure **PAL-1** includes the standard best management practice to halt all work within 50 feet of the discovery until the find has been evaluated by a qualified paleontologist. Implementation of **PAL-1** would result in a less than significant impact within mitigation incorporated.

Avoidance, Minimization, and/or Mitigation Measures

PAL-1: If unanticipated discoveries of paleontological resources occur during construction, all work within 50 feet of the discovery should be halted until the find has been evaluated by a qualified paleontologist.

BIO-1: Best Management Practices (BMPs):

- Disturbed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Disturbed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities.

- All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.
- All construction materials, vehicles, stockpiles, and staging areas would be situated outside of ephemeral ditches as feasible. All stockpiles would be covered, as feasible.
- All erosion control measures and storm water control measures would be properly maintained until final grading has been completed and permanent erosion control measures have been implemented.
- All disturbed areas would be restored to pre-construction contours so that hydrologic function of the ephemeral ditches is not permanently impacted.

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?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

CEQA Significance Determinations for Greenhouse Gas Emissions

a, b) <u>Less than Significant</u>

Construction of the proposed Project would generate approximately 8,576 tons of GHG emissions over the 24-month construction period. As the Project would result in the replacement of 10 bridges with no change in road alignment or roadway capacity, there would be no impact to long-term operation GHG emissions. Therefore, the proposed Project would not result in a significant conflict with the GHG reduction targets set by the County of San Bernardino Greenhouse Gas Emissions Reduction Plan (September 2011) or the San Bernardino County Regional Greenhouse Gas Reduction Plan (March 2021).

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?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

CEQA Significance Determinations for Hazards and Hazardous Materials

a, b) <u>Less than Significant with Mitigation Incorporated</u>

Based on the December 2021 Hazardous Waste Initial Site Assessment (ISA) prepared for this Project, which included an Environmental Data Resources (EDR) records search and a site reconnaissance was conducted on February 25, 2020, the following hazardous materials shown in Table 10 below were observed to occur within the Project boundaries:

Table 11. REC Evidence

Location	Description of REC Evidence Found	Description of Associated AUL	Risk to Project
Striping to be removed within project boundaries on each of the 10 bridges along the NTH.	Potential lead and heavy metals associated with pavement striping. Implementation of improvements may require the removal and disposal of yellow traffic stripe and pavement marking materials (paint, thermoplastic, permanent tape, and temporary tape). Yellow paints made prior to 1995 may exceed hazardous waste criteria under Title 22, California Code of Regulations, and require disposal in a Class I disposal site.	Striping present on each bridge	Low
Along unpaved shoulders near each of the 10 bridges along the NTH.	Implementation of improvements may require the disturbance and removal of contaminated soils. However, less than 50 ppm for lead and chromium were found at two other bridge project sites (Dola and Lanzit) near Amboy on the NTH. Therefore, due to the low threshold, ADL is not a concern for any of the ten bridges.	Potential ADL in unpaved shoulders	Low to None
Supports under each of the 10 bridges along the NTH proposed to be removed.	Wood timbers in the barriers and supporting the existing bridges. Potential treated wood waste should be managed in accordance with standards under Title 22, CA Code of Regulations Division 4.5 Chapter 34.	Treated timbers bridge supports and barriers	Low
Barriers on each of the 10 bridges along the NTH proposed to be removed.	Potentially lead-based paint on the wood timbers and on the railings that make up the bridge barriers. Structures constructed prior to 1978 are presumed to contain lead-based paint unless proven otherwise. However, structures constructed after 1978 may also contain lead-based paints.	Wood and metal railings that make bridge barriers	Low

Temporary construction activity associated with the proposed replacement of each bridge may result in the disturbance and/or release of these hazardous materials, if present. Measures **HAZ-1** through **HAZ-4** would ensure the proper handling, storage, transportation, and disposal of any hazardous impacts would occur prior to construction. Therefore, impacts would be less than significant with mitigation incorporated.

c) No Impact

There are no existing or proposed schools within one-quarter mile of any of the proposed bridge replacement sites. There would be no impact.

d) No Impact

A summary of the published lists of known hazardous substance sites was provided by Environmental Data Resources (EDR) for the Bristol, Cerro, Gordo, Cerulia, Leith, Terra, Sombra, Beacon, and Larissa Ditches. EDR reviewed standard federal, state, and local listings of known sites and did not identify any hazardous sites within the Project area. The nearest sites with the potential for hazardous materials include The California Rock Salt Co., approximately 1.4 miles from NTH, and Camp Clipper, in Essex, sites are listed as Inactive -

Needs Evaluation as of 7/1/2005 with past uses that caused contamination and potential contaminants of concern as None Specified. As there are no open/active cases of hazardous waste remediation within the Project area; therefore, the Project does not have potential to encounter hazardous wastes associated with the listings on the known hazardous substance sites. Therefore, the Project would have no impact.

e) No Impact

The Project is not located within an airport land use plan or within two miles of a public airport or public use airport; therefore, the Project would not result in a safety hazard or excessive noise for people residing or working near the Project area. The Project would have no impact.

f) Less than Significant Impact with Mitigation Incorporated

The Project would not substantially impair an adopted emergency response plan or emergency evacuation plan as traffic would be accommodated during construction to allow movement through the area. As the Project is intended to prevent future bridge failures, the Project would improve future traffic conditions for emergency response or emergency evacuation.

During construction, emergency service access will be temporarily diverted around the existing bridges by a temporary parallel road realignment, also referred to as a “shoo-fly detour”, that would carry traffic around the construction area. Each bridge replacement is anticipated to be completed in one construction season (approximately 100 working days); therefore, the temporary detour would be in place for approximately one season at each bridge replacement.

A Traffic Management Plan (TMP) will be developed in accordance with Caltrans’ standards and procedures to ensure impacts to emergency response services remain minimal. While construction is anticipated to occur during the driest times of the year, there remains a risk for flash-flooding during the summer monsoon events. Flash-flooding may result in temporary delays in the Project area as the shoo-fly detours provide at-grade, or near at-grade, low water crossings, which might be temporarily inundated during such storm events. The TMP will provide protocols on how and when to implement alerts and redirect traffic to minimize further traffic delay during any flash-flood forecasts and events. Measure **TRA-1** is discussed under Traffic and Transportation/Pedestrian and Bicycle Facilities.

Following completion of the proposed 10 bridge replacements, the temporary detour would be removed and there would be no remaining impacts to emergency access. Therefore, impacts would be less than significant with mitigation incorporated.

g) Less than Significant Impact

The San Bernardino County General Plan Fire Safety (FS) Overlay includes areas within the mountains, valley foothills, and desert region designated by the applicable Fire Authority as wildfire risk areas. It includes all the land generally characterized by areas varying from relatively flat to steep sloping terrain and with moderate to heavy fuel loading contributing to high fire hazard conditions. According to the FS Overlay, no fire safety area or associated wildfire risk occurs within or near any of the proposed Project sites.

Vegetation within the Project area is minimal and sparse. While construction equipment does have the potential to start fires, use of standard BMPs to prevent fires would be utilized throughout construction of the Project. Further, the Project would not introduce new

permanent features or utilities which could contribute to wildfire. The Project would not exacerbate wildfire risks; therefore, impacts would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

HAZ-1: It is anticipated that yellow pavement striping will be removed since it is present over each bridge along NTH. Removal of yellow striping and pavement marking materials would be performed in accordance with latest Caltrans Standard Special Provision for REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS. If yellow striping is removed in conjunction with the existing pavement, the paint striping can be considered non-hazardous material and a provision for handling the paint is not required.

HAZ-2: Lead-based paint is presumed to be present within the bridge barriers. The contractor shall ensure lead-based paint is properly managed and removed from the Project site in accordance with the latest Caltrans Standard Special Provision for DISTURBANCE OF EXISTING PAINT SYSTEMS ON BRIDGES.

HAZ-3: Treated wood along bridge deck barriers and supports underneath each bridge contain chemicals, e.g., creosote, which pose a risk to human health and the environment and must be handled in accordance with CCR, Title 22, Division 4.5 implemented by the Department of Toxic Substances Control (DTSC). Section 14-11.14 provides guidelines on handling, storing, transporting, and disposing of Treated Wood Waste (TWW). Caltrans follows the regulations adopted by DTSC regarding TWW, which may be handled as a regulated solid waste and disposed of in a State Water Resources Control Board certified solid waste landfill.

The contractor shall ensure that removal of TWW would be performed in accordance with the latest Caltrans Standard Special Provision for TREATED WOOD WASTE.

HAZ-4: As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during project construction (such as previously undetected petroleum hydrocarbon contamination from former underground storage tanks). If known or previously unknown hazardous waste/material is encountered during construction, the procedures outlined in the Caltrans Hazards Procedures for Construction shall be followed.

TRA-1: A Traffic Management Plan would be prepared prior to construction and be implemented during construction of the Project to reduce disruption of traffic patterns. Public information and awareness campaigns, motorist information strategies, and incident management strategies would alert the public of the temporary construction shoo-fly detours and the Project.

HYDROLOGY AND WATER QUALITY

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

CEQA Significance Determinations for Hydrology and Water Quality

a, c , e) Less than Significant with Mitigation Incorporated

During construction, traffic will be temporarily diverted around the existing bridges by a temporary low-water crossing shoo-fly detour built parallel to the existing bridges that would carry traffic around the construction area. Following construction, the Project would not result in any permanent increase in impervious surface. Impacts related to stormwater or flood flows would be less than significant.

The Project would result in temporary impacts to approximately 1.38 acres of ephemeral ditches during construction activities, when the Project would require the creation of a temporary road realignment with a low water crossing at each bridge, as well as staging and access areas for the installation of the new bridge. Construction of the proposed Project would cause disturbances to the ground surface from earthwork, including excavating and grading. These activities would potentially increase the amount of sediments entering ephemeral

ditches. However, the ditches would be dry at the time of construction. Therefore, no impacts to water quality are anticipated to occur. With implementation of measures **BIO-1** through **BIO-7**, discussed under Biological Environment, impacts related to water quality, implementation of water quality control or sustainable groundwater management plans would be less than significant with mitigation incorporated.

b) Less than Significant

The proposed Project would not deplete groundwater supplies, require use of a groundwater well or impede potential ground water recharge. Impacts would be less than significant.

d) Less than Significant

As the Project is approximately 130 miles inland from the Pacific Ocean, there is no tsunami hazard risk. As the largest inland water body near the Project is the Salton Sea, approximately 70 miles south, there is no seiche hazard risk.

The Project is located in Zone D, which is an area where there are possible but undetermined flood hazards due to flood hazard analysis not having been conducted in the area: therefore, the Project is not located within an identifiable 100-year floodplain or regulatory floodway. The hydraulic capacity of the watercourse underneath the bridges are anticipated to be improved as a result of the bridge replacements. Therefore, impacts related to project inundation are less than significant.

Avoidance, Minimization, and/or Mitigation Measures

BIO-1: Best Management Practices (BMPs):

- Disturbed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Disturbed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities.
- All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.
- All construction materials, vehicles, stockpiles, and staging areas would be situated outside of ephemeral ditches as feasible. All stockpiles would be covered, as feasible.
- All erosion control measures and storm water control measures would be properly maintained until final grading has been completed and permanent erosion control measures have been implemented.
- All disturbed areas would be restored to pre-construction contours so that hydrologic function of the ephemeral ditches is not permanently impacted.
- All construction materials would be hauled off-site after completion of construction.

BIO-2: Refueling or maintenance of equipment shall not be permitted to occur within the ephemeral ditches at the Project site. Refueling and maintenance shall occur on the

existing paved roadways rather than within natural communities when feasible. When refueling and maintenance activities occurs in natural communities, plastic sheeting or other secondary containment measures will be used to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).

BIO-3: Equipment will be checked daily for leaks and will be well maintained to prevent lubricants and any other deleterious materials from entering natural environments.

BIO-4: A chemical spill kit must be kept onsite and available for use in the event of a spill.

BIO-5: Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all equipment/materials located in a natural area (ephemeral ditch or creosote bush scrub habitat) as needed to prevent petroleum products or other chemicals from contaminating the soil or from spilling directly into ephemeral ditches. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).

BIO-6: Project activities will not occur during any periods of precipitation or surface water flow in the ephemeral ditches within the BSA. In the Mojave Desert, this is most likely to occur between November and April, and during the summer monsoon season from July to September. When precipitation is occurring or surface water is flowing, Project work within the ephemeral ditch channels will be halted in order to minimize disturbance to aquatic resources and desert wildlife, which is most active during this critical time when water is available.

BIO-7: Following the completion of project activities, areas that have been disturbed by project activities within the BSA will be re-graded to pre-construction conditions. Specifically, the sandy ephemeral ditches that flow under the existing bridges will be re-graded so that natural water flow would be allowed to return through the Project area following the next precipitation event.

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?	☐	☐	☐	☒
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?	☐	☐	☒	☐

CEQA Significance Determinations for Land Use and Planning

a) <u>No Impact</u>

The proposed bridge replacements would remain on the same alignment as the existing NTH. Therefore, the Project would not physically divide an established community. There would be no impact.

b) <u>Less than Significant</u>

The proposed bridge replacements are consistent with statewide, regional, and local mobility goals, and are being coordinated with impacted governmental, regulatory, and local agencies in the area to ensure consistency with applicable local goals and objectives. The Project would not change the land use designation or result in any zoning changes.

While the proposed Project would occur on land owned by the U.S. Bureau of Land Management, the proposed bridge replacements would occur entirely within the County's right-of-way as granted by the BLM. Therefore, impacts would be less than significant.

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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

CEQA Significance Determinations for Mineral Resources

a, b) <u>No Impact</u>

The proposed Project would involve replacement of 10 bridges along NTH. According to the NR-4 Mineral Resource Zone Map, found in the Natural Resources Element of the San Bernardino Countywide Plan (October 2020), mineral resource zones do not occur within the vicinity of any of the 10 proposed bridge replacements. There would be no impact to mineral resources.

NOISE

Would the Project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☒

CEQA Significance Determinations for Noise

a, b) Less than Significant

While the Project will have a potential for construction-related noise and vibration impacts such as pile driving and noise impacts related to bridge replacement and road resurfacing, there are no residences or receptors in the immediate vicinity of the Project and noise will be minimized to less than significant levels using standard Caltrans specifications regarding construction noise. Therefore, temporary construction noise and vibration impacts would be less than significant. Following construction, there would be no permanent increase in ambient noise levels.

c) No Impact

The Project will not result in residential construction; therefore, there are no impacts related to air traffic noise.

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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

CEQA Significance Determinations for Population and Housing

a) No Impact

The proposed Project does not include residential development and would not induce population growth. There would be no impact.

b) No Impact

While the proposed Project would occur on land owned by the U.S. Bureau of Land Management, the proposed bridge replacements would occur entirely within the County's right-of-way as granted by the BLM. There would be no impact to existing people or housing.

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?	☐	☒	☐	☐
Police protection?	☐	☒	☐	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

CEQA Significance Determinations for Public Services

a) <u>Less than Significant with Mitigation Incorporated</u>

During construction, emergency service access and all other traffic will be temporarily diverted around the existing bridges by a temporary low-water crossing shoo-fly detour built parallel to the existing bridges that would carry traffic around the construction area. Each bridge replacement is anticipated to be completed in one construction season (approximately 100 working days); therefore, the temporary detour would be in place for approximately one season at each bridge replacement.

A Traffic Management Plan (TMP) will be developed in accordance with Caltrans' standards and procedures to ensure impacts to emergency response services remain minimal. While each ditch is anticipated to be dry during the construction period, there remains a risk for flash-flooding due to the local climate. The risk for flash-flooding is an existing condition and adverse driving conditions or delays as a result of flooding would not be worsened by the temporary shoo-fly detour. Furthermore, if the temporary shoo-fly detour experiences flooding, the TMP will provide alerts and redirect traffic to minimize further traffic delay.

Measure **TRA-1** is discussed under Traffic and Transportation/Pedestrian and Bicycle Facilities.

Impacts to schools, parks, and other public facilities would be less than significant. Following completion of the proposed 10 bridge replacements, the temporary detour would be removed and there would be no remaining impacts to any public services.

Avoidance, Minimization, and/or Mitigation Measures

TRA-1: A Traffic Management Plan would be prepared prior to construction and be implemented during construction of the Project to reduce disruption of traffic patterns. Public information and awareness campaigns, motorist information strategies, and

incident management strategies would alert the public of the temporary construction shoo-fly detours and the Project.

RECREATION

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

CEQA Significance Determinations for Recreation

a, b) <u>No Impact</u>

There are no parks or recreational facilities within 0.5 miles of any of the Project sites. Further, the replacement of 10 bridges would not require the construction or expansion of any recreational facilities. No impacts would occur to parks and recreation facilities as a result of the proposed Project.

TRANSPORTATION

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

CEQA Significance Determinations for Transportation

a, b, c) <u>No Impact</u>

The purpose of the Project is to replace structurally deficient bridges in order to:

- Enhance safety on National Trails Highway by providing new vehicular crossings for 10 bridges;
- Provide a transportation facility consistent with County and Caltrans Standards, as well as local and regional plans.

The NTH roadway alignment would remain the same. The proposed Project would not increase road capacity and would have no impacts related to vehicle-miles travelled (VMT). Upon completion, hazards related to the safety of NTH would be reduced. There would be no impact.

d) <u>Less than Significant with Mitigation Incorporated</u>

During construction, traffic will be temporarily diverted around the existing bridges by a temporary low-water crossing shoo-fly detour built parallel to the existing bridges that would carry traffic around the construction area. Each bridge replacement is anticipated to be completed in one construction season (approximately 100 working days); therefore, the temporary detour would be in place for approximately one season at each bridge replacement.

A Traffic Management Plan (TMP) will be developed in accordance with Caltrans' standards and procedures to ensure impacts to emergency response services remain minimal. While construction is anticipated to occur during the driest times of the year, there remains a risk for flash-flooding during the summer monsoon events. Flash-flooding may result in temporary delays in the Project area as the shoo-fly detours provide at-grade, or near at-grade, low water crossings, which might be temporarily inundated during such storm events. The TMP will provide protocols on how and when to implement alerts and redirect traffic to minimize further traffic delay during any flash-flood forecasts and events.

Measure **TRA-1** is discussed under Traffic and Transportation/Pedestrian and Bicycle Facilities.

Following completion of the proposed 10 bridge replacements, the temporary detour would be removed and there would be no remaining impacts to emergency access. Therefore, impacts would be less than significant with mitigation incorporated.

Avoidance, Minimization, and/or Mitigation Measures

The following mitigation measure will be implemented:

TRA-1: A Traffic Management Plan would be prepared prior to construction and be implemented during construction of the Project to reduce disruption of traffic patterns. Public information and awareness campaigns, motorist information strategies, and incident management strategies would alert the public of the temporary construction shoo-fly detours and the Project.

TRIBAL CULTURAL RESOURCES

Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	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	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

CEQA Significance Determinations for Tribal Cultural Resources

AB 52 Consultation

Project notification letters were sent on March 10, 2020 to Tribes who had previously requested to consult on all projects in this area of San Bernardino County. These Tribes included the following: San Manuel Band of Mission Indians, the Colorado River Indian Tribes, and the Twenty-Nine Palms Band of Mission Indians. All letters were received; however, only one Tribe, the San Manuel Band of Mission Indians, elected to consult on the Project. No indigenous cultural resources were identified as a result of this consultation; therefore, there are no Tribal Cultural Resources which would be impacted by the Project.

As with all projects which involve grading or other ground disturbance, there is a potential that previously unknown, buried indigenous resources are present. For this reason, Avoidance and Minimization Measures **CUL-1**, **CUL-2**, **TCR-1**, and **TCR-2**, which were developed in consultation with the San Manuel Band of Mission Indians, shall be implemented should an inadvertent indigenous discovery occur during Project implementation. These measures are included following the responses to the questions below. Consultation was closed in January 2021. Chapter 4 (Comments and Coordination) of this EIR/EA includes a summary of consultation efforts conducted with Native American Tribes conducted under both Section 106 of the National Historic Preservation Act and the California Public Resources Code 21080.3.1 (i.e., AB 52).

CEQA Significance Determinations for Tribal Cultural Resources

a) No Impact

The Project is not anticipated to cause a substantial adverse change in the significance of a TCR listed or eligible for listing in the California Register of Historical Resources, or in a local register of historic resources as defined in Public Resources Code section 5020.1(k). No indigenous cultural resources were identified during the visual survey, the record search, or by the Native American tribal governments during consultation. No impacts are anticipated for

the Project related to indigenous cultural resources; however, with any Project requiring ground disturbance, there is always the possibility that previously unknown indigenous cultural resources may be unearthed during grading or other ground disturbing activities. Implementation of Avoidance and Minimization Measures **CUL-1,** t**CUL-2, TCR-1,** and **TCR-2** would ensure there would be No Impact to TCRs as a result of Project implementation.

b) No Impact

The Project is not anticipated to cause a substantial adverse change to a TCR pursuant to criteria set forth in subdivision (c) of Public Resources Cod Section 5024.1. No indigenous cultural resources were identified during the visual survey, record search, or by the Native American tribal governments. No impacts are anticipated for the Project related to indigenous cultural resources; however, with any Project requiring grading or other ground disturbing activities, there is always the possibility that previously unknown indigenous cultural resources may be unearthed during construction. Implementation of Avoidance and Minimization Measures **CUL-1, CUL-2, TCR-1,** and **TCR-2** would ensure there would be No Impact to TCRs as a result of Project implementation.

Avoidance, Minimization, and/or Mitigation Measures

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

CUL-2: If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact District 8 Division of Environmental Planning; Andrew Walters, DEBC: (909)383-2647 so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

TCR-1: The San Manuel Band of Mission Indians Cultural Resources Department shall be contacted should any indigenous cultural resources be discovered during Project implementation and be provided information regarding the nature of the discovery, so that the San Manuel Band of Mission Indians can provide input with regards to significance and treatment. If cultural resources are discovered which are considered historical resources and/or tribal cultural resources as defined under the California Environmental Quality Act, and avoidance cannot be ensured, a qualified archaeologist meeting the Secretary of Interior Professional Qualification Standards shall develop an Archaeological Monitoring and Treatment Plan in coordination with the County and Caltrans, as specified in **CUL-3b**. If the discovery involves indigenous resources, the Archaeological Monitoring and Treatment Plan shall allow for a monitor to be present that represents the San Manuel Band of Mission Indians for the remainder of the Project's ground disturbing activities in the area of the indigenous resource discovery, should the San Manuel Band of Mission Indians elect to place a monitor on-site. The drafts of the Archaeological Monitoring and Treatment Plan shall also be provided to San Manuel Band of Mission Indians Cultural Resources Department for review and comment. An archaeological monitor shall implement the Archaeological Monitoring and Treatment Plan accordingly and shall apply the plan to all subsequent cultural resource discoveries.

