Draft Initial Study & Mitigated Negative Declaration

Chualar Canyon Road Bridge Replacements Project

February 2024

CEQA Lead Agency:

County of Monterey

Prepared by:

moffatt & nichol

4225 East Conant Street
Long Beach, CA 90808
Contact: Stephanie Oslick, AICP, ENV SP

This page intentionally left blank.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICES

LIST OF ACRONYMS AND ABREVIATIONS

AB-52	Assembly Bill 52
APE	Area of Potential Effect
BMPs	Best Management Practices
BSA	Biological Study Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
County	County of Monterey
CRHR	California Register of Historical Resources
CWA	Clean Water Act
EIR	Environmental Impact Report
ESA	Environmentally Sensitive Area
F	Farmland
G	Grazing
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
MND	Mitigated Negative Declaration
M&N	Moffatt & Nichol
ND	Negative Declaration
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
PG	Permanent Grazing
the Project	Chualar Canyon Bridge Replacement Project
RWQCB	Regional Water Quality Control Board
RG	Rural Grazing
RMA	Monterey County Resource Management Agency
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resource Control Board
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WPCP	Water Pollution Control Plan

1.0 INTRODUCTION

1.1 Summary

The County of Monterey (County) Department of Public Works, Facilities and Parks (PWFP) has determined that the proposed Chualar Canyon Bridge Replacement Project or "Project", and the required discretionary actions of the County for the Project, require compliance with the guidelines and regulations of the California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code Section 21000 et seq.). This Initial Study and Mitigated Negative Declaration (IS/MND) addresses the direct, indirect, and cumulative environmental effects associated with the proposed Project.

This IS/MND has been prepared in conformance with CEQA; California Code of Regulations (CCR) Section 15070 of the State Guidelines for Implementation of the California Environmental Quality Act of 1970 ("CEQA Guidelines"), as amended (CCR, Title 14, Chapter 3, Section 15000 et seq.), and applicable requirements of the Lead Agency, County Department of Public Works, Facilities and Parks.

This IS/MND has determined that the proposed Project would result in potentially significant environmental impacts; however, mitigation measures are proposed that would reduce any potentially significant impact to less than significant levels. As such, the County concludes that an IS/MND is the appropriate document to provide the necessary environmental evaluations and clearance.

1.2 Statutory Authority and Requirements

In accordance with CEQA (Public Resources Code Sections 21000-21177) and pursuant to CCR Section 15063 of the CEQA Guidelines set forth at Title 14 of the California Code of Regulations, the Lead Agency for the Project is undergoing environmental review in this document. Acting in the capacity of CEQA Lead Agency, the County is required to undertake the preparation of an Initial Study (IS) to provide information to use as the basis for evaluating whether an Environmental Impact Report (EIR), Negative Declaration (ND), or Mitigated Negative Declaration (MND) is appropriate for providing the necessary environmental documentation for the proposed Project.

The purpose of an IS is to: (1) identify potential environmental impacts; (2) provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or ND; (3) enable the project sponsor/applicant or Lead Agency to modify a project to mitigate adverse impacts before an EIR is prepared; (4) facilitate environmental assessment early in a project; (5) provide documentation of the factual basis for the finding in a ND that a project would not have a significant environmental effect; (6) eliminate needless EIRs; (7) determine whether a previously prepared EIR could be used for a project; and (8) assist in the preparation of an EIR, if required, by focusing on the effects determined to be significant, identifying the effects determined not to be significant, and explaining why potentially significant effects are not be significant.

CCR Section 15063 identifies global disclosure requirements for inclusion in an IS. Pursuant to those requirements, an IS must include: (1) a description of the project, including the location of the project;

(2) an identification of the environmental setting; (3) an identification of environmental effects by use of a checklist, matrix or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries; (4) a discussion of ways to mitigate significant effects identified, if any; (5) an examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls; and (6) the name of the person or persons who prepared or participated in the preparation of the IS.

According to CCR Section 15065(a), an EIR must be prepared for a project if any of the following conditions occur:

- The project has 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 an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.
- The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
- The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
- The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

According to CCR Section 15070(a), an ND is deemed appropriate if the IS shows that there is no substantial evidence, in light of the whole record before the Lead Agency, that the project may have a significant effect on the environment.

According to CEQA Guidelines CCR Section 15070(b), an MND is deemed appropriate if it identifies potentially significant effects, if

- Revisions in the project plans or proposals made by or agreed to by the sponsor/applicant before a proposed IS/MND is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and
- There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

1.3 Intended Uses of this Initial Study and Mitigated Negative Declaration

This IS/MND is intended to be an informational document for the County, PWFP, the general public, and for responsible agencies to review and use when approving subsequent discretionary actions for the Project. The resulting documentation is not a policy document, and its approval and/or adoption neither presupposes nor mandates any actions on the part of those agencies from which permits and other discretionary approvals would be required.

The Notice of Intent (NOI) to Adopt an MND, IS/MND and supporting analysis (sometimes referred to as “document”) is subject to a minimum **30-day public and agency review period (February 15 – March 22, 2024)**. During this review period, comments on the document should be addressed to PWFP. A virtual public meeting will be held on Wednesday, March 6, 2024 from 6:00pm to 7:30pm [https://moffattnichol.zoom.us/j/83473942161?from=addon (Meeting ID: 834 7394 2161) (669 900 6833)], unless updated on the County website (https://www.co.monterey.ca.us/government/departments-i-z/public-works-facilities-parks/public-works/current-major-projects) .Following review of any comments received, PWFP will consider these comments as a part of the environmental review of the Project and include them with the IS/MND documentation for consideration by the appropriate authority within the County. This IS/MND document is available at 1441 Schilling Place, South 2nd Floor, Salinas, California 93901 and/or https://www.co.monterey.ca.us/government/departments-i-z/public-works-facilities-parks/public-works/current-major-projects.

1.4 Technical Studies

This IS/MND also uses information provided in the following technical reports, which are included in the appendices:

- Area West Environmental, Inc. Biological Resources Technical Memorandum for the Chualar Canyon Road Bridges Replacement Project on Chualar Canyon Road in Monterey County, California, dated October 2023 (Appendix B)
- Area West Environmental, Inc. Aquatic Resources Delineation Report for the Chualar Bridges Replacement Project, Monterey County, California, dated October 2023 (Appendix C)
- JRP Historical Consulting, LLC. Historic Evaluation of Bridges 302, 303, 304, and 305, Chualar Canyon Road, Monterey County, California, dated January 2023 (Appendix D)
- Area West Environmental, Inc. Cultural Resources Report Chualar Canyon Road Bridge Replacement Project, dated November 2023 (Appendix E)
- HDR|WRECO. Bridge Design Hydraulics Study Memorandum, dated August 2023 (Appendix F)
- Moffatt & Nichol. Chualar Canyon Road Bridges Replacement Project: Water Quality Report, dated September 2023 (Appendix G)
- Moffatt & Nichol. Construction Noise Analysis, Chualar Canyon Road Bridge Project, dated October 2023 (Appendix H)

2.0 INITIAL STUDY / ENVIRONMENTAL CHECKLIST

2.1 Project Title

Chualar Canyon Road Bridge Replacements Project

2.2 Lead Agency

County of Monterey

2.3 Project Contact

Douglas Poochigian, PE

Civil Engineer

County of Monterey Department of Public Works, Facilities and Parks

1441 Schilling Place, South 2nd Floor

Salinas, California 93901

2.4 Project Sponsor

Randy Ishii, MS, PE, TE, PTOE

Director

County of Monterey Department of Public Works, Facilities and Parks

1441 Schilling Place, South 2nd Floor

Salinas, California 93901

2.5 Project Description

Replacements four different bridges (Nos. 302, 303, 304, and 305) along Chualar Canyon Road in the County of Monterey.

2.6 Project Location

The Project site is located along Chualar Canyon Road approximately five miles to the northeast of Highway 101. Affected parcels include the following six Assessor Parcel Numbers: 415081031000, 145072023000, 415121009000, 415121012000, 415121014000, and 145101007000. Four of the parcels (415081031000, 145072023000, 415121009000, 415121012000) are under Agricultural Preserve Williamson Act contracts (numbers #77-004 and #68-094).

2.7 General Plan / Zoning Designations

Land Use Zoning District Designations: Farmlands – 40 acre minimum – Design Control (F/40-D), Rural Grazing – 10 acre minimum – Design Control (RG/10-D), and Permanent Grazing – 40 acre minimum – Design Control (PG/40-D).

2.8 Environmental Setting and Surrounding Land Uses

The Chualar Canyon Bridge Replacement Project is located in Chualar, unincorporated County of Monterey, California (Figure 1). It is surrounded by farmland (F), grazing (G), rural grazing (RG), and permanent grazing (PG). Bridge 302 (0.45 acres), Bridge 303 (0.49 acres), and Bridges 304 and 305 (1.76 acres), totaling approximately 2.70 acres (Figures 2-5). Bridge 302 is located within a Rural Grazing Zoning District designation and, Bridges 303, 304/305 are located within a Farmlands Zoning District designation within the unincorporated area of the County of Monterey.

2.9 Project Description

The County, as the Lead Agency pursuant to CEQA, is proposing to implement bridge replacements for four different bridges (302, 303, 304, & 305) along Chualar Canyon Road in the County of Monterey.

Although the original date that the bridges were built is unknown, they were all modified sometime between 1940-1948. They are located approximately 1.8 miles, 2.1 miles, 2.7 miles, and 2.8 miles, respectively, east of the Chualar and Old Stage Road intersection in the unincorporated community of Chualar, which is a census-designated place in the Salinas Valley, County of Monterey, California.

M&N performed inspections of the four bridges in 2020 and subsequently load rated them. All bridges are approximately 15-foot-long single spans and therefore, maintained by PWFP. The abutments for bridges 302 and 303 are founded on concrete spread footings. Bridge 304 is mostly founded on concrete spread footing abutments and partially on steel pile caps with driven railroad rails as piles. Bridge 305 is founded on steel pile cap abutments with driven railroad rails as piles and is also intermittently supported with a steel A-frame support system underneath the slab. A Planning Study submitted by M&N recommended replacement of the bridges with either reinforced concrete box culverts or single span slab bridges due to the lack of access for heavy emergency vehicles. The Project will replace the bridges with one-cell or two-cell concrete box culverts, slab bridges, or a Precast Arch Bridge system. The culvert extensions will be paved and tied back.

The total impact area of the Chualar Creek stream bed is approximately less than 0.02 acres per bridge, totaling less than 0.08 acres of total impact area for the Project. There will be “low-water” detours adjacent to the four bridges during construction. There may be fill or earthwork for temporary bridges for these detours, and any fences that need to be taken down for the detour will be replaced after the bridge has been completed. These detours will be open to all traffic and any emergency vehicles, as the paved road will be closed during construction. With respect to cultural resources, the Area of Potential Effects (APE) will include permanent impact areas within the existing County Right of Way, and the detour will partially be outside of County Right of Way. The APE includes all area subject to ground disturbance for each bridge. Some trees/tree branches will need to be removed/trimmed, respectively, during the creation of the detours.

The Project is slated to be completed within the same construction season between June to October 2024. Staging areas for the bridges will be on the adjacent paved road as traffic will be detoured around the bridge locations.

Permits needed for the Project may include the following: United States Army Corps of Engineers 404 permit (anticipating a Nationwide 14 for Linear Transportation Projects), Regional Water Quality Control Board 401 Certification or Waste Discharge Permit, and California Department of Fish and Wildlife 1602 Streambed Alteration Agreement. Due to minimal impacts to federal and state jurisdictional areas, the agencies may determine that permits may not be required. Compliance with Section 106 of the National Historic Preservation Act of 1966 will also be required.

2.10 Project Background

Moffatt & Nichol (M&N) performed inspections of the four Chualar Canyon Road bridges in January 2020 and subsequently load rated them. All bridges are approximately 15-foot-long single span reinforced concrete slabs and maintained by County/PWFP. M&N staff identified deteriorating and "soft" concrete abutments while inspecting the bridges. Furthermore, the load rating analysis yielded insufficient structural capacity under legal loads, requiring the bridges to be posted. To mitigate bridge posting, the County is interested in evaluating feasible retrofit or replacement alternatives.

None of the bridges meet the criteria for or have any historical significance under any National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) Criterion. They are also not historical resources under CEQA (JRP Historical Consulting, 2023).

2.11 Other Permits and Approvals

This IS/MND is intended to be an informational document for the County, to review and use when evaluating subsequent discretionary actions for this Project. Table 1 provides a partial list of other responsible agencies, trustee agencies, and/or entities that may rely upon this IS/MND to grant subsequent discretionary approvals and/or permits, where applicable, related to Project implementation.

Table 1. Other Permits and Approvals

Agency/Entity	Permit/Approval	Description	Timing
United States Army Corps of Engineers (USACE)	404 Nationwide Permit	Work within jurisdictional Waters of the US	Prior to construction
Regional Water Quality Control Board (RWQCB)	401 Certification	Work within jurisdictional Waters of the State	Prior to construction
California Dept of Fish and Wildlife (CDFW)	1602 Agreement	Work within CDFW Streambed	Prior to construction
County of Monterey Public Works, Facilities and Parks	Tree Removal	Removal of Trees	Prior to construction

2.12 Consultation with California Native American Tribe(s)

The PWFP initiated formal AB-52 consultation requests on January 6, 2023, and concluded consultation on February 6, 2023. The Ohlone/Costanoan-Esselen Nation and the Salinan Tribe of Monterey and San Luis Obispo Counties requested formal consultation. A summary of AB-52 correspondences is provided below:

Ohlone/Costanoan-Esselen Nation

Ground disturbance activities monitored by a cultural resource specialist from the tribe, cultural sensitivity training for construction crews, digital copies of professional reports.

Salinan Tribe of Monterey, San Luis Obispo Counties

Phase 1 Request, ground disturbance activities monitored by a cultural resource specialist from the tribe.

2.13 Environmental Factors Potentially Affected

Potential environmental impacts listed below are addressed in this IS. Those that are checked below have been identified as involving at least one "Potentially Significant Impact". As indicated by the checklist on the following pages, mitigation measures have been identified to reduce the impact to less than significant.

☐	Aesthetics	☐	Mineral Resources
☐	Agriculture and Forestry Resources	X	Noise
☐	Air Quality	☐	Population/Housing
X	Biological Resources	☐	Public Services
X	Cultural Resources	☐	Recreation
☐	Energy	☐	Transportation
☐	Geology/Soils	X	Tribal Cultural Resources
☐	Greenhouse Gas Emissions	☐	Utilities/Service Systems
☐	Hazards & Hazardous Materials	☐	Wildfire
X	Hydrology/Water Quality	☐	Mandatory Findings of Significance
☐	Land Use/Planning		

2.14 Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet (Appendix A) have been added to the Project. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Signature:	Douglas Poochigian, P.E.	Date:	2/2/2024
Printed Name:	Douglas Poochigian, P.E.	Title:	Civil Engineer

3.0 ENVIRONMENTAL ANALYSIS

The environmental analysis provided below in Section 3.0 is based on the IS Checklist recommended by the CEQA Guidelines, as amended, and used by the Lead Agency in its environmental review process. For the environmental review undertaken as part of this IS preparation, a determination of potentially significant impacts indicates the need to more fully analyze the Project's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the IS Checklist are stated and an answer is provided according to the analyses undertaken as part of this IS, which consider the short-term, long-term, direct, indirect, and cumulative impacts of the Project. There are four possible responses to each question:

- ***No impact.*** The Project would not have any measurable environmental impact on the environment.
- ***Less than significant impact.*** The Project would have the potential to impact the environment, although this impact would be negligible, it would be below established thresholds that are considered to be significant and/or would be reduced to less than significant with the implementation of established plans, policies, procedures and/or regulations.
- ***Less than significant with mitigation.*** The Project would have the potential to generate impacts, which may be considered as a significant effect on the environment, although mitigation measures or changes to the Project's physical or operational characteristics would reduce these impacts to levels that are less than significant.
- ***Potentially significant impact.*** The Project could have impacts that may be considered significant and, therefore, additional analysis is required to identify mitigation measures that could reduce potentially significant impacts to less than significant levels.

The following is a discussion of potential Project impacts as identified in the Initial Study/Environmental Checklist. Explanations are provided for each item.

3.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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) 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?	☐	☐	☐	☒

a) Would the Project have a substantial adverse effect on a scenic vista?

No impact. This project will not have a substantial adverse effect on a scenic vista.

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

No impact. The project will not substantially damage any scenic resources and there are no state scenic highways near the project sites. The closest eligible scenic highway is Route 25 about 11 miles east of the project on the other side of the Gabilan Mountain Range.

c) Would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?

No impact. The project will not substantially degrade the existing visual character. The project is only to replace existing bridges, there will be no change in visual character of the sites.

d) Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact. The project will not create a new light or glare source.

Avoidance, Minimization, and/or Mitigation Measures

No significant impacts were identified for Aesthetics and no mitigation measures are required.

Sources:

Caltrans State Scenic Highway Map (2018), accessed at https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa on 7/28/2023

3.2 Agricultural 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 Department 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 forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. – Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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 agricultural 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?	☐	☐	☐	☒

a) Would the Project 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?

No Impact. The project will not convert any Farmland to non-agricultural use. The project is surrounded by Grazing Land per the California Department of Conservation California Important Farmland Finder (Figure 6). The project is to replace small bridges along Chualar Canyon Road and will not affect any of the surrounding Farmland.

b) Would the Project conflict with existing agriculture zoning for agricultural use, or a Williamson Act contract?

No impact. The project will not conflict with existing zoning for agricultural use or a Williamson Act contract. The Project Parcels are within Farmland, Rural Grazing and Permanent Grazing Zoning District designations consisting of; F/40-D, RG/10-D, PG/40-D. Four of the six affected Project parcels are subject to an Agricultural Preserve Williamson Act contract (numbers #77-004 and #68-094), but there is no conflict with the existing zoning for agricultural use F/40-D, RG/10-D, PG/40-D nor the County's approved list of compatible uses for Williamson Act Contracts.

c) Would the Project 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))?

No impact. There is no timberland or forest land in the project area.

d) Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

No impact. The project would not result in the loss of forest land.

e) Would the Project 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?

No impact. The Project will not result in the conversion of farmland or forest land to non-agricultural nor non-forest use.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Agricultural and Forest Resources and no mitigation measures are required.

Sources

California Department of Conservation, California Important Farmland Finder. Webpage dated 2022. Accessed at https://maps.conservation.ca.gov/DLRP/CIFF/ on 10/26/2023

California Department of Conservation, California Williamson Act Enrollment Finder. Webpage dated 2022. Accessed at https://maps.conservation.ca.gov/dlrp/WilliamsonAct/ on 1/4/2024

County of Monterey Parcel Report Web App. Webpage undated. Accessed at https://maps.co.monterey.ca.us/wab/parcelreportwebapp/ on 1/11/2024

3.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. – Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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)?	☐	☐	☐	☒

a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

No impact. The project will not conflict with or obstruct the Monterey Bay Air Resources District Air Quality Management Plan.

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

No impact. This project would not result in a cumulatively considerable net increase in any criteria pollutant.

c) Would the Project expose sensitive receptors to substantial pollutant concentrations?

No impact. There are no sensitive receptors near the project site to be exposed to substantial pollutant concentrations.

d) Would the Project result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?

No impact. The project would not result in any other emissions.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Air Quality and no mitigation measures are required.

Sources

Monterey Bay Air Resources District. 2012-2015 Air Quality Management Plan. (2017). 41 pages.

3.4 Biological Resources

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and 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?	☐	☐	☐	☒

a) Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Less Than Significant with Mitigation. There are eleven special-status wildlife species determined to have low to moderate potential to occur at the Project sites, with other migratory birds and raptors having potential to occur within or adjacent to the Biological Study Areas (BSAs)(Appendix B). There are three special-status plant species with low potential to occur within the vicinity of the project, but none of these species were encountered during field surveys. BIO 1-18 will reduce any impacts to less than significant.

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

No impact. The project will not have a substantial adverse impact on any sensitive habitats. The Biological Study Areas do not contain riparian habitat or other sensitive natural communities.

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

Less Than Significant with Mitigation. The United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) identified the Chualar Creek as a riverine feature within the BSAs. Additionally, an unnamed stream that flows south to north to the Bridge 304 and 305 BSA was identified during the NWI review. No other wetlands or waterbody features were identified on the NWI within the BSAs.

The Project sites do contain federal and state protected water features (Chualar Creek) regulated under Section 404 and 401 of the Clean Water Act (CWA). The Project sites do not support any wetlands regulated by federal or state agencies per the Aquatic Resources Delineation Report for the Project, (Appendix C). BIO-19: Implement Water Quality BMPs will reduce any impacts to less than significant by requiring the Project to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP).

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

No impact. The Biological Study Area (BSA) does not fall within Essential Connectivity Areas or Natural Landscape Blocks. The BSAs are within Terrestrial Connectivity Areas, ranging from limited connectivity opportunities to previously mapped connectivity linkages.

The Project should not interfere with the movement of any species that would use the Terrestrial Connectivity Areas.

e) Would the Project conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance?

No impact. The Project will not conflict with any preservation policies or ordinances. Due to the possible detours while the bridges are being replaced, trees may need to be removed or trimmed for clearance. Should any trees need to be removed for the Project, the proper permits will be obtained from the County of Monterey per BIO- 20.

There are twenty-two trees with a diameter at breast height of four inches or greater within the four Project sites, and five of the coast live oak trees would qualify for protection under the County Preservation of Oak and Other Protected Trees Ordinance as private protected trees.

f) Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No impact. The Project does not conflict with any approved conservation plan.

Avoidance, Minimization and/or Mitigation Measures

Avoidance, Minimization and/or Mitigation Measures to minimize impacts to biological resources are identified in the Biological Resource Technical Memorandum for the Chualar Canyon Road Bridges Replacement Project on Chualar Canyon Road in Monterey County, California (Appendix B) as follows:

BIO-1: Conduct Environmental Awareness Training

Before any work occurs in the Project sites, including grading and equipment staging, all construction personnel would participate in an environmental awareness training regarding special-status species and sensitive habitats in the Project sites. If new construction personnel are added to the Project, they must receive the mandatory training before starting work. The training would discuss sensitive resources including waters of the United States and State, special-status species and habitats, and nesting birds/raptors. It would also cover Project measures required to avoid impacts to sensitive resources, including permit conditions identified by state and federal agencies.

BIO-2: Minimize Vegetation Removal

Following completion of final Project design, prior to initiation of Project activities, all trees and shrubs to be removed would be identified and clearly marked, to prevent accidentally removing trees and shrubs that should not otherwise be affected. The disturbance or removal of vegetation, especially oak trees, would not exceed the minimum necessary to complete the Project and would only occur within the defined work area.

Areas within the Project sites where avoidance of impacts to special-status species habitat and native tree species is determined to be feasible would be protected during Project activities. These areas would be considered an Environmentally Sensitive Area (ESA).

BIO-3: Install and Maintain Temporary Fencing Around Environmentally Sensitive Areas

Final construction drawings would identify the locations of temporary fencing around an ESA to ensure that sensitive resources proposed for avoidance (waters of the United States and State, native trees, special-status species habitat, etc.) would be protected during construction activities. Locations of ESA fencing would be determined in coordination with the Project biologist, with the goal or minimizing the impact to environmentally sensitive habitat.

ESA fencing must be installed prior to the initiation of any vegetation removal, equipment staging, construction, or other Project activity. Fencing would consist of temporary construction barrier fencing, silt fencing, and/or flagging, as recommended by the Project biologist, and would be installed between the work area and an ESA. Construction personnel and construction activity would be required to avoid an ESA. The fencing/flagging would be checked regularly and maintained until all construction is complete.

BIO-4: Restore Temporarily Disturbed Areas

All temporarily disturbed areas would be returned to pre-Project habitat conditions upon completion of construction. Immediately after construction is complete, all exposed soil would be stabilized. Soil stabilization may include, but is not limited to, seeding with a native grass seed mix, planting native plants, and placement of rock. These areas would be properly protected from washout and erosion using appropriate erosion control devices including coir netting, hydroseeding, and revegetation. The existing grades in temporary impact areas would be recontoured to existing habitat conditions.

BIO-5: Conduct a Preconstruction Survey for Crotch’s Bumble Bee

A biologist would conduct a preconstruction clearance survey for Crotch’s Bumble Bee nests within 48 hours prior to any ground disturbance within the Project Area. This survey would consist of walking transects while conducting visual encounter surveys within areas that would be subject to staging, vegetation clearing, grubbing, grading, cut and fill, or other ground disturbing activities. If a Crotch’s Bumble Bee nest is identified within the construction work area, the biologist would consult with CDFW to determine an appropriate no-disturbance buffer to ensure avoidance of the nest.

BIO-6: Crotch’s Bumble Bee Take Avoidance

- Small mammal burrows, thatched/bunch grasses, bush piles, and soil piles would be surveyed by a qualified biologist during the preconstruction surveys. If it is determined that there is a presence of an endangered or protected species during the preconstruction surveys, the location should be avoided by a minimum of 50 feet as best as possible to avoid take and potentially significant impacts during construction and ground-disturbing operations and maintenance activities.

- CDFW recommends also obtaining an incidental take permit from CDFW prior to Project operations for authorization of the take of these species that is likely to occur (CDFW 2020 in Area West, 2023b).

- CDFW recommends also obtaining take authorization during construction if nesting habitat is present and cannot be avoided by 50 feet (CDFW 2020 in Area West, 2023b).

BIO-7: Monitor during Initial Ground Disturbance and Vegetation Removal

A qualified biological monitor would be present during initial Project activities requiring ground disturbance (e.g., grading and excavation) or vegetation removal within the construction area.

BIO-8: Provide Escape Ramps or Cover Open Trenches

To avoid entrapment of wildlife, all excavated steep-walled holes or trenches more than 1 foot deep would be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, then holes or trenches would be covered with plywood or similar materials. Providing escape ramps or covering open trenches would prevent injury or mortality of wildlife resulting from falling into trenches and becoming trapped. The trenches would be thoroughly inspected for the presence of federally listed species at the beginning of each workday. Any species observed would be allowed to voluntarily move outside of the work area on its own. If at any time a trapped listed animal is discovered, an escape ramp or other appropriate structures would be installed to allow the animal to escape, and the United States Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW), as appropriate for the species, would be contacted for further guidance and if needed, to reinitiate consultation.

BIO-9: Conduct Preconstruction Surveys for Special-Status Amphibians and Reptiles

A qualified biologist would conduct a survey for California tiger salamander, California red-legged frog, and San Joaquin coachwhip within 48 hours prior to the initiation of any ground disturbing activities within or adjacent to suitable habitat for California tiger salamander, California red-legged frog, and San Joaquin coachwhip in the BSA. This survey would consist of walking transects while conducting visual encounter surveys within potential habitat. Potential habitat features in the BSA, such as crevices, burrows, and/or insulated ledges along waterways would be inspected for signs of the California tiger salamander, California red-legged frog, and San Joaquin coachwhip usage to the maximum extent practicable.

If any California tiger salamander, California red-legged frog, or San Joaquin coachwhip are observed in the Project work limits during construction, work would immediately stop within a 50 feet buffer of the animal, and the animal would be allowed to move out of harm's way on its own accord. The USFWS and CDFW would be contacted to reinitiate consultation or obtain a permit, as appropriate, if California tiger salamander or California red-legged frog is observed.

BIO-10: Install Temporary Special-status Amphibian and Reptile Exclusion Fencing

Within 48 hours following completion of preconstruction surveys for special-status amphibians and reptiles, exclusion fencing would be installed around the work areas with ingress/egress access being the only break in the barrier. The location of exclusion fencing will be shown on construction drawings and may be modified in the field by the resident engineer coordinating with the qualified biologist, with the goal of allowing individuals within the work area to move out and to keep individuals from entering the work area.

The fencing material height would be suitable for wildlife exclusion and the lower portion of the fence would be buried in a six-inch trench. One way eviction funnels would be installed within the exclusion fence to allow amphibians and reptiles to move out of, but not re-enter, the Project site. Installation of the fencing would occur under the supervision of a qualified biologist. The fencing would be regularly checked and maintained until all construction is complete. No construction activity shall be allowed until this condition is satisfied.

BIO-11: Construction Best Management Practices (BMPs)

Construction best management practices (BMPs) shall be implemented for work near Chualar Creek located within the Project sites, including working in the dry season, keeping heavy equipment out of the streambed, refueling and maintaining equipment outside of the floodplain, stockpiling soils outside the floodplain, tree removal only as necessary to complete improvements, and other measures identified by the USACE.

BIO-12: Seasonal Avoidance

Project activities would be scheduled to minimize adverse effects to the California tiger salamander and the California red-legged frog and their habitat. Disturbance to upland habitat will be confined to the dry season, generally May 1 through October 31 (or the first measurable fall rain of 1 inch or greater), because that is the time period when California tiger salamanders and California red-legged frogs are less likely to be moving through upland areas.

BIO-13: Rain Event Limitations

To the maximum extent practicable, no construction activities would occur during rain events or within 24 hours following a rain event.

BIO-14: Disease and Decontamination Procedures

To ensure that diseases are not conveyed between work sites by the approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force would be followed at all times.

BIO-15: Conduct Pre-construction Burrowing Owl Surveys

- If possible, vegetation removal would be implemented outside of the avian breeding season, which generally extends from February through August.
- If vegetarian removal must occur during the avian breeding season, a qualified biologist shall conduct 1-day focused surveys for burrowing owls on and within 1,650 feet adjacent to the Project sites where accessible.
- Surveys shall be conducted within 7 days prior to commencement of construction activities including removal of trees and clearing and grubbing and again within 48 hours prior to the initiation of any Project work during the bird nesting season (between February 1 and August 31), including vegetation removal, equipment staging, and construction.
- For surveys outside the Project sites where property access has not been granted, the surveying biologist shall use binoculars to scan any suitable habitat for burrowing owls or their sign (e.g., pellets, feathers, appropriately sized burrows).
- Surveys shall be conducted in accordance with the CDFG's Staff Report on Burrowing Owl Mitigation (Staff Report), published March 7, 2012. Surveys will be done within 14 days prior to construction activities and will be repeated if project activities are suspended or delayed

for more than 15 days during nesting season. If no burrowing owls are detected, no further mitigation is required.

- If an active burrow is found during the nonbreeding season, the qualified biologist will consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion and relocation plan will be developed according to guidance provided in CDFG's Staff Report on Burrowing Owl Mitigation (CDFG 2012). Owls will be relocated outside of the impact area using passive or active methods developed in consultation with CDFW and may include active relocation to preserve areas if approved by CDFW and the preserve managers. No burrowing owls will be excluded from occupied burrows until the burrowing owl exclusion and relocation plan is approved by CDFW.

- If an active burrow is found during the breeding season, occupied burrows will not be disturbed and will be provided with a 50-to-500-meter protective buffer unless a qualified biologist verified through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The appropriate size of the buffer will depend on the time of year and level of disturbance as outlined in the CDFG Staff Report (2012).

- A report shall be prepared and submitted to the County following the surveys to document the results.

- If a lapse in construction activities for one week or longer occurs during the avian breeding season, another survey shall be performed prior to work re-initiation.

BIO-16: Conduct Preconstruction Survey for Swainson's Hawk, Golden Eagle, and other Nesting Bird and Raptor Surveys

If possible, vegetation removal would be implemented outside of the avian breeding season, which generally extends from February to August. If vegetation removal must occur during the avian breeding season, a qualified biologist shall conduct a preconstruction nesting bird and raptor survey prior to the start of vegetation removal.

- Removal or disturbance of trees shall occur during periods outside the bird nesting season (September 16 to January 31), to the extent feasible. For any construction activities that will occur between February 1 and September 15, the applicant shall obtain a qualified biologist to conduct pre-construction surveys in suitable nesting habitat within 0.25 miles for Swainson's hawk nests, 500 feet of the construction area for other nesting raptors, and 100 feet for migratory birds. Surveys shall be conducted within 7 days prior to commencement of construction activities including removal of trees and clearing and grubbing and again within 48 hours prior to the initiation of any Project work during the bird nesting season (between February 1 and August 31), including vegetation removal, equipment staging, and construction. The survey methods should follow those for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000 in Area West, 2023b).

- If an active Swainson's hawk or golden eagle nest is identified, the qualified biologist will coordinate with CDFW.
- For raptor surveys outside the Project sites where property access has not been granted, the surveying biologist shall use binoculars to scan any suitable nesting substrate for potential raptor nests.
- A report shall be prepared and submitted to the County following the preconstruction survey to document the results. If no active nests are found during the preconstruction survey, no additional mitigation measures are required.
- If an active bird or raptor nest is identified within the construction work area or an active raptor nest is identified within the appropriate survey buffers from the construction work area, a no-disturbance buffer shall be established around the nest to avoid disturbance of the nesting birds or raptors until a qualified biologist determines that the young have fledged and are foraging on their own. The extent of these buffers shall be determined by the biologist (coordinating with CDFW, as applicable) and shall depend on the species identified, level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographic or artificial barriers. In addition to the establishment of buffers, other avoidance measures (determined in coordination with CDFW, as applicable) may include monitoring of the nest during construction and restricting the type of work that can be conducted near the nest site. If no active nests are found during the preconstruction surveys, then no additional mitigation is required.
- Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined on an individual basis), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the nest, the biologist shall have the authority to halt construction activities within the buffer until the nest is no longer active or until the biologist has determined that construction activities have been modified to eliminate impacts to the nest. Construction activities may re-commence once the biological monitor determines that the nest is no longer occupied, or the modifications have eliminated impacts. Modifications associated with eliminating impacts to the nest may be removed once the biological monitor determines that the nest is no longer active and the monitor is no longer needed.
- If a lapse in construction activities for one week or longer occurs during the avian breeding season, another pre-construction survey shall be performed prior to work re-initiation.

BIO-17: Conduct Preconstruction Bat Survey

A qualified biologist will conduct a pre-construction roost survey of all trees proposed for removal or trimming with the BSAs for the presence of bat roosts. Field surveys shall be conducted early in the breeding season before any construction activities begin, when bats are establishing maternity roosts but before pregnant females give birth (April through early May).

- If no roosting bats are found, then no further mitigation is required.
- If a bat maternity roost is found, then disturbance of the roost shall be avoided. Reduction of the buffer depends on the species of bat, the location of the roost relative to Project activities, activities during the time the roost is active, and other Project-specific conditions.
    - No work shall occur in the buffer until it is determined that the bats have left on their own, or until the end of the maternity season. Alternatively, a qualified bat biologist may exclude the roosting bats in consultation with the CDFW, thereby allowing construction to continue after successful exclusion activities.
    - Removal of a bat roost tree outside of the maternity season shall be conducted in two phases: day 1 will include liming the tree and on day 2 the tree shall be removed.

BIO-18: Conduct a Preconstruction American Badger Survey

The following measures would be implemented to minimize or avoid potential impacts to American badger:

- A qualified biologist would conduct a preconstruction survey for American badger and active dens within the BSAs.
- For surveys in inaccessible areas, the biologist would use binoculars to scan any suitable denning substrate for potential individuals or dens.
- The preconstruction survey would be conducted no more than 14 days before the initiation of construction activities.
- If no active dens are found during the preconstruction surveys, then no additional mitigation is required.
- If an active special-status mammal den is identified within the BSAs, a no-disturbance buffer would be established around the den to avoid disturbance of the denning mammal until a qualified biologist determines that the young have dispersed. The extent of these buffers would be determined by the biologist and would depend on the species identified, level of noise or construction disturbance, line-of-sight between the den and the disturbance, ambient levels of noise or other disturbances, and other topographical or artificial barriers.
- If any non-denning species are observed in the BSAs before or during construction, the species would be allowed to move out of harm's way on its own.

BIO-19: Implement Water Quality BMPs

Before any ground-disturbing activities, the County shall prepare and implement a SWPPP (as required under the SWRCB's General Construction Permit Order 2009-0009-DWQ[1] [and as amended by the most current order(s)]) that include erosion control measures and construction waste containment measures to ensure that waters of the State are protected during and after Project construction. The SWPPP would include site design to minimize offsite storm water runoff that might otherwise affect adjacent stream habitat.

The SWPPP shall be prepared with the following objectives: (a) to identify pollutant sources, including sources of sediment, that may affect the quality of storm water discharges from the construction of the proposed Project; (b) to identify BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the Project during construction; (c) to outline and provide guidance for BMP monitoring; (d) to identify proposed Project discharge points and receiving waters; to address post-construction BMP implementation and monitoring; and (f) to address sedimentation, siltation, and turbidity.

The SWPPP will require BMPs including, but not limited to:

- Conduct ground disturbing activities adjacent to and within Chualar Creek during the low-flow period (generally between June 1 and October 15).
- Install sediment fencing, fiber rolls, or other equivalent erosion and sediment control measures between the designated work area and Chualar Creek, as necessary, to ensure that construction debris and sediment does not inadvertently enter the drainage. The County will also cover or otherwise stabilize all exposed soil 48 hours prior to potential precipitation events of greater than 0.5 inch.
- No refueling, storage, servicing, or maintenance of equipment shall take place within 100 feet of aquatic habitat.
- All machinery used during construction of the Project shall be properly maintained and cleaned to prevent spills and leaks that could contaminate soil or water.
- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, state, and/or federal regulations.

BIO-20: Compensate for Permanent Impacts to Protected Trees

Prior to removal of a protected tree, the applicant shall obtain a County tree removal permit.

[1] On September 2, 2009, the State Water Resource Control Board (SWRCB) adopted the new statewide Construction General Permit (GSP), Order 2009-0009-DWQ. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

Sources

Area West Environmental, Inc. 2023a. Aquatic Resources Delineation Report for the Chualar Bridges Replacement Project, Monterey County, California. 22 Pages

Area West Environmental, Inc. 2023b. Biological Resource Technical Memorandum for the Chualar Canyon Road Bridges Replacement Project on Chualar Canyon Road in Monterey County, California. 84 pages.

County of Monterey. Webpage dated 2023. Code of Ordinances, Chapter 16.60. Accessed at https://library.municode.com/ca/monterey_county/codes/code_of_ordinances?nodeId=TIT16EN_CH16.60PROAOTPRTR on 10/27/2023.

3.5 Cultural Resources

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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 formal cemeteries?	☐	☒	☐	☐

a) Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

No impact. The Project will not cause a significant adverse change to any historical resources. There are no historical resources per the California Historical Resources List from the California State Parks Office of Historic Preservation, the Historic Advisory Commission of Monterey County, or the Historic Evaluation of Bridges 302, 303, 304, and 305, Chualar Canyon Road, Monterey County, California (Appendix D).

b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

No impact. The Project will not cause a significant adverse change to any archeological resources. There are no archeological resources per the California Historical Resources List from the California State Parks Office of Historic Preservation.

c) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact With Mitigation. The Project will not disturb any human remains, as the Project is only replacing current bridges and will not excavate any undisturbed land. If human remains are discovered, CUL-1 will reduce impacts to less than significant.

Avoidance, Minimization and/or Mitigation Measures

Avoidance, Minimization and/or Mitigation Measures to minimize impacts to cultural resources are identified in the Cultural Resources Report Chualar Canyon Road Bridge Replacement Project (Appendix E) as follows:

CUL-1: Procedures for Discovery of Human Remains

If human remains are discovered, all work must immediately cease, and the local coroner must be contacted. Procedures for the discovery of human remains will be followed in accordance with provisions of the State Health and Safety Code, Sections 7052 and 7050.5 and the State Public Resources Code (PRC) Sections 5097.9 to 5097.99. If the Coroner determines that the remains are those of a Native American, the Coroner shall contact the NAHC and subsequent procedures shall be followed, according to State Public Resources Code Sections 5097.9 to 5097.99, regarding notification of the Native American Most Likely Descendant.

Sources

Area West Environmental, Inc. 2023c. Cultural Resources Report Chualar Canyon Road Bridge Replacement Project. 189 pages.

California State Parks Office of Historic Preservation. 2023. California Historic Resources. Accessed at https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=27 on 7/28/2023

JRP Historical Consulting LLC. 2023. Historic Evaluation of Bridges 302, 303, 304, and 305, Chualar Canyon Road, Monterey County, California. 29 pages.

3.6 Energy

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	☐	☐	☐	☒

a) Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

No Impact. The Project will not result in a potentially significant impact to energy resources. There will be energy use during construction, but it will not be wasteful, inefficient, or unnecessary, and there will be no energy use during operation.

b) Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No impact. The Project will not conflict with any renewable energy plans.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Energy and no mitigation measures are required.

Sources

None.

3.7 Geology and Soils

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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 or most current edition), 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?	☐	☐	☐	☒

a) Would the Project 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.

No impact. The Project would not rupture a known earthquake fault. There is an unnamed fault in the Reliz fault zone approximately 8 miles to the southwest of the project sites. The closest named fault zone is the San Andreas Faultline approximately 10 miles to the northeast of the Project sites.

ii) Strong seismic ground shaking?

No impact. The Project would not cause any potential risks regarding seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?

No impact. The Project would not cause any potential risks regarding liquefaction.

iv) Landslides?

No impact. There are no landslides inventoried by the California Department of Conservation for Chualar, California.

b) Would the Project result in substantial soil erosion or the loss of topsoil?

No impact. The Project would not result in any substantial soil erosion or loss of topsoil.

c) Would the Project 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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

No impact. The Project is not located on a geologic unit or unstable soil.

d) Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks of life or property?

No impact. The Project is not located on expansive soil and will not create risks to life or property. Per the Aquatic Resources Delineation Report and the Biological Report, the Project is fully Hanford gravelly sandy loam, 0 to 5 percent slopes. This soil is gravelly sandy loam, derived from igneous rock. This soil unit is well drained with very low runoff. This soil map unit is not listed as hydric soil.

e) Would the Project 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?

No impact. The Project does not involve the use of septic tanks or alternative wastewater disposal systems.

f) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No impact. The Project will not destroy a unique paleontological resource.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Geology and Soils and no mitigation measures are required.

Sources

Area West Environmental, Inc. 2023a. Aquatic Resources Delineation Report for the Chualar Bridges Replacement Project, Monterey County, California. 2/13/2023

Area West Environmental, Inc. 2023b. Biological Report for the Chualar Bridges Replacement Project, Monterey County, California. 8/14/2023

California Department of Conservation Landslide Inventory. Accessed at https://maps.conservation.ca.gov/cgs/lsi/ on 7/28/2023

3.8 Greenhouse Gas Emissions

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	☐	☐	☐	☒

a) Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

No impact. The Project will not generate a significant amount of greenhouse gas emissions. There will be greenhouse gas emissions during construction, but it will not be wasteful, inefficient, or unnecessary, and there will be no greenhouse gas emissions during operation.

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

No impact. The Project will not conflict with any greenhouse gas reduction plan, policy or regulation.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Greenhouse Gas Emissions and no mitigation measures are required.

Sources

Monterey Bay Air Resources District. 2012-2015 Air Quality Management Plan. (2017). 41 pages.

3.9 Hazards and Hazardous Materials

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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 complied 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.	☐	☐	☐	☒

a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

No impact. The Project will not create a significant hazard by transporting, using, or disposing of hazardous materials.

b) Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No impact. The Project does not have the risk of releasing hazardous material into the environment.

c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No impact. The Project is approximately 5 miles northeast from the closest school, Chualar Union Elementary School.

d) Would the Project 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?

No impact. The Project would not be located on a hazardous material site. The closest site is the historical Chualar Dump Site on Chualar River Road on the opposite side of State Route 101, about 7 miles southwest of the Project site.

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?

No impact. The Project would not result in a safety hazard or excessive noise. The closest airport to the Project is Quail Creek Airport, approximately 4 miles northwest from the Project site.

f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No impact. The Project would not impair any emergency response plan, as there will be a detour during each bridge construction that will be open to normal traffic and any emergency vehicles. This Project is needed due to the existing bridges most likely being unable to handle the weight of emergency vehicles.

g) Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

No impact. The Project would not expose people or structures to a significant wildfire risk.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Hazards and Hazardous Materials and no mitigation measures are required.