TCR-2: Any and all archaeological/cultural documents created as a part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the County for dissemination to San Manuel Band of Mission Indians. The County shall, in good faith, consult with San Manuel Band of Mission Indians throughout the life of the Project.

UTILITIES AND SERVICE SYSTEMS

Would the Project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals??	☐	☐	☐	☒
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

CEQA Significance Determinations for Utilities and Service Systems

a) <u>Less than Significant</u>

An existing buried fiber optic line is potentially within the limits of the proposed structures. No other known utility systems, including water, sewer or electric power are known to occur in the Project area.

If, through coordination with affected utility companies via Utility "A" letters, it is found that conflicts to the existing buried fiber optic line within the Project area is unavoidable, the County will coordinate with the utility companies as needed prior to bridge construction. The existing fiber optic line will then be relocated and attached to the new bridges by the utility purveyors. Temporary disruption to utilities related to the buried fiber optic line may occur during the relocation.

No permanent impacts to existing utility services would occur as a result of the 10 proposed bridge replacements. All existing utility services would continue to provide service even if a utility relocation would occur. Impacts would be less than significant.

b-e) <u>No Impact</u>

The proposed Project would not create any development that includes or require the use of any utility service systems, including water, wastewater, or solid waste. There would be no impact.

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?	☐	☒	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
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?	☐	☐	☒	☐

CEQA Significance Determinations for Wildfire.

Regulatory Setting

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the "CEQA Checklist" for the inclusion of questions related to fire hazard impacts for projects located on lands classified as very high fire hazard severity zones. The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these very high fire hazard severity zones.

a) <u>Less than Significant with Mitigation Incorporated</u>

The Project would not substantially impair an adopted emergency response plan or emergency evacuation plan as traffic would be accommodated during construction to allow movement through the area. As the Project is intended to prevent future bridge failures, the Project would improve future traffic conditions for emergency response or emergency evacuation.

During construction, emergency service access will be temporarily diverted around the existing bridges by a temporary parallel road realignment, also referred to as a "shoo-fly detour", that would carry traffic around the construction area. Each bridge replacement is anticipated to be completed in one construction season (approximately 100 working days); therefore, the temporary detour would be in place for approximately one season at each bridge replacement.

A Traffic Management Plan (TMP) will be developed in accordance with Caltrans' standards and procedures to ensure impacts to emergency response services remain minimal. While construction is anticipated to occur during the driest times of the year, there remains a risk for flash-flooding during the summer monsoon events. Flash-flooding may result in temporary

delays in the Project area as the shoo-fly detours provide at-grade, or near at-grade, low water crossings, which might be temporarily inundated during such storm events. The TMP will provide protocols on how and when to implement alerts and redirect traffic to minimize further traffic delay during any flash-flood forecasts and events.

Measure **TRA-1** is discussed under Traffic and Transportation/Pedestrian and Bicycle Facilities.

Following completion of the proposed 10 bridge replacements, the temporary detour would be removed and there would be no remaining impacts to emergency access. Therefore, impacts would be less than significant with mitigation incorporated.

b-d) Less than Significant

The San Bernardino County General Plan Fire Safety (FS) Overlay includes areas within the mountains, valley foothills, and desert region designated by the applicable Fire Authority as wildfire risk areas. It includes all the land generally characterized by areas varying from relatively flat to steep sloping terrain and with moderate to heavy fuel loading contributing to high fire hazard conditions. According to the FS Overlay, no fire safety area or associated wildfire risk occurs within or near any of the proposed Project sites.

Vegetation within the Project area is minimal and sparse. While construction equipment does have the potential to start fires, use of standard BMPs to prevent fires would be utilized throughout construction of the Project. Further, the Project would not introduce new permanent features or utilities which could contribute to wildfire. The Project would not exacerbate wildfire risks; therefore, impacts would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

TRA-1: A Traffic Management Plan would be prepared prior to construction and be implemented during construction of the Project to reduce disruption of traffic patterns. Public information and awareness campaigns, motorist information strategies, and incident management strategies would alert the public of the temporary construction shoo-fly detours and the Project.

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?	☒	☐	☐	☐
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)?	☒	☐	☐	☐
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

CEQA Significance Determinations for Mandatory Findings of Significance

a) Significant and Unavoidable Impact

Implementation of the Project Build Alternative would not substantially degrade the quality of the existing environment. Potential impacts related to natural communities, wetlands, special status species, and threatened and endangered species have been identified and discussed in their respective sections under Biological Environment in Chapter 2.3. Mitigation measures have been identified related to individual resource-specific impacts. Construction of the proposed Project has the potential to have impacts to creosote bush scrub and ephemeral ditches, which serve as suitable habitat to support desert bighorn sheep, desert tortoise, Glandular ditaxis, small-flowered androstephium, and pointed dodder; however, avoidance and minimization measures would reduce the level of all Project-related impacts to less than significant levels. Therefore, impacts are considered less than significant.

Implementation of the proposed Project would result in impacts to an historical resource, as defined under CEQA, which includes the National Old Trails Road/Route 66 (CA-SBR-2910H) alignment between Daggett and Mountain Springs Road and its character defining features the Adena Ditch Bridge, Late 1950s Paddleboards, and C-Markers. Significant impacts to the Late 1950s Paddleboards and C-Markers through implementation of measure **CUL-3b** which will ensure these resources are removed prior to construction, stored in protective materials, and reinstalled following the end of construction. The Late 1950s Paddleboards will also be rehabilitated through paint refurbishment to better match their original coloration.

The Project will demolish the Adena Ditch Bridge, install concrete bridges with modern railings, create a slightly raised profile at the replacement bridge locations (less than 2 feet), and will also include roadway "feathering" or tapering to adjust the roadway to the wider new bridges. This feathering results in a relatively minor change to the roadway at any given point. But the cumulative effect of long stretches of this feathering will result in a significant effect to the geometry as well as the materials for the roadway. The demolishing of the timber Adena Ditch Bridge and the use of concrete replacement bridges and modern MASH bridge railings will introduce a material element incongruous with the other remaining timber bridges and less modern railings located along the National Old Trails Road/Route 66 (CA-SBR-2910H) alignment. The cumulative impact of demolishing a character defining feature(the Adena Ditch Bridge) and introducing new materials (concrete bridges and railings instead of timber bridges and railings) is considered a significant impact of an historical resource.

To reduce the significant effects, the Project will implement **CUL-3a** through **3e**, which consists of a Memorandum of Agreement between the County, Caltrans, and the State Historic Preservation Officer. The MOA is currently in the process of being finalized and is anticipated to be executed in 2023. The MOA outlines measures to further develop the County's existing website which contains historical information compiled on the National Old Trails Road/Route 66 (CA-SBR-2910H) and to submit a National Register of Historic Places Nomination Form for the entire 111-mile long National Old Trails Road/Route 66 (CA-SBR-2910H) alignment. While this will reduce the Project's impact, it will not mitigate the impact to a less than significant level; therefore, impacts would remain significant and unavoidable.

b) Significant and Unavoidable Impact

Only one cumulatively considerable impact was identified, which involves the National Old Trails Road/Route 66 (CA-SBR-2910H). No other resources would result in a cumulatively considerable impact as future anticipated projects, which would consist entirely of timber bridge rehabilitation/replacements along the NTH would not all occur simultaneously and instead be spread out over many construction seasons. Although some project construction may overlap within the same construction seasons as the proposed Project, permanent impacts associated with those projects are anticipated to be required to implement the same avoidance and minimization measures.

For the National Old Trails Road/Route 66 (CA-SBR-2910H), there would be a cumulatively considerable impact as future projects would involve additional timber bridge replacements and/or roadway improvements, resulting in continued degradation and demolition of elements of the original National Old Trails Road/Route 66 (CA-SBR-2910H). This current Project as well as future bridge replacement projects will introduce thousands of feet of improved roadway which will significantly alter the historical visual setting. Future projects will also result in the demolition of additional National Old Trails Road/Route 66 (CA-SBR-2910H) character defining features, namely other timber bridges. Therefore, cumulatively considerable effects would be significant and unavoidable.

c) <u>Less than Significant with Mitigation Incorporated</u>

The project alternatives would not cause significant adverse effects to human beings, either directly or indirectly with mitigation incorporated. The NTH roadway alignment would remain the same. The proposed Project would not increase road capacity and would have no impacts related to vehicle-miles travelled (VMT). Upon completion, hazards related to the safety of NTH would be reduced. Without the proposed Project, the existing 10 bridges would continue

to remain structurally deficient. Failure of any of the existing bridges could result in significant disruption of traffic circulation.

While the Project will have a potential for construction-related noise and air quality impacts related to bridge replacement and road resurfacing, there are no residences or receptors in the immediate vicinity of the Project and noise will be minimized to less than significant levels using, but not limited to, the following control measures: limiting hours of construction, locating staging areas away from residences, ensuring operating mufflers are included in all construction equipment used, and scheduling impulsive noises, such as jack hammering, to affect the fewest number of receptors. Following construction, there would be no permanent increase in ambient noise levels.

During construction, traffic will be temporarily diverted around the existing bridges by a temporary parallel road realignment, also referred to as a “shoo-fly detour”, that would carry traffic around the construction area. Each bridge replacement is anticipated to be completed in one construction season (approximately 100 working days); therefore, the temporary detour would be in place for approximately one season at each bridge replacement.

A Traffic Management Plan (TMP) will be developed in accordance with Caltrans’ standards and procedures to ensure impacts to emergency response services remain minimal. While construction is anticipated to occur during the driest times of the year, there remains a risk for flash-flooding during the summer monsoon events. Flash-flooding may result in temporary delays in the Project area as the shoo-fly detours provide at-grade, or near at-grade, low water crossings, which might be temporarily inundated during such storm events. The TMP will provide protocols on how and when to implement alerts and redirect traffic to minimize further traffic delay during any flash-flood forecasts and events.

Implementation of Measure **TRA-1** will ensure impacts to human beings are Less than Significant with Mitigation Incorporated.

3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF6), and various hydrofluorocarbons (HFCs). CO2 is the most abundant GHG; while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO2 that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO2.

The impacts of climate change are already being observed in the form of sea level rise, drought, more intense heat, extended and severe fire seasons, and historic flooding from changing storm patterns. Both mitigation and adaptation strategies are necessary to address these impacts. The most important mitigation strategy is to reduce GHG emissions. In the context of climate change (as distinct from CEQA and NEPA), "mitigation" involves actions to reduce GHG emissions or to enhance the "sinks" that store them (such as forests and soils) to lessen adverse impacts. "Adaptation" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

REGULATORY SETTING

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

Federal

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2022). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values— "the triple bottom line of sustainability" (FHWA n.d.). 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.

The federal government has taken steps to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 USC Section 6201) as amended by the Energy Independence and Security Act (EISA) of 2007; and Corporate Average Fuel Economy (CAFE) Standards. This act established fuel economy standards for on-road motor vehicles sold in the United States. The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces the CAFE standards based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014).

U.S. EPA published a final rulemaking on December 30, 2021, that raised federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. The updated GHG emissions standards will avoid more than 3 billion tons of GHG emissions through 2050. In April 2022, NHTSA announced corresponding new fuel economy standards for model years 2024 through 2026, which will reduce fuel use by more than 200 billion gallons through 2050 compared to the old standards and reduce fuel costs for drivers (U.S. EPA 2022a; NHTSA 2022).

State

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs) including, but not limited to, the following:

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

Assembly Bill (AB) 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (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 [H&SC] 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.

EO 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 (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.

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

EO 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.

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO2e). [GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO2 is the most important GHG, so amounts of other gases are expressed relative to CO2, using a metric called "carbon dioxide equivalent," or CO2e. The global warming potential of CO2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO2.] 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.

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.

SB 1386, Chapter 545, 2016, declared "it to be the policy of the state that the protection and management of natural and working lands … is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled, to promote the state's goals of reducing greenhouse gas

emissions and traffic related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires ARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.

EO B-55-18 (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

AB 1279, Chapter 337, 2022, The California Climate Crisis Act: This bill mandates carbon neutrality by 2045 and establishes an emissions reduction target of 85% below 1990 level as part of that goal. This bill solidifies a goal included in EO B-55-18. It requires ARB to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California, as specified.

ENVIRONMENTAL SETTING

The proposed Project is in a rural area. NTH is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is SR-40, 10 miles to the north. Traffic counts are low and NTH is rarely congested. The San Bernardino County Transportation Agency (SBCTA), San Bernardino Associated Governments (SANBAG), and Southern California Association of Governments (SCAG) guides transportation development. The San Bernardino County Regional Greenhouse Gas Reduction Plan 2021 addresses GHGs in the Project area.

GHG Inventories

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

National GHG Inventory

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total GHG emissions from all sectors in 2020 were 5,222 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. Of these, 79 percent were CO2, 11 percent were CH4, and 7 percent were N2O; the balance consisted of fluorinated gases. Total GHGs in 2020 decreased by 21% from 2005 levels and 11% from 2019. The change from 2019 resulted primarily from less demand in the transportation sector during the COVID-19 pandemic. The transportation sector was responsible for 27 percent of total U.S. GHG emissions in 2020, more than any other sector (**Figure 9**), and for 36% of all CO2 emissions from fossil fuel combustion. Transportation CO2 emissions for 2020 decreased 13 percent from 2019 to 2020, but were 7 percent higher than transportation CO2 emissions in 1990 (**Figure 9**) (U.S. EPA 2022b).

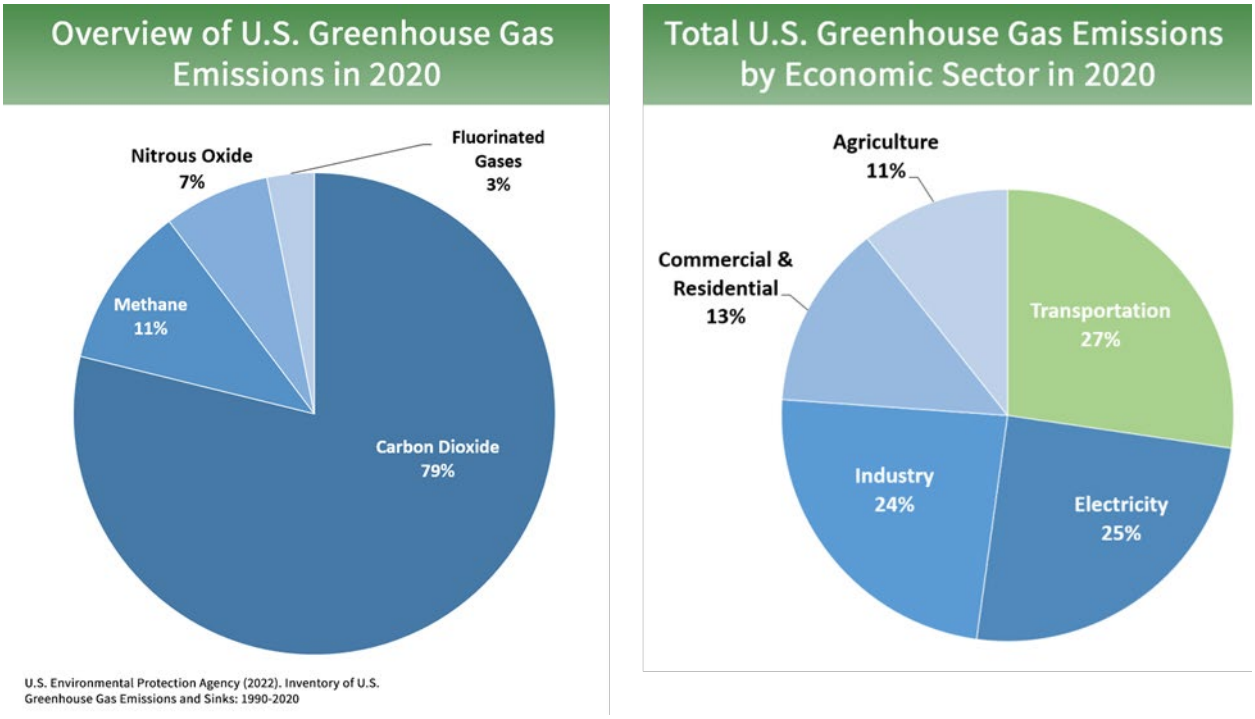


Figure 9. U.S. 2020 Greenhouse Gas Emissions (Source: U.S. EPA 2022b)

State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2022 edition of the GHG emissions inventory reported emissions trends from 2000 to 2020. Total California GHG emissions in 2020 were 369.2 MMTCO2e, a reduction of 35.3 MMTCO2e from 2019 and 61.8 MMTCO2e below the 2020 statewide limit of 431 MMTCO2e. Much of the decrease from 2019 to 2020, however, is likely due to the effects of the COVID-19 pandemic on the transportation sector, during which vehicle miles traveled declined under stay-at-home orders and reductions in goods movement. Nevertheless, transportation remained the largest source of GHG emissions, accounting for 37 percent of statewide emissions (**Figure 10**). (Including upstream emissions from oil extraction, petroleum refining, and oil pipelines in California, transportation was responsible for about 47 percent of statewide emissions in 2020; however, those emissions are accounted for in the industrial sector.) California's gross domestic product (GDP) and GHG intensity (GHG emissions per unit of GDP) both declined from 2019 to 2020 (**Figure 11**). It is expected that total GHG emissions will increase as the economy recovers over the next few years (ARB 2022a).

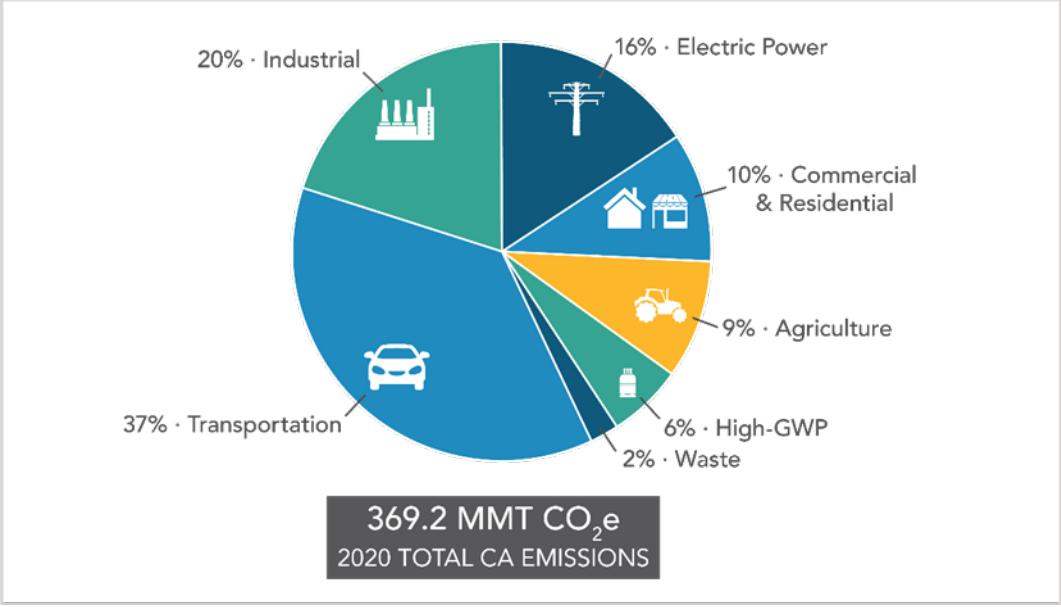


Figure 10. California 2020 Greenhouse Gas Emissions by Scoping Plan Category (Source: ARB 2022a)

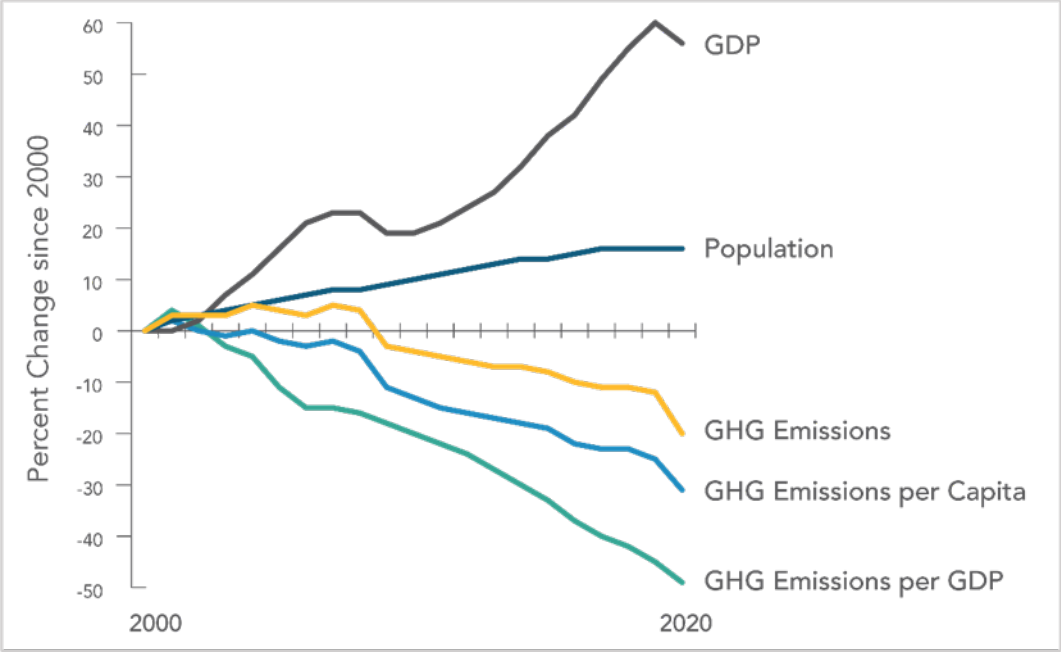


Figure 11. Change in California GDP, Population, and GHG Emissions since 2000 (Source: CARB 2022a)

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, and to update it every 5 years. ARB adopted the first scoping plan in 2008. 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 draft 2022 Scoping Plan Update additionally lays out a path to achieving carbon neutrality by 2045 (ARB 2022b).