Sources

California Department of Toxic Substances Control EnviroStor database. Webpage dated 2023. Accessed at https://www.envirostor.dtsc.ca.gov/public/search?CMD=search&ocieerp=&HWMP=False&business_name=&main_street_name=&city=Chualar&zip=&county=&censustract=&case_number=&apn=&Search=Get+Report on 10/27/2023

3.10 Hydrology and Water Quality

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☐	☒
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surface, 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	☐	☐	☐	☒
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?	☐	☐	☐	☒

a) Would the project violate or conflict with any adopted water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

No impact. The Project would not substantially degrade surface or groundwater quality or conflict with adopted water quality standards. All BMP's listed below will be implemented to and adhered to avoid potential impacts to water quality (Appendix F).

b) Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No impact. The Project would not substantially decrease groundwater supplies or interfere with groundwater management.

c) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

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;

Less Than Significant with Mitigation. The Project will not alter the existing drainage patterns, currents, circulation or the course of Chualar Creek. The replaced bridges will not make a substantial difference in the water surface elevation or the course of Chualar Creek. The Water Surface Elevation will be lowered by a maximum of 1.1 feet at Bridge 305, 0.9 feet at Bridge 303, 0.2 feet at 302, and no difference at Bridge 304. HWQ-1 *Implement Construction Best Management Practices for Erosion Control* will be used to prevent erosion of exposed soil and stockpiles, including watering for dust control, establishing perimeter silt fences, and/or placing fiber rolls.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant with Mitigation. The Project is not within a flood hazard, tsunami, or seiche zone, and will not risk pollutant release due to inundation. HWQ-2 *Place Management Practices that Involve Retention and/or Treatment of Surface Runoff Outside of 100-Year Floodplains or Tsunami or Seiche Inundation Zones* would implement good judgment in not placing structural management practices for sediment retention in areas immediately adjacent to large standing waterbodies that could be inundated during a seiche event.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No impact. The Project will not conflict with the Monterey County Groundwater Sustainability Plan/Salinas Valley Groundwater Basin 180/400-Foot Aquifer Subbasin 2022 Update.

Avoidance, Minimization and/or Mitigation Measures

Avoidance and Minimization Measures to minimize impacts to hydrology and water quality are identified in the Bridge Design Hydraulics Study Memorandum (Appendix F) and Water Quality Report (Appendix G)) as follows:

HWQ-1 Implement Construction Best Management Practices for Erosion Control.

Where construction of management practices would not be subject to the Construction General Permit or local grading ordinance, Agricultural Order 4.0 enrollees must implement the following measures during construction of the improvements, or must implement alternative measures that are demonstrated to be equally or more effective: Implement practices to prevent erosion of exposed soil and stockpiles, including watering for dust control, establishing perimeter silt fences, and/or placing fiber rolls.

1. Confirm that BMPs are included in contract documents, if any.
2. Confirm that all BMPs are implemented fully, and that erosion control measures use the best available technology that is economically achievable.

HWQ-2 Place Management Practices that Involve Retention and/or Treatment of Surface Runoff Outside of 100-Year Floodplains or Tsunami or Seiche Inundation Zones.

To the extent feasible, Agricultural Order 4.0 enrollees must place structural management practices that involve retention or treatment of runoff outside of Federal Emergency Management Agency-designated 100-year floodplains or identified tsunami or seiche inundation zones. Where seiche inundation zones have not been mapped, enrollees should use good judgment in not placing structural management practices for sediment retention in areas immediately adjacent to large standing waterbodies that could be inundated during a seiche event.

1. Confirm that applicable management practices are not located within 100-year floodplains, tsunami or seiche inundation zones.

The State Water Resources Control Board has the following mitigation measures:

HWQ-3: NPDES Compliance

The Project will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for the State of California, Department of Transportation, Order No. 2022-XXXX-DWQ, NPDES No. CAS000003 and any subsequent permits in effect at the time of construction.

HWQ-4: NPDES Construction General Permit

The Project will comply with the provisions of the NPDES Construction General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2022-0057-DWQ, NPDES No. CAS000002 and any subsequent permits in effect at the time of construction.

HWQ-5: Stormwater Pollution Prevention Plan or Water Pollution Control Plan

The Project will comply with the Construction General Permit by preparing and implementing a Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP) to address all construction-related activities, equipment, and materials that have the potential impact water quality for the appropriate Risk Level. The SWPPP or WPCP will identify the sources of pollutants that may affect the quality of stormwater and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management and non-stormwater BMPs. All work must conform to the Construction Site BMP requirements specified in the latest edition of the Stormwater Quality Handbooks: Construction Site Best Management Practices Manual to control and minimize the impacts of construction and construction related activities, material and pollutants on the watershed. These include, but are not limited to temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-stormwater BMPs.

HWQ-6: Best Management Practices

Design Pollution Prevention Best Management Practices (BMPs) will be implemented such as preservation of existing vegetation, slope/surface protection systems (permanent soil stabilization), concentrated flow conveyance systems such as ditches, berms, dikes, and swales, over side drains, flared end sections, and outlet protection/velocity dissipation devices.

Sources

HDR | WRECO. 2023. Bridge Design Hydraulics Study Draft Memorandum. 48 pages.

Moffatt & Nichol. 2023a. Chualar Canyon Road Bridges Water Quality Assessment. 10 pages

Salinas Valley Basin Groundwater Sustainability Agency. 2022. Salinas Valley Groundwater Basin 180/400-Foot Aquifer Subbasin 2022 Update. Accessed 3/14/2023 at https://svbgsa.org/wp-content/uploads/2022/09/180400-2022-GSP-09292022.pdf

3.11 Land Use and Planning

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	☐	☐	☐	☒

a) Would the Project physically divide an established community?

No impact. This Project will not physically divide an established community.

b) Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No impact. The Project will not conflict with any plan.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Land Use and Planning and no mitigation measures are required.

Sources

None.

3.12 Mineral Resources

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	☐	☐	☐	☒

a) Would the Project 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?

No impact. The Project would not result in the loss of availability of mineral resources.

b) Would the Project 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?

No impact. The Project would not result in the loss of availability of mineral resources. There is a Quarry 2 miles to the south of the project site and Sand and Gravel Pit just over 7 miles to the southwest across Highway 101. Neither of these mineral resource recovery sites will be affected by the Project.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Mineral Resources and no mitigation measures are required.

Sources

California Department of Conservation: Mines Online. 2016. Accessed at https://maps.conservation.ca.gov/mol/index.html on 8/2/2023

Google Maps Investigation. Aerial Photograph dated 2023. Accessed 10/26/2023

3.13 Noise

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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 ground-borne vibration or ground-borne 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?	☐	☐	☐	☒

a) Would the Project result in the 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?

No impact. The Project would not result in any permanent increase in ambient noise levels. There may be a temporary increase in ambient noise levels during construction, but this will not be substantial (Appendix H).

b) Would the Project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Less Than Significant with Mitigation. The Project will not result in excessive ground-borne vibration or noise levels. There are no protected, threatened, or endangered species in the Chualar Creek or surrounding area that would be impacted by the construction Project. The nearest sensitive receptor is a residence approximately 250 feet from the construction sites. Given the distance from the construction sites to the nearest sensitive receptor, the noise would not create a harassment level for residents along Chualar Canyon Road. Avoidance and minimization measures are listed below.

c) For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

No impact. The Project is not within two miles of an airport. The closest airport is Quail Creek Airport, approximately 4 miles northwest of the Project site.

Avoidance, Minimization and/or Mitigation Measures

Avoidance and Minimization Measures to minimize impacts to sensitive receptors are identified in the Construction Noise Analysis, Chualar Canyon Road Project (Appendix H) as follows:

NOI-1 Internal combustion engines

Internal combustion engines shall be equipped with a muffler of a type recommended by the manufacturer.

NOI-2: Noise abatement measures

As directed by the County PWFP Project Engineer, the contractor shall implement appropriate additional noise abatement measures including, but not limited to, siting the location of stationary construction equipment (e.g., generators, compressors) away from sensitive noise receptors to the greatest extent feasible, turning off idling equipment after no more than five minutes of inactivity, and rescheduling construction activity to avoid noise-sensitive days or times.

Sources

Moffatt & Nichol. 2023b. Construction Noise Analysis, Chualar Canyon Road Bridge Project. 3 pages.

3.14 Population and Housing

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial upland 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?	☐	☐	☐	☒

a) Would the Project 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)?

No impact. This Project will not induce substantial population growth in the area.

b) Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No impact. This Project will not displace a substantial population in the area.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Population and Housing and no mitigation measures are required.

Sources

None.

3.15 Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 following public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

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 government 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 following public services?

i) Fire protection

ii) Police protection

iii) Schools

iv) Parks

v) Other public facilities

No impact. This Project will not result in substantial adverse physical impacts to any public services. Emergency services will be able to access the surrounding areas during the Project construction duration. There are no schools or parks near the Project area that would be impacted by the Project.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Public Services and no mitigation measures are required.

Sources

None.

3.16 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	☐	☐	☐	☒

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?

No impact. This Project will not increase the use of existing neighborhood or regional parks.

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?

No impact. This Project will not increase the use of recreational activities.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Recreation and no mitigation measures are required.

Sources

None.

3.17 Transportation

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	☐	☐	☐	☒

a) Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit roadway, bicycle and pedestrian facilities?

No impact. The Project would not conflict with the transportation policy within the Regional Transportation Plan for the Transportation Agency of Monterey County (2022).

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

No impact. The Project would not conflict or be inconsistent with the abovementioned guidelines.

c) Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves of dangerous intersections) or incompatible uses (e.g., farm equipment)?

No impact. There will be no geometric design features or incompatible uses in the Project.

d) Would the Project result in inadequate emergency access?

No impact. The Project will not result in inadequate emergency access. There will be low water detours when the bridges are being replaced.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Transportation and no mitigation measures are required.

Sources

Transportation Agency for Monterey County. 2022. 2022-2045 Monterey County Regional Transportation Plan. 132 Pages.

3.18 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:

	Potentially Significant Impact	Less Than Significant with Mitigation	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 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

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 this:

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

No impact. The Project will not cause a significant adverse change to any cultural historical resources. There are no historical resources per the California Historical Resources List from the California State Parks Office of Historic Preservation.

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 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant with Mitigation. The project will not cause a significant adverse change to any resources. Chualar is a recorded Salinan village site per the Tribal Administrator for the Salinan Tribe. Local tribal entities have avoidance and minimization measures for the Project, noted below.

Avoidance, Minimization and/or Mitigation Measures

Avoidance and Minimization Measures to minimize impacts to tribal cultural resources are identified as follows:

TCR-1: Worker Cultural Sensitivity Training

Prior to subsurface disturbance activities, individuals conducting the work will be required to participate in Worker Cultural Sensitivity Training. Workers will be advised to watch for cultural resource materials, including evidence of pre-contact cultural resources (freshwater shells, beads, done tool remnants or an assortment of bones, soil changes including subsurface ash lens or soil darker "midden" in color than surrounding soil, lithic materials such as flakes, tools or grinding rocks, etc.), or historic-era cultural resources (abode foundations or walls, structures and remains with square nails, refuse deposits or bottle dumps, often associated with wells or old privies).

TCR-2: Tribal Cultural Monitor During Ground Disturbance

To minimize the potential for significant impacts to Tribal cultural resources and to help identify Tribal cultural resources, a Tribal monitor shall be present during all subsurface construction activities (such as demolition, pavement removal, and excavation). The Tribal cultural monitor will participate in evaluation of inadvertent discoveries (TCR-3). The County shall fund the costs of the qualified Tribal monitor.

TCR-3: Procedures for Inadvertent Discovery of Cultural Resources During Ground-Disturbing Activities

If a potentially significant historical or archeological resource is encountered during subsurface construction activities (such as demolition, pavement removal, and excavation), all construction activities within a 50-foot radius of the identified potential resource shall cease until a qualified archeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation (DPR) forms. The archeologist shall determine whether the item requires further study, in consultation with the Tribal cultural monitor. If, after the qualified archeologist conducts appropriate technical analyses, the item is determined to be significant under CEQA, the archeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlines in Public Resources Code section 21083.2. Upon the County's approval of the recommended mitigation measures, the County and contractor shall implement said measures. The County shall fund the costs of the qualified archeologist and required analysis and shall include this mitigation measure in the construction contract to inform contractors of this requirement.

Sources

Area West Environmental, Inc. 2023c. Cultural Resources Report Chualar Canyon Road Bridge Replacement Project. 189 pages.

California State Parks Office of Historic Preservation. 2023. California Historic Resources. Accessed at https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=27 on 7/28/2023

3.19 Utilities and Service Systems

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	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 serv' 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?	☐	☐	☐	☒

a) Would the Project 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?

No impact. The Project will not have any substantial environmental effects with the relocation or construction of facilities. There will be no relocations for the Project, but the existing power poles will be protected in place.

b) Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?

No impact. The Project should not need water supplies and should not need any water for future development.

c) Would the Project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

No impact. The Project should not increase projected demand for wastewater treatment.

d) Would the Project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No Impact. The Project would not generate excess solid waste.

e) Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. The Project will comply with solid waste regulations.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Utilities and Service Systems and no mitigation measures are required.

Sources

None.

3.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	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?	☐	☐	☐	☒

The project is not within a very high fire hazard severity zone per the Office of the State Fire Marshall Fire Hazard Severity Zones Map for Monterey County Local Responsibility Area (Figures 7 and 8). There are Very High Fire Hazard Severity Zones around the project site, but the project site itself is a Moderate Fire Hazard Zone (Figure 9).

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

a) Would the project Substantially impair an adopted emergency response plan or emergency evacuation plan?

No impact. The Project will not impair any emergency response plan or emergency evacuation plan. There will be a traffic management plan and detours when the bridges are being built. These detours will be accessible to both normal traffic and emergency vehicles.

b) Due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No impact. The Project will not exacerbate wildfire risks.

c) Would the Project 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?

No impact. The Project will not require installing or maintaining infrastructure that will exacerbate fire risk.

d) Would the Project 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?

No impact. The Project will not expose people or structures to risks.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified for Wildfire and no mitigation measures are required.

Sources

Office of the State Fire Marshall. Webpage dated 2023. Fire Hazard Severity Zones in State Responsibility Area – September 29, 2023. Accessed at https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008 on 10/27/2023

Office of the State Fire Marshall. Webpage dated 2008. Monterey County Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE. Accessed at https://osfm.fire.ca.gov/media/6728/fhszl_map27.pdf on 10/27/2023

3.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	☐	☐	☐	☒

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, 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?

No Impact. The Project should not have the potential to substantially degrade environmental quality.

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)?

No Impact. The Project should not have any cumulatively considerable impacts. There are no other projects near the Project that will have any other effects on the Project site.

c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

No Impact. This Project will not have any substantial adverse effects on human beings. The roads will not be fully closed during replacement, and there will be no environmental effects on the surrounding population.

4.0 LIST OF PREPARERS

4.1 Monterey County Public Works, Facilities and Parks (CEQA Lead Agency)

Douglas Poochigian, PE

Mary Perry

Erich Rauber

4.2 Moffatt & Nichol

Stephanie Oslick, AICP, ENV SP

Hanna Olson, ENV SP

Melissa Edwards

Garrett Dekker, PE

Krishna Adusumilli, PE

4.3 Area West

Becky Rozumowicz-Kodsuntie

Samantha Morford

4.4 HDR | WRECO

Chris Sewell

Alejandra Rodriguez

4.5 JRP Historical Consulting LLC

Christopher McMorris

Cheryl Brookshear

5.0 REFERENCES

Area West Environmental, Inc. 2023a. Aquatic Resources Delineation Report for the Chualar Bridges Replacement Project, Monterey County, California. 22 Pages

Area West Environmental, Inc. 2023b. Biological Resource Technical Memorandum for the Chualar Canyon Road Bridges Replacement Project on Chualar Canyon Road in Monterey County, California. 84 pages.

Area West Environmental, Inc. 2023c. Cultural Resources Report Chualar Canyon Road Bridge Replacement Project. 189 pages.

California Department of Conservation: California Important Farmland Finder. Webpage dated 2022. Accessed at https://maps.conservation.ca.gov/DLRP/CIFF/ on 10/27/2023

California Department of Conservation: Landslide Inventory. Webpage dated 2015. Accessed at https://maps.conservation.ca.gov/cgs/lsi/ on 10/27/2023

California Department of Conservation: Mines Online. Webpage dated 2016. Accessed at https://maps.conservation.ca.gov/mol/index.html on 10/27/2023

California Department of Conservation: California Williamson Act Enrollment Finder. Webpage dated 2022. Accessed at https://maps.conservation.ca.gov/dlrp/WilliamsonAct/ on 1/4/2024

California Department of Toxic Substances Control EnviroStor database. Webpage dated 2023. Accessed at https://www.envirostor.dtsc.ca.gov/public/search?CMD=search&ocieerp=&HWMP=False&business_name=&main_street_name=&city=Chualar&zip=&county=&censustract=&case_number=&apn=&Search=Get+Report on 10/27/2023

California State Parks Office of Historic Preservation. Webpage dated 2023. California Historic Resources. Accessed at https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=27 on 10/27/2023

California State Scenic Highway System Map. Webpage dated 2018. Accessed at https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa on 10/27/2023

County of Monterey. Webpage dated 2023. Code of Ordinances, Chapter 16.60. Accessed at https://library.municode.com/ca/monterey_county/codes/code_of_ordinances?nodeId=TIT16EN_CH16.60PROAOTPRTR on 10/27/2023

County of Monterey. Webpage undated. Parcel Report Web App. Accessed at https://maps.co.monterey.ca.us/wab/parcelreportwebapp/ on 1/11/2024

HDR | WRECO. 2023. Bridge Design Hydraulics Study Draft Memorandum. 48 pages.

Google Maps Investigation. Aerial Photograph dated 2023. Accessed at https://www.google.com/maps/@36.6008691,-121.4216868,15z?entry=ttu on 10/26/2023

JRP Historical Consulting. 2023. Historic Evaluation of Bridges 302, 303, 304, and 305, Chualar Canyon Road, Monterey County, California. 29 pages.

Moffatt & Nichol. 2023a. Chualar Canyon Road Bridges Water Quality Assessment. 10 pages.

Moffatt & Nichol. 2023b. Construction Noise Analysis, Chualar Canyon Road Bridge Project. 3 pages.

Monterey Bay Air Resources District. 2017. 2012-2015 Air Quality Management Plan. 41 pages.

Office of the State Fire Marshall. Webpage dated 2023. Fire Hazard Severity Zones in State Responsibility Area – September 29, 2023. Accessed at https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008 on 10/27/2023

Office of the State Fire Marshall. Webpage dated 2008. Monterey County Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE. Accessed at https://osfm.fire.ca.gov/media/6728/fhszl_map27.pdf on 10/27/2023

Salinas Valley Basin Groundwater Sustainability Agency. 2022. Salinas Valley Groundwater Basin 180/400-Foot Aquifer Subbasin 2022 Update. Accessed at https://svbgsa.org/wp-content/uploads/2022/09/180400-2022-GSP-09292022.pdf on 10/27/2023

Transportation Agency for Monterey County. 2022. 2022-2045 Monterey County Regional Transportation Plan. 132 Pages.

6.0 FIGURES

Figure 1: Location Map

Figure 2: Bridge 302 Site Photo (Source: Source: HDR | WRECO 2023)

Figure 3: Bridge 303 Site Photo (Source: HDR | WRECO 2023)

Figure 4: Bridge 304 Site Photo (Source: HDR | WRECO 2023)

Figure 5: Bridge 305 Site Photo (Source: HDR | WRECO 2023)

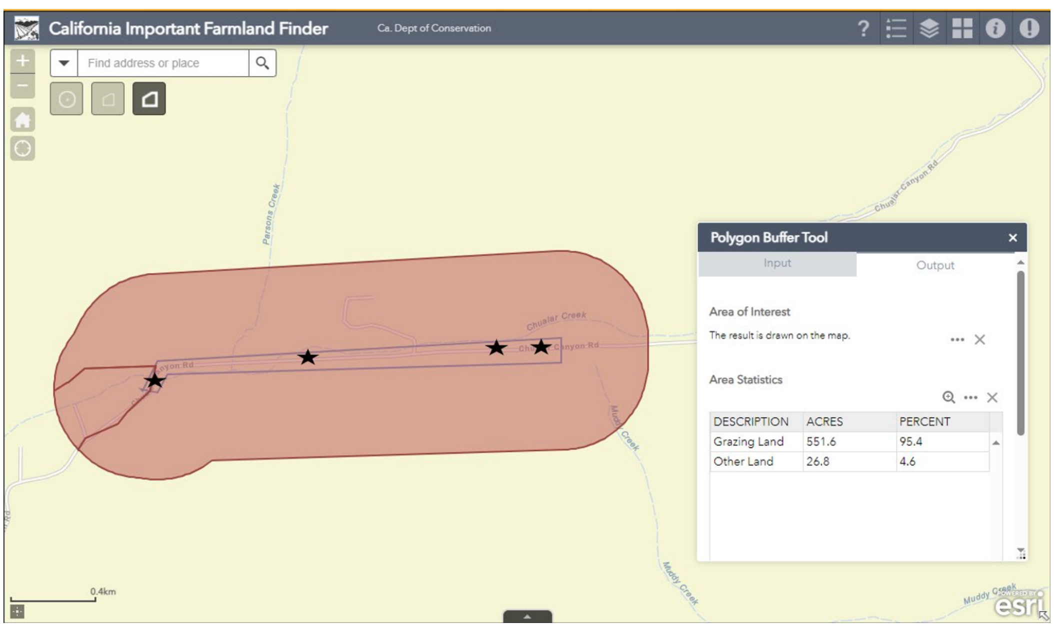


Figure 6: California Important Farmland Map

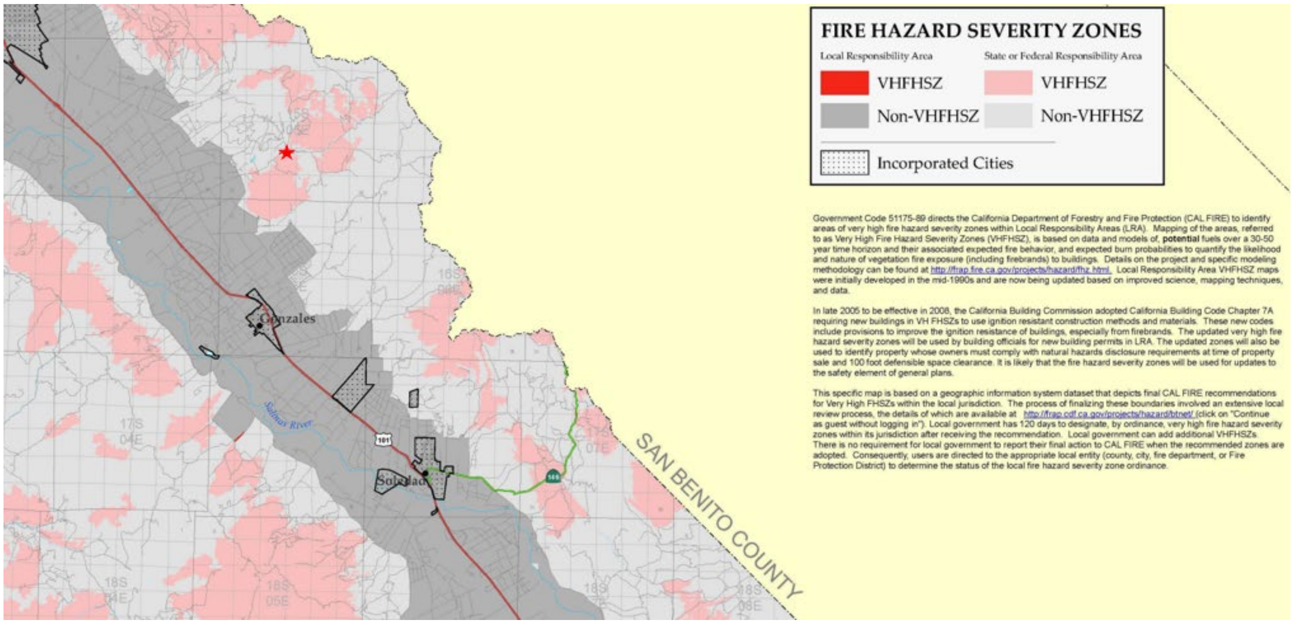


Figure 7: Regional Fire Map

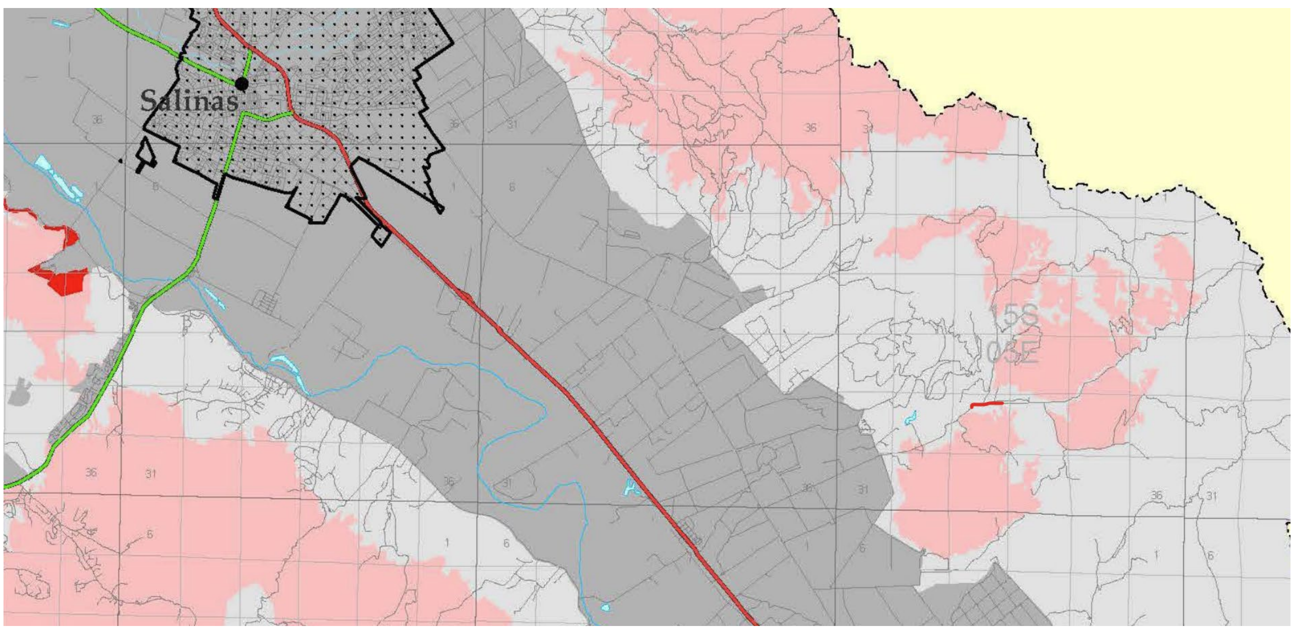


Figure 8: Location Fire Map

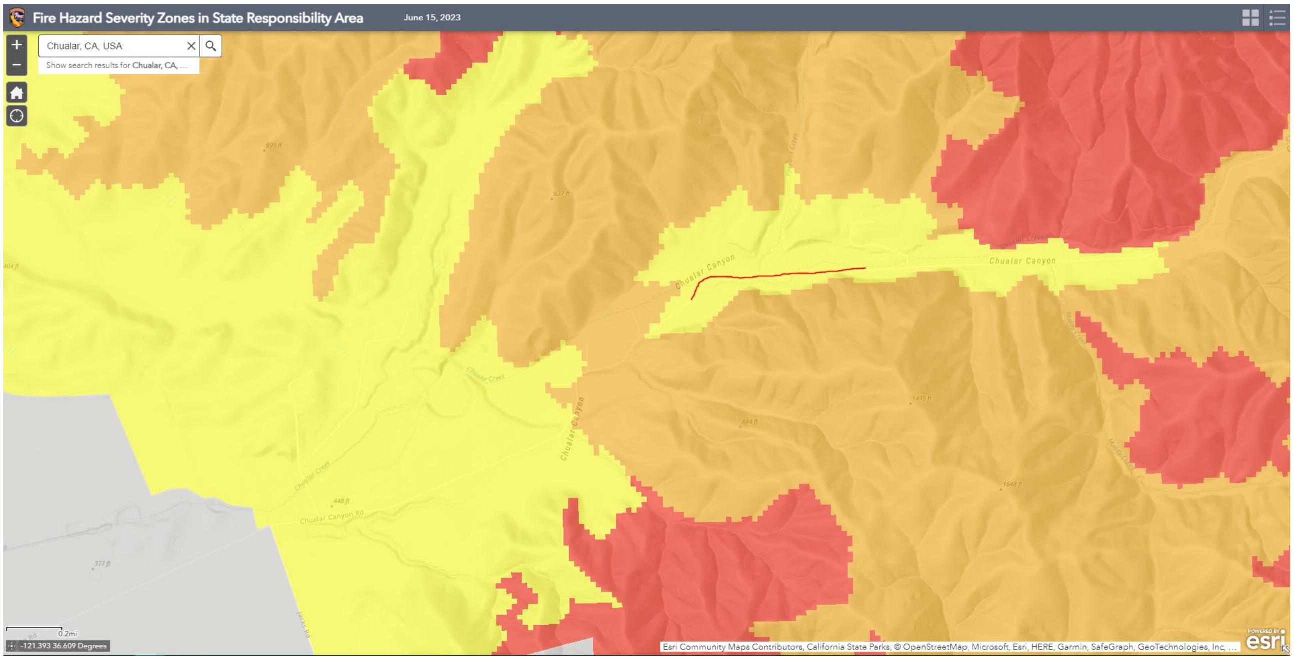


Figure 9: Fire Hazard Severity Zones in State Responsibility Areas

7.0 APPENDICES

Appendix A
Mitigation Monitoring and Reporting Program

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
Biology				
BIO-1: Conduct Environmental Awareness Training Before any work occurs in the Project sites, including grading and equipment staging, all construction personnel would participate in an environmental awareness training regarding special-status species and sensitive habitats in the Project sites. If new construction personnel are added to the Project, they must receive the mandatory training before starting work. The training would discuss sensitive resources including waters of the United States and State, special-status species and habitats, and nesting birds/raptors. It would also cover Project measures required to avoid impacts to sensitive resources, including permit conditions identified by state and federal agencies.				
BIO-2: Minimize Vegetation Removal Following completion of final Project design, prior to initiation of Project activities, all trees and shrubs to be removed would be identified and clearly marked, to prevent accidentally removing trees and shrubs that should not otherwise be affected. The disturbance or removal of vegetation, especially oak trees, would not exceed the minimum necessary to complete the Project and would only occur within the defined work area.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
Areas within the Project sites where avoidance of impacts to special-status species habitat and native tree species is determined to be feasible would be protected during Project activities. These areas would be considered Environmentally Sensitive Areas (ESAs).				
BIO-3: Install and Maintain Temporary Fencing Around Environmentally Sensitive Areas Final construction drawings would identify the locations of temporary fencing around ESAs to ensure that sensitive resources proposed for avoidance (waters of the U.S. and State, native trees, special-status species habitat, etc.) would be protected during construction activities. Locations of ESA fencing would be determined in coordination with the Project biologist, with the goal or minimizing the impact to environmentally sensitive habitat. ESA fencing must be installed prior to the initiation of any vegetation removal, equipment staging, construction, or other Project activity. Fencing would consist of temporary construction barrier fencing, silt fencing, and/or flagging, as recommended by the Project biologist, and would be installed between the work area and ESAs. Construction personnel and construction activity would be required to avoid ESAs. The fencing/flagging would be checked regularly and maintained until all construction is complete.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
BIO-4: Restore Temporarily Disturbed Areas All temporarily disturbed areas would be returned to pre-Project habitat conditions upon completion of construction. Immediately after construction is complete, all exposed soil would be stabilized. Soil stabilization may include, but is not limited to, seeding with a native grass seed mix, planting native plants, and placement of rock. These areas would be properly protected from washout and erosion using appropriate erosion control devices including coir netting, hydroseeding, and revegetation. The existing grades in temporary impact areas would be recontoured to existing habitat conditions.				
BIO-5: Conduct a Preconstruction Survey for Crotch's Bumble Bee A biologist would conduct a preconstruction clearance survey for crotch bumble bee nests within 48 hours prior to any ground disturbance within the Project Area. This survey would consist of walking transects while conducting visual encounter surveys within areas that would be subject to staging, vegetation clearing, grubbing, grading, cut and fill, or other ground disturbing activities. If a Crotch's Bumble Bee nest is identified within the construction work area, the biologist would consult with CDFW to determine an appropriate no-disturbance buffer to ensure avoidance of the nest.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
BIO-6: Crotch's Bumble Bee Take Avoidance • All small mammal burrows, thatched/bunch grasses, bush piles, and soil piles would be surveyed by a qualified biologist during the preconstruction surveys. If it is determined that there is a presence of an endangered or protected species during the preconstruction surveys, the location should be avoided by a minimum of 50 feet as best as possible to avoid take and potentially significant impacts during construction and ground-disturbing operations and maintenance activities. • CDFW recommends also obtaining an incidental take permit from CDFW prior to Project operations for authorization of the take of these species that is likely to occur (CDFW 2020). • CDFW recommends also obtaining take authorization during construction if nesting habitat is present and cannot be avoided by 50 feet (CDFW 2020).				
BIO-7: Monitor during Initial Ground Disturbance and Vegetation Removal A qualified biological monitor would be present during initial Project activities requiring ground disturbance (e.g., grading and excavation) or vegetation removal within the construction area.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	Method(s) of Verification	Timing of Verification	Monitoring Responsibility	Verification (Date/Initials)
BIO-8: Provide Escape Ramps or Cover Open Trenches To avoid entrapment of wildlife, all excavated steep-walled holes or trenches more than 1 foot deep would be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, then holes or trenches would be covered with plywood or similar materials. Providing escape ramps or covering open trenches would prevent injury or mortality of wildlife resulting from falling into trenches and becoming trapped. The trenches would be thoroughly inspected for the presence of federally listed species at the beginning of each workday. Any species observed would be allowed to voluntarily move outside of the work area on its own. If at any time a trapped listed animal is discovered, an escape ramp or other appropriate structures would be installed to allow the animal to escape, and the United States Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW), as appropriate for the species, would be contacted for further guidance and if needed, to reinitiate consultation.				
BIO-9: Conduct Preconstruction Surveys for Special-Status Amphibians and Reptiles A qualified biologist would conduct a survey for California tiger salamander, California red-legged frog, and San Joaquin coachwhip within 48 hours prior to the initiation of any ground disturbing activities within or adjacent to suitable habitat for California tiger salamander,				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
California red-kegged frog, and San Joaquin coachwhip in the BSAs. This survey would consist of walking transects while conducting visual encounter surveys within potential habitat. All potential habitat features in the BSAs, such as crevices, burrows, and/or insulated ledges along waterways would be inspected for signs of the California tiger salamander, California red-legged frog, and San Joaquin coachwhip usage to the maximum extent practicable. If any California tiger salamander, California red-legged frog, or San Joaquin coachwhip are observed in the Project work limits during construction, work would immediately stop within a 50 feet buffer of the animal, and the animal would be allowed to move out of harm's way on its own accord. The USFWS and CDFW would be contacted to reinitiate consultation or obtain a permit, as appropriate, if California tiger salamander or California red-legged frog is observed.				
BIO-10: Install Temporary Special-status Amphibian and Reptile Exclusion Fencing Within 48 hours following completion of preconstruction surveys for special-status amphibians and reptiles, exclusion fencing would be installed around the work areas with ingress/egress access being the only break in the barrier. The location of exclusion fencing will be shown on construction drawings and may be modified in the field by the resident engineer coordinating with the qualified biologist, with the goal of allowing				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
individuals within the work area to move out and to keep individuals from entering the work area. The fencing material height would be suitable for wildlife exclusion and the lower portion of the fence would be buried in a six-inch trench. One way eviction funnels would be installed within the exclusion fence to allow amphibians and reptiles to move out of, but not re-enter, the Project site. Installation of the fencing would occur under the supervision of a qualified biologist. The fencing would be regularly checked and maintained until all construction is complete. No construction activity shall be allowed until this condition is satisfied.				
BIO-11: Best Management Practices (BMPs) Construction best management practices (BMPs) shall be implemented for work near Chualar Creek located within the Project sites, including working in the dry season, keeping heavy equipment out of the streambed, refueling and maintaining equipment outside of the floodplain, stockpiling soils outside the floodplain, tree removal only as necessary to complete improvements, and other measures identified by the USACE.				
BIO-12: Seasonal Avoidance Project activities would be scheduled to minimize adverse effects to the California tiger salamander and the California red-legged frog and their habitat. Disturbance to upland habitat will be confined to the dry season, generally May 1 through October 31 (or the first measurable fall rain of 1				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
inch or greater), because that is the time period when California tiger salamander and California red-legged frogs are less likely to be moving through upland areas.				
BIO-13: Rain Event Limitations To the maximum extent practicable, no construction activities would occur during rain events or within 24 hours following a rain event.				
BIO-14: Disease and Decontamination Procedures To ensure that diseases are not conveyed between work sites by the approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force would be followed at all times.				
BIO-15: Conduct Pre-construction Burrowing Owl Surveys • If possible, vegetation removal would be implemented outside of the avian breeding season, which generally extends from February through August. • If vegetarian removal must occur during the avian breeding season, a qualified biologist shall conduct 1-day focused surveys for burrowing owls on and within 1,650 feet adjacent to the Project sites where accessible.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
• Surveys shall be conducted within 7 days prior to commencement of construction activities including removal of trees and clearing and grubbing and again within 48 hours prior to the initiation of any Project work during the bird nesting season (between February 1 and August 31), including vegetation removal, equipment staging, and construction. • For surveys outside the Project sites where property access has not been granted, the surveying biologist shall use binoculars to scan any suitable habitat for burrowing owls or their sign (e.g., pellets, feathers, appropriately sized burrows). • Surveys shall be conducted in accordance with the CDFG's Staff Report on Burrowing Owl Mitigation (Staff Report), published March 7, 2012. Surveys will be done within 14 days prior to construction activities and will be repeated if project activities are suspended or delayed for more than 15 days during nesting season. If no burrowing owls are detected, no further mitigation is required. • If an active burrow is found during the nonbreeding season, the qualified biologist will consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion and relocation plan will be developed according to guidance provided in Appendix E				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
of CDFG's Staff Report on Burrowing Owl Mitigation (CDFG 2012). Owls will be relocated outside of the impact area using passive or active methods developed in consultation with CDFW and may include active relocation to preserve areas if approved by CDFW and the preserve managers. No burrowing owls will be excluded from occupied burrows until the burrowing owl exclusion and relocation plan is approved by CDFW. • If an active burrow is found during the breeding season, occupied burrows will not be disturbed and will be provided with a 50-to-500-meter protective buffer unless a qualified biologist verified through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The appropriate size of the buffer will depend on the time of year and level of disturbance as outlined in the CDFG Staff Report (2012). • A report shall be prepared and submitted to the County following the surveys to document the results. • If a lapse in construction activities for one week or longer occurs during the avian breeding season, another survey shall be performed prior to work re-initiation.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
BIO-16: Conduct Preconstruction Survey for Swainson's Hawk, Golden Eagle, and other Nesting Bird and Raptor Surveys If possible, vegetation removal would be implemented outside of the avian breeding season, which generally extends from February to August. If vegetation removal must occur during the avian breeding season, a qualified biologist shall conduct a preconstruction nesting bird and raptor survey prior to the start of vegetation removal. • Removal or disturbance of trees shall occur during periods outside the bird nesting season (September 16 to January 31), to the extent feasible. For any construction activities that will occur between February 1 and September 15, the applicant shall obtain a qualified biologist to conduct pre-construction surveys in suitable nesting habitat within 0.25 miles for Swainson's hawk nests, 500 feet of the construction area for other nesting raptors, and 100 feet for migratory birds. Surveys shall be conducted within 7 days prior to commencement of construction activities including removal of trees and clearing and grubbing and again within 48 hours prior to the initiation of any Project work during the bird nesting season (between February 1 and August 31), including vegetation removal, equipment staging, and construction. The survey methods should follow those for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000).				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
• If an active Swainson's hawk or golden eagle nest is identified, the qualified biologist will coordinate with CDFW. • For raptor surveys outside the Project sites where property access has not been granted, the surveying biologist shall use binoculars to scan any suitable nesting substrate for potential raptor nests. • A report shall be prepared and submitted to the County following the preconstruction survey to document the results. If no active nests are found during the preconstruction survey, no additional mitigation measures are required. • If an active bird or raptor nest is identified within the construction work area or an active raptor nest is identified within the appropriate survey buffers from the construction work area, a no-disturbance buffer shall be established around the nest to avoid disturbance of the nesting birds or raptors until a qualified biologist determines that the young have fledged and are foraging on their own. The extent of these buffers shall be determined by the biologist (coordinating with CDFW, as applicable) and shall depend on the species identified, level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographic or artificial barriers. In addition to the establishment of buffers, other avoidance measures (determined in coordination with CDFW, as applicable) may include monitoring of the nest during construction and restricting the type of work that can be				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
conducted near the nest site. If no active nests are found during the preconstruction surveys, then no additional mitigation is required. • Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined on an individual basis), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the nest, the biologist shall have the authority to halt construction activities within the buffer until the nest is no longer active or until the biologist has determined that construction activities have been modified to eliminate impacts to the nest. Construction activities may re-commence once the biological monitor determines that the nest is no longer occupied, or the modifications have eliminated impacts. Modifications associated with eliminating impacts to the nest may be removed once the biological monitor determines that the nest is no longer active and the monitor is no longer needed. • If a lapse in construction activities for one week or longer occurs during the avian breeding season, another pre-construction survey shall be performed prior to work re-initiation.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
BIO-17: Conduct Preconstruction Bat Survey A qualified biologist will conduct a pre-construction roost survey of all trees proposed for removal or trimming with the BSAs for the presence of bat roosts. Field surveys shall be conducted early in the breeding season before any construction activities begin, when bats are establishing maternity roosts but before pregnant females give birth (April through early May). • If no roosting bats are found, then no further mitigation is required. • If a bat maternity roost is found, then disturbance of the roost shall be avoided. Reduction of the buffer depends on the species of bat, the location of the roost relative to project activities, activities during the time the roost is active, and others project-specific conditions. ○ No work shall occur in the buffer until it is determined that the bats have left on their own, or until the end of the maternity season. Alternatively, a qualified bat biologist may exclude the roosting bats in consultation with the CDFW, thereby allowing construction to continue after successful exclusion activities. ○ Removal of a bat roost tree outside of the maternity season shall be conducted in two phases: day 1 will include liming the tree and on day 2 the tree shall be removed.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
BIO-18: Conduct a Preconstruction American Badger Survey The following measures would be implemented to minimize or avoid potential impacts to American badger: • A qualified biologist would conduct a preconstruction survey for American badger and active dens within the BSAs. • For surveys in inaccessible areas, the biologist would use binoculars to scan any suitable denning substrate for potential individuals or dens. • The preconstruction survey would be conducted no more than 14 days before the initiation of construction activities. • If no active dens are found during the preconstruction surveys, then no additional mitigation is required. • If an active special-status mammal den is identified within the BSAs, a no-disturbance buffer would be established around the den to avoid disturbance of the denning mammal until a qualified biologist determines that the young have dispersed. The extent of these buffers would be determined by the biologist and would depend on the species identified, level of noise or construction disturbance, line-of-sight between the den and the disturbance, ambient levels of noise or other disturbances, and other topographical or artificial barriers.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
• If any non-denning species are observed in the BSAs before or during construction, the species would be allowed to move out of harm's way on its own.				
BIO-19: Implement Water Quality BMPs Before any ground-disturbing activities, the County shall prepare and implement a SWPPP (as required under the SWRCB's General Construction Permit Order 2009-0009-DWQ [and as amended by the most current order(s)]) that includes erosion control measures and construction waste containment measures to ensure that waters of the State are protected during and after Project construction. The SWPPP shall include site design to minimize offsite storm water runoff that might otherwise affect adjacent stream habitat. The SWPPP shall be prepared with the following objectives: (a) to identify pollutant sources, including sources of sediment, that may affect the quality of storm water discharges from the construction of the proposed Project; (b) to identify BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the Project during construction; (c) to outline and provide guidance for BMP monitoring; (d) to identify proposed Project discharge points and receiving waters; to address post-construction BMP implementation and monitoring; and (f) to address sedimentation, siltation, and turbidity. The SWPPP will require BMPs including, but not limited to:				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
• Conduct ground disturbing activities adjacent to and within Chualar Creek during the low-flow period (generally between June 1 and October 15). • Install sediment fencing, fiber rolls, or other equivalent erosion and sediment control measures between the designated work area and Chualar Creek, as necessary, to ensure that construction debris and sediment does not inadvertently enter the drainage. The County will also cover or otherwise stabilize all exposed soil 48 hours prior to potential precipitation events of greater than 0.5 inch. • No refueling, storage, servicing, or maintenance of equipment shall take place within 100 feet of aquatic habitat. • All machinery used during construction of the Project shall be properly maintained and cleaned to prevent spills and leaks that could contaminate soil or water. • Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, state, and/or federal regulations.				
BIO-20: Compensate for Permanent Impacts to Protected Trees Prior to removal of a protected tree, the applicant shall obtain a Monterey County tree removal permit.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
Cultural				
CUL-1: Procedures for Discovery of Human Remains If human remains are discovered, all work must immediately cease, and the local coroner must be contacted. Procedures for the discovery of human remains will be followed in accordance with provisions of the State Health and Safety Code, Sections 7052 and 7050.5 and the State Public Resources Code (PRC) Sections 5097.9 to 5097.99. If the Coroner determines that the remains are those of a Native American, the Coroner shall contact the NAHC and subsequent procedures shall be followed, according to State Public Resources Code Sections 5097.9 to 5097.99, regarding notification of the Native American Most Likely Descendant.				
Hydrology and Water Quality				
HWQ-1: Implement Construction Best Management Practices for Erosion Control Where construction of management practices would not be subject to the Construction General Permit or local grading ordinance, Agricultural Order 4.0 enrollees must implement the following measures during construction of the improvements, or must implement alternative measures that are demonstrated to be equally or more effective: Implement practices to prevent erosion of exposed soil and stockpiles,				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
including watering for dust control, establishing perimeter silt fences, and/or placing fiber rolls. 1. Confirm that BMPs are included in contract documents, if any. 2. Confirm that all BMPs are implemented fully, and that erosion control measures use the best available technology that is economically achievable.				
HWQ-2: Place Management Practices that Involve Retention and/or Treatment of Surface Runoff Outside of 100-Year Floodplains or Tsunami or Seiche Inundation Zones. To the extent feasible, Agricultural Order 4.0 enrollees must place structural management practices that involve retention or treatment of runoff outside of Federal Emergency Management Agency-designated 100-year floodplains or identified tsunami or seiche inundation zones. Where seiche inundation zones have not been mapped, enrollees should use good judgment in not placing structural management practices for sediment retention in areas immediately adjacent to large standing waterbodies that could be inundated during a seiche event. 1. Confirm that applicable management practices are not located within 100-year floodplains, tsunami or seiche inundation zones.				
HWQ-3: NPDES Compliance The Project will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for the State of California, Department of Transportation,				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
Order No. 2022-XXXX-DWQ, NPDES No. CAS000003 and any subsequent permits in effect at the time of construction.				
HWQ-4: NPDES Construction General Permit The Project will comply with the provisions of the NPDES Construction General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2022-0057-DWQ, NPDES No. CAS000002 and any subsequent permits in effect at the time of construction.				
HWQ-5: Stormwater Pollution Prevention Plan or Water Pollution Control Plan The Project will comply with the Construction General Permit by preparing and implementing a Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP) to address all construction related activities, equipment, and materials that have the potential impact water quality for the appropriate Risk Level. The SWPPP or WPCP will identify the sources of pollutants that may affect the quality of stormwater and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management and non-stormwater BMPs. All work must conform to the Construction Site BMP requirements specified in the latest edition of the Stormwater Quality Handbooks: Construction Site Best Management Practices Manual to control and minimize the impacts of construction and construction related activities, material and pollutants on the watershed. These include, but are not limited to temporary sediment control, temporary soil stabilization,				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
scheduling, waste management, materials handling, and other non-stormwater BMPs.				
HWQ-6: Best Management Practices Design Pollution Prevention Best Management Practices (BMPs) will be implemented such as preservation of existing vegetation, slope/surface protection systems (permanent soil stabilization), concentrated flow conveyance systems such as ditches, berms, dikes, and swales, over side drains, flared end sections, and outlet protection/velocity dissipation devices.				
Noise				
NOI-1: Internal combustion engines Internal combustion engines shall be equipped with a muffler of a type recommended by the manufacturer.				
NOI-2: Noise abatement measures As directed by the County Project Engineer, the contractor shall implement appropriate additional noise abatement measures including, but not limited to, siting the location of stationary construction equipment (e.g., generators, compressors) away from sensitive noise receptors to the greatest extent feasible, turning off idling equipment after no more than five minutes of inactivity, and rescheduling construction activity to avoid noise-sensitive days or times.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
Tribal Cultural Resources				
TCR-1: Worker Cultural Sensitivity Training Prior to subsurface disturbance activities, individuals conducting the work will be required to participate in Worker Cultural Sensitivity Training. Workers will be advised to watch for cultural resource materials, including evidence of pre-contact cultural resources (freshwater shells, beads, done tool remnants or an assortment of bones, soil changes including subsurface ash lens or soil darker "midden" in color than surrounding soil, lithic materials such as flakes, tools or grinding rocks, etc.), or historic-era cultural resources (abode foundations or walls, structures and remains with square nails, refuse deposits or bottle dumps, often associated with wells or old privies).				
TCR-2: Tribal Cultural Monitor During Ground Disturbance To minimize the potential for significant impacts to Tribal cultural resources and to help identify Tribal cultural resources, a Tribal monitor shall be present during all subsurface construction activities (such as demolition, pavement removal, and excavation). The Tribal cultural monitor will participate in evaluation of inadvertent discoveries (TCR-3). The County shall fund the costs of the qualified Tribal monitor.				