Regional Plans

ARB sets regional GHG reduction targets for California's 18 MPOs to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed Project is included in the 2020-2045 Connect SoCal RTP/SCS for SCAG. The regional reduction target for SACAG is 19 percent by 2035 (ARB 2022c).

Table 12. Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy (adopted September 2020)	• Focus Growth Near Destinations & Mobility Options • Promote Diverse Housing Choices • Leverage Technology Innovations • Support Implementation of Sustainability Policies • Promote a Green Region
San Bernardino County Regional Greenhouse Gas Reduction Plan (adopted March 2021)	**Reduction Measure 4.3.3.1:** Alternative Fueled Transit Fleets – CNG to Electric **Reduction Measure 4.3.3.2:** Encourage Use of Mass Transit, Carpooling, Ridesharing, and Telecommuting **Reduction Measure 4.3.3.3:** Improve Efficiency through Signal Synchronization **Reduction Measure 4.3.3.4:** Expand Bike Routes Including pedestrian and Bicycle Friendly Streets **Reduction Measure 4.3.3.5:** Community Fleet Electrification **Reduction Measure 4.3.4.1:** Electric-Powered Construction Equipment **Reduction Measure 4.3.4.2:** Idling Ordinance **Reduction Measure 4.3.4.3:** Electric Landscaping Equipment

PROJECT ANALYSIS

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO2, CH4, N2O, and HFCs. CO2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH4 and N2O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California

Supreme Court explained, “because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512). 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. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed Project is to replace 10 structurally deficient bridges on NTH and will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the Project would not increase the number of travel lanes on NTH, no increase in vehicle miles traveled (VMT) would occur as result of project implementation. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

Construction GHG emissions would result from material processing and transportation, 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.

Use of long-life pavement, improved traffic management plans, and changes in materials, can also help offset emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

Construction emissions were estimated using the latest Sacramento Metropolitan Air Quality Management District’s Road Construction Model (http://www.airquality.org/ceqa/, Version 9.0.0). Construction-related emissions for the proposed Project are presented in Table 12. The emissions presented are based on the best information available at the time of calculations. The emissions represent the peak daily construction emissions that would be generated by construction of the proposed Project.

Table 13. Modelled CO_2e Emissions from Construction

CO_2e (metric tons/phase)										
	Adena Bridge	**Beacon Bridge**	**Bristol Bridge**	**Cerro Bridge**	**Cerulia Bridge**	**Gordo Bridge**	**Larissa Bridge**	**Leith Bridge**	**Sombra Bridge**	**Terra Bridge**
Grubbing/Land Clearing	17.88	17.88	18.71	17.88	17.88	17.88	17.88	17.88	17.88	17.88
Grading/Excavation	504.04	519.02	517.74	504.04	504.04	504.04	504.04	504.04	511.53	504.04
Drainage/Utilities/Sub-Grade	297.92	297.92	300.08	297.92	297.92	297.92	297.92	297.92	297.92	297.92
Paving	34.19	32.79	37.93	32.79	32.79	31.39	32.79	32.79	37.00	34.19
Project Total (tons/construction project)	854.04	867.61	874.45	852.63	852.63	851.23	852.63	852.63	864.33	854.04

Construction is planned to last approximately 24 months. Approximately 8,576 metric tons of GHG emissions are anticipated to be generated from the construction period. Currently, the MDAQMD has an annual significance threshold of 100,000 tons of CO_2e. As shown in table 12 above, the Project does not surpass this threshold, and as a result, would not be considered a significant impact.

All construction contracts will include Caltrans Standard Specifications Section 7-1.02A and 7 1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the Project and to certify they are aware of and will comply with all ARB emission reduction regulations; and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

CEQA Conclusion

While the proposed Project will result in GHG emissions during construction, it is anticipated that the Project will not result in any increase in operational GHG emissions since there would be no change in road alignment or roadway capacity. Therefore, the proposed Project would not result in a significant conflict with the GHG reduction targets set by the County of San Bernardino Greenhouse Gas Emissions Reduction Plan (September 2011) or the San Bernardino County Regional Greenhouse Gas Reduction Plan (March 2021). Impacts would be less than significant.

GREENHOUSE GAS REDUCTION STRATEGIES

Statewide Efforts

In response to AB 32, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors, to take California into a sustainable, low-carbon and cleaner future, while maintaining a robust economy (ARB 2022d).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research identified five sustainability pillars in a 2015 report: (1) increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030; (2) reducing petroleum use by up to 50 percent by 2030; (3) increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) reducing emissions of short-lived climate pollutants; and (5) stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (OPR 2015). OPR later added strategies related to achieving statewide carbon neutrality by 2045 in accordance with EO B-55-18 and AB 1279 (OPR 2022).

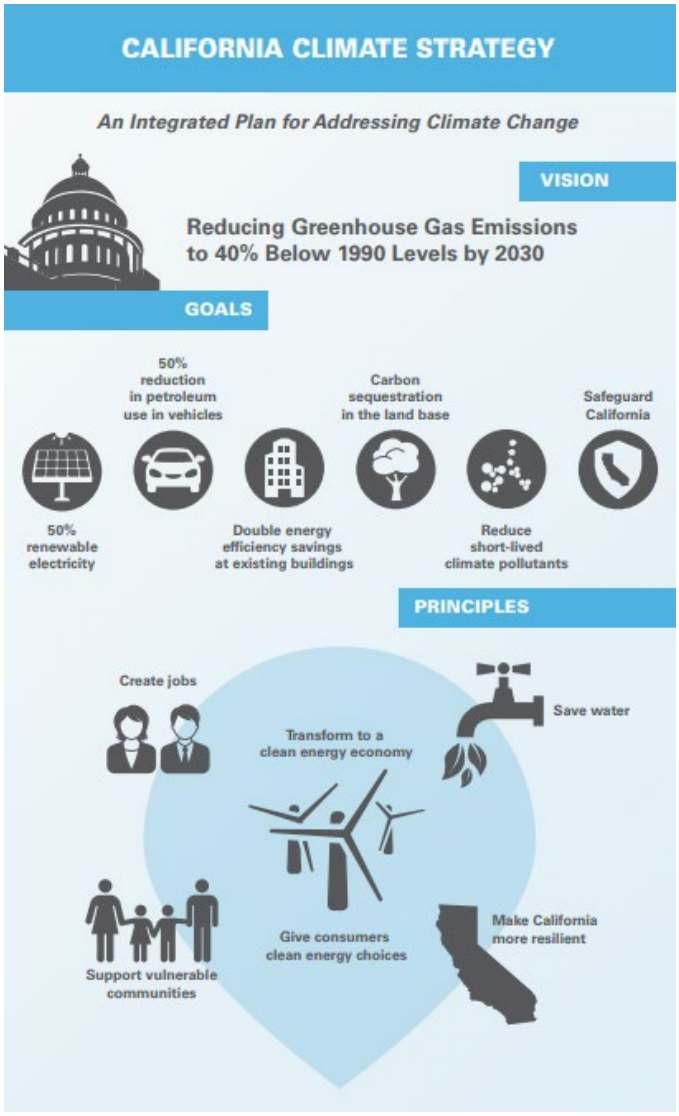


Figure 12. California Climate Strategy

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). Reducing today's petroleum use in cars and trucks by 50% is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income,

disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency (2022a) released *Natural and Working Lands Climate Smart Strategy*, with a focus on nature-based solutions.

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 an 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.

CLIMATE ACTION PLAN FOR TRANSPORTATION INFRASTRUCTURE

*The California Action Plan for Transportation Infrastructur*e (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40 percent of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

CALIFORNIA TRANSPORTATION PLAN

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021a).

CALTRANS STRATEGIC PLAN

The *Caltrans 2020–2024 Strategic Plan* includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

CALTRANS POLICY DIRECTIVES AND OTHER INITIATIVES

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a Department policy to ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions. The report documents and evaluates current Caltrans procedures and activities that track and reduce GHG emissions and identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Departmental and State goals.

Project-Level GHG Reduction Strategies

Currently, there are no standard best management practices that would be required to reduce GHG at the Project-Level that are listed by the MDAQMD. However, San Bernardino County does have a Regional Greenhouse Gas Reduction Plan (2021) for jurisdictions in the Project vicinity. The GHG Reduction Plan offers the following guidance for reducing GHG during construction withing the unincorporated County:

Off-Road-1. Electric-Powered Construction Equipment

- **Strategy 2.B.2.** Enact local ordinances to promote clean technologies.

- **Policy 2 A.** Work with the Mojave Desert Air Quality Management District, San Bernardino Association of Governments, San Bernardino County and neighboring jurisdictions to implement the federal ozone and PM10 & PM 2.5 non- attainment plans and meet federal state air quality standards and reduce overall emissions from mobile and stationary sources.

Off-Road-2. Idling Ordinance

- **Goal 6.** Provide programs and incentives to encourage residents, businesses, and developers to reduce consumption and efficiently use energy resources. City

- **Policy 2 A.** Work with the Mojave Desert Air Quality Management District, San Bernardino Association of Governments, San Bernardino County and neighboring jurisdictions to implement the federal ozone and PM10 & PM 2.5 non- attainment plans and meet federal state air quality standards and reduce overall emissions from mobile and stationary sources.

The proposed Project would adhere to the goals of the GHG Reduction Plan. With adherence to the goals above, GHG emissions from construction of the proposed Project would be minimized.

ADAPTATION

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability

for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways."

The U.S. DOT Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions" (U.S. DOT 2011). The U.S. DOT Climate Action Plan of August 2021 followed up with a statement of policy to "accelerate reductions in greenhouse gas emissions from the transportation sector and make our transportation infrastructure more climate change resilient now and in the future," following this set of guiding principles (U.S. DOT 2021):

- Use best-available science
- Prioritize the most vulnerable
- Preserve ecosystems
- Build community relationships
- Engage globally

U.S. DOT developed its climate action plan pursuant to the federal EO 14008, *Tackling the Climate Crisis at Home and Abroad* (January 27, 2021). EO 14008 recognized the threats of climate change to national security and ordered federal government agencies to prioritize actions on climate adaptation and resilience in their programs and investments (White House 2021).

FHWA order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*, December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. California's Fourth Climate Change Assessment (2018) is the state's effort to "translate the state of climate science into useful information for action" in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.

- *Resilience* is the "capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality.2 Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts to date. Recent state publications produced in response to these policies draw on these definitions.

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance) in 2010, with instructions for how state agencies could incorporate "sea-level rise (SLR) projections into planning and decision making for projects in California" in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California – An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change other than sea-level rise also threaten California's infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017, to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

Caltrans Adaptation Efforts

CALTRANS VULNERABILITY ASSESSMENTS

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Project Adaptation Analysis

SAN BERNARDINO COUNTY VULNERABILITY ASSESSMENT

In 2019 SACAG released a Vulnerability Assessment, which summarized potential exposure and vulnerability to climate hazards that may pose risks to the region. These hazards include extreme heat, wildfires, drought, flooding, and air quality.

The following climate change hazards are discussed below.

SEA LEVEL RISE

The proposed Project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

PRECIPITATION AND FLOODING

The Project is located in Zone D, which is an area where there are possible but undetermined flood hazards due to flood hazard analysis not having been conducted in the area: therefore, the Project is not located within an identifiable 100-year floodplain or regulatory floodway. The hydraulic capacity of the watercourse underneath the bridges are anticipated to be improved as a result of the bridge replacements. Furthermore, the proposed Project would not create any new impervious surfaces. Therefore, the proposed Project would not exacerbate or contribute to increased flood magnitude or frequency in combination with climate change. Additionally, The Caltrans Climate Change Vulnerability Assessment for District 8 maps projected changes in 100-year storm precipitation depths under climate change scenario. In the Project area, storm depth is projected to change by less than 5% through 2085 (Caltrans 2019). Effects of climate change on precipitation are not likely to adversely affect the Project.

WILDFIRE

The San Bernardino County General Plan Fire Safety (FS) Overlay includes areas within the mountains, valley foothills, and desert region designated by the applicable Fire Authority as wildfire risk areas. It includes all the land generally characterized by areas varying from relatively flat to steep sloping terrain and with moderate to heavy fuel loading contributing to high fire hazard conditions. According to the FS Overlay, no fire safety area or associated wildfire risk occurs within or near any of the proposed Project sites. Accordingly, the Project is not anticipated to exacerbate the impacts of wildfires intensified by climate change.

TEMPERATURE

The District Climate Change Vulnerability Assessment does not indicate temperature changes during the project's design life that would require adaptive changes in pavement design or maintenance practices.

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Chapter 4 – Comments and Coordination

This section describes the involvement of public agencies and the general public in development of the proposed Project. It also lists contacts made with federal, State and local agencies and other organizations or individuals during preparation of the environmental technical reports.

Project Development Team

The PDT includes representatives from the County of San Bernardino, Caltrans, and traffic and environmental consultants.

Public Outreach and Scoping Process

The County of San Bernardino prepared a Notice of Preparation of an EIR and circulated the document to the State Clearinghouse, interested individuals, agencies, and groups on April 9, 2021. Two comment letters were received during the public circulation of the Notice of Preparation. The comments were addressed within the document and are included in Appendix E.

Native American Consultation

Native American Consultation completed for the Project involved efforts completed under Section 106 of the National Historic Preservation Act) and California's Public Resources Code (PRC) Section 21074 (also referred to as AB 52). Both consultation efforts and results are presented here.

Section 106 of the National Historic Preservation Act On December 11, 2020, initial consultation letters were mailed to the Native American individuals who might wish to consult on the Project, as identified by NAHC. The letters provided a summary of the project and requested information about comments or concerns the Native American community might have about the project (see HPSR Attachment 6: Native American Consultation). For those individuals that did not reply to the letter, follow-up emails (or phone calls when no email was available) were sent on February 10, 2021 to those individuals with email contact. The following comments were received:

- Fort Mojave Indian Tribe, Linda Otero, Director of Aha Ma Kay Cultural Society
    - Director Otero responded via emailed letter on March 1, 2021 that the FMIT would like to consult on the Project. They inquired as to whether the APE delineated on the maps included with the notification letter included all staging/laydown areas and requested any cultural reports and records searches be provided to better assist their internal review of whether the Project will impact Native American cultural resources. Draft cultural reports were sent to the FMIT on February 25, 2022.
    - Director Otero responded by letter sent via email on April 1, 2022 relaying that the FMIT felt both tangible and intangible cultural resources were meaningful, especially isolates. The FMIT requested that if any cultural resources or human remains are found that all Project work halt until the discovery can be assessed, and in the case of human remains, so that the County Coroner can be contacted. If human remains are determined by the County Coroner as Native American, the FMIT requested that notification and treatment protocol follow California State standards and health codes. If Native American human remains are discovered on federal land, the FMIT requested that the remains be treated in accordance with the Native American Graves Protection Act. The letter also requested monitoring during construction.

- Caltrans District Native American Coordinator Gary Jones sent a letter response via email on April 14, 2022 acknowledging receipt of the April 1, 2022 letter. Caltrans relayed that as there were no Native American cultural resources found within the APE and as the ground within the APE has been previously disturbed and has a low buried site potential based on geological conditions, Caltrans does not believe that the Project APE retains sensitivity for the presence of Native American cultural resources and does not require any additional identification efforts or monitoring efforts during construction.

  The letter further stated while Caltrans understands the FMIT's position that cultural resources include both tangible and intangible resources that consist of entire landscapes, in order for Caltrans to assess a Project's anticipated effect to cultural resources, the resource must first be defined in terms of boundary, components, and location. Only then can Caltrans assess eligibility and if applicable, an effects finding. If the FMIT have a Native American cultural resource or traditional cultural property present within the Project APE which would be affected by the Project, Caltrans respectfully requested additional information so that this information can be reviewed. The letter also clarified that if any cultural resources or human remains are discovered during construction, that Caltrans standard avoidance/minimization measures will be implemented.
- The Draft FOE was provided on August 8, 2022. To date, no comments were received.

- San Manuel Band of Mission Indians, Jessica Mauck, Director of Cultural Resources
  - On January 13, 2021 an email was received from Ryan Nordness, Cultural Resource Analyst, stating the San Manuel Band of Mission Indians (SMBMI) did not have any concerns about Project activities but would like specific language related to inadvertent discoveries to be made part of the Project/permit/plan conditions. Caltrans standard cultural specifications cover the concerns raised by the Tribe. Further, as part of the consultation efforts conducted under CEQA's PRC 21074, discussed below, Avoidance and Minimization Measures **CUL-1, CUL-2, TCR-1,** and **TCR-2** will be implemented should any indigenous resources be discovered during construction of the Project.).

PRC 21074 (AB 52)

Project notification letters were sent on March 10, 2020 to Tribes who had previously requested to consult on all projects in this area of San Bernardino County. These Tribes included the following: San Manuel Band of Mission Indians, the Colorado River Indian Tribes, and the Twenty-Nine Palms Band of Mission Indians. All letters were received; however, only one Tribe, the San Manuel Band of Mission Indians, elected to consult on the Project. No indigenous cultural resources were identified as a result of this consultation; therefore, there are no Tribal Cultural Resources which would be impacted by the Project.

As with all projects which involve grading or other ground disturbance, there is a potential that previously unknown, buried indigenous resources are present. For this reason, Avoidance and Minimization Measures **CUL-1, CUL-2, TCR-1,** and **TCR-2**, which were developed in consultation with the San Manuel Band of Mission Indians, shall be implemented should an inadvertent indigenous discovery occur during Project implementation. These measures are included following the responses to the questions below. Consultation was closed in January 2021.

Local Agencies and Organizations

Consultation completed for the Project involved efforts completed under Section 106 of the NHPA. Initial consultation letters dated February 19, 2021 were mailed to historic preservation groups and museums that had previously shown an interest in past projects involving the NTH. The letters provided a summary of the Project and requested information about comments or concerns the preservation community might have about the Project. For those individuals that did not reply, follow-up emails (or phone calls when no email was available) were sent on August 2, 2021 to those individuals with email contact. The following comments were received:

- National Park Service, Route 66 Corridor, Attn: Kaisa Barthuli
    - An email from Kaisa Barthuli was received on March 25, 2021, requesting consulting party status and asking how the current Project may relate to the San Bernardino County Bridge Replace/Rehab Programmatic Agreement.
    - On May 5, 2021 Andrew Walters, Caltrans District 8, replied that in discussion with SHPO, Caltrans decided to put the PA on hold and work with the County on the current bridge replacement Project, in the interest of getting some of the bridges repaired and Route 66 back open to the travelling public. He explained this 10-bridge replacement project will result in an adverse effect to Route 66 and Caltrans will prepare a project specific Memorandum of Agreement. It is hoped that in consultation with interested consulting parties Caltrans can develop an MOA that will serve as a model for future projects as well. These MOAs would take the place of the Corridor PA Caltrans was previously working on.
    - On June 3, 2021, after a phone meeting with Kaisa Barthuli to discuss the NTH/Route 66, Andrew Walters sent an email indicating the next step would be for Caltrans to provide a draft of the subject Project's Section 106 reports as they become available.
    - The draft HPSR and HRER were sent via email to Kaisa Barthuli on February 25, 2022, with a request to provide any comments/questions within 30 days.
    - Kaisa Barthuli responded via email on March 24, 2022 relaying that she understood that the previously proposed replacement timber bridges proposed in the unfinished/no longer pursued NTH programmatic agreement will not meet structural/engineering requirements. She inquired as to whether other bridge or railing designs exist that would maintain a historic look and feel within the corridor. She stated that she looked forward to continued consultation and discussion of the Project, including reviewing the forthcoming Finding of Effect report and proposed concrete bridge and railing design.
    - Caltrans District 8 Branch Chief responded via email on March 24, 2022 relaying that the next step in the Section 106 process is for the Project to prepare a Finding of Effect (FOE) Report and it was anticipated that the Project would have an adverse effect on the NTH. The FOE Report will contain a discussion of alternatives considered, which hopefully will help answer questions regarding alternatives.
    - The Draft FOE was provided on August 8, 2022. To date, no comments were received.

      The Draft Memorandum of Agreement (MOA) was provided on January 17, 2022 with a follow-up email sent on February 6, 2023. Kasia Barthuli responded via email on March 7, 2023 with one comment reminding Caltrans and the County that the historic feeling and association continues to be lost at a rapid rate. She encouraged special effort and attention be paid to preserving the look and feel of the NTH. She also inquired as to whether accident data supported the need to widen the bridges beyond the historic 28-foot width. Caltrans District 8 Branch Chief responded via email on March 7, 2023 relaying the proposed mitigation measures specified in the MOA for this Project and for future projects are meant

to build on each other to preserve the look and feel of the NTH as much as possible. The County responded via email on March 9, 2023 with traffic data, accident data, and current safety design requirements which support and require widening the bridges. No response from the NPS has been received.

- California Historic Route 66 Association, Glen Duncan, (Former) President
    - An email from Scott Piotrowski, (Current) President (cc Lyne Miller, Treasurer), was received on March 5, 2021, requesting detailed plans for the new construction. He also noted the recent naming of Route 66 from the Arizona border to downtown Barstow as a National Scenic Byway and that the wooden bridges are one of the iconic features of the roadway in the Mojave Desert, which is why detailed plans were being requested in order to provide comments on the Project.
    - An email transmitting the plans and a visual rendering of the driver's view as they cross the proposed bridges was sent on August 2, 2021. Caltrans will provide a draft of the subject project's Section 106 reports as they become available.
    - The draft HPSR and HRER were sent via email on February 25, 2022, with a request to provide any comments/questions on the documents within 30 days. Lynne Miller responded on March 9, 2022 that she would discuss the reports with Scott and that a "CHR66A" response would be provided. No such response has been received.
    - The draft FOE was provided on August 8, 2022. To date, no comments were received.

- Mojave Desert Heritage and Cultural Association, Dennis Casebier, President
    - A letter from Laura Misajet, Executive Director, dated April 8, 2021, stated that Mojave Desert Heritage and Cultural Association totally supports the Project because they rely on visitors to find the association by driving historical Route 66. Because the road is closed between Amboy and Essex, the association had been losing visitors as Route 40 bypasses the area thereby diverting traffic.

- National Historic Route 66 Federation, David Knudson, President
    - An email from Scott Piotrowski, President, California Historic Route 66 Association, was received on March 5, 2021, indicating Dave Knudson had forwarded the initial consultation letter dated February 19, 2021. To date, no direct response from Dave Knudson to the initial notification letter has been received.