Mitigation Measuring and Reporting Program				
Mitigation/Avoidance Measure	**Method(s) of Verification**	**Timing of Verification**	**Monitoring Responsibility**	**Verification (Date/Initials)**
TCR-3: Procedures for Inadvertent Discovery of Cultural Resources During Ground-Disturbing Activities If a potentially significant historical or archeological resource is encountered during subsurface construction activities (such as demolition, pavement removal, and excavation), all construction activities within a 50-foot radius of the identified potential resource shall cease until a qualified archeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation (DPR) forms. The archeologist shall determine whether the item requires further study, in consultation with the Tribal cultural monitor. If, after the qualified archeologist conducts appropriate technical analyses, the item is determined to be significant under CEQA, the archeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlines in Public Resources Code section 21083.2. Upon the County's approval of the recommended mitigation measures, the County and contractor shall implement said measures. The County shall fund the costs of the qualified archeologist and required analysis and shall include this mitigation measure in the construction contract to inform contractors of this requirement.				

Appendix B
Biological Resource Technical Memorandum for the Chualar Canyon Road Bridges Replacement Project on Chualar Canyon Road in Monterey County, California

Date: October 24, 2023

To: Garrett Dekker
Moffatt & Nichol
4225 East Conant Street, Long Beach, CA 90808
Email: gdekker@moffattnichol.com

From: Becky Rozumowicz-Kodsuntie
Area West Environmental, Inc.
6248 Main Avenue, Suite C, Orangevale, CA 95662
Email: becky@areawest.net

Subject: **Biological Resource Technical Memorandum for the Chualar Canyon Road Bridges Replacement Project on Chualar Canyon Road in Monterey County, California**

This biological resource technical memorandum describes environmental conditions and biological resources at the Chualar Canyon Road Bridges Replacement Project (Project).

1.0 PROJECT LOCATION AND DESCRIPTION

The Project includes Bridge Number 302, 303, 304, and 305 on Chualar Canyon Road, within the Community of Chualar, Monterey County, California (Appendix A, Figure 1). The Project is located within the *Gonzales* U.S. Geological Survey (USGS) 7.5-minute quadrangle map (Appendix A, Figure 2). The Project site for Bridge Number 302 and 303 occur in Township 15 South, Range 5 East, Section 28 and the Project site for Bridge Number 304 and 305 occur in Township 15 South, Range 5 East, Section 27. The Project sites are on county right-of-way and the following Assessor's Parcel Numbers per bridge, Bridge 302: 145-101-007-000 (W), 145-101-007-000 (W), 145-072-023-000 (SE); Bridge 303: 415-121-014-000 (N) and 415-121-009-000 (S); Bridge 304/305: 415-121-012-000 (N) and 415-121-009-000 (S). The Project is in a rural, agricultural area with cropland to the southeast of Bridge 302 and south of Bridge 303, and a sheep farm with cattle dogs north of Bridge 304 and 305.

The Project proposes to retrofit and replace four bridges (Bridge Number 302, 303, 304, and 305) over Chualar Canyon Creek on Chualar Canyon Road (Appendix A, Figure 3a-c). The Project was subdivided into three Project sites: Bridge 302 (0.45 acres), Bridge 303 (0.49 acres), and Bridges 304 & 305 (1.76 acres), totaling approximately 2.70 acres. Bridge 302 is located within Rural Grazing land use and, Bridge 303, 304/305 are Farmlands land use in an Agricultural zone of Central Salinas Valley, Monterey County.

2.0 STUDY OBJECTIVE

The primary objective of this study is to assess the biological resources in and resource value of the Project sites and adjacent land, determine the presence or presumed absence of sensitive biological resources (i.e., special-status species and sensitive plant communities or habitats occurring at the Project sites), assess potential Project impacts, and recommend mitigation strategies for potential impacts from the proposed Project.

3.0 REGULATORY SETTING

3.1 Clean Water Act Sections 401, 402, and 404

Section 404 of the Clean Water Act (CWA) protects waters of the U.S., including wetlands and drainages, by requiring projects that would discharge dredge or fill material into them to obtain a permit or authorization from the U.S. Army Corps of Engineers (Corps). The permitting program is designed to minimize the fill of waters of the U.S. and when impacts cannot be avoided, require compensatory mitigation.

Section 401 of the CWA requires any applicant for a federal license or permit that could result in any discharge into waters of the U.S. (i.e., Corps permit to fill wetlands), to obtain water quality certification from the Regional Water Quality Control Board (RWQCB).

Section 402 of the CWA requires projects that disturb 1 acre or more or are part of a larger project to notify the State Water Resources Control Board (SWRCB) and to prepare a Storm Water Pollution Prevention Plan (SWPPP) that will minimize construction and storm water related impacts to waterways.

3.2 Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act extends the RWQCB jurisdiction over waters of the State, which defines waters of the State as any surface water or groundwater, including saline waters, within the boundaries of the State (California Water Code Section 13050[e]). In the absence of CWA Section 404 jurisdiction over isolated waters or other waters of the State, California retains authority to regulate discharges of wastes into waters of the State.

3.3 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973, and subsequent amendments, provides regulations for the conservation of endangered and threatened species and the ecosystems on which they depend. The U.S. Fish and Wildlife Service (USFWS) (with jurisdiction over plants, wildlife, and resident fish) oversee the FESA.

Section 9 of the FESA prohibits the take of any fish or wildlife species listed as endangered, including the destruction of habitat that prevents the species' recovery. "Take" is defined as any action or attempt to hunt, harm, harass, pursue, shoot, wound, capture, kill, trap, or collect a species. Section 9 prohibitions also apply to threatened species unless a special rule has been defined with regard to take at the time of listing. Under Section 9 of the FESA, the take prohibition applies only to wildlife and fish species. However, Section 9 does prohibit the unlawful removal and possession, or malicious damage or destruction, of any endangered plant from federal land. Section 9 prohibits acts to remove, cut, dig up, damage, or destroy an endangered plant species in nonfederal areas in knowing violation of any state law or in the course of criminal trespass. Candidate species and species that are proposed for or under petition for listing receive no protection under Section 9.

3.4 California Department of Fish and Game Code Sections 1600-1610

Under California Fish and Game Code (CFGC) Sections 1600–1610 California Department of Fish and Wildlife (CDFW) may enter into a Streambed Alteration Agreement (SAA) with an applicant if a project would divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake.

3.5 Migratory Bird Treaty Act and California Fish and Game Code Sections 3503.5, 3511, and 3513

The federal Migratory Bird Treaty Act (MBTA) (16 United State Code [USC], Sec. 703, 1989) prohibits killing, possessing, or trading migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, bird nests, and eggs. The MBTA is administered by the USFWS and special permits from the agency are generally required for the take of any migratory birds. This act applies to all persons and agencies in the U.S., including federal agencies. Under CFGC, eggs and nests of all birds are protected from take under CFGC Section 3503. Raptors and raptor nests or eggs are protected from take under CFGC Section 3503.5. Migratory birds are expressly prohibited from take under CFGC Section 3513 and species designated by CDFW as fully protected species are protected from take under CFGC Sections 3511, 4700, 5050, and 5515.

3.6 State Endangered Species Act

The CDFW is the state agency responsible for the protection of endangered and threatened plants, fish, and wildlife and for the regulation of activities that could affect those species. The regulatory vehicle that protects sensitive species administered by this agency is the California Endangered Species Act (CESA).

3.7 Sensitive Natural Communities

Sensitive natural communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by CDFW. Natural Communities are evaluated using NatureServe's Heritage Methodology, the same system used to assign global and state rarity ranks for plant and animal species in the California Natural Diversity Database (CNDDB). Threat scope (typically assessed within a 20-year timeframe for vegetation) and severity are used to calculate an overall threat score, which is added to the overall rarity score for a single rank of 1 through 5. Evaluation is done at both the Global (full natural range within and outside of California) and State (within California) levels resulting in a single G (global) and S (state) rank ranging from 1 (very rare and threatened) to 5 (demonstrably secure). CNDDB vegetation alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. (CDFW 2023)

Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or USFWS must be considered and evaluated under California Environmental Quality Act (CEQA) (14 California Code of Regulations [CCR] Title 14, Div. 6, Chap. 3, Appendix G). In addition, this general class includes oak woodlands that are protected by local ordinances under the Oak Woodlands Protection Act.

3.8 Special-status Species

For the purpose of this technical memorandum, special-status species are generally defined as follows:

- Plants that meet the definitions of rare or endangered species under the CEQA (CEQA Guidelines, Section 15380).
- Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered" in California (Lists 1B and 2B [CNPS 2023]).
- Plants listed or proposed for listing by the State of California as threatened or endangered under CESA (14 CCR 670.5).
- Plants listed under the California Native Plant Protection Act (CFGC 1900 et seq.).
- Wildlife species that are listed or proposed for listing as threatened or endangered under the FESA).
- Wildlife species that are listed or proposed for listing under CESA (CFGC 1992 Sections 2050 et seq.; 14 CCR Sections 670.1 et seq.).
- Wildlife species that are designated as Species of Special Concern by CDFW.

- Wildlife species that are designated as Fully Protected by CDFW (CFGC, Sections 3511, 4700, 5050, and 5515).
- Wildlife species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380).

3.9 County of Monterey

General Plan

Monterey County's 2010 General Plan was written to serve as a guide for the future form and appearance of the County. Included in the General Plan is guidance pertaining to environmental resources. Biological policies included in the 2010 General Plan Environmental Impact Report (EIR) applicable to the Project are provided below.

- Goal OS-4: Protect and conserve the quality of coastal, marine, and river environments, as applied in areas not in the coastal zone.
- Policy OS-4.1: Federal and State listed native marine and freshwater species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant shall be protected. Species designated in Area Plans shall also be protected.
- Policy OS-4.2: Direct and indirect discharges of harmful substances into marine waters, rivers, or streams shall not exceed state or federal standards.
- Goal OS-5: Conserve listed species, critical habitat, habitat and species protected in area plans; avoid, minimize, and mitigate significant impacts to biological resources.
- Policy OS-5.4: Development shall avoid, minimize, and mitigate impacts to listed species and critical habitat to the extent feasible. Measures may include but are not limited to: a. clustering lots for development to avoid critical habitat areas, b. dedications of permanent conservation easements, or c. other appropriate means. If development may affect listed species, consultation with USFWS and CDFW may be required and impacts may be mitigated by expanding the resource elsewhere on-site or within close proximity off-site. Final mitigation requirements would be determined as required by law.
- Policy OS-5.9: Tree removal that requires a permit shall be established by Area Plans.
- Policy OS-5.11: Conservation of large, continuous expanses of native trees and vegetation shall be promoted as the most suitable habitat for maintaining abundant and diverse wildlife.

- Policy OS-5.25: Occupied nests of statutorily protected migratory birds and raptors shall not be disturbed during the breeding season (generally February 1 to September 15). The county shall: A. Consult, or require the developer to consult, with a qualified biologist prior to any site preparation or construction work in order to: (1) determine whether work is proposed during nesting season for migratory birds or raptors, (2) determine whether site vegetation is suitable to nesting migratory birds or raptors, (3) identify any regulatory requirements for setbacks or other avoidance measures for migratory birds and raptors which could nest on the site, and (4) establish project-specific requirements for setbacks, lock-out periods, or other methods of avoidance of disruption of nesting birds; B. Require the development to follow the recommendations of the biologist. This measure may be implemented in one of two ways: (1) preconstruction surveys may be conducted to identify active nests and, if found, adequate buffers shall be provided to avoid active nest disruption until after the young have fledged; or (2) vegetation removal may be conducted during the non-breeding season (generally September 16 to January 31); however, removal of vegetation along waterways shall require approval of all appropriate local, state, and federal agencies. This policy shall not apply in the case of an emergency fire event requiring tree removal. This policy shall apply for tree removal that addresses fire safety planning, since removal can be scheduled to reduce impacts to migratory birds and raptors.

Preservation of Oak and Other Protected Trees Ordinance

Monterey County Municipal Code 16.60 protects oak and other protected trees from injury or destruction (Monterey County Municipal Code 16.60, 2009). According to the County's ordinance, a permit is required to remove or significantly trim protected trees. In the Central Salinas Valley Area Plan, protected trees are defined as oak trees, and the following is prohibited as per Monterey County Municipal Code 16.60:

- The removal of any oak trees in any other area of the County of Monterey designated in the applicable area plan as Agricultural or Industrial, Mineral Extraction, unless such removal meets and purpose and standards required.

Monterey County Municipal Code 16.60.040, 2009 states that permits are required:

- No person shall do, cause, permit, aid, abet, suffer, or furnish equipment or labor to remove, cut down or trim more than one-third of the green foliage of, poison or otherwise kill or destroy any tree as specified in this Section until tree removal permit for the project has first been obtained.

- Removal of Three or Less Protected Trees. The Director of Planning may approve the removal of no more than three protected trees per lot in a one-year period. The following information shall be submitted to the Director of Planning prior to consideration of such removal: 1. Applicants or authorized representatives name, address and telephone number;

2. The description of the site(s) involved, including the street address, if any, and the accessors parcel number; 3. A site plan sufficient to identify and locate the trees to be removed, other trees, buildings, proposed buildings, and other improvements; 4. The purpose of the tree removal; 5. A description of the species, diameter two feet above ground level, estimated height, and general health of the trees to be removed; 6. A description of the method to be used in removing tree(s); A statement showing how trees not proposed for removal are to be protected during removal or construction; 8. Proposed visual impact mitigation measures the applicant intends to take (if appropriate). Size, location and species of replacement trees, if any, shall be indicated on the site plan; 9. Such further information as may be required by the Director of Planning, including but not limited to the opinion of a registered professional forester, tree surgeon, or other qualified expert to enable the determination of matter required under these regulations.

- Removal of More Than Three Protected Trees. 1. Removal of more than three protected trees on a lot in a one-year period shall require a Forest Management Plan and approval of Use Permit by the Monterey County Planning Commission. 2. The Forest Management plan shall be prepared by a qualified professional forester, as selected from the County's list of Consulting Foresters. Plan preparation shall be at the applicants expense. 3. The Director of Planning shall prescribe the format and content requirements for the Forest Management Plan and maintain a list of qualified and acceptable foresters to prepare the Forest Management Plan. 4. All tree removal requests coming under this Subsection shall be subject to the requirements of the CEQA.
- Relocation or Replacement. As a consideration of the granting of a permit pursuant to Subsections B or C, the applicant shall be required to relocate or replace each removed protected tree on a one-to-one ratio. This requirement may be varied upon a showing that such a requirement will create a special hardship in the use of the site or such replacement would be detrimental to the long-term health and maintenance of the remaining habitat.
- Required Findings. In order to gran the permit for tree removal, the appropriate authority shall make the following findings based on substantial evidence: 1. The tree removal is the minimum required under the circumstances of the case; and 2. The removal will not involve of adverse environmental impacts such as: a. Soil erosion, b. Water Quality. The removal of the trees will be substantially lessen the ability for the natural assimilation of nutrients, chemical pollutants, heavy metals, silt and other noxious substances from ground and surface waters; c. Ecological Impacts. The removal will not have a substantial adverse impact upon existing biological and ecological systems, climatic conditions which affect these systems, or such removal will not create conditions which may adversely affect the dynamic equilibrium of associated systems; d. Noise Pollution. The removal will not

significantly increase ambient noise levels to the degree that a nuisance is anticipated to occur; e. Air Movement. The removal will not significantly reduce the ability of the existing vegetation to reduce wind velocities to the degree that a nuisance is anticipated to occur; f. Wildlife Habitat. The removal will not significantly reduce available habitat for wildlife existence and reproduction or result in the immigration of wildlife from adjacent or associated ecosystems; or 3. The tree is diseased, injured, in danger of falling too close to existing or proposed structures, creates unsafe vision clearance, or is likely to promote the spread of insects or disease.

- Conditions of Approval. In granting any permit as provided herein, the appropriate authority may attach reasonable conditions to mitigate environmental impacts and ensure compliance with the provisions of this Chapter, including but not limited to replacement of trees removed.
- Emergencies. In the case of emergency caused by hazardous or dangerous conditions of a tree and requiring immediate action for the safety of life or property, such necessary action may be taken to remove the tree or otherwise reduce or eliminate the hazard without complying with the other provisions of this Section, except that the person responsible for cutting or removal of the tree(s) shall report such action to the Director of Planning within ten (10) working days thereafter.

4.0 METHODS

This section describes the methods used in the preparation of this technical memorandum and includes a list of resources reviewed, field survey dates and personnel, and problems and limitations encountered during the study that may influence the conclusions reached in this technical memorandum.

4.1 Project Site

The Project site boundaries are the areas where Project activities are anticipated to occur, causing permanent and temporary impacts (Appendix A, Figures 3a-c). The Biological Study Area (BSA) is the Project site plus a 50-foot buffer to account for indirect impacts to potential adjacent biological resources. The BSA boundary of Bridge 302 encompasses 1.47 acres, Bridge 303 encompasses 1.69 acres, and Bridges 304 and 305 BSA encompasses 3.97 acres, totaling approximately 7.13 acres (Appendix A, Figures 3a-c).

4.2 Pre-field Survey Investigation

Prior to conducting field surveys, available information regarding biological resources with potential to occur within the vicinity of the Project sites was gathered and reviewed, including information on special-status plant and wildlife species with potential to occur on the Project sites. Several data sources were reviewed, including:

- general topography obtained from the *Gonzales* USGS 7.5-minute topographic quadrangle map (Appendix A, Figure 2);
- a species list from the USFWS Information for Planning and Consultation (IPaC) tool for the Project site (Appendix B) (USFWS 2023);
- a species list obtained from the National Marine Fisheries Service (NMFS) online system for the USGS *Gonzales* 7.5-minute quadrangles (Appendix B) (NMFS 2023);
- a records search of the CDFW's CNDDB Biogeographic Information and Observation System (BIOS) 6 for the Project site and surrounding 10-mile buffer (Appendix A, Figure 4) (CDFW 2022);
- a records search of the CDFW's CNDDB Rarefind 5 list for USGS *Gonzales, Natividad, Mt. Harlan, Paicines, Mount Johnson, Chualar, Rana Creek, Palo Escrito Peak, and Soledad* 7.5-minute quadrangles (Appendix B) (CDFW 2023);
- a search of the CNPS Inventory of Rare and Endangered Plants Database for the Gonzales, Natividad, Mt. Harlan, Paicines, Mount Johnson, Chualar, Rana Creek, Palo Escrito Peak, and Soledad USGS quadrangles (Appendix B) (CNPS 2023);
- USFWS's National Wetland Inventory Maps (USFWS 2022); and

- National Resources Conservation Service (NRCS) Web Soil Survey Report (NRCS 2022) (Appendix C).

A list of special-status plant and wildlife species known from the vicinity of the Project limits was developed based on the review of existing information. This list was used to focus the site investigation on the special-status species and associated habitats with potential to be present at the Project sites and are described below.

4.3 Field Surveys

A biological survey (field survey) was conducted on December 19 and 20, 2022, by Area West Environmental, Inc. biologists Samantha Morford and Katheryn Pitkin. An additional botanical survey was conducted by senior botanist Mary Bailey on May 16, 2023. Appendix D provides representative photographs of the BSAs taken during the survey.

Field surveys focused on:

- describing and mapping vegetation communities (common and sensitive);
- identifying special-status and common plant and wildlife species' occurrences; and
- assessing vegetation community suitability to support special-status species.

The specific methods employed for each of these elements are described below.

Vegetation Community and Tree Mapping

Vegetation community types were delineated by hand on a 1 1/8 inch = 200 feet aerial photograph of each of the BSAs. Where permitted, biologists walked the entirety of the BSAs and delineated all vegetation community types, including aquatic resources. Portions of the BSAs that could not be accessed were surveyed visually with aid of binoculars as needed. All vegetation communities were noted, mapped, and evaluated for special-status species suitability. Upland community types were based on observed dominant vegetation composition and density. Upland habitat types were classified using the CNPS A Manual of California Vegetation, online edition (CNPS 2022). Aquatic and developed habitat types were classified using common biological nomenclature and were mapped as described below. An inventory of trees with a diameter at breast height (DBH) of 4 inches or greater within the Project sites was conducted concurrent to the vegetation community mapping and habitat assessments. Tree locations were collected with a handheld Bad Elf Global Positioning System (GPS) unit and the DBH and species were noted. The biologists also noted all observed common and special-status plant and wildlife species (Appendix E).

Aquatic Resources Delineation

The Project sites were surveyed to determine if potentially jurisdictional waters of the U.S. and/or State are present. Waters of the U.S. include wetlands and/or other waters of the U.S., while waters of State are more broadly defined and include any surface water or groundwater. During fieldwork, all accessible areas within the Project sites were covered on foot and were surveyed for hydrophytic vegetation, standing water, and scoured areas. Data regarding vegetation, soils, and hydrology were recorded on ordinary high water mark (OHWM) data forms. Where accessible, the boundaries of potential aquatic features were recorded using a handheld Bad Elf GPS unit with sub-meter accuracy.

Corps jurisdiction limits were mapped at the OHWM, defined by the Corps a line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

RWQCB jurisdiction limits included the limits within the OHWM but also include out to the top of bank (TOB) or edge of riparian whichever was further from the aquatic feature.

CDFW jurisdiction limits mirrored that of the RWQCB.

Data was collected in latitude/longitude in the NAD83 datum. When habitat boundaries or portions thereof were not accessible, the biologist walked a line using the GPS and recorded an offset. In areas outside the Project sites, the feature was hand drawn on aerial photographs. GPS data and hand-drawn data were overlain on aerial photographs of the BSAs using ArcView Geographic Information System (GIS) software. Acreages were calculated for all mapped features in GIS.

Special-status Species Surveys and Assessment

All special-status species that could potentially occur within the BSAs were identified during the pre-field survey investigation and are included in Appendix F, Table F-1 and F-2. During the field surveys the BSAs were assessed for habitat quality for special-status plant and wildlife species with potential to occur. A rationale for the occurrence determination is included for each species in Appendix F.

No protocol-level wildlife surveys have been conducted within the BSAs to date. A list of all plant and wildlife species observed during the2022 and 2023, field surveys is included in Appendix E.

Limitations that May Affect Results

There were not limitations for the BSA survey at Bridge 302. However, rights to enter were not granted for private land within the BSA for Bridge 303 and a portion of the BSA for Bridge 304 and 305. For these areas where access was not granted, the biologists surveyed from the County right of way, mapping vegetation communities and aquatic resources by hand on an aerial photograph of the BSAs.

5.0 RESULTS

The following sections provide a summary of the field survey results.

5.1 Environmental Setting

The Project is located in Monterey County on the fringe of a rural agricultural neighborhood on Chualar Canyon Road. The Bridge 302 BSA primarily consist of non-native grassland habitat used for agriculture with existing residential properties occurring on the western portion in the southeastern corner of the BSA (Appendix A, Figure 5a). The Bridge 303 BSA consists of non-native grassland habitat used for agriculture and gravel lot in the northwestern corner associated with a barn structure (Appendix A, Figure 5b). The Bridge 304 and 305 BSA primarily consists of non-native grasslands used for agriculture, barn structure and associated gravel lot and driveways, and a small section of coast live oak woodland on the southwestern portion of the BSA (Appendix A, Figure 5c). Representative photographs of the Project sites are provided in Appendix D.

The BSAs are within a small valley, with hills to the north and south. The topography within the BSAs is generally flat. Elevation within the BSAs from approximately 535 to 600 feet (163 to 184 meters) above mean sea level (Appendix A, Figure 2). Climate details within the vicinity of the BSAs are based on historical data collected by the Western Regional Climate Center (WRCC) at the Salinas, California monitoring station (047668). The area has a Mediterranean climate, with warm to hot dry summers and mild to cool, wet winters. Temperatures range from an average high temperature in September of 74.7 degrees Fahrenheit (°F) to an average low of 40.5 °F in January and December. In the vicinity of the BSAs, the area receives an average of 14.54 inches of annual precipitation (rain), mostly from November through April (WRCC 2022).

According to the NRCS (Appendix C) there is one soil map unit within the Project sites:

- Hanford gravelly sandy loam, 0 to 5 percent slopes (100% of Project sites). This soil is gravelly sandy loam, derived from igneous rock. This soil unit is well drained with very low runoff. This soil map unit is not listed as hydric soil.

Review of the USFWS's National Wetland Inventory (NWI) identified the Chualar Creek as a riverine feature within the BSAs (Appendix A, Figure 6). Additionally, an unnamed stream that flows south to north to the Bridge 304 and 305 BSA was identified during the NWI review. No other wetlands or waterbody features were identified on the NWI within the BSAs. The principal hydrologic sources in the BSAs are direct precipitation and localized surface runoff, including sheet flow and channelized flow through roadside ditches and culverts. Stormwater from the BSAs drains into Chualar, which flows generally east to west. Flows from Chualar Creek drain into Salinas River, approximately 9 miles downstream from the BSAs (Appendix A, Figure 7). The Salinas River is considered a Traditional Navigable Water. The Salinas River drains into the

Pacific Ocean. The Project is located within the USGS Hydrologic Unit Code (HUC) 12-digit Chualar Creek sub watershed (HUC 180600051504) (Appendix A, Figure 8).

Wildlife movement corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented acres of undisturbed areas. Maintaining the continuity of established wildlife corridors is important to: a) sustain species with specific foraging requirements; b) preserve a species' distribution potential; and c) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource.

Available data on movement corridors and linkages was accessed via the CDFW BIOS 6.23.0117 Viewer (CDFW 2022). Data reviewed included the Essential Connectivity Areas – California Essential Habitat Connectivity (ds620) layer, the Natural Landscape Blocks – California Essential Habitat Connectivity (ds621) layer, and the Terrestrial Connectivity – Areas of Conservation Emphasis (ACE) (ds2734) layer. The BSAs do not fall within the Essential Connectivity Areas or Natural Landscape Blocks layer. However, the BSAs do fall within the Terrestrial Connectivity ACE layer. The propose of the Terrestrial Connectivity layer ACE is to 1) provide a broad overview of statewide connectivity based on the most up-to-date information; 2) assess potential connectivity importance in every hexagon (2.5 square miles) across the state; and 3) serve as a spatial library of existing connectivity studies (CDFW 2019). This layer uses a scoring system that was designed to bring together connectivity information at multiple scales, giving each hexagon a Connectivity Rank of 1-5 based on the conservation importance of connectivity based on the best available data (CDFW 2019). According to this layer the Bridge 302 BSA falls within a hexagon ranked 1- limited connectivity opportunity (CDFW 2022). This means the BSA falls in an area where land use may limit options for providing connectivity (e.g., agriculture, urban) or no connectivity importance has been identified in models (CDFW 2019). The BSAs for Bridge 303 and Bridge 304 and 305 fall within a hexagon ranked 4- conservation planning linkages (CDFW 2022). This means these two BSAs fall in an area where habitat connectivity linkages have been previously mapped (CDFW 2019). Habitat connectivity linkages are often based on species-specific models and represent the best connections between core natural areas to maintain habitat connectivity (CDFW 2019).

5.2 Vegetation Communities

Field surveys identified the following generalized vegetation communities are present within the BSAs (Appendix A, Figure 5a-c):

- Urban/non-vegetated
- Wild oats and annual brome grassland
- Coast live oak woodland (Bridge 304 and 305 BSA only)

- Ephemeral stream
- Acreages of each vegetation community within the BSAs are provided in Table 1. No sensitive natural communities were identified within the BSAs.

Table 1. Vegetation Communities in the BSAs

Vegetation Community	Bridge 302 BSA (Acres)	Bridge 303 BSA (Acres)	Bridge 304 and 305 BSA (Acres)
Urban/non-vegetated	0.66	0.49	1.32
Wild oats and annual brome grassland	0.80	1.16	2.38
Coast live oak woodland	-	-	0.22
Ephemeral stream	0.01	0.04	0.06

Urban/Non-vegetated

Urban/non-vegetated portions of the BSAs are characterized by the presence of anthropogenic features, including Chualar Canyon Road and driveways, landscaping, and barren lots associated with residential and agricultural buildings. Within the Bridge 302 BSA, this habitat includes Chualar Canyon Road, driveways and landscaping associated with existing developments to the west and southeast of the BSA. Vegetation in this habitat type at this BSA included spineless yucca (*Yucca gigantea*), oleander (*Nerium oleander*), bishop pine (*Pinus muricata*), tree of heaven (*Ailanthus altissima*), and a maintained lawn.

This habitat within the Bridge 303 BSA consisted of Chualar Canyon Road, a driveway and gravel lot associated with a barn structure northwest of the BSA.

At the Bridge 304 and 305 BSA, this habitat type consisted of Chualar Canyon Road, driveways associated with existing residential homes and a gravel lot associated with a barn structure. Landscaping associated with the residential homes included several spineless yucca along the driveways within the BSA.

Wild Oats and Annual Brome Grassland

The wild oats and annual brome grasslands community occurs throughout all three BSAs and is the dominant habitat in the BSAs. The majority of this habitat consists of non-native herbaceous species and is characterized by a Semi-natural Alliance between *Avena* spp. and *Bromus* spp. Rodent burrows, including California ground squirrel (*Otospermophilus beecheyi*) burrows, were observed within this habitat at all three BSAs. Each of the BSAs also contained large western sycamores scattered throughout this habitat type with large cavities.

Within BSA Bridge 302, identifiable grass species included ripgut brome (*Bromus diandrus*), slender wild oat (*Avena barbata*), and wall barley (*Hordeum murinum* subsp. *leporinum*). Additional herbaceous species included fennel (*Foeniculum vulgare*), field mustard (*Brassica* *rapa*), Canada horseweed (*Erigeron canadensis*), mugwort (*Artemisia douglasiana*), Pacific blackberry (*Rubus ursinus*), blue fiesta flower (*Pholistoma auritum*), red maids (*Caladrinia menziesii*), telegraph weed (*Heretheca grandiflora*), and redstem filaree (*Erodium cicutarium*). There were scattered trees within this habitat in the BSA; these were coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), and domestic olive (*Olea europaea*).

Within BSA Bridge 303, identifiable grass species included ripgut brome, slender wild oat, and wall barley. Additional herbaceous species included field mustard, prickly lettuce (*Lactuca serriola*), California sagebrush, blue fiesta flower, red maids, tree tobacco, Canada horseweed, stinging nettle (*Urtica dioica*), telegraph weed, and redstem filaree. Two tree species were present within the BSA boundary; these were western sycamore and coast live oak. At the time of the surveys, it appeared that this habitat had been recently tilled on the south side of Chualar Canyon Road.

Within BSA Bridge 304 and 305, identifiable grass species included ripgut brome, slender wild oat, and wall barley. Additional herbaceous species included field mustard, prickly lettuce, California sagebrush, blue fiesta flower, red maids, tree tobacco, Canada horseweed, stinging nettle, telegraph weed, and redstem filaree. Three tree species were present within the BSA boundary; these were western sycamore, coast redwood (*Sequoia sempervirens*), and coast live oak. At the time of the surveys, sheep were grazing in this habitat within the BSA.

Coast Live Oak Woodland

Coast live oak woodland is only present within BSA Bridge 304 and 305 in the southwestern section of the BSA. This habitat type is dominated by coast live oak with a wild oats and annual brome grassland understory. This habitat occurred on a parcel that the biologists were not granted access to and was therefore surveyed from the road.

Ephemeral Stream

Chualar Creek bisects all three BSAs (Figure 5a-c). Within the BSAs, Chualar Creek is an ephemeral stream. At the Bridge 302 BSA, the creek channel below the OHWM was largely devoid of vegetation. A thick leaf litter layer was present.

At the Bridge 303, 304 and 305 BSAs, the creek channel below the OHWM was largely obscured by the thick leaf litter layer. However, at the time of the December 2022 surveys, there was some grass starting to grow through areas where the leaf litter was thinner. Due to the time of the year, this grass species was unidentifiable, but appeared to be an upland species because it was also growing in the adjacent grassland and along the roadway.

Flows from Chualar Creek drain into Salinas River, a traditional navigable waterway. No water was observed at any of the bridges during the December 2022 field surveys.

5.3 Trees

A total of 10 trees with a DBH of 4 inches or greater were mapped within the Bridge 302 Project site. Three tree species were present within the Project site Bridge 302 boundary: western sycamore, coast live oak, bishop pine; and tree of heaven (Table 2).

A total of four trees with a DBH of 4 inches or greater were mapped within the Bridge 303 Project site. Two tree species were present within the Bridge 303 Project site boundary: western sycamore and coast live oak (Table 2).

A total of 8 trees with a DBH of 4 inches or greater were mapped within the Bridge 304 and 305 Project site. Three tree species were present within the Bridge 304 and 305 Project site boundary: western sycamore, coast live oak, and coast redwood (Table 2).

Of the 22 trees within the Project sites in total, five of the coast live oak trees would qualify for protection under the Monterey County Preservation of Oak and Other Protected Trees Ordinance as private protected trees.

Table 2 . Trees Identified within the Project Sites

Tree #	Species	Common Name	DBH*	Protected by Tree Ordinance? (Yes/No)
Project Limits Bridge 302				
1	*Quercus agrifolia*	Coast live oak	19	Yes
2	*Platanus racemosa*	Western sycamore	1, 5	No
3	*Platanus racemosa*	Western sycamore	20.5	No
4	*Quercus agrifolia*	Coast live oak	18.5	Yes
5	*Platanus racemosa*	Western sycamore	14.5	No
6	*Platanus racemosa*	Western sycamore	22.75	No
7	*Platanus racemosa*	Western sycamore	27, 28.5, 29	No
8	*Pinus muricata*	Bishop pine	18.5	No
9	*Pinus muricata*	Bishop pine	10.5	No
10	*Ailanthus altissima*	Tree of Heaven	12.5	No
Project Limits Bridge 303**				
11	*Quercus agrifolia*	Coast live oak	13.5	Yes
12	*Quercus agrifolia*	Coast live oak	5.5, 8.5	Yes
13	*Platanus racemose*	Western sycamore	30.9	No
14	*Platanus racemose*	Western sycamore	31.8	No
Project Limits Bridge 304/305				
15	*Platanus racemose*	Western sycamore	20	No
16	*Platanus racemose*	Western sycamore	21	No

Tree #	Species	Common Name	DBH*	Protected by Tree Ordinance? (Yes/No)
17	*Quercus agrifolia*	Coast live oak	19	Yes
18	*Platanus racemose*	Western sycamore	19	No
19	*Platanus racemose*	Western sycamore	19	No
20	*Platanus racemose*	Western sycamore	22	No
21	*Sequoia sempervirens*	Coast redwood	29**	No
22	*Sequoia sempervirens*	Coast redwood	25, 29**	No

*The DBH of each trunk is listed in the table above and separated by commas for each multi-trunk tree. The DBH of each trunk on muti-trunk trees was added together to determine if the tree would be considered a protected tree by the County.

**The DBH was approximated for these trees because access to the land adjacent to Chualar Canyon Road was not granted. GPS location was digitized on field maps app from roadside.

5.4 Special-status Species

A preliminary review of UFWS, NMFS, CNPS, and CDFW's CNDDB species lists identified 16 special-status plants and 33 special-status wildlife species with potential to occur within the Project vicinity (Appendix F). The special-status plant and wildlife with moderate to high potential to occur onsite are discussed below.

Special-status Plants

Of the sixteen special-status plant species listed in Appendix A, three have low potential to occur within the BSAs. This is due to either the lack of suitable habitat or floristic surveys conducted during appropriate blooming periods determined the species was not present in the BSAs. These three species are as follows:

- Jolon clarkia (*Clarkia jolonensis*) – CNPS Rank 1B.2
- Indian Valley bush-mallow (*Malacothamnus aboriginum*) – CNPS Rank 1B.2
- Carmel Valley bush-mallow (*Malacothamnus palmeri var. involucratus*) – CNPS Rank 1B.2

Floristic surveys were conducted during these species appropriate blooming period and none were observed. Therefore, no impacts to specials-status plant species is expected from the Project. A list of all plant species encountered during the field surveys is provided in Appendix E.

Special-status Wildlife

Of the 33 special-status wildlife species within potential to occur within the Project vicinity, 11 species have moderate potential to occur within the BSAs. These species are listed below and the rational for the potential to occur determination can be found in Appendix F.

- Crotch bumble bee (*Bombus crotchii)* – State Candidate for Endangered
- California tiger salamander (*Ambystoma californiense*) – Federally Endangered and State Threatened
- California red-legged frog (*Rana draytonii)* – Federally Threatened and CDFW Species of Special Concern
- San Joaquin coachwhip (*Masticophis flagellum ruddocki*) – CDFW Species of Special Concern
- Golden eagle (*Aquila chrysaetos)* – Fully Protected
- Burrowing owl (*Athene cunicularia*) – CDFW Species of Special Concern
- Swainson's hawk (*Buteo swainsonii*) – State Threatened
- Pallid bat (*Antrozous pallidus*) – CDFW Species of Special Concern
- Townsend's big-eared bat (*Corynorhinus townsendii*) – CDFW Species of Special Concern
- Western mastiff bat (*Eumops perotis californicus*) – CDFW Species of Special Concern
- American badger (*Taxidea taxus*) – CDFW Species of Special Concern

Eight of the of the 33 species have a low potential to occur within the BSAs, however they are not discussed farther in this document due to the low likelihood of presences. A rational for these determinations can be found in Appendix F. The remaining species have no potential of being present within BSAs due to a lack of suitable habitat for the species. The sites support annual grassland and developed areas. Trees in and adjacent to the BSAs provide potential nesting habitat for migratory birds and raptors and roosting habitat for special-status bats.