Additionally, a response was received from the following member of the public:

- Steven Reyes (Association Unknown)
    - An email from Steven Reyes was received on April 15, 2021 stating that the segment of the NTH within the APE is a "huge" tourist interest area and is also used to access off-road trails. He further mentioned that the area is rich in history and that once again opened, this segment of the NTH would generate traffic from I-40. He closed his email by stating that he could provide more information, if needed, and is currently active on two historical boards, both of which would love to see this segment reopened.

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APPENDICES

Appendix A. Section 4(f)

Individual Section 4(f) Evaluation (Draft)

APPENDICES

Appendix A. Section 4(f)

Individual Section 4(f) Evaluation (Draft)

National Trails Highway at 10 Bridges Project

SAN BERNARDINO COUNTY, CALIFORNIA
DISTRICT 8 – SBD – NTH/Route 66
BRLS-5954(142,147,149-156)

Individual Section 4(f) Evaluation



Prepared by the
State of California, Department of Transportation
and County of San Bernardino

June 2023

FEDERAL AID No. BRLS-5954 (142, 147,149-156)

Replace 10 bridges along National Trails Highway in and near the unincorporated communities of Amboy and Essex in San Bernardino County.

INDIVIDUAL SECTION 4(F) EVALUATION AND SECTION 4(F)

Submitted Pursuant to: 49 USC 303

THE STATE OF CALIFORNIA

Department of Transportation as assigned

_____
Date of Approval

_____
NAME
TITLE

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

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1 Introduction

This evaluation identifies the Section 4(f) resources in the study area, describes the nature and extent of the potential effects on these properties, evaluates alternatives that would avoid the use of Section 4(f) resource, and describes measures to minimize harm to the affected resources.

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 USC 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- there is no prudent and feasible alternative to using that land; and
- the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires coordination with the Department of the Interior and, as appropriate, the offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer is also needed.

Responsibility for compliance with Section 4(f) has been assigned to the Department pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

2 Description of Proposed Project

The County of San Bernardino (County), in coordination with the California Department of Transportation (Caltrans), is proposing to replace 10 bridges on the National Trails Highway (NTH/Route 66), also known as U.S. Route 66 (**Appendix A: Figure 1. Project Vicinity**). The National Trails Highway at 10 Bridge Replacement Project (Project) is located in the unincorporated communities of Amboy and Essex in the County of San Bernardino (**Appendix A: Figure 2. Project Location**). A summary of the existing 10 bridges including their length, width, spans and locations is listed below.

Bridge Name	Bridge Number	Existing Bridge Length	Existing Bridge Width	Original Number of Spans (Current Spans)	Location
Bristol Ditch	54C0272	40 feet	28 feet	2(2)	26.7 miles east of Crucero Rd
Cerro Ditch	54C0275	40 feet	28 feet	2(4)	1.3 miles east of Amboy Rd
Gordo Ditch	54C0276	40 feet	28 feet	2(4)	1.8 miles east of Amboy Rd
Cerulia Ditch	54C0277	40 feet	28 feet	2(4)	2.2 miles east of Amboy Rd
Leith Ditch	54C0279	40 feet	28 feet	2(4)	3.1 miles east of Amboy Rd
Terra Ditch	54C0280	40 feet	28 feet	2(4)	3.6 miles east of Amboy Rd
Sombra Ditch	54C0281	78 feet	28 feet	4(8)	4.1 miles east of Amboy Rd
Beacon Ditch	54C0282	40 feet	28 feet	2(4)	6.2 miles east of Amboy Rd
Larissa Ditch	54C0284	40 feet	27 feet	2(4)	1.1 miles east of Kelbaker Rd
Adena Ditch	54C0315	59 feet	28 feet	3(3)	21.9 miles east of Kelbaker Rd

The existing bridges were constructed in 1930 with simple timber girders and a continuous cast-in-place/reinforced concrete deck. The bridges span over various manmade ditches that were created to channel surface drainage flows. The bridges are supported on closed-end backfilled timber pile extension strutted abutments and timber pile extension bents. They now have asphalt overlays. At Cerro, Gordo, Cerulia, Leith, Terra, Sombra, Beacon and Larissa supplemental timber bents and columns were installed at the midspan doubling the number of supports and spans at these bridges. All ten existing bridges are classified Structurally Deficient and have sufficiency ratings from 22.2 to 61.2. All but Bristol Ditch Bridge has a sufficiency rating below 50.

The purpose of the Project is to replace structurally deficient bridges in order to:

- Enhance safety on NTH/Route 66 by providing new vehicular crossings for 10 bridges;
- Provide a transportation facility consistent with County and Caltrans Standards, as well as local and regional plans.

The Project is needed as the existing NTH/Route 66 Bridges are rated “Structurally Deficient” by Caltrans under Federal Highway Administration prescribed inspection criteria. Full replacement of the bridges is needed because the current structures do not meet structural design standards.

Two alternatives are being considered for this Project - Build Alternative 1 (Build Alternative 1) and the No Build Alternative discussed below.

2.1 Build Alternative (Build Alternative 1)

The existing bridges are proposed to be replaced with reinforced concrete bridges. The existing soil is sandy and susceptible to scour, so pile extensions would be utilized at the piers and the abutment foundation would be supported on piles. The bridge barrier would be steel California ST-75 Bridge Rail or Concrete Barrier Type 85 which are both Manual for Assessing Safety Hardware (MASH) approved and best match the existing railing. The chosen barrier type, which will be specified in the MOA, would be painted white and would be spaced to best match existing conditions while also complying with current safety standards. The bridge lengths would match the existing lengths if possible, but would be lengthened as needed to convey the storm flows. Bristol Ditch Bridge would be lengthened from 40 feet to 65 feet, Sombra Ditch Bridge would be lengthened from 78 feet to 90 feet, and all other bridges will be the same length. The width of each replacement bridge would be widened from approximately 28 feet to 34 feet to accommodate two 11-foot lanes, two 4-foot shoulders and the 2-foot railing. The vertical profile of the bridges will remain close to the existing profile except for those bridge locations in which it is determined that additional vertical clearance is required to provide sufficient water conveyance beneath the bridge. It is anticipated that any such necessary changes in vertical profiles would be 2 feet or less, with the elevation gradually conforming to the existing roadway elevations.

The NTH/Route 66 horizontal alignment would remain unchanged; however, approach road work, up to 800 feet, on either side of each bridge may be needed to conform to the vertical profile of the existing roadway. Grading along the approaches and around the bridges may be needed to ensure storm conveyance and drainage of the area.

A temporary, parallel road realignment, also referred to as a “shoo-fly detour”, would be constructed at each bridge location to accommodate through-traffic during construction. Construction of each bridge replacement is expected to be completed in one season, limiting the time the shoo-fly detour would be in place to one season as well.

Permanent acquisition of right-of-way is not anticipated to be needed; however, temporary construction easements may be needed to accommodate construction of the temporary detour lanes.

2.2 No Build Alternative

Under the No Build alternative, the existing NTH/Route 66 bridges would not be replaced. The existing NTH/Route 66 bridges would continue to be rated “Structurally Deficient” by Caltrans under Federal Highway Administration prescribed inspection criteria. Failure of the bridges would likely occur.

3 Description of Section 4(f) Resources

There are four types of properties which could be considered protected Section 4(f) resources:

- Parks and recreational areas of national, state, or local significance that are both publicly owned and open to the public
- Publicly owned wildlife and waterfowl refuges of national, state, or local significance that are open to the public to the extent that public access does not interfere with the primary purpose of the refuge
- Historic sites of national, state, or local significance in public or private ownership regardless of whether they are open to the public

Of the listed protected Section 4(f) property types, only one potential property type is present within the Project area, "historic sites of national, state, or local significance." Significant historic sites include cultural resources which are listed on or eligible for inclusion on the National Register of Historic Places (NRHP). There are two historic-era cultural resources present within the Project area, the National Trails Highway and the California Historical Landmark No. 985: Desert Training Center and California – Arizona Maneuver Area (DTC/C-AMA). As both of these resources are considered eligible for inclusion on the NRHP, they are considered "historic sites" under Section 4(f). Detailed descriptions of each resource are provided below.

3.1 National Trails Highway (CA-SBD-2910H) (MR# F)

US Highway 66 in California, commonly referred to as "Route 66" is the western terminus of the 1926 established cross-country highway that extended from Chicago, Illinois to Santa Monica California. The development of Route 66 was the first successful coordination between federal and state agencies to create a comprehensive and integrated major transportation system in the United States. Innovations in design and construction were developed to address the varying terrain and drainage conditions associated with crossing multiple states. With a reliable and standardized transportation system in place, Route 66 heavily influenced and contributed to changes in commerce, population shifts, tourism, and recreation. As such, the Route 66 roadway system is considered significant for its embodiment/contributions to US transportation, engineering, social history, commerce, entertainment/recreation, and architecture. The period of significance for the entire resource begins in 1926 when the route was designated as a US highway and ends in 1974 when the last segment of the route was bypassed by Interstates 40, 10, and 210.

In the late 1950s, construction of Interstate 40 through the Mojave Desert was completed, bypassing but leaving in place about 111 miles of the old NTH/Route 66 between Daggett and Mountain Springs Road (P-36-002910/CA-SBD-2910H; MR# F). The National Old Trails Highway became an auxiliary route, providing relief during periods of heavy traffic resulting from road and/or lane closures on Interstate 40. This 111-mile-long segment, which crosses through the Project area at all 10 bridge locations, was determined eligible for listing on the NRHP by State Historic Preservation Officer (SHPO) consensus in 2014 (**Appendix A: Figure 3. Section 4(f) Resources**). The segment limits were determined based on this being a predominantly continuous rural/desert segment of Route 66 that contains synonymous and relatively unique roadway features, namely all remaining timber trestle bridges on CA Highway 66/NTH. Similar to the entire Route 66 alignment, this

segment is considered significant for its innovative design and construction practices as well as demonstrating transportation trends in the United States and California history.

The character defining features/contributing features include the following resources constructed during the period of significance:

- Original surface material
- Culverts
- Retaining Walls
- Spillways
- Guardrails
- Graded Portions of road shoulder
- Banked curves
- Side slopes
- Roadbed raised from surrounding landscape
- Curb and gutter
- Medians
- Turn lanes
- Access and exit ramps
- Parking area for automobiles
- Shade Trees
- Traveler rest areas
    - Including three 1957 era rest areas at Mountain Springs, Danby, and Hector
- C-Markers (concrete monument demarking edge of highway right of way)
- Late 1950s Paddleboards (mile markers)
- Dikes and drainage ditches
- 1929-1931 Bridges, mainly timber bridges (superstructure and main structural members):
    - Green Ditch
    - Crest Ditch
    - Crimp Ditch
    - Ant Ditch
    - Blossom Ditch
    - Lake Ditch
    - Camp Ditch
    - Hector Wash
    - East Hector Wash
    - Cloud Ditch
    - Rock Wash
    - Verde Wash
    - Verbena Wash
    - Trans Ditch
    - Circle Ditch
    - Bud Ditch
    - Smoke Ditch
    - Leaf Ditch
    - Coral Ditch
    - Olive Ditch
    - Wide Wash
    - High Ditch
    - Travelers Wash
    - Avon Wash
    - Fonda Ditch
    - Anvila Ditch
    - Siberia Ditch
    - Verado Ditch
    - Zanza Ditch
    - Trojan Ditch
    - Durango Ditch
    - Cinder Ditch
    - Retiro Ditch
    - Cereza Ditch
    - Banta Ditch
    - Ballona Ditch
    - Emden Ditch
    - Cashio Ditch
    - El Rovia Ditch
    - Trada Ditch
    - Scarpa Ditch
    - Florwood Ditch
    - Encanto Ditch
    - Diaz Ditch
    - Chanda Ditch
    - Baroda Ditch
    - Basalt Ditch
    - Saltworks Ditch
    - Mound Ditch
    - Marble Ditch
    - Pastel Ditch
    - Urlan Ditch
    - Talofa Ditch
    - Arletta Ditch
    - Terzilla Ditch
    - Edloft Ditch
    - Rodilla Ditch
    - Atajo Ditch
    - Ellita Ditch
    - Tenino Ditch

- Dalmatia Ditch
- Bud Ditch
- Tareco Ditch
- Ava Ditch
- Nicola Ditch
- Califa Ditch
- Adena Ditch
- Tevito Ditch
- Izzy Ditch
- Elrita Ditch
- Axton Ditch
- Avis Ditch
- Avilla Ditch
- Averill Ditch
- Essex Overhead
- Centosa Ditch
- Milbank Ditch
- Centshire Ditch
- Osillo Ditch
- Itza Ditch
- Arillo Wash
- Yocum Ditch
- Calico Wash
- Un-Named
- Ganesha Wash
- Fanita Ditch
- Arimo Ditch
- Falkirk Ditch

Of the character defining and contributing features listed above, the following will be impacted by the proposed Project at all 10 bridge locations:

- Roadway
  - Side slopes
  - Roadbed raised from surrounding landscape
- C-Markers
- Late 1950s Paddleboards
- Adena Ditch - Timber Bridge

Each of these is discussed in greater detail below.

Roadway

The NTH/Route 66 roadway alignment consists of an average paved roadway width (including paved shoulders) of 34 feet and an average bridge width of approximately 28 feet. The roadway at each bridge is often elevated to provide additional height or depth to the channel of the ditch or wash at each bridge. The raised roadbed allows for views of the surrounding desert landscape and of the wooden wingwalls or abutments at many bridge locations. The character defining features of the roadway include the historic-period cross section, raised roadbed, presence of timber bridges and roadway features from the period of significance within the roadway corridor, and the rural desert landscape/setting.

Adena Ditch - Timber Bridge (54C-0315) (MR# 111)

Timber trestle bridges are located at all 10 bridge locations. The Adena Ditch Bridge (MR# 111) was found to be a contributing element of the NTH/Route 66 through consultation with the SHPO in 2014 (**Appendix A: Figure 3. Section 4(f) Resources**). The Adena Ditch Bridge is one of the bridges to be replaced by the proposed Project. The Adena Ditch Bridge is a timber trestle structure built in 1930. The bridge is 69 feet long and 28 feet wide. It has three spans, created by two timber column bents. The spans are roughly equal in length. The bridge is carried on continuous timber girders supporting a cast-in-place reinforced concrete deck, now covered in asphalt. The bridge is supported on closed-end backfilled timber pile extension strutted abutments and timber pile extension bents. At the abutments are timber retaining walls, or splayed wing walls, angled out from the plane of the bridge. The railings are continuous “W” metal guardrail on wooden posts. As with nearly all bridges on the NTH/Route 66, the metal railing extends beyond the bridge into the adjacent roadway and ending just before short segments of K-rails.

The characteristics that define the significance of the Adena Ditch Bridge include all timber elements: the longitudinal girders, the column bents, the timber splayed wingwalls at both abutments. The metal w-beam railings are not character-defining features. The reinforced concrete deck is also a character-defining element but not the asphalt overlay. It should be noted that the existing bridge railings are not original, having been replaced by more modern railing to meet safety standards.

C-Markers (MR# A)

C-Markers were found to be a contributing element of the NTH/Route 66 through consultation with the SHPO in 2022 (**Appendix A: Figure 3. Section 4(f) Resources**). The C-Marker is a concrete monument used to demark the edge of highway right-of-way. While C-Markers are a recognizable part of the NTH/Route 66 roadway, the markers were not unique to NTH/Route 66 right of way. C-Markers were used throughout the state, likely between 1914 and 1934.



Photo 1: C-Marker at Adena Ditch Bridge, (Source: Stephen Mikesell, 2021)

C-Markers are characteristic of the highway and are not structurally linked to any specific bridge location. Any C-Marker, if it is intact/standing and undamaged, is significant because it was built as a minor but important part of the NTH/Route 66. Many C-Markers, including those located within the Project area, retain integrity, likely due to the fact that each marker was a cast concrete block, a highly durable material likely to stay in place for many decades barring major impact from a vehicle or extreme flood conditions.

Late 1950s Paddleboards (MR# B)

Several generations of metal milepost markers are installed at bridges on the NTH/Route 66. Of these, only those installed in the late 1950s or earlier were found to be a contributing element of the NTH/Route 66 through consultation with the SHPO in 2022 (**Appendix A: Figure 3. Section 4(f) Resources**). Of the 10 bridge locations in the Project area, four include late 1950s paddleboards: Bristol Ditch, Cerulia Ditch, Leith Ditch, and Terra Ditch. This generation of paddleboards are flat steel signs, measuring about 12-inches x 4-inches, mounted on metal posts. These paddleboards were installed in the late 1950s by the Division of Highways when this stretch of Route 66 was abandoned as a state highway and relinquished to San Bernardino County. Each paddleboard includes three pieces of information. It identifies the County location (shown as SBD), denotes the fact that I-40 replaces this stretch of highway (indicated by the number 40), and it indicates a postmile for Route 66 (indicated by a number that is different for each bridge). The paint on many paddleboards from the late 1950s is so faded the numbers are scarcely legible.



Photo 2: Showing new and old paddleboards, side by side. The Late 1950s Paddleboard is located on the right. (Source: Stephen Mikesell, 2021)

3.2 California Historical Landmark No. 985: Desert Training Center and California – Arizona Maneuver Area (DTC/C-AMA) (MR# G)

The DTC/C-AMA is registered and listed on the California Register of Historical Resources (CRHR). It is also assumed eligible for listing on the NRHP, for the purposes of this Project only. As such, the DTC/C-AMA is a historic site protected under Section 4(f).

The recorded boundary of California Historical Landmark No. 985 (MR# G), the DTC/C-AMA, encompasses the entire Project area. The DTC/C-AMA is a 1940s military

training/maneuver area that is currently being documented as a historical cultural landscape composed of numerous site types (i.e., maneuver areas, divisional camps, small unit training areas, air facilities and crash sites, bivouacs, as well as hospital and medical features), features (i.e., anti-tank ditches, camouflage areas, foxholes, minefields, observation positions, obstacles, refuse scatter and dumps, reuse of existing facilities, roads, rock features, rock insignias or cairns, rock walls, slit trenches, tank tracks, and tank traps), and military and non-military artifacts. The DTC/C-AMA stretches from Indio, California eastward toward Prescott, Arizona and from Yuma, Arizona to Searchlight, Nevada and covers approximately 18,000 square miles. While the recorded boundary of the DTC/C-AMA encompasses the entire Project area, no resources associated with the DTC/C-AMA were identified within the Project area, including tank tracks, tent pads, or other evidence of military use.

4 Use of the Section 4(f) Resource

The Section 4(f) regulations (23 CFR 774.17) indicate that, with certain identified exceptions, a “use” of Section 4(f) property occurs:

1) When land is permanently incorporated into a transportation facility;

2) When there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose as determined by the criteria in § 774.13(d); or

3) When there is a constructive use of a Section 4(f) property as determined by the criteria in § 774.15.

4.1 DTC/C-AMA

Per the FHWA Section 4(f) Policy Paper Question 2B and 3C, Section 4(f) applies to components within historic/archaeological districts that are considered contributing to the eligibility of the district or to any individually eligible property within the district. While the recorded boundary of the DTC/C-AMA encompasses the entire Project area, no components associated with the DTC/C-AMA - including tank tracks, tent pads, or other evidence of military use - were identified at any of the 10 bridge locations. Additionally, there are no components of the DTC/C-AMA located in proximity to the 10 bridge locations which would be impacted by the Project. As the Project would not impact any components of the DTC/C-AMA, there is no use of this Section 4(f) Resource and it is not discussed further in this document.

4.2 NTH/Route 66 and its Contributing Elements

Permanent Incorporation
Land is considered permanently incorporated into a transportation project when it has been purchased as right-of-way or sufficient property interests have otherwise been acquired for the purpose of project implementation. Further, when considering use of a historic transportation facility, per the FHWA Section 4(f) Policy Paper Question 8A, use of historic transportation Section 4(f) resource occurs when the historic integrity is adversely affected by the proposed project.

The Project will result in the demolition and replacement of 10 timber bridges and up to 800 feet of roadway along the NTH/Route 66 alignment. The timber bridges, which include the NRHP eligible Adena Ditch Bridge, will be replaced by concrete bridges and modern railings, which is inconsistent with the Secretary of the Interior’s Standards (SOIS) for Rehabilitation. The 800 feet of roadway replacement is required to taper the roadway approaches to the wider replacement bridges. This will alter the roadway geometry and remove any original roadways surface/cross section that may still exist beneath the more modern paving. Removal of original pavement and 10 timber bridges would irreversibly alter the character defining features that contribute to the NTH/Route 66’s historic integrity, which is considered an adverse effect. Further, removal of original pavement and 10 timber bridges would permanently incorporate the remaining components of the NTH/Route 66 into the modern and improved transportation facility. These adverse effects, as determined through the Section 106 process, constitute a permanent incorporation use of the historic site.

Additionally, contributing components of the NTH/Route 66, the C-Markers and the Late 1950s Paddleboards, would be temporarily removed prior to construction and reinstalled upon completion of construction. As discussed in the attached SOIS Action Plan, the C-Markers and Paddleboards will be mapped via GPS data collection, removed prior to demolition of the bridge, stored in protective materials (such as blankets, bubble wrap, or other materials) within a safe and secure area away from weather and elements, and reinstalled following the completion of construction activities. Further, the Late 1950s Paddleboards will be rehabilitated through paint restoration to better match their original coloration. Historic photographs and examples of Late 1950s Paddleboards found along the NTH/Route 66 that are in better condition will be utilized as the guide for coloration. Repainting would in no way damage or destroy the original metal Paddleboard but would restore the faded lettering/numbering as well as the base color. These rehabilitation actions would assist the long-term preservation of the paddleboards to ensure efficient contemporary use by making them more legible and consistent with their original coloration and finish, all of which are consistent with the SOIS Action Plan for rehabilitation. The incorporation of these measures will lessen the adverse effect to the NTH/Route 66 historic site and mediate the subsequent use of the historic site.

Temporary Occupancy

Examples of temporary occupancy of Section 4(f) resources include right-of-entry, project construction, a temporary easement, or other short-term arrangement involving a Section 4(f) property. The Project will permanently replace the Adena Ditch Bridge, the roadway approaches, bridge railings, and nine other timber bridges with modern materials that are inconsistent with the SOIS for Rehabilitation. These impacts to the NTH/Route 66 historic property are considered a permanent incorporation and not a temporary occupancy.

Constructive Use

A constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the projected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired.

As established above, the proposed Project would permanently replace the Adena Ditch Bridge, the roadway approaches, bridge railings, and nine other timber bridges with modern materials which is considered a permanent incorporation and not a constructive use.

5 Avoidance Alternatives and Other Findings

Section 4(f) requires the identification and development of a reasonable range of avoidance alternatives. An avoidance alternative completely avoids the use of a Section 4(f) property and for transportation projects, could include mode shifts, alignment shifts, re-routing, and design changes. A mode shift was not considered as mode shifts are typically used to resolve congestion issues. There are currently no congestion issues along the NTH/Route 66 within the Project area, due to the low average daily traffic (ADT) volumes, which range from 230 to 790 ADT, depending on the segment. Therefore, a mode shift is not a practical alternative to the Project and was not considered further.

Please see below for discussion on applicable avoidance alternatives, including the No Build Alternative.

5.1 Avoidance Alternatives

Alignment Shift

The Alignment Shift Alternative would construct a new roadway and bridges adjacent to the existing NTH/Route 66 alignment. This would allow the existing NTH/Route 66 historic site to remain unaltered; however, this alternative would alter the historic setting of the NTH/Route 66 by introducing modern materials and a parallel roadway inconsistent with the period of significance, which could be considered a constructive use of the resource.

As this alternative would occur beyond the existing County right-of-way, additional right-of-way would need to be acquired from the surrounding privately owned and federally owned properties, resulting in higher project costs. An alignment shift would also incur a greater environmental impact footprint within sensitive biological habitats, namely by permanently reducing habitat, including critical habitat, for the California desert tortoise, a California Endangered Species Act threatened species. The expanded impact footprint might also impact archaeological sites of national or local significance. Both the biological and cultural impacts would require mitigation, which could be extensive for such a multiple miles-long linear project.

Further, while the existing alignment would remain unaltered, NTH/Route 66 tourism could be negatively impacted for two reasons. First, tourists wishing to travel on the historic roadway in this area would be prohibited, instead required to use the parallel, modern roadway which defeats the purpose of visiting the NTH/Route 66 alignment. Second, the addition of a modern roadway would detract from the historic setting and feel. Both of these impacts could result in discouraging tourism travel along this area. A permanent reduction in NTH/Route 66 tourism could result in an unjustifiable hardship to those businesses in the area which have come to heavily rely on NTH/Route 66 tourism, forcing them to close or permanently relocate.

The alignment shift would also not correct the structural deficiencies. Additional maintenance or rehabilitation projects would still be needed to correct the safety deficiencies; however, due to the extent of the bridge deterioration at many of the bridges, it is unlikely that maintenance/rehabilitation projects would meet both the SOIS and current safety standards due to the very low scoring structural deficiency rating and the extensive damage caused by previous storms. This would mean that the bridges and roadway would continue to deteriorate, increasing the risk to public safety and resulting in additional temporary, and more likely, permanent road closures. Additional closures would

significantly impact the surrounding residences and local businesses, who would be forced to take the much longer reroute/bypass route daily.

Rerouting

The Rerouting Alternative would construct new bridges on a new alignment outside of the existing roadway right-of-way and at a sufficient distance away to prevent introducing a modern visual component to the setting of the NTH/Route 66 historic site. This alternative would avoid use of the historic site.

Similar to the alignment shift alternative, this alternative would occur beyond the existing County right-of-way, requiring additional right-of-way acquisition from privately owned and federally owned properties, resulting in higher project costs. Rerouting would also incur a greater environmental impact footprint within sensitive biological habitats, namely through permanently reducing habitat, including critical habitat, for the California desert tortoise, a California Endangered Species Act threatened species. The expanded impact footprint might also impact archaeological sites of national or local significance. Both the biological and cultural impacts would require mitigation, which could be extensive for such a multiple miles-long linear project.

Further, while the existing alignment would remain unaltered, the bridges and roadway approaches would remain in disrepair and a section of the roadway would remain closed. Additional maintenance or rehabilitation projects would still be needed to correct the safety deficiencies; however, due to the extent of the bridge deterioration at many of the bridges, it is unlikely that maintenance/rehabilitation projects would meet both the SOIS and current safety standards due to the very low scoring structural deficiency rating and the extensive damage caused by previous storms. As such, the bridges and roadway would continue to deteriorate, increasing the risk to public safety. Due to these reasons, additional temporary, or more realistically, permanent road closures might be imposed.

Additional road closures, whether temporary or permanent, would create an unjustifiable and permanent hardship to residences and businesses, who would be forced to take the much longer reroute/bypass route daily. Businesses that rely heavily on NTH/Route 66 tourism would need to relocate or permanently close as there would be no further use of this area for NTH/Route 66 tourism since it would be inaccessible. Emergency vehicle response times and evacuation routes would also be significantly impacted due to reroute/bypass route.

Design Alternative - Replacement in Kind

Replacing the bridges with similar timber bridges consistent with the SOIS was considered to maintain the visual character of the overall NTH/Route 66. A previous NTH/Route 66 bridge replacement project replaced the Dola and Lanzit timber bridges in 2017 with new timber structures. Since their construction, both bridges developed issues with cracking in the timbers and other structure weaknesses, requiring substantial repair and on-going regular inspections in attempt to prevent further degradation that would jeopardize the structure. These efforts required the expenditure of more funds than anticipated for new structures, especially when considering that a new concrete bridge would require minimal, if any, maintenance over a 20-year span.

The repairs and inspections also required additional road closures, which impacted the local residents and businesses. The roadway closures also resulted in further limiting

public access to the historic site, which consists primarily, if not solely, of motorists visiting the historic resource for recreational/tourism purposes.

Due to the rapid deterioration, high expenditure of funds, and need to provide a reliable and safe crossing for residential use and businesses, especially those which which rely on NTH/Route 66 tourism, the County is now planning on replacing the 2017 Dola and Lanzit timber bridges with concrete structures.

It is also important to note that even if replacement-in-kind for the timber bridges was utilized, despite the safety and maintenance issues, replacement-in-kind of the bridge railing is not possible as timber bridge railings do not meet MASH standards, which is a safety requirement for all bridge railings. For this reason, this alternative would not avoid use of the resource.

Design Alternative - Rehabilitation

Rehabilitation of the timber bridges would require replacing and strengthening most if not all of the structural components to maintain the original timber elements. Replacing these components would help preserve the historic feel of the Section 4(f) resource; however, the existing timber components and overall bridge design do not meet current design standards for safe shoulder width, fire-resistance, crash worthiness, and vehicle load-carrying capacity. Additionally, previous efforts to rehabilitate and/or maintain timber components as they deteriorate has been occurring as needed since the structures were constructed almost 100 years ago. The extremely low scoring structural deficiency ratings of the existing bridges, combined with extensive damages that many have sustained due to storm events and the need to meet modern safety standards have exceeded what rehabilitation, consistent with the SOIS, can provide to ensure safe and long-lasting crossings. To provide a safer facility, extensive additional timber support structures would be needed which would likely result in marring the historic integrity/feel of the resource. Further, rehabilitating the bridge railing would not be possible as timber bridge railings do not meet MASH standards, which is a safety requirement for all bridge railings. For these reasons, a rehabilitation alternative would not avoid use of the historic site.

No Build Alternative

Under the No Build alternative, the existing NTH/Route 66 bridges would not be removed and replaced. The segment of the NTH/Route 66 between Daggett to Mountain Springs Road would be unaltered and it would avoid use of the Section 4(f) property.

While the existing alignment would remain unaltered, the bridges and roadway approaches would remain in disrepair and a section of the roadway east of Kelbaker Road would remain closed. Additional maintenance or rehabilitation projects would still be needed to correct the safety deficiencies and repair the damaged structures/roadway so that the roadway closure can be removed; however, due to the extent of the bridge deterioration and as maintenance activities have so far been unable to prevent structural deficiencies from occurring, it is unlikely that maintenance/rehabilitation projects would meet both the SOIS and current safety standards. Due to these reasons, the roadway would remain closed east of Kelbaker Road. Further, the bridges and roadway would continue to deteriorate, increasing the risk to public safety. This would lead to additional temporary and permanent roadway closures due to the unsafe conditions. This would create an unjustifiable and permanent hardship to both residences and businesses, especially those businesses which rely mainly on motorists travelling along NTH/Route 66 for tourism.

Summary
The Rerouting Alternative and the No Build Alternative were identified as the only alternatives that could avoid use of the Section 4(f) property. The Rerouting Alternative would construct a new roadway on a new alignment outside of the existing roadway right-of-way and at a sufficient distance away to prevent introducing a modern visual component to the setting of the NTH/Route 66 historic site. Under the No-Build Alternative, the existing bridges and roadway would continue to operate under current conditions, which include a road closure preventing full public access to the NTH/Route 66 east of Kelbaker Road.

While the Alignment Shift Alternative would construct a new roadway with bridges parallel to the existing roadway, this would be considered a constructive use of historic site and is therefore not a feasible and prudent avoidance alternative. Further, although the Design Alternative – Replacement in Kind and the Design Alternative – Rehabilitation would utilize timber replacement bridges/components consistent with the historic setting and the SOIS, these alternatives would not completely avoid use of the historic site and are therefore not feasible and prudent avoidance alternatives.

5.2 Feasible and Prudent Alternatives

An avoidance alternative is prudent and feasible if it avoids using the Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the Section 4(f) property to the preservation purpose of the Section 4(f) statute.

An avoidance alternative is not feasible if it cannot be built as a matter of sound engineering judgment. Title 23 CFR 774.17 sets forth six factors to consider when determining whether an alternative is prudent:

1. **Compromises the Project:** Compromises the project so that it is unreasonable given the purpose and need;
2. **Results in Unacceptable Safety/Operational Problems:** Results in unacceptable safety or operational problems;
3. **Results in Severe Impacts:** After reasonable mitigation, still causes:
    a. Severe social, economic, or environmental impacts;
    b. Severe disruption to established communities;
    c. Severe environmental justice impacts; or
    d. Severe impacts to other federally protected resources.
4. **Results in Excessive Costs:** Results in construction, maintenance, or operational costs of an extraordinary magnitude;
    a. Consider factors such as: the percentage difference in the costs of the alternatives; how the cost difference relates to the total cost of similar transportation projects in the applicant's annual budget; and the extent to which the increased cost for the project would adversely impact the applicants' ability to fund other transportation projects.
5. **Results in Unique Issues:** Causes other unique problems or unusual factors; or
6. **Results in Cumulative Issues:** Involves multiple factors listed above that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

Each of these will be discussed below for the Rerouting Alternative and the No Build Alternative.

Compromise the Project

The purpose of the Project is to enhance safety on the NTH/Route 66 and to provide a transportation facility consistent with all current safety standards. The Project is needed because the 10 Project bridges are rate "Structurally Deficient" under the Federal Highway Administration. The roadway east of Kelbaker Road is currently closed as the roadway and bridges are too unsafe to travel.

The No Build and the Rerouting Alternatives, while avoiding use of the Section 4(f) resource, would result in no improvements to the 10 bridges on the NTH/Route 66. The roadway east of Kelbaker would remain closed. Additional maintenance or rehabilitation projects would still be needed to correct the safety deficiencies; however, due to the extent of the bridge deterioration at many of the bridges, it is unlikely that maintenance/rehabilitation projects would meet both the SOIS and current safety standards due to the very low scoring structural deficiency rating and the extensive damage caused by previous storms.

The lack of improvements would result in continued deterioration of the bridges and roadway, which in turn would likely result in more roadway closures to prevent harm and injury to the public. As such, neither alternative would enhance safety along the NTH/Route 66. While the Rerouting Alternative would provide a transportation facility consistent with current safety standards, since no improvements would be made along the NTH/Route 66, public access to the historic site would continue to be restricted. For these reasons, both the Rerouting and No Build Alternatives would not meet the Project's purpose and need; therefore, both would compromise the Project.

Results in Unacceptable Safety/Operational Problems

Both the Rerouting and No Build Alternatives would result in no improvements to the 10 bridges on the NTH/Route 66. All 10 existing bridges are classified as Structurally Deficient by Caltrans under Federal Highway Administration prescribed inspection criteria and have sufficiency ratings from 22.2 to 61.2. All but Bristol Ditch Bridge has a sufficiency rating below 50. In addition, the NTH/Route 66 roadway is currently closed to traffic east of Kelbaker Road due to the bridge sufficient ratings and due to roadway approach damage from several storm events. Continued operation of the bridges would result in eventual deterioration to the point of becoming unsafe, leading to more road closures, both temporary and permanent.

Regular maintenance and repair efforts have already become impractical, infeasible, and cost prohibitive. Currently, County records indicate that since 2014, maintenance/repair costs spent on just four of the 10 existing Project bridges amount to approximately $59,000. Associated roadway maintenance/repair costs spent since 2014 amount to approximately $82,000. Despite the provided maintenance and repairs, these four bridges are still deteriorating at such a rate that a roadway closure was still implemented due to unacceptable safety and operation issues. Additional closures are anticipated despite ongoing maintenance because timber is no longer a long-term bridge structure material suitable for use in this area. Further, maintenance and repair efforts have been occurring for several decades and have not been able to prevent the current poor structural

sufficiency ratings. It is unlikely that continued repair/maintenance efforts would provide safe and reliable crossings.

By not correcting the existing bridge and roadway safety issues, additional roadway closures would be implemented. These closures would require businesses and residences to permanently utilize longer routes, which would require additional expenditure of funds. For those businesses that rely on NTH/Route 66 tourism, additional roadway closures, especially permanent closures, would likely decrease use of the area for tourism, which would be detrimental to their business and may require them to permanently close or relocate. For these reasons, both alternatives would constitute an unacceptable operational problem for the NTH/Route 66,

Results in Severe Impacts

While the Rerouting and No Build Alternatives would avoid use of the Section 4(f) Property, the NTH/Route 66 and its bridges would continue to deteriorate, leading to more roadway closures. Roadway closures would create an unjustifiable and permanent hardship to residences and businesses, who would be forced to take much longer/less direct route daily. Businesses that rely heavily on NTH/Route 66 tourism would need to relocate or permanently close as there would be no further use of this area for NTH/Route 66 tourism as it would be inaccessible.

The additional roadway closures would also impact emergency vehicle response times and evacuation routes serving the immediate communities along the NTH/Route 66. These communities already contend with a partial roadway closure, but additional access restrictions would severely reduce emergency vehicle response times and result in less direct evacuation routes, both of which are considered sever hazards to these communities.

Last, the Rerouting Alternative would incur a greater environmental impact footprint within sensitive biological habitats, namely permanently reducing habitat, including critical habitat, for the California desert tortoise, a California Endangered Species Act threatened species. Archaeological sites of national or state significance might also be adversely impacted. Based on previous consultation with the Fort Mojave Indian Tribe, the Rerouting Alternative could result in a cumulative adverse effect to a Tribal Cultural Resource/Landscape by introducing a new multiple-mile long modern roadway within a natural landscape.

Results in Excessive Costs

The No Build Rerouting Alternative would mean that the bridges and roadway would continue to deteriorate, increasing the risk to public safety. To prevent this, the County would need to implement additional projects to either correct the safety issues or permanently close the roadway and relocate businesses and residences, requiring additional costs for projects or relocations. Construction of the Rerouting Alternative would occur beyond existing County right-of-way, which would mean additional fund expenditure for right-of-way acquisition.

The Rerouting Alternative would incur a greater environmental impact footprint within sensitive biological habitats, namely permanently reducing habitat, including critical habitat, for the California desert tortoise, a California Endangered Species Act threatened species. These impacts would require mitigation through purchase of mitigation bank credits which would be a high cost for such a long linear impact. Any archaeological site

impact would require significance evaluation testing and if determined to be eligible for listing on the NRHP or the CRHR, data recovery mitigation would be required.

These additional costs, including possible residential and commercial relocations, right-of-way acquisitions, mitigation credit purchases, archaeological testing and mitigation costs, and triggering the need for additional/unplanned projects in the area to correct public safety issues, would constitute a cost increase of extraordinary magnitude. As such, both the No Build and Rerouting Alternatives would be considered impractical and would constitute a continuous drain on County funds which could be used for other needed transportation projects.

Results in Unique Problems/Unusual Factors

The intent of Section 4(f) is to ensure protection/preservation of historic sites for the public's use and enjoyment. The Rerouting and No Build Alternatives would not repair or replace the existing bridges and existing conditions would remain. The NTH/Route 66 would continue to remain closed east of Kelbaker Road. As maintenance and repair efforts are unlikely to provide crossings that meet both the SOIS and current safety standards due to the very low scoring structural deficiency rating and the extensive damage caused by previous storms, additional roadway closures are anticipated under both alternatives. So, while the alternatives would avoid use of the Section 4(f) resource, they would result in further restricting or completely preventing public access and enjoyment of the Section 4(f) resource.

Results in Cumulative Issues

The Rerouting and No Build Alternatives would compromise the Project, making it unreasonable to proceed with the Project's stated purpose and need and would result in unacceptable safety or operational problems. The Rerouting Alternative would also introduce a new multiple-mile long modern roadway within a natural landscape that is considered significant by the Fort Mojave Indian Tribe. Additional archaeological resources considered nationally or locally significant might also be impacted by the new roadway.

Under both alternatives, the bridges would continue to deteriorate, leading to failure, which would result in additional temporary or permanent roadway closures. Temporary closures imposed so that the County can attempt to correct structural issues would repeatedly impact desert tortoise biological habitat. These closures would further limit access to the Section 4(f) resource by the driving public, who is the main (if not sole) user of the resource. Businesses that rely on NTH/Route 66 tourism would be severely impacted by reduced tourism, forcing them to relocate or permanently close.

Summary

The No Build and Rerouting Alternatives are the only identifiable avoidance alternatives that would avoid use of the Section 4(f) resource. Neither would enhance safety along the NTH/Route 66 as they would not correct structural deficiencies of the existing 10 bridges and the roadway approaches. This would result in unacceptable safety/operational problems. As neither alternative would correct the structural deficiencies on the existing NTH/Route 66 alignment, the County would need to fund additional maintenance/rehabilitation projects in an attempt to provide a safer/continuous alignment and to maintain the integrity of the historic site. However, since the previous maintenance and rehabilitation efforts, which have been occurring for decades, have failed to prevent extremely low structural ratings/bridge and roadway failures, it is highly unlikely that

additional maintenance work would result in providing a usable transportation facility. These efforts might maintain the look of the historic site, but the safety concerns would remain unaddressed, which would result in continued access limitations. Further, as the existing timber substructure at many bridges is so deteriorated, extensive additional timber support structures would be needed which would likely result in marring the historic integrity/feel of the resource.

The Rerouting Alternative, while providing a transportation facility consistent with all current safety standards, would incur additional environmental impacts by permanently reducing habitat, including critical habitat, for the California desert tortoise, a California Endangered Species Act threatened species. Archaeological sites of national or state significance, including a Tribal Cultural Resource/Landscape considered significant by the Fort Mojave Indian Tribe, might also be adversely impacted through construction of the Rerouting Alternative. These impacts would require additional mitigation costs of an extraordinary magnitude, especially when combined with purchasing right-of-way needed for the entirety of the Rerouting Alternative.

Under both alternatives, the existing communities and businesses would be permanently impacted as they would be subject to continued and increasing closures of NTH/Route 66, and be forced to travel along longer, less direct routes. This would especially harm businesses that rely heavily on NTH/Route 66 tourism, causing these businesses to relocate or close. The continued and increasing roadway closures which would occur under both alternatives would also severely impact emergency vehicle access, response times, and evacuation routes in the adjacent communities.

Finally, while both alternatives would avoid use of the Section 4(f) resource, they would not correct the existing roadway closure east of Kelbaker Road, which currently restricts the public's access to experience the historic site. The intent of Section 4(f) is to ensure protection/preservation of historic sites for the public's use and enjoyment. As additional roadway closures are anticipated as a result of both alternatives, public access to the historic site would continue to decrease.

Due to all these reasons, both the No Build and Rerouting Alternatives are not feasible and prudent avoidance alternatives. However, a final decision will not be made until after the draft environmental document has been circulated for public review.

5.3 Measures to Minimize Harm/Mitigate Adverse Effect to the Section 4(f) Property

As the proposed Build Alternative would result in use of and an adverse effect on the NTH/Route 66, the following discussion examines all reasonable measures to minimize harm and mitigate for adverse impacts and effects. These measures are detailed in the draft *Memorandum of Agreement between the California Department of Transportation and the California State Historic Preservation Officer Regarding the National Trails Highway at 10 Bridges Project* (NTH/Route 66 10 Bridges MOA) and the SHPO approved *Secretary of the Interior's Standards Action Plan: Late 1950s Paddleboards and C-Markers for the National Trails Highway at 10 Bridges Project*.

Interpretive Website
The County shall further develop its existing NTH/Route 66 website to house the historical information compiled on NTH/Route 66. Information added to the website shall include, but shall not be limited to, copies of the documentation prepared for the NRHP nomination, historical content, historical photographs, interviews, post cards, and personal stories related to NTH/Route 66. The website development shall be planned in a manner that will allow it to be built upon as a repository for future projects. The website development shall be planned in a manner that will allow it to be built upon as a repository for future projects. The final content of the website to be created will be determined through consultation with the Caltrans District 8 cultural staff and the interested consulting parties identified in the NTH/Route 66 10 Bridges MOA and will be focused primarily on information specific to parts of the NTH/Route 66 within the Project's APE. Future projects could provide additional content such as video footage from drone flights, information on route maintenance, original plans, photographs, postcards, interviews, and links to other sources. The website shall be maintained by the County and accessible to the public for their use, information, and enjoyment. This measure was developed in consultation with the SHPO, San Bernardino County, National Park Service, and the California Historic Route 66 Association.

NRHP Nomination
Caltrans shall ensure that within one year of the execution of the NTH/Route 66 10 Bridges MOA, the County has prepared an NRHP Nomination form for the entire 111-mile long NTH/Route 66 segment between Daggett and the Mountain Springs Road exit for submittal to the California SHPO for review by the State Historical Resources Commission. This measure was developed in consultation with the SHPO, San Bernardino County, National Park Service, and the California Historic Route 66 Association.

A NRHP nomination helps in preserving historic information regarding the roadway, including construction history, use, and importance in US history. This information will be accessible by the public as nomination applications/information are stored on a federal website. Being listed on the NRHP will ensure continued protection of the NTH/Route 66 under Section 106 of the NHPA.