Crotch Bumble Bee

Crotch bumble bee is a candidate for listing as Endangered under the CESA. Crotch bumble bees have a modest range extent but is restricted to a very limited climatic range preferring much hotter and drier environments (NatureServe 2018). The historic range for the crotch bumble bee extends from Central California south to Baja California, including all coastal areas east to edges of the deserts and the Central Valley (NatureServe 2018). Crotch bumble bees are generalist foragers as they are able to utilize a wide array of flowering plants (CDFW 2020). Suitable habitat for the crotch bumble bee includes areas of grasslands and upland scrub that contain small mammal burrows (CDFW 2020). Crotch bumble bees are able to persist in semi-natural habitats that are surrounded by modified landscapes (NatureServe 2018). Colonies will nest underground from late February through late October in abandoned small mammal burrows but may also nest under perennial bunch grasses or thatched annual grasses, under brush piles, in old bird nests, and in dead trees or hollow logs (CDFW 2020). Dispersal of colonies primarily occurs in spring with the queen searching for nesting sites (NatureServe 2018). There is evidence that crotch bumble bees are able to disperse relatively long distances between 1.5-6.5 miles (2.6-10 kilometers) (NatureServe

2018). Overwintering sites utilized by mated queen crotch bumble bees include soft, disturbed soil or under leaf litter and other debris (CDFW 2020). Active flight periods range for late February to late October, peaking in early April and July for queens, and late March through September for worker and male bees (CDFW 2020).

Survey Results

The wild oats and annual brome grasslands community and rodent burrows found within the BSAs have the potential to provide suitable foraging and nesting habitat for crotch bumble bee. Per CNDDB, there are no occurrences within 10 miles of the Project sites. There is a moderate potential for crotch bumble bee to occur within the BSAs.

California Tiger Salamander

California tiger salamander is listed as an Endangered species under the FESA and as a Threatened species under the CESA. California tiger salamander is an endemic species to California that can be found near Petaluma, Sonoma County, east through the Central Valley to Yolo and Sacramento counties, south to Tulare County, and from the vicinity of San Francisco Bay south to Santa Barbara County at elevations 10 feet to 3,200 feet (3-1,054 meters) amsl (Kucera 2018). California tiger salamanders are nocturnal and spend most of their time underground in burrows made by other burrowing animals, such as California ground squirrels. An active population of burrowing mammals is necessary to sustain an adequate underground refuge for California tiger salamanders as an unmaintained burrow will collapse (Calherps 2022a). California tiger salamanders are most commonly found in annual grassland habitats, and seasonal ponds or vernal pools are crucial to breeding. Permanent ponds or reservoirs void of fish are sometimes used as well.

California tiger salamander breeding season occurs December through February and reproduction is aquatic (Calherps 2022a). Breeding takes place in standing water, and streams are rarely used for reproduction (Calherps 2022a; Kucera 2018). Eggs are laid singly or in clumps on both submerged and emergent vegetation or debris in shallow water (Kucera 2018). Adults engage in a mass migration on rainy nights during the breeding season and will leave the pond shortly after breeding (Calherps 2022a). In years without adequate rainfall, migrations and breeding are either delayed or do not occur (Calherps 2022a). California tiger salamanders are known to disperse 1.3 mile from suitable breeding sites (USFWS 2000).

Survey Results

The BSAs do not contain suitable breeding habitat, however, ponds in vicinity of BSAs may. The wild oats and annual brome grasslands community and the rodent burrows found within all the BSAs provide suitable upland dispersal habitat for the California tiger salamander. The grassland habitat and Chualar Creek in the BSAs could be used as a dispersal corridor from breeding sites and rodent burrows could be used for estivation. Per CNDDB, there are nine occurrences within

10 miles of the Project sites (CNDDB occurrence # 15, 84, 85, 87, 88, 177, 488, 614, and 999). There is a moderate potential for the California tiger salamander to occur within the BSAs.

California Red-Legged Frog

California red-legged frog is listed as a Threatened species under the FESA and a CDFW Species of Special Concern. California red-legged frogs are a highly aquatic species preferring shorelines with extensive vegetation found along the Coast Ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges, usually below 3,936 feet (1,200 meters) amsl (CWHR Staff 2008). California red-legged frogs require permanent or nearly permanent pools for larval development, which takes 11 to 20 weeks, and intermittent streams must retain surface water in pools year-round for frog survival (CWHR Staff 2008). California red-legged frogs are active all year round coastally, but individuals found elsewhere will estivate in moist refuges from late summer to early winter (Calherps 2022b; CWHR Staff 2008).

California red-legged frog breeding season occurs late November to April and reproduction is aquatic (Calherps 2022b). Some adults inhabit the breeding pond year-round, while others disperse to other habitats and travel overland (Calherps 2022b). Rain is required for dispersal (CWHR Staff 2008). Breeding usually only lasts a week or two, and females lay eggs in clusters attached to vegetation near the water's surface (Calherps 2022b; CWHR Staff 2008). Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry and are found in close association with California ground squirrels (Calherps 2022b). California red-legged frogs are known to disperse 1 mile from suitable breeding sites.

Survey Results

The BSAs do not contain suitable breeding habitat, however, ponds in vicinity of BSAs may. The wild oats and annual brome grasslands community and the rodent burrows found within all the BSAs provide suitable upland and dispersal habitat. Individuals of this species may use Chualar Creek to disperse between breeding sites and rodent burrows could be used for estivation. Per CNDDB, there is one occurrence within 10 miles of the Project sites (CNDDB occurrence # 766). There is a moderate potential for California red-legged frog to occur within the BSAs.

San Joaquin Coachwhip

San Joaquin coachwhip is a CDFW Species of Special Concern. San Joaquin coachwhips are large, fast-moving snakes endemic to California that can be found in deserts south of Mono County and the foothills of the coast ranges south of San Francisco Bay (Palermo 2000). San Joaquin coachwhips can be found in dry, open terrain and are most abundant in grass, desert, scrub, chaparral, and pasture habitats (Palermo 2000; California Herps 2022c; California State University [CSU] Stanislaus). A diurnal species, the San Joaquin coachwhip is tolerate of high temperatures and found to be active during the hottest part of the day from mid-morning to late afternoon (Palermo 2000; California Herps 2022c; CSU Stanislaus). San Joaquin coachwhips are particularly active from March through October and have been known to hibernate in soil or approximately 1 foot (0.3 meters) beneath the surface (Palermo 2000). San Joaquin coachwhips search for prey actively by elevating their heads, poking into burrows, or climbing trees hunting for small mammals, other reptiles including rattlesnakes, birds, eggs, amphibians, insects, and carrion (Palermo 2000). Little is known about the reproduction cycle or nesting preferences of the San Joaquin coachwhip, but it is presumed that mating occurs in May and females will lay a clutch of 4-20 eggs in early summer (California Herps 2022c). There is one known record of a San Joaquin coachwhip nest on the bank of a highway drainage ditch, approximately one foot (0.3 meters) below the surface (Palermo 2000).

Survey Results

The wild oats and annual brome grasslands community and the rodent burrows found within the BSAs provide suitable foraging habitat for the San Joaquin coachwhip. Per CNDDB, there is one occurrence within 10 miles of the Project sites (CNDDB occurrence # 50). There is a moderate potential for San Joaquin coachwhip to occur within the Project sites and the BSAs.

Golden Eagle

Golden eagle is designated as a fully protected species under the CFGC. Little is known about the abundance of the golden eagle but is found throughout North America, being more common in the western regions (CDFW 2022). Golden eagle are typically year-long residents, but some migrate into California for winter (CDFW 2022; Polite and Pratt 1990). Yearlong resident golden eagles may move downslope for the winter or upslope after breeding season (CDFW 2022; Polite and Pratt 1990). Golden eagles can be found throughout tundra, grasslands, shrublands, and oak woodlands, favoring large open areas for hunting (Polite and Pratt 1990; USFWS 2011; CDFW 2022). An aerial predator, golden eagles soar roughly 98-297 feet (30-90 meters) above ground in search of prey or will make low flights just above the ground at 23-26 feet (7-8 meters) (Polite and Pratt 1990). Golden eagle create large platform nests out of sticks, twigs, and other greenery that are often 10 feet (3 meters) across and 3 feet (1 meter) high (Polite and Pratt 1990). It is common for the same pair of golden eagles to maintain alternative nesting sites and reuse old nests (Polite and Pratt 1990). The largest tree in open areas or cliffs of all heights are ideal nesting habitat for the golden eagle (Polite and Pratt 1990; USFWS 2011; CDFW 2022).

Breeding takes place from late January through August, with the peak season being in March through January (Polite and Pratt 1990; CDFW 2022). Eggs are laid in early February to mid-May with clutch sizes ranging from 1-3 eggs, typically two (Polite and Pratt 1990). Incubation ranges from 43-45 days and the nestling period is roughly 65-70 days (Polite and Pratt 1990). Golden eagles are sensitive to human disturbance, will avoid densely populated areas, and have been known to desert a nest in early incubation if disturbed by humans (Polite and Pratt 1990; USFWS 2011).

Survey Results

Large trees within and adjacent to the BSAs may provide suitable nesting habitat for this species. Inactive raptor nests were observed within the Bridge 302 and 304/305 BSAs. The wild oats and annual brome grasslands community and the active California ground squirrels communities observed within the BSAs provide suitable foraging habitat for the golden eagle. There is a moderate potential for golden eagle to occur within the Project sites and the BSAs.

Burrowing Owl

Burrowing owl is a CDFW Species of Special Concern. Burrowing owl are small, ground-dwelling owls found throughout most of the western U.S. Burrowing owl occur as a year-round resident and winter visitor in much of California's lowlands, inhabiting open areas with sparse or non-existent tree or shrub canopies. Their territories tend to be very localized, with most owls hunting within 600 meters of their burrows during the breeding season (Shuford et. al. 2008). They forage primarily in grasslands and agricultural fields, where they prey upon large insects, rodents, small birds, reptiles, and frogs at night and sometimes during the day (Shuford et. al. 2008). Typical habitat is annual or perennial grassland, although human-modified areas such as agricultural lands are also used. Burrowing owl use a variety of habitat characterized by low-growing vegetation. This species is dependent on burrowing mammals to provide the burrows that are characteristically used for shelter and nesting, and in northern California, it is typically found in close association with California ground squirrels. Humanmade substrates such as pipes or debris piles may also be occupied in place of burrows.

Burrowing owl may utilize a site for breeding, foraging, overwintering, or transient/migration stops; therefore, a site that is utilized may only be occupied for a short duration of a year. Burrowing owl are dependent upon burrows created by other animals (burrowing mammals) or suitable surrogate burrows (e.g. rock/concrete piles, culverts). The breeding season in California is March to August, but can begin as early as February and extend into December (Shuford et. al. 2008).

Survey Results

The wild oats and annual brome grasslands community and the rodent burrows found within the BSAs provide suitable foraging and nesting habitat for burrowing owl. Per CNDDB, there are two occurrences within 10 miles of the Project sites (CNDDB occurrence # 344 and 1107). None of the occurrences identify an active reporting of burrowing owl within last 5 years. There is a moderate potential for burrowing owl to occur within the BSAs.

Swainson's Hawk

Swainson's hawk is listed as threatened under the CESA. Swainson's hawk was historically adapted to open grasslands and prairies, but it has become increasingly dependent on agriculture as native plant communities have been converted to agricultural lands (CDFG 1993). They require large open areas of suitable foraging habitat with abundant and available prey base in association with suitable nesting habitat (CDFW 2016). Suitable foraging habitats include a variety of agriculture crops, grassland, and pasture. Swainson's hawks nest on a platform of sticks, bark and fresh leaves in a tree, bush or utility pole. Suitable nesting trees range from trees within mature riparian forest or corridors, lone oak trees, oak groves, and mature roadside trees.

This species breeds in the western U.S. and winters in isolated areas of California, Mexico, Central America, through South America (CDFG 1993; Bechard et al. 2010; Kochert et al. 2011). Swainson's hawks typically arrive at their breeding sites between March and April (Bechard et al. 2010). These hawks show a high degree of site fidelity, returning to the same territory year after year (England et al. 1995; Bechard et al. 2010). They begin building nests soon after arriving at breeding sites and begin laying eggs between late-March and early-April (England et al. 1995). Incubation lasts 34-35 days (Bechard et al. 2010). Young generally fledge about 6 weeks after hatching (CDFW 2016). In the Central Valley most young fledge during the first part of July (CDFW 2016). Migration back to the wintering grounds begins mid-August, and by October most hawks have left California (Kochert et al. 2011).

Suitable Swainson's hawk foraging habitat includes open fields and pastures within an energetically efficient flight distance from active nest sites. The wild oats and annual brome grasslands community within the Project sites provides suitable foraging habitat for Swainson's hawk. CDFW considers impacts to foraging habitat greater than five acres within 10 miles of an active nest (used during one or more of the last 5 years).

Survey Results

Large trees within and adjacent to the BSAs may provide suitable nesting habitat for this species. Inactive raptor nests were observed within the Bridge 302 and 304/305 BSAs. The wild oats and annual brome grasslands community and the active California ground squirrels communities observed within the BSAs provide suitable foraging habitat for Swainson's hawk. There are no occurrences of active nests in the last 5 years, but there is one possible extirpated occurrence within a 10-mile radius (CNDDB occurrence # 2542). There is a moderate potential for Swainson's hawk to occur within the BSAs.

Pallid Bat

The pallid bat is a CDFW Species of Special Concern. The pallid bat is found throughout California and occupies a variety of habitats, from arid deserts to grasslands, to conifer forests, and riparian areas. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods, bole cavities of oaks, exfoliating Ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various human structures such as bridges (especially wooden and concrete girder designs) (WBWG 2005). While roosts generally have unobstructed entrances/exits, are high above the ground, warm, and inaccessible to terrestrial predators, they have also been found roosting on or near the ground under burlap sacks, stone piles, rags, and baseboards (WBWG 2005). As a social species, pallid bats have been known to form night roosts in addition to day roosts, which is separate and are commonly in caves, buildings, or under a bridge (NatureServe 2015). The diet of a pallid bat primarily consists of arthropods, captured both in flight and on the ground after an aerial search (NatureServe 2015). Pallid bats will not travel too far from days when foraging but can travel up to 4 miles (NatureServe 2015). While winter habits are poorly known, it is believed that the pallid bat hibernates with roosts being in areas that have relatively cool, stable temperatures and are in protected structures beneath the forest canopy or on the ground, out of direct sunlight (NatureServe 2014; WBWG 2005). Pallid bats have been known roost alone or in large social colonies with male day roosts may include up to 60 individuals and maternity colonies of 20–200 individuals (WBWG 2005; NatureServe 2015; Harris 1990). Breeding usually occurs in October to December, with young being born in late May to early June in litters of two, sometimes one (NatureServe 2015).

Survey Results

The wild oats and annual brome grasslands community and trees with large cavities and snags found within the BSAs provide suitable foraging and nesting habitat, respectively, for pallid bat. Per CNDDB, there are no occurrences within 10 miles of the Project sites. There is a moderate potential for pallid bat to occur within the BSAs.

Townsend's Big-eared Bat

The Townsend's big-eared bat is a CDFW Species of Special Concern. The species is known to occur throughout California in a variety of habitat types below 3,300 meters including coniferous forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal areas (WBWG 2005a). The Townsend's big-eared bat roosts in caves, abandoned mines, buildings, bridges, and other cave-like spaces, including rock crevices and basal cavities of trees (WBWG 2005a). With the majority of its diet comprised of lepidopterans, the Townsend's big-eared bat is often found foraging along edge habitats along intermittent streams, old fields, open areas of pastures, crops, and native grass, in the proximity of woodlands and associated with forest habitats (Fellers and Pierson 2002). Townsend's big-eared bat roost alone or upwards of several hundred individuals in maternity colonies. The maternity period extends from April through mid-September (Pierson and Rainey 1998). Maternity colonies form between March and June, with a single pup born between May and July (WBWG 2017). While born non volant, the young bats can fly within three weeks and after two months many have left the nursery roost (NPS 2020b). This species overwinters near summer maternity roosts from November to February (Pierson and Rainey 1998). Townsend's big-eared bat are extremely sensitive to disturbance of roosting sites, and a single visit may result in abandonment of the roost site (Harris 2000).

Survey Results

The wild oats and annual brome grasslands community and trees with large cavities and snags, respectively, found within the BSAs provide suitable foraging and nesting habitat for Townsend's big-eared bat. Per CNDDB, there are no occurrences within 10 miles of the Project sites. There is a moderate potential for Townsend's big-eared bat to occur within the Project sites and the BSAs.

Western Mastiff Bat

The western mastiff batt is a CDFW Species of Special Concern. Western mastiff bat is the largest native bat in the United States and can be found in southeastern San Joaquin Valley and Coastal Rangers from Monterey Co., southward through southern California, from coast eastward to the Colorado Desert. Western mastiff bat is a yearlong active resident that can be found in a variety of habitats from open, semi-arid habitats, woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban environments. A non-hibernating species, western mastiff batt will enter daily torpor from December to February but will still resume nightly activities to feed. Specifically, crevices in cliff faces, high buildings, trees, and tunnels are required for roosting. A standard characteristic of roosting sites is being high above ground with an unobstructed approach (NatureServe 2014). Maternity roosts require a tight crevice that is at least 35 inches deep and 2 inches wide. Western mastiff bat typically roost in colonies of both males and females, less than 100 individuals, and have been known to roost with other species of large bats. A non-migratory species, it is common for the western mastiff bat to move between alternate daytime roosts and will forage up to 15 miles from roosting sites (NatureServe 2014; Ahlborn and White 1990a). A nocturnal forager, it has been recorded that western mastiff bat has exceptionally long foraging period, up to 6 and 7 hours a night (NatureServe 2014; Ahlborn and White 1990a). The diet primarily consists of flying hymenopterous insects and moths. Breeding starts in early spring, with most births occurring in June and July, to a single pup.

Survey Results

The wild oats and annual brome grasslands community and trees with large cavities and snags, respectively, found within the BSAs provide suitable foraging and nesting habitat for western mastiff bat. Per CNDDB, there is one occurrence within 10 miles of the Project sites (CNDDB occurrence # 72). There is a moderate potential for western mastiff bat to occur within the Project sites and the BSAs.

American Badger

American badger is a CDFW Species of Special Concern. American badger is an active year-long resident that is found throughout California. American badger is found in most open habitats with dry, friable soils, favoring dry, open grasslands. American badger are burrowing mammals that have been known to frequently reuse old burrows, while some will dig a new burrow each night. The diet of an American badger primarily consists of fossorial rodents such as rats, mice, chipmunks, and in particular ground squirrels and pocket gophers. They have also been known to eat reptiles, insects, earthworms, eggs, birds, and carrion, as their diets have been known to shift seasonally depending on the availability of food. American badger is a specialized mustelid predator that is important in controlling small mammal populations. Home ranges of American badgers have been known to vary geographically and seasonally, but on average an adult male badger has a home range of 600 acres and 400 acres for adult females. American badgers are typically solitary, except in breeding season. Mating typically occurs in summer and early fall. The gestation period varies from 183-265 days, including delayed implantation. A female badger gives birth in March and April to an average litter of 2-3 kits, in a burrow that is in relatively dry, often sandy, soil. (Ahlborn and White 1990b)

Survey Results

The wild oats and annual brome grasslands community and active California ground squirrel communities found within the BSAs provide suitable foraging and denning habitat for American badger. Per CNDDB, there are no occurrences within 10 miles of the Project sites. There is a moderate potential for American badger to occur within the Project sites and the BSAs.

6.0 POTENTIAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

This biological resources assessment has been prepared in support of CEQA, therefore potential adverse impacts on biological resources are evaluated in the context of the State CEQA Guidelines and the County of Monterey General Plan EIR. The Project is consistent with the goals and policies in the County of Monterey General Plan EIR.

The BSAs do not contain riparian habitats or other sensitive natural communities. The BSAs do not serve as an important migration or movement corridor for any wildlife species. These issues are not addressed further.

The Project sites do contain federally and state protected other water features (Chualar Creek) regulated under Section 404 and 401 of the CWA. The Project sites do not support any wetlands regulated by federal or state agencies.

The following discussion provides an analysis of potential impacts on sensitive biological resources from the Project activities and recommended avoidance and minimization measures and/or compensatory mitigation to minimize these potential impacts or reduce them to less-than significant. The impact numbers presented in this document are based on preliminary Project designs. The following tables provide a summary of impacts to vegetation communities within each Project site (Appendix A, Figure 9a-c).

Table 3. Potential Impact to Vegetation Communities within the Bridge 302 Project Site

Vegetation Community	Permanent Impact (acres)	Temporary Impact (acres)
Urban/non-vegetated	0.05	0.24
Wild oats and annual brome grassland	0.05	0.10
Ephemeral stream (Chualar Creek)	0	0.01
Total	**0.10**	**0.35**

Table 4. Potential Impact to Vegetation Communities within the Bridge 303 Project Site

Vegetation Community	Permanent Impact (acres)	Temporary Impact (acres)
Urban/non-vegetated	0.10	0.16
Wild oats and annual brome grassland	0.04	0.18
Ephemeral stream (Chualar Creek)	<0.01	0.01
Total	**0.14**	**0.35**

Table 5. Potential Impact to Vegetation Communities within the Bridge 304 & 305 Project Site

Vegetation Community	Permanent Impact (acres)	Temporary Impact (acres)
Urban/non-vegetated	0.28	0.66
Wild oats and annual brome grassland	0.05	0.72
Coast live oak woodland	0	<0.01
Ephemeral stream (Chualar Creek)	<0.01	0.02
Total	**0.33**	**1.40**

6.1 Special-status Wildlife

After completion of the wildlife habitat assessment and review of existing information on special-status wildlife in the Project region, 11 special-status wildlife species were determined to have potential to occur at the Project sites (crotch bumble bee, California tiger salamander, California red-legged frog, San Joaquin coachwhip, golden eagle, burrowing owl, Swainson's hawk, pallid bat, Townsend-s big-eared bat, western mastiff bat, and American badger). In addition, other migratory birds and raptors have potential to occur within and adjacent to the BSAs. These are discussed below.

Crotch Bumble Bee

There is suitable habitat for crotch bumble bee within the BSAs. The Project would temporarily remove some areas of potential crotch bumble bee habitat in annual grassland areas. Vegetation removal and ground disturbance in the grassland habitat within the Project sites could directly and indirectly impact crotch bumble bee individuals and nests by causing burrow collapse, nest abandonment, reduced nest success, reduced health and vigor of eggs, young and/or queens, in addition to direct mortality by squashing or collisions with vehicles or equipment. Vegetation removal within the annual grassland would temporarily affect foraging habitat for this species through loss of foraging plants, changes in foraging behavior. Project activities would not have long-term impacts on crotch bumble bee or their habitat within the BSA.