Architectural Treatment of Bridge Railings on 10 New Bridges
The final design shall include treatments which most closely simulate the original NTH/Route 66 historical railing design and which also meet current MASH standards. Project plans will be reviewed by both the County and Caltrans District 8 staff to ensure consistency of treatment prior to the commencement of construction and request review by a Caltrans Professionally Qualified Staff Principal Architectural Historian for conformance. The SHPO shall also be afforded the opportunity to review the design plans and specifications. This measure was developed in consultation with the SHPO, National Park Service, San Bernardino County, and the California Historic Route 66 Association.

This measure assists in maintaining the historic setting of the Section 4(f) resource by creating a railing that is more consistent with the original design than is currently in place. This will also assist in maintaining the historic tourism of the area and may even lead to an increase in tourism. This would be a benefit to the local businesses that rely on NTH/Route 66 tourism.

SOIS Action Plan – Late 1950s Paddleboards

An Action Plan for compliance with the SOIS for Rehabilitation (36 CFR 67) (SOIS Action Plan) was developed to avoid adverse effects to the late 1950s Paddleboards (metal postmile markers) located at four of the 10 bridges (Bristol Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, and Leith Ditch Bridge). This measure was developed in consultation with and approved by the SHPO, National Park Service, San Bernardino County, and the California Historic Route 66 Association.

Per the Action Plan, prior to earthmoving work or demolition each late 1950s Paddleboard will be removed (via hand tools only). The paddleboards will be given a temporary identification tag (noting bridge number/name location and GPS reading), wrapped in protective materials (such as blankets, bubble wrap, or other materials), stored in a safe and secure area away from weather and elements until they are provided to a paint shop which specializes in historic restoration/repainting. The intent will be to match the original paint in color, design, and information, utilizing historic photographs as a guide. Initially, only one Paddleboard shall be repainted, to serve as a test for the remaining Paddleboards. Once this first Paddleboard is repainted, a cultural resource specialist, shall observe either in person or via photographs and detail any necessary adjustments, as needed. Once this initial Paddleboard has been approved by the cultural resource specialist, the remaining Paddleboards can be repainted. Once repainted, and after construction activities are completed at the Paddleboard's specific bridge location, the Paddleboards will be reinstalled.

A cultural resource specialist/monitor will be present during removal and reinstallation to ensure the proper handling methods are utilized and to ensure that the Late 1950s Paddleboards are installed in the correct locations/orientations.

This measure assists in maintaining the historic setting of the Section 4(f) resource by preserving and rehabilitating one of its contributing elements. This will also assist in maintaining the historic tourism of the area and may even lead to an increase in tourism. This would be a benefit to the local businesses that rely on NTH/Route 66 tourism.

SOIS Action Plan – C-Markers

An Action Plan for compliance with the SOIS for Rehabilitation (36 CFR 67) (SOIS Action Plan) was developed to avoid adverse effects to the 9 C-Markers located at six bridges (Larissa Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, Cerro Ditch Bridge, Adena Ditch Bridge, and Gordo Ditch Bridge). This measure was developed in consultation with and approved by the SHPO, National Park Service, San Bernardino County, and the California Historic Route 66 Association.

Prior to earthmoving work or demolition each C-Marker will be removed (via hand tools and/or mechanically levered with straps), given a temporary identification tag with its bridge number/name location and GPS reading, wrapped in protective materials (such as blankets, bubble wrap, or other material), and stored in a safe and secure area away from weather and elements.

After construction activities are completed at the C-Marker's specific bridge location, the C-Marker will be reinstalled in the same location, utilizing hand tools and/or mechanical tools. Each C-Marker will be installed with 1-foot of the monument above ground level.

A cultural resource specialist/monitor will be present during removal and reinstallation to ensure the proper handling methods are utilized and to ensure that the C-Markers are installed in the correct locations/orientations. This measure assists in maintaining the historic setting of the Section 4(f) resource by preserving one of its contributing elements. This will also assist in maintaining the historic tourism of the area and may even lead to an increase in tourism. This would be a benefit to the local businesses that rely on NTH/Route 66 tourism.

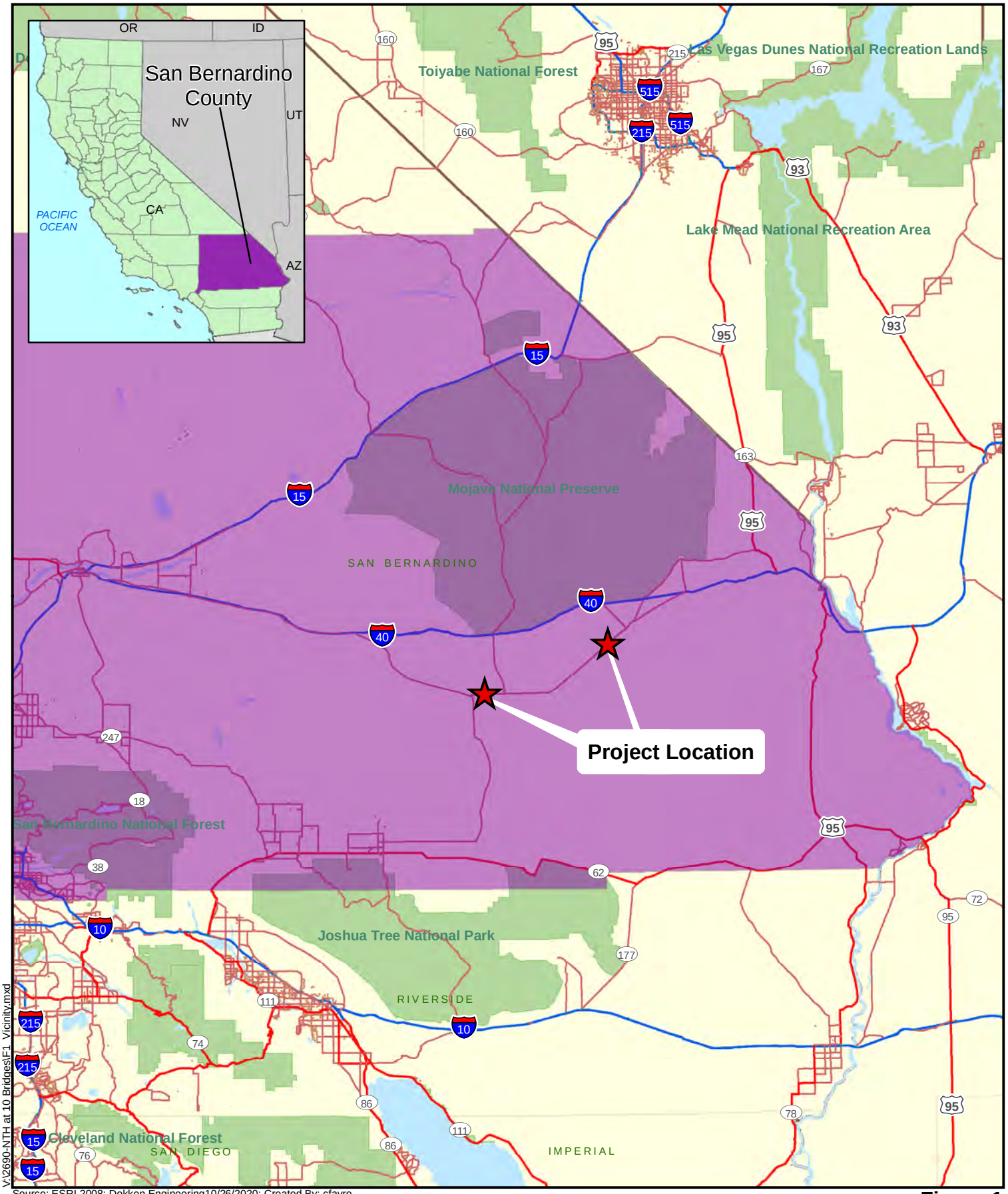
6 Coordination

Pursuant to Section 4(f) of the Transportation Act of 1966 (title 49 USC Section 303) and 23 CFR 774.17, the NTH/Route 66, a linear historic property, is recognized as a Section 4(f) resource. To fulfill the requirements of Section 4(f), Caltrans consulted with the SHPO, NPS, and several historic societies regarding significance evaluation, the Project's anticipated effect, and proposed measures to mitigate/reduce adverse impacts to the NTH/Route 66.

The NTH/Route 66 segment between Daggett and Mountain Springs Road and the Adena Ditch Bridge were previously determined eligible for listing on the NRHP as part of a separate project. SHPO concurred on this significance determination in 2014. As part of the efforts conducted for this project, the C-Markers and Late 1950s Paddleboards were determined contributing elements of the NTH/Route 66 with SHPO concurrence provided on June 20, 2022.

Caltrans obtained SHPO concurrence on the adverse finding of effect on December 15, 2022. Additionally, this draft Section 4(f) document is being distributed the public, the SHPO, and the US Department of the Interior so that they have an opportunity to comment.

APPENDIX A: MAP FIGURES



V:\2690-NTH at 10 Bridges\F1_Vicinity.mxd

Source: ESRI 2008; Dokken Engineering10/26/2020; Created By: cfavro

0 10 20 30 Miles

Figure 1
Project Vicinity
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



v:\1836_11thStBridge\Cultural\F2_Loc_10-12-10.mxd

Source: ESRI World Street Maps Online; Dokken Engineering 10/26/2020; Created By: cfavro

0 2.5 5 7.5 10
Miles

Figure 2
Project Location
National Trails Highway 10 Bridges Project
BRLS-5954 (142,147,149-156)
San Bernardino County, California



V:\2690-NTH at 10 Bridges\df\F3_Section4fResources_.mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 8,750 feet

0 6,000 12,000 18,000 24,000 30,000 Feet

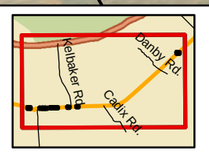


Figure 3 - Section 4(f) Resources
Page 1 of 11
All 10 Bridges
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Crater Road

Project Area

Project Linework

- Edge of Pavement
- Bridge Limits
- Rock Slope Protection
- Detour Extent
- Detour Cut and Fill Extent

Section 4(f) Resources

- National Trails Highway Alignment/P-36-002910 (MR#F)
- Historic C-Marker (MR# A)
- Historic Paddle Board (MR# B)

CHL-985: DTC/C-AMA (MR# G) - recorded boundary encompasses all of Project Area

V:\12690-NTH at 10 Bridges\4f\F3_Section4fResources_.mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 200 feet

0 130 260 390 520 650 Feet

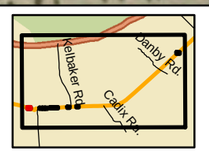


Figure 3 - Section 4(f) Resources
Page 2 of 11
Bristol Ditch (54C0272)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area

Project Linework

Edge of Pavement

Bridge Limits

Rock Slope Protection

Detour Extent

Detour Cut and Fill Extent

Section 4(f) Resources

National Trails Highway Alignment/P-36-002910 (MR#F)

Historic C-Marker (MR# A)

Historic Paddle Board (MR# B)

CHL-985: DTC/C-AMA (MR# G) - recorded boundary encompasses all of Project Area

V:\2690-NTH at 10 Bridges\4f\F3_Section4fResources_mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 150 feet

0 100 200 300 400 500 Feet

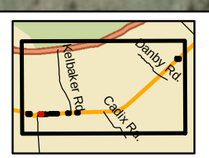


Figure 3 - Section 4(f) Resources
Page 3 of 11
Cerro Ditch (54C0275)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area

Project Linework

Edge of Pavement

Bridge Limits

Rock Slope Protection

Detour Extent

Detour Cut and Fill Extent

Section 4(f) Resources

National Trails Highway Alignment/P-36-002910 (MR#F)

Historic C-Marker (MR# A)

Historic Paddle Board (MR# B)

CHL-985: DTC/C-AMA (MR# G) - recorded boundary encompasses all of Project Area

V:\2690-NTH at 10 Bridges\4f\F3_Section4fResources_mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 150 feet

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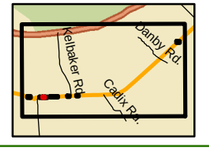


Figure 3 - Section 4(f) Resources
Page 4 of 11
Gordo Ditch (54C0276)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area

Project Linework

Edge of Pavement

Bridge Limits

Rock Slope Protection

Detour Extent

Detour Cut and Fill Extent

Section 4(f) Resources

National Trails Highway Alignment/P-36-002910 (MR#F)

Historic C-Marker (MR# A)

Historic Paddle Board (MR# B)

CHL-985: DTC/C-AMA (MR# G) - recorded boundary encompasses all of Project Area

V:\2690-NTH at 10 Bridges\4f\F3_Section4fResources_mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 150 feet

0 100 200 300 400 500 Feet

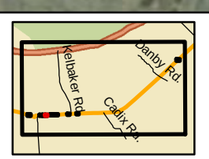


Figure 3 - Section 4(f) Resources
Page 5 of 11
Cerulia Ditch (54C0277)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area

Project Linework

Edge of Pavement

Bridge Limits

Rock Slope Protection

Detour Extent

Detour Cut and Fill Extent

Section 4(f) Resources

National Trails Highway Alignment/P-36-002910 (MR#F)

Historic C-Marker (MR# A)

Historic Paddle Board (MR# B)

CHL-985: DTC/C-AMA (MR# G) - recorded boundary encompasses all of Project Area

V:\2690-NTH at 10 Bridges\4f\F3_Section4fResources_mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 150 feet

0 100 200 300 400 500 Feet

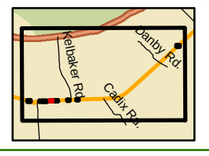


Figure 3 - Section 4(f) Resources
Page 6 of 11
Leith Ditch (54C0279)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area

Project Linework

Edge of Pavement

Bridge Limits

Rock Slope Protection

Detour Extent

Detour Cut and Fill Extent

Section 4(f) Resources

National Trails Highway Alignment/P-36-002910 (MR#F)

Historic C-Marker (MR# A)

Historic Paddle Board (MR# B)

CHL-985: DTC/C-AMA (MR# G) - recorded boundary encompasses all of Project Area

V:\2690-NTH at 10 Bridges\4f\F3_Section4fResources_.mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 150 feet

0 100 200 300 400 500 Feet

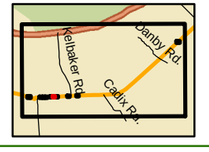


Figure 3 - Section 4(f) Resources
Page 7 of 11
Terra Ditch (54C0280)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area

Project Linework

Edge of Pavement

Bridge Limits

Rock Slope Protection

Detour Extent

Detour Cut and Fill Extent

Section 4(f) Resources

National Trails Highway Alignment/P-36-002910 (MR#F)

Historic C-Marker (MR# A)

Historic Paddle Board (MR# B)

CHL-985: DTC/C-AMA (MR# G) - recorded boundary encompasses all of Project Area

V:\2690-NTH at 10 Bridges\4f\F3_Section4fResources-.mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 150 feet

0 100 200 300 400 500 Feet

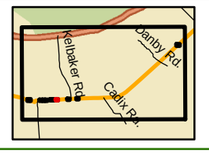


Figure 3 - Section 4(f) Resources
Page 8 of 11
Sombra Ditch (54C0281)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area

Project Linework

Edge of Pavement

Bridge Limits

Rock Slope Protection

Detour Extent

Detour Cut and Fill Extent

Section 4(f) Resources

National Trails Highway Alignment/P-36-002910 (MR#F)

Historic C-Marker (MR# A)

Historic Paddle Board (MR# B)

CHL-985: DTC/C-AMA (MR# G) - recorded boundary encompasses all of Project Area

V:\2690-NTH at 10 Bridges\4f\F3_Section4fResources-.mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 150 feet

0 100 200 300 400 500 Feet

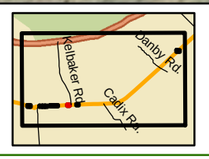
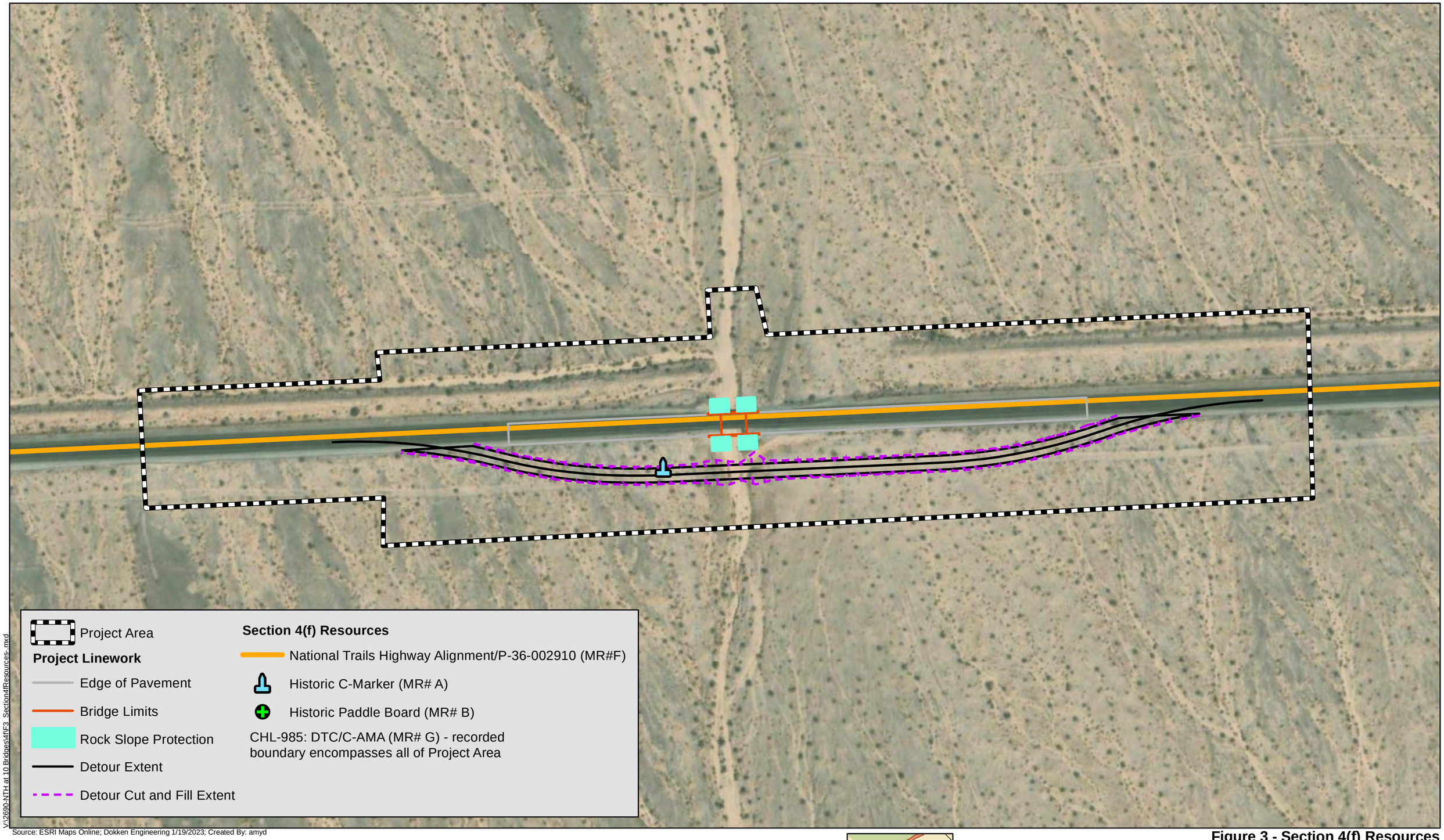


Figure 3 - Section 4(f) Resources
Page 9 of 11
Beacon Ditch (54C0282)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California



V:\12690-NTH at 10 Bridges\4\f\F3_Section4fResources_mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 150 feet

0 100 200 300 400 500 Feet

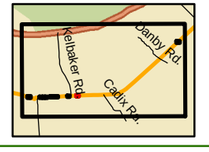


Figure 3 - Section 4(f) Resources
Page 10 of 11
Larissa Ditch (54C0284)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

Project Area

Project Linework

Edge of Pavement

Bridge Limits

Rock Slope Protection

Detour Extent

Detour Cut and Fill Extent

Section 4(f) Resources

National Trails Highway Alignment/P-36-002910 (MR#F)

Adena Ditch Bridge (MR# 111)

Historic C-Marker (MR# A)

Historic Paddle Board (MR# B)

CHL-985: DTC/C-AMA (MR# G) - recorded boundary encompasses all of Project Area

V:\2690-NTH at 10 Bridges\4f\F3_Section4fResources-.mxd

Source: ESRI Maps Online; Dokken Engineering 1/19/2023; Created By: amyd

1 inch = 200 feet

0 130 260 390 520 650 Feet

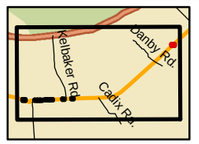


Figure 3 - Section 4(f) Resources
Page 11 of 11
Adena Ditch (54C0315)
National Trails Highway 10 Bridges Project
BRLS-5954 (142, 147, 149-156)
San Bernardino County, California

State of California • Natural Resources Agency
Gavin Newsom, *Governor*

DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION
Armando Quintero, *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

December 15, 2022

VIA EMAIL

In reply refer to: FHWA_2022_0502_001

Mr. David Price, Section 106 Coordinator
Caltrans Cultural Studies Office
Division of Environmental Analysis
1120 N Street, PO Box 942873, MS-27
Sacramento, CA 94273-0001

Subject: Finding of Effect for the Proposed 10 Bridges Replacement Project, San Bernardino County, California

Dear Mr. Walters:

Caltrans is continuing consultation regarding the above project in accordance with the January 1, 2014 First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer (SHPO), and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA). As part of your documentation, Caltrans submitted a Finding of Effect Report and a Secretary of the Interior Standard's (SOIS) Action Plan for the proposed project.

The County of San Bernardino, in cooperation Caltrans, is proposing to replace 10 bridges on the National Trails Highway (NTH), also known as U.S. Route 66, located in rural unincorporated San Bernardino County. The project limits extend along U.S. Route 66 from east of Amboy, CA to north of Danby, CA.

As part of its identification efforts, Caltrans determined that the following historic properties are located within the area of potential effect (APE) for the undertaking:

- National Trails Highway/Route 66 (NTH)
- Adena Ditch Bridge – contributor to NTH
- C Markers – contributor to NTH
- Paddleboards – contributor to NTH
- Desert Training Center/CA-AZ Maneuver Area (DTC/AMA) – assumed eligible for NRHP under all 4 criteria

Caltrans has found that the project will have an adverse effect, specifically a cumulative adverse effect to the National Trails Highway due to the impact the bridge replacements will have on the original road design. The project will also have an adverse effect on the Adena Ditch Bridge, a contributor to the NTH. Caltrans will have no adverse effect on the C Markers and Paddleboards through the implementation of a SOIS Action Plan. The project will have no adverse effect on the DTC/AMA as there are no contributing features of the DTC/AMA located within the APE for the project.

Based on review of the submitted documentation, I have no objections to the finding of adverse effect for the undertaking as a whole. I also have no objections to Caltrans' finding that the project will have no adverse effect on the C Markers, Paddleboards, and the DTC/AMA.

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

Sincerely,

Julianne Polanco
State Historic Preservation Officer

State of California • Natural Resources Agency
Gavin Newsom, *Governor*

DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION
Armando Quintero, *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

June 20, 2022

VIA EMAIL

In reply refer to: FHWA_2022_0502_001

Mr. Andrew Walters, Branch Chief
Environmental Support/Cultural Studies
Caltrans District 8
464 W Fourth Street
San Bernardino, CA 92401-1400

Subject: Determinations of Eligibility for the Proposed 10 Bridges Replacement Project, San Bernardino County, California

Dear Mr. Walters:

Caltrans is initiating consultation regarding the above project in accordance with the January 1, 2014 First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer (SHPO), and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA). As part of your documentation, Caltrans submitted a Historic Property Survey Report (HPSR), Historic Resources Evaluation Report, and Archaeological Survey Report for the proposed project.

The County of San Bernardino, in cooperation Caltrans, is proposing to replace 10 bridges on the National Trails Highway (NTH), also known as U.S. Route 66, located in rural unincorporated San Bernardino County. The project limits extend along U.S. Route 66 from east of Amboy, CA to north of Danby, CA.

As part of the identification process Caltrans looked at a 43-bridge sample of bridge locations that included the 10 bridge locations within the area of potential effect (APE) and an additional 33 bridge locations outside the APE for the current Undertaking. This sample consists of about one third of the 136 bridge locations along this section of the NTH. This sampling suggests that the situation is remarkably similar from one bridge location to the next in terms of the four roadside-related resources treated here: paddleboards, C-Markers, ditches, and dikes.
Caltrans has determined that there are both contributing and non-contributing elements to the National Register of Historic Places (NRHP) eligibility of Route 66 within the APE

for the project. Caltrans has determined that the following resources are eligible for the NRHP as contributors to Route 66 in California, a property listed on the NRHP:

- C-Markers
- Pre-1958 Paddleboards

Caltrans has also determined that the flood control ditches and dikes are not eligible for the NRHP as contributors to Route 66 as they are unlikely to retain sufficient historic integrity to the period of significance.

Based on review of the submitted documentation, I concur with the above determinations.

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

Sincerely,

Julianne Polanco
State Historic Preservation Officer

Appendix B. Title VI Policy Statement

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.

August 2020

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.*"

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a nondiscriminatory manner.

Related federal statutes, remedies, 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, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

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 Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at <Title.VI@dot.ca.gov>.

Original signed by
Toks Omishakin
Director

Appendix C. Avoidance, Minimization and/or Mitigation Summary

In order to be sure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record [ECR] which follows) would be implemented. During project design, avoidance, minimization, and /or mitigation measures will be incorporated into the Project's final plans, specifications, and cost estimates, 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 this ECR are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. As the following ECR is a draft, some fields have not been completed, and will be filled out as each of the measures is implemented. Note: Some measures may apply to more than one resource area. Duplicative or redundant measures have not been included in this ECR.

Environmental Commitments Record (ECR)

DIST-CO-RTE: DISTRICT 8 – SBD – 66/NTH **PM/PM:** N/A **EA/ Federal-Aid Project Number/Project ID.:** BRLS-5954(142,147,149-156)
Project Description: Replace 10 bridges along National Trails Highway in and near the unincorporated communities of Amboy and Essex in San Bernardino County.
Date (Last modification): 2023-08-16
Environmental Planner: **Phone No.:**
Construction Liaison: **Phone No.:**
Resident Engineer: **Phone No.:**

Instructions / Notes (remove prior to finalizing):

- Enter the EA/Project ID and Federal-Aid Project Number (if applicable) in the footer and the project title in the header beginning on page 2.
- Enter information in the following tables as appropriate for the project. If additional rows are needed, copy and paste in new rows.
- In the "Task and Brief Description" column, it is recommended to list the resource and number the task (e.g., BIO-1, CUL-3, HAZ-5, Visual-4, etc.).
- In the Source column, identify the page number(s) from the environmental document, or resource agency decision document, permit, or mitigation plan, where the commitment is most thoroughly described and identified. Update as the commitment definition is refined.
- In the "Included in the PS&E package" column, select "yes" if the task should be (or has been) included in the PS&E package. Identify the appropriate SSP or NSSP in the Action to Comply Column.
- In the "Action to Comply" column, describe the action that must be taken by the responsible party in order to comply with the commitment (e.g. establish an ESA, include delineation on the Plans).
- If an MND or EIR was prepared, select "yes" in the "Mitigation for Significant Impacts Under CEQA?" column for those measures that were proposed specifically to address a significant impact under CEQA.
- Upon completion of the PA&ED phase, the ECR will be used by the Project Team as a detailed reference throughout all project phases (Final Design and Construction), both to identify and track commitments and to locate the most current, detailed source of information. This is a living document that should be updated as commitments are made and completed through each key milestone (and potential phases of a project).

PERMITS

Permit	Agency	Application Submitted	Permit Received	Permit Expiration	Permit Requirement Completed by:	Permit Requirement Completed on:	Comments
Enter permit	Enter agency	Enter date	Enter date	Enter date	Enter Name	Enter date	Enter comments
Enter permit	Enter agency	Enter date	Enter date	Enter date	Enter Name	Enter date	Enter comments
Enter permit	Enter agency	Enter date	Enter date	Enter date	Enter Name	Enter date	Enter comments
Enter permit	Enter agency	Enter date	Enter date	Enter date	Enter Name	Enter date	Enter comments
Enter permit	Enter agency	Enter date	Enter date	Enter date	Enter Name	Enter date	Enter comments
Enter permit	Enter agency	Enter date	Enter date	Enter date	Enter Name	Enter date	Enter comments

ENVIRONMENTAL COMMITMENTS

PA&ED

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Biology	**BIO-29:** Placement and construction of rock slope protection will require the interstitial spaces within the rock slope protection to be filled with substrate to prevent trapping of desert tortoise.	EIR/EA pg 81	Select a response	Contractor	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**TCR-2:** Any and all archaeological/cultural documents created as a part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the County for dissemination to San Manuel Band of Mission Indians. The County shall, in	EIR/EA pg 137	Select a response	County	Send documentation.	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	good faith, consult with San Manuel Band of Mission Indians throughout the life of the Project.									

PS&E/BEFORE RTL

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Biology	**BIO-29:** Placement and construction of rock slope protection will require the interstitial spaces within the rock slope protection to be filled with substrate to prevent trapping of desert tortoise.	EIR/EA pg 81	Select a response	Contractor	Implement	Enter date	Enter Name	Enter date	Enter remarks	No
Cultural Resources	**CUL-3a: Architectural Treatment of Bridge Railings on 10 New Bridges.** County shall direct the contractor to apply treatments for historical railing design considerations as depicted in MOA Attachment 3 to the replaced bridge railings on all 10 NTH/Route 66 replacement bridges. Attachment 3 depicts railings designs for replacement bridge projects on the NTH/Route 66 which were previously approved by Caltrans. Consistency of treatments with this measure, and any future revisions to the treatments, will be determined through review of project plans by Caltrans. County shall submit the design plans and specifications for the Undertaking to District 8 Cultural Studies prior to the commencement of construction and request review by a Caltrans Professionally Qualified Staff Principal Architectural Historian. Following Caltrans approval, the SHPO shall also be afforded the opportunity to review the design plans and specifications for a 30-day review period.	EIR/EA pg 43	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3b: SOIS Action Plan.** An Action Plan for compliance with the Secretary of the Interior's Standards for Rehabilitation (36 CFR 67) (SOIS Action Plan) was approved by Caltrans to avoid adverse effects to the late 1950s Paddleboards (metal postmile markers) located at four of the 10 bridges (Bristol Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, and Leith Ditch Bridge) and 9 C-Markers located at six bridges (Larissa Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, Cerro Ditch Bridge, Adena Ditch Bridge, and Gordo Ditch Bridge) pursuant to the FHWA/Caltrans Section 106 PA Stipulation X.B.1.b. Caltrans shall ensure the SOIS Action Plan, included as MOA Attachment 4, is implemented by the Responsible Parties identified in the plan at the milestones specified therein. In general, the SOIS	EIR/EA pg 43	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	Action Plan involves temporarily removing the C-Markers and Late 1950s Paddleboards prior to construction, storing them in protective materials during construction, and reinstalling them following construction. The Late 1950s Paddleboards will be rehabilitated in accordance with the SOIS standards through paint refurbishment to better match the original coloration.									
Cultural Resources	**CUL-3c: Construction Monitoring.** County shall prepare a construction monitoring plan and conduct periodic monitoring of construction activities to ensure the project is conducted in a manner that meets the stipulations outlined in the MOA. The monitoring plan and its ongoing status will be included in the annual reports submitted pursuant to MOA Stipulation IV.F. Caltrans shall ensure that the construction monitoring plan is implemented. Within three months following the completion of construction and prior to the expiration of the MOA, a monitoring report shall be prepared and submitted to the SHPO to document project completion and compliance with the treatment of Historic Properties outlined in the MOA. The monitoring report may be combined with the final annual report prepared for the Undertaking pursuant to MOA Stipulation IV.F. The monitor shall meet the appropriate professional qualifications standards in accordance with MOA Stipulation IV.A.3.	EIR/EA pg 44	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3d: National Register of Historic Places (NRHP) Nomination.** Caltrans shall ensure that the County has prepared an NRHP Nomination form for the entire 111-mile long NTH/Route 66 segment between Daggett and the Mountain Springs Road exit for submittal to the California SHPO for review by the State Historical Resources Commission, prior to the 2024 Annual Report prepared for the MOA.	EIR/EA pg 44	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3e: Interpretive Website.** The County will develop a website to share historic and other Route 66 road-related information for the benefit of the general public. Information to be included on the website is detailed in the website outline, included as Attachment 5 to the MOA. The final content of the website to be created as part of the MOA will be determined through consultation with the Caltrans District 8 cultural staff and the interested consulting parties and will be focused on the segment of the NTH/Route 66 between Daggett and the Mountain Springs Road exit, with an emphasis on information specific to parts of the NTH/Route 66 within the Project's APE, if available. The website shall be maintained by the County and accessible to the public for their use, information, and enjoyment. The County shall commence development of the website	EIR/EA pg 44	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	prior to the 2024 Annual Report prepared for the MOA and shall publish the website prior to the 2027 Annual Report.									
Hazardous Waste	**HAZ-1:** It is anticipated that yellow pavement striping will be removed since it is present over each bridge along NTH. Removal of yellow striping and pavement marking materials would be performed in accordance with latest Caltrans Standard Special Provision for REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS. If yellow striping is removed in conjunction with the existing pavement, the paint striping can be considered non-hazardous material and a provision for handling the paint is not required.	EIR/EA pg 56	Select a response	Contractor	Follow Caltrans Standard Special Provision for REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS.	Enter date	Enter Name	Enter date	Enter remarks	Yes

ROW/PURCHASING

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Cultural Resources	**CUL-3a: Architectural Treatment of Bridge Railings on 10 New Bridges.** County shall direct the contractor to apply treatments for historical railing design considerations as depicted in MOA Attachment 3 to the replaced bridge railings on all 10 NTH/Route 66 replacement bridges. Attachment 3 depicts railings designs for replacement bridge projects on the NTH/Route 66 which were previously approved by Caltrans. Consistency of treatments with this measure, and any future revisions to the treatments, will be determined through review of project plans by Caltrans. County shall submit the design plans and specifications for the Undertaking to District 8 Cultural Studies prior to the commencement of construction and request review by a Caltrans Professionally Qualified Staff Principal Architectural Historian. Following Caltrans approval, the SHPO shall also be afforded the opportunity to review the design plans and specifications for a 30-day review period.	EIR/EA pg 43	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3b: SOIS Action Plan.** An Action Plan for compliance with the Secretary of the Interior's Standards for Rehabilitation (36 CFR 67) (SOIS Action Plan) was approved by Caltrans to avoid adverse effects to the late 1950s Paddleboards (metal postmile markers) located at four of the 10 bridges (Bristol Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, and Leith Ditch Bridge) and 9 C-Markers located at six bridges (Larissa Ditch Bridge, Cerulia Ditch Bridge, Terra	EIR/EA pg 43	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	Ditch Bridge, Cerro Ditch Bridge, Adena Ditch Bridge, and Gordo Ditch Bridge) pursuant to the FHWA/Caltrans Section 106 PA Stipulation X.B.1.b. Caltrans shall ensure the SOIS Action Plan, included as MOA Attachment 4, is implemented by the Responsible Parties identified in the plan at the milestones specified therein. In general, the SOIS Action Plan involves temporarily removing the C-Markers and Late 1950s Paddleboards prior to construction, storing them in protective materials during construction, and reinstalling them following construction. The Late 1950s Paddleboards will be rehabilitated in accordance with the SOIS standards through paint refurbishment to better match the original coloration.									
Cultural Resources	**CUL-3c: Construction Monitoring.** County shall prepare a construction monitoring plan and conduct periodic monitoring of construction activities to ensure the project is conducted in a manner that meets the stipulations outlined in the MOA. The monitoring plan and its ongoing status will be included in the annual reports submitted pursuant to MOA Stipulation IV.F. Caltrans shall ensure that the construction monitoring plan is implemented. Within three months following the completion of construction and prior to the expiration of the MOA, a monitoring report shall be prepared and submitted to the SHPO to document project completion and compliance with the treatment of Historic Properties outlined in the MOA. The monitoring report may be combined with the final annual report prepared for the Undertaking pursuant to MOA Stipulation IV.F. The monitor shall meet the appropriate professional qualifications standards in accordance with MOA Stipulation IV.A.3.	EIR/EA pg 44	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3d: National Register of Historic Places (NRHP) Nomination.** Caltrans shall ensure that the County has prepared an NRHP Nomination form for the entire 111-mile long NTH/Route 66 segment between Daggett and the Mountain Springs Road exit for submittal to the California SHPO for review by the State Historical Resources Commission, prior to the 2024 Annual Report prepared for the MOA.	EIR/EA pg 44	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3e: Interpretive Website.** The County will develop a website to share historic and other Route 66 road-related information for the benefit of the general public. Information to be included on the website is detailed in the website outline, included as Attachment 5 to the MOA. The final content of the website to be created as part of the MOA will be determined through consultation with the Caltrans District 8 cultural staff and the interested consulting parties and will be focused on the segment of the NTH/Route 66 between	EIR/EA pg 44	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	Daggett and the Mountain Springs Road exit, with an emphasis on information specific to parts of the NTH/Route 66 within the Project's APE, if available. The website shall be maintained by the County and accessible to the public for their use, information, and enjoyment. The County shall commence development of the website prior to the 2024 Annual Report prepared for the MOA and shall publish the website prior to the 2027 Annual Report.									

PRE-CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Biology	**BIO-9:** Environmental awareness training shall be conducted prior to the onset of project work for all construction personnel discussing the special status plant and wildlife species with the potential to occur in the BSA. The training will also discuss how to proceed if there are any encounters of special status species within the work area, as well as measures and BMPs that will be implemented to avoid impacts to such species.	EIR/EA pg 70	Select a response	Biologist	Provide biological training.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	**BIO-10:** During the ideal blooming period prior to the beginning of construction activities, a rare plant survey will be conducted by an authorized biologist. If individuals or populations of rare plants are observed within the BSA during this survey, the area around the rare plant will be marked with high-visibility Environmentally Sensitive Area (ESA) fencing. project activities will not be permitted to encroach upon the fencing and vegetation removal will not be authorized within the boundaries of said fencing.	EIR/EA pg 70	Select a response	Biologist and Contractor	Conduct Biological survey and if ESA is required, contractor installs fencing and does not enter ESA.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-14:** Approximately 2-4 weeks in advance of construction activities, a survey for desert tortoise and their burrows within the Project area shall occur by the authorized biologist. Additionally, within 24 hours of the start of soil disturbance, another preconstruction clearance survey for desert tortoise will be conducted by the authorized biologist. If a tortoise or tortoise sign is found in the impact areas or within the immediate vicinity during either pre-construction survey, USFWS and CDFW shall be contacted immediately and the tortoise shall be allowed to move outside the construction area/exclusionary area on their own before the Project can commence installation of exclusionary fencing, on-site construction preparation activities, or any construction activities.	EIR/EA pg 80	Select a response	Biologist	Conduct Biological survey	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Biology	**BIO-25:** Prior to construction, a qualified biologist must conduct a focused bat survey on the existing bridge structures. If a maternity colony is found within the Project area, a qualified bat biologist shall prepare a bat eviction plan in order to evict bats during the appropriate non-pupping season, from September 1 to October 15 or March 15 to April 15. If no maternity colony or potential maternity colony is identified, work may proceed as scheduled and no additional considerations for bat species are required.	EIR/EA pg 75	Select a response	Biologist	Bat survey.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3a: Architectural Treatment of Bridge Railings on 10 New Bridges.** County shall direct the contractor to apply treatments for historical railing design considerations as depicted in MOA Attachment 3 to the replaced bridge railings on all 10 NTH/Route 66 replacement bridges. Attachment 3 depicts railings designs for replacement bridge projects on the NTH/Route 66 which were previously approved by Caltrans. Consistency of treatments with this measure, and any future revisions to the treatments, will be determined through review of project plans by Caltrans. County shall submit the design plans and specifications for the Undertaking to District 8 Cultural Studies prior to the commencement of construction and request review by a Caltrans Professionally Qualified Staff Principal Architectural Historian. Following Caltrans approval, the SHPO shall also be afforded the opportunity to review the design plans and specifications for a 30-day review period.	EIR/EA pg 43	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3b: SOIS Action Plan.** An Action Plan for compliance with the Secretary of the Interior's Standards for Rehabilitation (36 CFR 67) (SOIS Action Plan) was approved by Caltrans to avoid adverse effects to the late 1950s Paddleboards (metal postmile markers) located at four of the 10 bridges (Bristol Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, and Leith Ditch Bridge) and 9 C-Markers located at six bridges (Larissa Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, Cerro Ditch Bridge, Adena Ditch Bridge, and Gordo Ditch Bridge) pursuant to the FHWA/Caltrans Section 106 PA Stipulation X.B.1.b. Caltrans shall ensure the SOIS Action Plan, included as MOA Attachment 4, is implemented by the Responsible Parties identified in the plan at the milestones specified therein. In general, the SOIS Action Plan involves temporarily removing the C-Markers and Late 1950s Paddleboards prior to construction, storing them in protective materials during construction, and reinstalling them following construction. The Late 1950s Paddleboards will be	EIR/EA pg 43	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	rehabilitated in accordance with the SOIS standards through paint refurbishment to better match the original coloration.									
Cultural Resources	**CUL-3c: Construction Monitoring.** County shall prepare a construction monitoring plan and conduct periodic monitoring of construction activities to ensure the project is conducted in a manner that meets the stipulations outlined in the MOA. The monitoring plan and its ongoing status will be included in the annual reports submitted pursuant to MOA Stipulation IV.F. Caltrans shall ensure that the construction monitoring plan is implemented. Within three months following the completion of construction and prior to the expiration of the MOA, a monitoring report shall be prepared and submitted to the SHPO to document project completion and compliance with the treatment of Historic Properties outlined in the MOA. The monitoring report may be combined with the final annual report prepared for the Undertaking pursuant to MOA Stipulation IV.F. The monitor shall meet the appropriate professional qualifications standards in accordance with MOA Stipulation IV.A.3.	EIR/EA pg 44	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3d: National Register of Historic Places (NRHP) Nomination.** Caltrans shall ensure that the County has prepared an NRHP Nomination form for the entire 111-mile long NTH/Route 66 segment between Daggett and the Mountain Springs Road exit for submittal to the California SHPO for review by the State Historical Resources Commission, prior to the 2024 Annual Report prepared for the MOA.	EIR/EA pg 44	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3e: Interpretive Website.** The County will develop a website to share historic and other Route 66 road-related information for the benefit of the general public. Information to be included on the website is detailed in the website outline, included as Attachment 5 to the MOA. The final content of the website to be created as part of the MOA will be determined through consultation with the Caltrans District 8 cultural staff and the interested consulting parties and will be focused on the segment of the NTH/Route 66 between Daggett and the Mountain Springs Road exit, with an emphasis on information specific to parts of the NTH/Route 66 within the Project's APE, if available. The website shall be maintained by the County and accessible to the public for their use, information, and enjoyment. The County shall commence development of the website prior to the 2024 Annual Report prepared for the MOA and shall publish the website prior to the 2027 Annual Report.	EIR/EA pg 44	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Other	**TRA-1:** A Traffic Management Plan would be prepared prior to construction and be implemented during construction of the Project to reduce disruption of traffic patterns. Public information and awareness campaigns, motorist information strategies, and	EIR/EA pg 134	Select a response	Contractor	Draft Traffic Management Plan	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	incident management strategies would alert the public of the temporary construction shoo-fly detours and the Project.									

CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Biology	**BIO-1:** Best Management Practices (BMPs): • Disturbed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events. • Disturbed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities. • All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly. • All construction materials, vehicles, stockpiles, and staging areas would be situated outside of ephemeral ditches as feasible. All stockpiles would be covered, as feasible. • All erosion control measures and storm water control measures would be properly maintained until final grading has been completed and permanent erosion control measures have been implemented. • All disturbed areas would be restored to pre-construction contours so that hydrologic function of the ephemeral ditches is not permanently impacted. • All construction materials would be hauled off-site after completion of construction.	EIR/EA pg 59	Select a response	Contractor	Implement BMPs	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-2:** Refueling or maintenance of equipment shall not be permitted to occur within the ephemeral ditches at the	EIR/EA pg 60	Select a response	Contractor	No refueling/maintenance	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	Project site. Refueling and maintenance shall occur on the existing paved roadways rather than within natural communities when feasible. When refueling and maintenance activities occurs in natural communities, plastic sheeting or other secondary containment measures will be used to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).				in ditches. Utilize secondary containment.					
Biology	**BIO-3:** Equipment will be checked daily for leaks and will be well maintained to prevent lubricants and any other deleterious materials from entering natural environments.	EIR/EA pg 60	Select a response	Contractor	Check equipment daily.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-4:** A chemical spill kit must be kept onsite and available for use in the event of a spill.	EIR/EA pg 60	Select a response	Contractor	Keep chemical spill kit onsite and use on spills.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-5:** Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all equipment/materials located in a natural area (ephemeral ditch or creosote bush scrub habitat) as needed to prevent petroleum products or other chemicals from contaminating the soil or from spilling directly into ephemeral ditches. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).	EIR/EA pg 60	Select a response	Contractor	Enter action	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-6:** Project activities will not occur during any periods of precipitation or surface water flow in the ephemeral ditches within the BSA. In the Mojave Desert, this is most likely to occur between November and April, and during the summer monsoon season from July to September. When precipitation is occurring or surface water is flowing, Project work within the ephemeral ditch channels will be halted in order to minimize disturbance to aquatic resources and desert wildlife, which is most active during this critical time when water is available.	EIR/EA pg 60	Select a response	Contractor	Restrict activities during precipitation or surface water flow.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-7:** Following the completion of project activities, areas that have been disturbed by project activities within the BSA will be re-graded to pre-construction conditions. Specifically, the sandy ephemeral ditches	EIR/EA pg 60	Select a response	Contractor	Return temporarily disturbed areas to preconstruction conditions.	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	that flow under the existing bridges will be re-graded so that natural water flow would be allowed to return through the Project area following the next precipitation event.									
Biology	**BIO-8:** Following construction, soil within impact areas will be decompacted and a seed mix of locally native desert shrubs will be applied to natural areas disturbed by construction activities in order to kick start the site's natural cycle of plant recruitment.	EIR/EA pg 60	Select a response	Contractor	Apply a seed mix of locally native desert shrubs to natural areas disturbed by construction activities	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-10:** During the ideal blooming period prior to the beginning of construction activities, a rare plant survey will be conducted by an authorized biologist. If individuals or populations of rare plants are observed within the BSA during this survey, the area around the rare plant will be marked with high-visibility Environmentally Sensitive Area (ESA) fencing. project activities will not be permitted to encroach upon the fencing and vegetation removal will not be authorized within the boundaries of said fencing.	EIR/EA pg 70	Select a response	Biologist and Contractor	Conduct Biological survey and if ESA is required, contractor installs fencing and does not enter ESA.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-11:** All vegetation removal will be minimized to the greatest extent feasible. When possible, vegetation removal will be accomplished with the use of hand tools. Trees and shrubs shall be trimmed rather than removed unless absolutely necessary for project activities.	EIR/EA pg 70	Select a response	Contractor	Minimize vegetation removal.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-12:** If desert bighorn sheep are observed within the Project area, work will be halted until the individual(s) have left the Project area. Construction personnel is not authorized to come into direct contact with desert bighorn sheep. The species must be allowed to move throughout the Project area undisturbed by humans, vehicles, or construction machinery.	EIR/EA pg 75	Select a response	Contractor	Halt work until bighorn sheep leave Project are.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-13:** An authorized project biologist, approved by CDFW and USFWS, will monitor initial ground disturbing activities at the Project site which may cause take of the desert tortoise. The authorized biologist will also oversee the implementation of all avoidance and minimization measures put in place to protect the desert tortoise.	EIR/EA pg 80	Select a response	Biologist	Monitor initial ground disturbing activities.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-15:** Construction impact areas shall be staked in order to contain construction activities within the Project boundaries. These areas shall be marked with	EIR/EA pg 80	Select a response	Contractor	Stake limits of construction and	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	temporary desert tortoise exclusion fencing marked with high visibility flagging. The desert tortoise fencing must be in compliance with the standards outlined in the 2009 *USFWS Desert Tortoise (Mojave Population) Field Manual*. The desert tortoise exclusion fencing ESAs shall be delineated in coordination with the authorized project biologist.				desert tortoise exclusion fencing.					
Biology	**BIO-16:** Desert tortoise exclusion fencing will be inspected monthly and immediately after precipitation events during project activities by the authorized project biologist and repaired as needed. Repairs must occur within two days. Any debris that accumulates along the fence should be removed as the fence is inspected.	EIR/EA pg 80	Select a response	Biologist	Inspect desert tortoise exclusion fencing.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-17:** The Project biologist shall monitor initial ground disturbing activities for tortoise activity. Should a desert tortoise be found within the Project limits, construction activities shall cease and the USFWS and CDFW shall be contacted immediately. The tortoise shall be allowed to leave the Project area limits undisturbed. Construction may only recommence at the Project biologist's authority and once the desert tortoise is outside of project limits.	EIR/EA pg 81	Select a response	Biologist	Monitor initial ground disturbing activities	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-18:** Project personnel shall carefully check under parked vehicles or equipment for desert tortoises before moving said vehicles or equipment. Should a desert tortoise be found, the protocol outlined in measure **BIO-17** shall be followed.	EIR/EA pg 81	Select a response	Contractor	Inspect vehicles/equipment.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-19:** Construction and maintenance vehicles shall not exceed 15 mph in tortoise habitat, which includes all natural communities within the BSA, during periods of higher tortoise activity, March 1 through November 1. Outside of this window, vehicles shall not exceed 25 mph in tortoise habitat.	EIR/EA pg 81	Select a response	Contractor	Follow 15 mph between March 1and November 1; Follow 25 mph all other times.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-20:** Open trenches, auger holes, or other excavations that may act as pitfall traps shall be inspected prior to working in or around the excavation and prior to backfilling. Other excavations that remain open overnight shall be covered to prevent them from becoming pitfall traps. Any animals found within the excavations shall be relocated by the Project biologist. Should any listed or sensitive species be found within these excavations, the appropriate wildlife agency shall be contacted immediately, and subsequent	EIR/EA pg 81	Select a response	Biologist and Contractor	Inspect trenches, holes, and other excavations.	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	action shall be performed under the direction of the lead wildlife agencies.									
Biology	**BIO-21:** Should a desert tortoise be injured as a result of project related activities; it shall be immediately taken to a CDFW approved rehabilitation facility by the authorized biologist. The CDFW approved rehabilitation facility in the vicinity of the Project area is the Big Bear Alpine Zoo (909) 584-1299. Any veterinarian bills for such injured tortoises shall be paid by San Bernardino County. The CDFW and USFWS shall be notified within five calendar days of the incident. Notification shall include the date, time, location, and circumstances of the incident.	EIR/EA pg 81	Select a response	Biologist	Take injured tortoise to rehabilitation facility.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-22:** Should a desert tortoise be killed by project related activities or found dead within the construction area, remains shall be collected by the Project biologist and frozen as soon as possible. CDFW and USFWS shall be notified and a written report shall be sent within five calendar days of the incident. Notification shall include the date, time, location, and circumstances of the finding.	EIR/EA pg 81	Select a response	Biologist	Report tortoise finding.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-23:** Prior to the initial arrival at the first bridge of the Project site and prior to leaving at the completion of construction, equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.	EIR/EA pg 70	Select a response	Contractor	Prevent spread of invasives.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-24:** The construction contractor shall avoid removing any vegetation or performing structure demolition during the nesting bird season (February 15-August 31). If either of these activities must occur within the nesting season, a pre-construction nesting bird survey must be conducted no more than 3 days prior to the activity commencing. Structure demolition or vegetation removal must occur within 3 days from the nesting bird survey. A no-disturbance buffer will be established around any active nest of migratory birds and raptor species. Standard no-disturbance buffers of 100 feet for migratory birds and 300 feet for raptor species may be altered at the discretion of the Project biologist, based on species, location of the nest, and the biologist's expertise. The contractor must immediately stop work in the nesting area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the Project biologist and in coordination with the County)	EIR/EA pg 74	Select a response	Contractor and Biologist	If constructing between February 15 and August 31, conduct nesting bird survey prior to construction activities.	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	in the buffer area until a qualified biologist determines the young have fledged.									
Biology	**BIO-26:** All construction crew members will allow wildlife enough time to escape initial clearing and grubbing activities. Where determined appropriate by the Project biologist, initial clearing and grubbing must be accomplished through the use of hand tools. If initial clearing and grubbing through the use of hand tools is not feasible, then heavy equipment may be used if operated at speeds less than 3 miles per hour.	EIR/EA pg 75	Select a response	Contractor and Biologist	Allow wildlife to leave Project area on its own. Biologist to determine where hand tools or equipment can be used.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	**BIO-27:** The contractor must dispose of all food-related trash in closed containers and must remove it from the Project area each day during construction. Construction personnel must not feed or attract wildlife to the Project area.	EIR/EA pg 75	Select a response	Contractor	Dispose of food trash in closed container and remove from Project each day.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	**BIO-28:** The contractor must not apply rodenticide or herbicide within the BSA during construction.	EIR/EA pg 75	Select a response	Contractor	No rodenticide or herbicide.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	**BIO-29:** Placement and construction of rock slope protection will require the interstitial spaces within the rock slope protection to be filled with substrate to prevent trapping of desert tortoise.	EIR/EA pg 81	Select a response	Contractor	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-1:** If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.	EIR/EA pg 43	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-2:** If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact District 8 Division of Environmental Planning; Andrew Walters, DEBC: (909)383-2647 so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.	EIR/EA pg 43	Select a response	Archaeologist and Caltrans	Halt work and assess discovery.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**CUL-3b: SOIS Action Plan.** An Action Plan for compliance with the Secretary of the Interior's Standards for Rehabilitation (36 CFR 67) (SOIS Action Plan) was approved by Caltrans to avoid adverse effects to the	EIR/EA pg 43	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	late 1950s Paddleboards (metal postmile markers) located at four of the 10 bridges (Bristol Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, and Leith Ditch Bridge) and 9 C-Markers located at six bridges (Larissa Ditch Bridge, Cerulia Ditch Bridge, Terra Ditch Bridge, Cerro Ditch Bridge, Adena Ditch Bridge, and Gordo Ditch Bridge) pursuant to the FHWA/Caltrans Section 106 PA Stipulation X.B.1.b. Caltrans shall ensure the SOIS Action Plan, included as MOA Attachment 4, is implemented by the Responsible Parties identified in the plan at the milestones specified therein. In general, the SOIS Action Plan involves temporarily removing the C-Markers and Late 1950s Paddleboards prior to construction, storing them in protective materials during construction, and reinstalling them following construction. The Late 1950s Paddleboards will be rehabilitated in accordance with the SOIS standards through paint refurbishment to better match the original coloration.									
Cultural Resources	**CUL-3c: Construction Monitoring.** County shall prepare a construction monitoring plan and conduct periodic monitoring of construction activities to ensure the project is conducted in a manner that meets the stipulations outlined in the MOA. The monitoring plan and its ongoing status will be included in the annual reports submitted pursuant to MOA Stipulation IV.F. Caltrans shall ensure that the construction monitoring plan is implemented. Within three months following the completion of construction and prior to the expiration of the MOA, a monitoring report shall be prepared and submitted to the SHPO to document project completion and compliance with the treatment of Historic Properties outlined in the MOA. The monitoring report may be combined with the final annual report prepared for the Undertaking pursuant to MOA Stipulation IV.F. The monitor shall meet the appropriate professional qualifications standards in accordance with MOA Stipulation IV.A.3.	EIR/EA pg 44	Select a response	County	Implement	Enter date	Enter Name	Enter date	Enter remarks	Yes
Cultural Resources	**TCR-1:** The San Manuel Band of Mission Indians Cultural Resources Department shall be contacted should any indigenous cultural resources be discovered during Project implementation and be provided information regarding the nature of the discovery, so that the San Manuel Band of Mission Indians can provide input with regards to significance and treatment. If cultural resources are discovered which are considered historical resources and/or tribal cultural resources as defined under the California Environmental Quality Act, and avoidance cannot be ensured, a qualified archaeologist meeting the Secretary of Interior Professional Qualification Standards shall develop an	EIR/EA pg 136	Select a response	Archaeologist and Caltrans	Halt work and consult.	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	Archaeological Monitoring and Treatment Plan in coordination with the County and Caltrans, as specified in CUL-3d. If the discovery involves indigenous resources, the Archaeological Monitoring and Treatment Plan shall allow for a monitor to be present that represents the San Manuel Band of Mission Indians for the remainder of the Project's ground disturbing activities in the area of the indigenous resource discovery, should the San Manuel Band of Mission Indians elect to place a monitor on-site. The drafts of the Archaeological Monitoring and Treatment Plan shall also be provided to San Manuel Band of Mission Indians Cultural Resources Department for review and comment. An archaeological monitor shall implement the Archaeological Monitoring and Treatment Plan accordingly and shall apply the plan to all subsequent cultural resource discoveries.									
Cultural Resources	**TCR-2:** Any and all archaeological/cultural documents created as a part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the County for dissemination to San Manuel Band of Mission Indians. The County shall, in good faith, consult with San Manuel Band of Mission Indians throughout the life of the Project.	EIR/EA pg 137	Select a response	County	Send documentation.	Enter date	Enter Name	Enter date	Enter remarks	No
Paleontology	**PAL-1:** If unanticipated discoveries of paleontological resources occur during construction, all work within 50 feet of the discovery should be halted until the find has been evaluated by a qualified paleontologist.	EIR/EA pg 111	Select a response	Contractor and Paleontologist	Halt work and assess discovery.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Hazardous Waste	**HAZ-1:** It is anticipated that yellow pavement striping will be removed since it is present over each bridge along NTH. Removal of yellow striping and pavement marking materials would be performed in accordance with latest Caltrans Standard Special Provision for REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS. If yellow striping is removed in conjunction with the existing pavement, the paint striping can be considered non-hazardous material and a provision for handling the paint is not required.	EIR/EA pg 56	Select a response	Contractor	Follow Caltrans Standard Special Provision for REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Hazardous Waste	**HAZ-2:** Lead-based paint is presumed to be present within the bridge barriers. The contractor shall ensure lead-based paint is properly managed and removed from the Project site in accordance with the latest Caltrans Standard Special Provision for	EIR/EA pg 56	Select a response	Contractor	Follow Caltrans Standard Special Provision for DISTURBANCE OF EXISTING PAINT SYSTEMS ON BRIDGES.	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	DISTURBANCE OF EXISTING PAINT SYSTEMS ON BRIDGES.									
Hazardous Waste	**HAZ-3:** Treated wood along bridge deck barriers and supports underneath each bridge contain chemicals, e.g., creosote, which pose a risk to human health and the environment and must be handled in accordance with CCR, Title 22, Division 4.5 implemented by the Department of Toxic Substances Control (DTSC). Section 14-11.14 provides guidelines on handling, storing, transporting, and disposing of Treated Wood Waste (TWW). Caltrans follows the regulations adopted by DTSC regarding TWW, which may be handled as a regulated solid waste and disposed of in a State Water Resources Control Board certified solid waste landfill. The contractor shall ensure that removal of TWW would be performed in accordance with the latest Caltrans Standard Special Provision for TREATED WOOD WASTE.	EIR/EA pg 57	Select a response	Contractor	Follow Caltrans Standard Special Provision for TREATED WOOD WASTE.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Hazardous Waste	**HAZ-4:** As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during project construction (such as previously undetected petroleum hydrocarbon contamination from former underground storage tanks). If known or previously unknown hazardous waste/material is encountered during construction, the procedures outlined in the Caltrans Hazards Procedures for Construction shall be followed.	EIR/EA pg 57	Select a response	Contractor	Follow Caltrans Hazards Procedures for Construction shall be followed.	Enter date	Enter Name	Enter date	Enter remarks	Yes

POST-CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Select a category	Enter task and brief description	Enter source	Select a response	Enter name	Enter action	Enter date	Enter Name	Enter date	Enter remarks	Select a response
Select a category	Enter task and brief description	Enter source	Select a response	Enter name	Enter action	Enter date	Enter Name	Enter date	Enter remarks	Select a response
Select a category	Enter task and brief description	Enter source	Select a response	Enter name	Enter action	Enter date	Enter Name	Enter date	Enter remarks	Select a response
Select a category	Enter task and brief description	Enter source	Select a response	Enter name	Enter action	Enter date	Enter Name	Enter date	Enter remarks	Select a response

Environmental Commitment Record for the National Trails Highway at 10 Bridges Project

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Select a category	Enter task and brief description	Enter source	Select a response	Enter name	Enter action	Enter date	Enter Name	Enter date	Enter remarks	Select a response
Select a category	Enter task and brief description	Enter source	Select a response	Enter name	Enter action	Enter date	Enter Name	Enter date	Enter remarks	Select a response

Appendix D. List of Acronyms and Abbreviations

AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ADA	American Disabilities Act
ADL	Aerially deposited lead
ADT	Average Daily Traffic
AMSL	Above mean sea level
APE	Area of Potential Effects
AQR	Air Quality Report
ARDR	Aquatic Resources Delineation Report
ASR	Archaeological Survey Report
BMPs	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal EPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDWR	California Department of Water Resources
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFG	California Fish and Game
CGP	Construction General Permit
CH_4	Methane
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
COZEP	Construction Zone Enhanced Enforcement Program
CRHR	California Register of Historic Places
CT-EMFAC	Caltrans Emission Factors Model
CWA	Clean Water Act
dBA	Decibel A-weighted
dbh	diameter at breast height
EB	Eastbound
EDCAQMD	El Dorado County Air Quality Management District
EDR	Environmental Data Resources

EIR/EA	Environmental Impact Report/Environmental Assessment
EIS	Environmental Impact Statement
E.O.	Executive Order
ESA	Environmentally Sensitive Area
FCAA	Federal Clean Air Act
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
GHG	greenhouse gases
H&SC	Health and Safety Code
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
HOV	High-occupancy vehicles
HSPR	Historic Property Survey Report
HUC	Hydrologic Unit Code
H_2S	Hydrogen Sulfide
IPCC	Intergovernmental Panel on Climate Change
ICE	Intersection Control Evaluation
IS	Initial Study
ISA	Initial Site Assessment
ITS	Intelligent Transportation System
KV	Key view
Lb	Pound
Ldn	day-night average sound level
LEDPA	Least Environmentally Damaging Practicable Alternative
Leq	equivalent continuous sound level
LID	Low impact development
Lmax	maximum sound level
LOS	Level of Service
MASH	Manual for Assessing Safety Hardware
MLD	Most Likely Descendent
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MDAQMD	Mojave Desert Air Quality Management District
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
Mph	miles per hour

MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer Systems
MSL	mean sea level
MT	Metric tons
MTIP	Metropolitan Transportation Improvement Program
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decision Report
NAHC	Native American Heritage Commission
NB	Northbound
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
NOA	Notice of Availability
NOA	Naturally Occurring Asbestos
NO_2	nitrogen dioxide
N_2O	nitrous oxide
NOX	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSR	Noise Study Report
O_3	Ozone
OHWM	Ordinary high water mark
OPR	Office of Planning and Research
PA&ED	Project Approval and Environmental Documentation
PA	Programmatic Agreement
PeMS	California Freeway Performance Measure System
PG&E	Pacific Gas and Electric
Pb	Lead
PEIR	Programmatic Environmental Impact Report
PLAC	Permits, Licenses, Agreements, and Certifications
PM	particulate matter
POAQC	Project of Air Quality Concern
PRC	Public Resources Code
PS&E	Plans Specifications and Estimates
PTE	Permission to enter
RAP	Relocation Assistance Program
RECs	Recognized Environmental Conditions
ROG	Reactive organic compounds

RSA	Resource Study Area
RWQCB	Regional Water Quality Control Board
SANBAG	San Bernardino Association of Governments
SB	southbound
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
SF_6	Sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLF	Sacred Land Files
SMARA	Surface Mining and Reclamation Act
SO_2	sulfur dioxide
SOIS	Secretary of the Interior's Standards
SR	State Route
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminants
TCR	Tribal Cultural Resource
TCMs	Transportation Control Measures
TMDL	Total Maximum Daily Load
TMP	Traffic Management Plan
TOAR	Traffic Operations Analysis Report
UCMP	UC Museum of Paleontology
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USGS	United States Geological Survey
U.S. EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VIA	Visual Impact Assessment
VOC	Volatile Organic Compounds
VMT	Vehicle miles traveled
VRP	Visibility-reducing particles
WB	westbound
WDRs	Water Discharge Requirements
WPCP	Water Pollution Control Program
WQAR	Water Quality Assessment Report

Appendix E. Notice of Preparation

The following comment letters were received during public circulation of the Notice of Preparation and associated Initial Study. All comments are addressed within the text of the document.

- Native American Heritage Commission, April 12, 2021
- United States Army Corps of Engineers, June 2, 2021

Appendix F. Required Consultation/Concurrence Documentation

The following required consultation/concurrence documentation is included in this Appendix:

State Historic Preservation Officer

- Memorandum of Agreement – Date Pending – In SHPO Review
- Finding of Effect Concurrence – December 15, 2022
- Determinations of Eligibility Concurrence – June 20, 2022

US Fish and Wildlife Service

- Not Likely to Adversely Affect Determination – January 3, 2022

Appendix G. Biological Species List

List of Technical Studies Bound Separately

Natural Environment Study (NES) (Dokken Engineering, April 2021)

Biological Assessment (BA) and Section 7 Consultation (Dokken Engineering, October 2021)

Hazardous Waste Initial Site Assessment (ISA) (Dokken Engineering, December 2021)

Section 4(f) Evaluation (Dokken Engineering, March 2023)

Historic Property Survey Report (HPSR) (GPA Consulting, April 2022)

Archaeological Survey Report (ASR) (Dokken Engineering, April 2022)

Historic Resources Evaluation Report (HRER) (Mikesell Historical Consulting, April 2022)

Finding of Effect Report (FOE) (GPA Consulting and Mikesell Historical Consulting, September 2022)

Memorandum of Agreement (MOA) (GPA Consulting and Mikesell Historic Consulting, In SHPO Review)

Cultural Resources Report for CEQA (GPA Consulting, May 2023)

Paleontological Resources Memorandum (Cogstone, June 2021)