Potential nest abandonment and mortality to crotch bumble bee individuals would be a significant impact on a state candidate for Endangered listing species. However, with the implementation of the avoidance and minimization measures outlined below, impacts to crotch bumble bee are expected to be lowered to a less-that-significant level.

Avoidance and Minimization Measures

The following avoidance and minimization measures would be implemented prior to and during Project activities to avoid and minimize potential impacts to crotch bumble bee.

Avoidance and Minimization Measure 1: Conduct Environmental Awareness Training

Before any work occurs in the Project sites, including grading and equipment staging, all construction personnel would participate in an environmental awareness training regarding special-status species and sensitive habitats in the Project sites. If new construction personnel are added to the Project, they must receive the mandatory training before starting work. The training would discuss sensitive resources including waters of the U.S. and State, special-status species and habitats, and nesting birds/raptors. It would also cover Project measures required to avoid impacts to sensitive resources, including permit conditions identified by state and federal agencies.

Avoidance and Minimization Measure 2: Minimize Vegetation Removal

Following completion of final Project design, prior to initiation of Project activities, all trees and shrubs to be removed would be identified and clearly marked, to prevent accidentally removing trees and shrubs that should not otherwise be affected. The disturbance or removal of vegetation, especially oak trees, would not exceed the minimum necessary to complete the Project and would only occur within the defined work area.

Areas within the Project sites where avoidance of impacts to special-status species habitat and native tree species is determined to be feasible would be protected during Project activities. These areas would be considered Environmentally Sensitive Areas (ESAs).

Avoidance and Minimization Measure 3: Install and Maintain Temporary Fencing Around Environmentally Sensitive Areas

Final construction drawings would identify the locations of temporary fencing around ESAs to ensure that sensitive resources proposed for avoidance (waters of the U.S. and State, native trees, special-status species habitat, etc.) would be protected during construction activities. Locations of ESA fencing would be determined in coordination with the Project biologist, with the goal of minimizing the impact to environmentally sensitive habitat.

ESA fencing must be installed prior to the initiation of any vegetation removal, equipment staging, construction, or other Project activity. Fencing would consist of temporary construction barrier fencing, silt fencing, and/or flagging, as recommended by the Project biologist, and would be installed between the work area and ESAs. Construction personnel and construction activity would be required to avoid ESAs. The fencing/flagging would be checked regularly and maintained until all construction is complete.

Avoidance and Minimization Measure 4: Restore Temporarily Disturbed Areas

All temporarily disturbed areas would be returned to pre-Project habitat conditions upon completion of construction. Immediately after construction is complete, all exposed soil would be stabilized. Soil stabilization may include, but is not limited to, seeding with a native grass seed mix, planting native plants, and placement of rock. These areas would be properly protected from washout and erosion using appropriate erosion control devices including coir netting, hydroseeding, and revegetation. The existing grades in temporary impact areas would be recontoured to existing habitat conditions.

Avoidance and Minimization Measure 5*: *Conduct a Preconstruction Survey for Crotch Bumble Bee

A biologist would conduct a preconstruction clearance survey for crotch bumble bee nests within 48 hours prior to any ground disturbance within the Project Area. This survey would consist of walking transects while conducting visual encounter surveys within areas that would be subject to staging, vegetation clearing, grubbing, grading, cut and fill, or other ground disturbing activities. If a crotch bumble bee nest is identified within the construction work area, the biologist would consult with CDFW to determine an appropriate no-disturbance buffer to ensure avoidance of the nest.

Avoidance and Minimization Measure 6: Crotch bumble bee Take Avoidance

- All small mammal burrows, thatched/bunch grasses, brush piles, and soil piles would be surveyed by a qualified biologist during the preconstruction surveys. If it is determined that there is a presence of an endangered or protected species during the preconstruction surveys, the location should be avoided by a minimum of 50 feet as best as possible to avoid take and potentially significant impacts during construction and ground-disturbing operations and maintenance activities.
- CDFW recommends also obtaining an incidental take permit from CDFW prior to Project operations for authorization of the take of these species that is likely to occur (CDFW 2020).
- CDFW recommends also obtaining take authorization during construction if nesting habitat is present and cannot be avoided by 50 feet (CDFW 2020).

Special-Status Amphibians

There is potential upland dispersal habitat for California tiger salamander and California red-legged frog within the BSAs. If California tiger salamander or California red-legged frog is present within the Project sites during Project activities, the Project may affect this species. Direct effects to individuals could include crushing and other injuries resulting from contact with vehicles and other construction equipment; entrapment in open trenches; a reduction of prey or forage items caused by silting, fill placement, or spilling of oil or other chemicals; obstruction of movement corridors due to the presence of people, equipment, Project fencing, and topographic changes; displacement from the BSAs due to the presence of people and equipment; and an increased risk of predation by wildlife inadvertently attracted by the Project (trash in Project site, freshly up-turned soils, etc.). With the implementation of avoidance and minimization measures described below, these potential direct impacts to individuals would be avoided.

Overall the Project would result in a permanent loss of 0.14 acre and temporary disturbance to 1 acre of California tiger salamander and California red-legged frog upland dispersal habitat (wild oats and annual brome grassland and Chualar Creek).

The Project would not result in reduced overall dispersal habitat quality for California tiger salamander California red-legged frog. With the implementation of the avoidance and minimization measures, no direct impacts to California tiger salamander and California red-legged frog individuals would occur from the Project. Therefore, the Project ***may affect, but is not likely to adversely affect*** California tiger salamander and California red-legged frog.

Avoidance and Minimization Measures

The following avoidance and minimization measures would be implemented prior to and during Project activities to avoid and minimize potential impacts to California tiger salamander.

Avoidance and Minimization Measure 1: Conduct Environmental Awareness Training

(Described in the crotch bumble bee section)

Avoidance and Minimization Measure 2: Minimize Vegetation Removal

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 3: Install and Maintain Temporary Fencing Around Environmentally Sensitive Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 4: Restore Temporarily Disturbed Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 7: Monitor during Initial Ground Disturbance and Vegetation Removal

A qualified biological monitor would be present during initial Project activities requiring ground disturbance (e.g., grading and excavation) or vegetation removal within the construction area.

Avoidance and Minimization Measure 8: Provide Escape Ramps or Cover Open Trenches

To avoid entrapment of wildlife, all excavated steep-walled holes or trenches more than 1 foot deep would be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, then holes or trenches would be covered with plywood or similar materials. Providing escape ramps or covering open trenches would prevent injury or mortality of wildlife resulting from falling into trenches and becoming trapped. The trenches would be thoroughly inspected for the presence of federally listed species at the beginning of each workday. Any species observed would be allowed to voluntarily move outside of the work area on its own. If at any time a trapped listed animal is discovered, an escape ramp or other appropriate structures would be installed to allow the animal to escape, and the USFWS or CDFW, as appropriate for the species, would be contacted for further guidance and if needed, to reinitiate consultation.

Avoidance and Minimization Measure 9: Conduct Preconstruction Surveys for Special-Status Amphibians and Reptiles

A qualified biologist would conduct a survey for California tiger salamander, California red-legged frog, and San Joaquin coachwhip within 48 hours prior to the initiation of any ground disturbing activities within or adjacent to suitable habitat for California tiger salamander, California red-legged frog, and San Joaquin coachwhip in the BSAs. This survey would consist of walking transects while conducting visual encounter surveys within potential habitat. All potential habitat features in the BSAs, such as crevices, burrows and/or insulated ledges along waterways would be inspected for signs of California tiger salamander, California red-legged frog, and San Joaquin coachwhip usage to the maximum extent practicable.

If any California tiger salamander, California red-legged frog, or San Joaquin coachwhip are observed in the Project work limits during construction, work would immediately stop within a 50 feet buffer of the animal, and the animal would be allowed to move out of harm's way on its own accord. The USFWS and CDFW would be contacted to reinitiate consultation or obtain a permit, as appropriate, if California tiger salamander or California red-legged frog is observed.

Avoidance and Minimization Measure 11: Install Temporary Special-status Amphibian and Reptile Exclusion Fencing

Within 48 hours following completion of preconstruction surveys for special-status amphibians and reptiles, exclusion fencing would be installed around the work areas with ingress/egress access being the only break in the barrier. The location of exclusion fencing will be shown on construction drawings and may be modified in the field by the resident engineer coordinating with the qualified biologist, with the goal of allowing individuals within the work area to move out and to keep individuals from entering the work area.

The fencing material height would be suitable for wildlife exclusion and the lower portion of the fence would be buried in a six-inch trench. One-way eviction funnels would be installed within the exclusion fence to allow amphibians and reptiles to move out of, but not re-enter, the Project site. Installation of the fencing would occur under the supervision of a qualified biologist. The fencing would be regularly checked and maintained until all construction is complete. No construction activity shall be allowed until this condition is satisfied.

Avoidance and Minimization Measure 12: Best Management Practices (BMPs)

Construction best management practices (BMPs) shall be implemented for work near Chualar Creek located within the Project sites, including working in the dry season, keeping heavy equipment out of the streambed, refueling and maintaining equipment outside of the floodplain, stockpiling soils outside the floodplain, tree removal only as necessary to complete improvements, and other measures identified by the U.S. Army Corps of Engineers.

Avoidance and Minimization Measure 13: Seasonal Avoidance

Project activities would be scheduled to minimize adverse effects to the California tiger salamander/California red-legged frog and their habitat. Disturbance to upland habitat will be confined to the dry season, generally May 1 through October 15 (or the first measurable fall rain of 1 inch or greater), because that is the time period when California tiger salamander/California red-legged frogs are less likely to be moving through upland areas.

Avoidance and Minimization Measure 14: Rain Event Limitations

To the maximum extent practicable, no construction activities would occur during rain events or within 24 hours following a rain event.

Avoidance and Minimization Measure 15: Disease and Decontamination Procedures

To ensure that diseases are not conveyed between work sites by the approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force would be followed at all times.

San Joaquin Coachwhip

There is potential San Joaquin coachwhip habitat within the BSAs. The Project would result in temporary impacts to potential habitat for this species. If San Joaquin coachwhip is present within the Project sites during Project activities, the Project may affect individuals. Effects could include crushing and other injuries resulting from contact with vehicles and other construction equipment; entrapment in open trenches; a reduction of prey or forage items caused by silting, fill placement, or spilling of oil or other chemicals; obstruction of movement corridors due to the presence of people, equipment, Project fencing, and topographic changes; displacement from the BSAs due to the presence of people and equipment; and an increased risk of predation by wildlife inadvertently attracted by the Project (trash in Project site, freshly up-turned soils, etc.). However, with the implementation of the avoidance and minimization measures outlined below, impacts to San Joaquin coachwhip are expected to be lowered to a less-that-significant level. Over the long term, the site would continue to function for San Joaquin coachwhip as it currently functions.

Avoidance and Minimization Measures

The following Avoidance and Minimization measures would be implemented prior to and during Project activities to avoid and minimize potential impacts to San Joaquin coachwhip.

Avoidance and Minimization Measure 1: Conduct Environmental Awareness Training

(Described in the crotch bumble bee section)

Avoidance and Minimization Measure 2: Minimize Vegetation Removal

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 3: Install and Maintain Temporary Fencing Around Environmentally Sensitive Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 4: Restore Temporarily Disturbed Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 7: Monitor during Initial Ground Disturbance and Vegetation Removal

(Described in special-status amphibian section)

Avoidance and Minimization Measure 8: Provide Escape Ramps or Cover Open Trenches

(Described in special-status amphibian section)

Avoidance and Minimization Measure 9: Conduct Preconstruction Surveys for Special-Status Amphibians and Reptiles

(Described in special-status amphibian section)

Avoidance and Minimization Measure 11: Install Temporary Special-status Amphibian and Reptile Exclusion Fencing

(Described in special-status amphibian section)

Avoidance and Minimization Measure 12: Best Management Practices (BMPs)

(Described in special-status amphibian section)

Burrowing Owl

Though no sign of burrowing owls, Project implementation may result in the loss of this species through destruction of active nesting sites and/or incidental burial of adults, young, and eggs, should they become established on-site. The grassland within the Project sites and immediately adjacent to the Project sites provides suitable foraging and nesting habitat for burrowing owl. The noise associated with construction activities involving heavy equipment operation that occur during the breeding season (generally between February 1 and August 31) could disturb any active burrowing owl nests located near these activities. Any disturbance that causes nest abandonment and subsequent loss of eggs or developing young at active nests located at or near the construction work area would violate CFGC Sections 3503 or 3503.5 and the MBTA.

Potential nest abandonment and mortality to burrowing owl individuals would be a significant impact on a special-status species.

However, with the implementation of the avoidance and minimization measures outlined below, impacts to burrowing owl are expected to be lowered to a less-that-significant level.

Mitigation Measures

The following mitigation measures would be implemented prior to and during Project activities to avoid and minimize potential impacts to burrowing owl.

Avoidance and Minimization Measure 1: Conduct Environmental Awareness Training

(Described in the crotch bumble bee section)

Avoidance and Minimization Measure 2: Minimize Vegetation Removal

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 4: Restore Temporarily Disturbed Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 7: Monitor during Initial Ground Disturbance and Vegetation Removal

(Described in special-status amphibian section)

Avoidance and Minimization Measure 12: Best Management Practices (BMPs)

(Described in special-status amphibian section)

Avoidance and Minimization Measure 16: Conduct Pre-construction Burrowing Owl Surveys

- If possible, vegetation removal would be implemented outside of the avian breeding season, which generally extends from February through August.
- If vegetation removal must occur during the avian breeding season, a qualified biologist shall conduct 1-day focused surveys for burrowing owls on and within 1,650 feet adjacent to the Project sites where accessible.
- Surveys shall be conducted within 7 days prior to commencement of construction activities including removal of trees and clearing and grubbing and again within 48 hours prior to the initiation of any Project work during the bird nesting season (between February 1 and August 31), including vegetation removal, equipment staging, and construction.

- For surveys outside the Project sites where property access has not been granted, the surveying biologist shall use binoculars to scan any suitable habitat for burrowing owls or their sign (e.g., pellets, feathers, appropriately sized burrows).
- Surveys shall be conducted in accordance with the CDFG's Staff Report on Burrowing Owl Mitigation (Staff Report), published March 7, 2012. Surveys will be done within 14 days prior to construction activities and will be repeated if project activities are suspended or delayed for more than 15 days during nesting season. If no burrowing owls are detected, no further mitigation is required.
- If an active burrow is found during the nonbreeding season, the qualified biologist will consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion and relocation plan will be developed according to guidance provided in Appendix E of CDFG's Staff Report on Burrowing Owl Mitigation (CDFG 2012). Owls will be relocated outside of the impact area using passive or active methods developed in consultation with CDFW and may include active relocation to preserve areas if approved by CDFW and the preserve managers. No burrowing owls will be excluded from occupied burrows until the burrowing owl exclusion and relocation plan is approved by CDFW.
- If an active burrow is found during the breeding season, occupied burrows will not be disturbed and will be provided with a 50 to 500 meter protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The appropriate size of the buffer will depend on the time of year and level of disturbance as outlined in the CDFG Staff Report (2012).
- A report shall be prepared and submitted to the County following the surveys to document the results.
- If a lapse in construction activities for one week or longer occurs during the avian breeding season, another survey shall be performed prior to work re-initiation.

Swainson's Hawk

CDFW considers 5 acres or more of annual grassland as suitable foraging habitat for Swainson's hawk (CDFW 1994). While the Project sites contain less than 5 acres of wild oats and annual brome grasslands (aka annual grassland), in combination with adjacent open areas, more than 5 acres of habitat is present in the Project vicinity. The grassland and trees within the Project sites and immediately adjacent to the Project sites provide potential foraging and suitable nesting habitat for Swainson's hawk. Removal of the annual grassland and trees could directly affect Swainson's hawk nesting and/or foraging. The noise associated with construction activities involving heavy equipment operation that occur during the breeding season (generally between February and

August) could disturb any active Swainson's hawk nests located near these activities. Any disturbance that causes nest abandonment and subsequent loss of eggs or developing young at active nests located at or near the construction work area would violate CESA as well as CFGC Sections 3503 or 3503.5 and the MBTA.

Mitigation recommendations are divided between active nests within 1 mile, between 1 and 5 miles, and between 5 and 10 miles of suitable foraging habitat. Project activities would temporarily impact 1 acre of suitable Swainson's hawk foraging habitat. According to CNDDB records, there are no active (within the last five years) Swainson's hawk nests within 10 miles of the Project sites.

Potential nest abandonment and mortality to Swainson's hawk individuals would be a significant impact on a special-status species.

With the implementation of the avoidance and minimization measures outlined below, impacts to Swainson's hawk are expected to be less-that-significant. No ***take*** of Swainson's hawk individuals is anticipated to occur as a result of Project activities.

Avoidance and Minimization Measures

The following mitigation measures would be implemented prior to and during Project activities to avoid and minimize potential impacts to Swainson's hawk.

Avoidance and Minimization Measure 1: Conduct Environmental Awareness Training

(Described in the crotch bumble bee section)

Avoidance and Minimization Measure 2: Minimize Vegetation Removal

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 4: Restore Temporarily Disturbed Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 7: Monitor during Initial Ground Disturbance and Vegetation Removal

(Described in special-status amphibian section)

Avoidance and Minimization Measure 12: Best Management Practices (BMPs)

(Described in special-status amphibian section)

Avoidance and Minimization Measure 17: Conduct Preconstruction Survey for Swainson's Hawk, Golden Eagle, and other Nesting Bird and Raptor Surveys

If possible, vegetation removal would be implemented outside of the avian breeding season, which generally extends from February through August. If vegetation removal must occur during the avian breeding season, a qualified biologist shall conduct a preconstruction nesting bird and raptor survey prior to the start of vegetation removal.

- Removal or disturbance of trees shall occur during periods outside the bird nesting season (September 16 to January 31), to the extent feasible. For any construction activities that will occur between February 1 and September 15, the applicant shall obtain a qualified biologist to conduct pre-construction surveys in suitable nesting habitat within 0.25 miles for Swainson's hawk nests, 500 feet of the construction area for other nesting raptors, and 100 feet for migratory birds. Surveys shall be conducted within 7 days prior to commencement of construction activities including removal of trees and clearing and grubbing and again within 48 hours prior to the initiation of any Project work during the bird nesting season (between February 1 and August 31), including vegetation removal, equipment staging, and construction. The survey methods should follow those for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000).
- If an active Swainson's hawk or golden eagle nest is identified, the qualified biologist with coordinate with CDFW.
- For raptor surveys outside the Project sites where property access has not been granted, the surveying biologist shall use binoculars to scan any suitable nesting substrate for potential raptor nests.
- A report shall be prepared and submitted to the County following the preconstruction survey to document the results. If no active nests are found during the pre-construction survey, no additional mitigation measures are required.
- If an active bird or raptor nest is identified within the construction work area or an active raptor nest is identified within the appropriate survey buffers from the construction work area, a no-disturbance buffer shall be established around the nest to avoid disturbance of the nesting birds or raptors until a qualified biologist determines that the young have fledged and are foraging on their own. The extent of these buffers shall be determined by the biologist (coordinating with CDFW, as applicable) and shall depend on the species identified, level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographic or artificial barriers. In addition to the establishment of buffers, other avoidance measures (determined in coordination with CDFW, as applicable) may include monitoring of the nest during construction and restricting the type of work that can be conducted near the nest site. If no active nests are found during the preconstruction surveys, then no additional mitigation is required.
- Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined on an individual

basis), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the nest, the biologist shall have the authority to halt construction activities within the buffer until the nest is no longer active or until the biologist has determined that construction activities have been modified to eliminate impacts to the nest. Construction activities may re-commence once the biological monitor determines that the nest is no longer occupied, or the modifications have eliminated impacts. Modifications associated with eliminating impacts to the nest may be removed once the biological monitor determines that the nest is no longer active and the monitor is no longer needed.

- If a lapse in construction activities for one week or longer occurs during the avian breeding season, another pre-construction survey shall be performed prior to work re-initiation.

Golden Eagle and Other Migratory Birds and Raptors

The grassland and trees within the Project site and immediately adjacent to the Project site provide suitable nesting habitat for a number of migratory birds and raptors, including golden eagle. Removal of the annual grassland and trees could directly affect golden eagle and other ground and tree nesting bird species. The noise associated with construction activities involving heavy equipment operation that occur during the breeding season (generally between February and August) could disturb nesting golden eagle and other migratory birds and raptors if an active nest is located near these activities. Any disturbance that causes golden eagle or other migratory bird or raptor nest abandonment and subsequent loss of eggs or developing young at active nests located at or near the construction work area would violate CFGC Sections 3503 or 3503.5 and the MBTA.

Potential nest abandonment or direct mortality to individuals would be a significant impact. However, implementation of avoidance and minimization measures outlined below, impacts to nesting migratory birds and raptors would be lowered to a less-that-significant level.

Avoidance and Minimization Measures

The following mitigation measures would be implemented prior to and during Project activities to avoid and minimize potential impacts to golden eagle and other migratory birds and raptors.

Avoidance and Minimization Measure 1: Conduct Environmental Awareness Training

(Described in the crotch bumble bee section)

Avoidance and Minimization Measure 2: Minimize Vegetation Removal

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 4: Restore Temporarily Disturbed Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 7: Monitor during Initial Ground Disturbance and Vegetation Removal

(Described in special-status amphibian section)

Avoidance and Minimization Measure 12: Best Management Practices (BMPs)

(Described in special-status amphibian section)

Avoidance and Minimization Measure 17: Conduct Preconstruction Survey for Swainson's Hawk, Golden Eagle, and other Nesting Bird and Raptor Surveys

(Described in Swainson's hawk section)

Special-Status Bats

No evidence of bat roosts was detected during biological surveys, but suitable roosting habitat exists within the BSAs for pallid bat, Townsend's big-eared bat, and western mastiff bat. Western sycamores containing large cavities suitable for bachelor or maternity roost were observed within the BSAs. Nearby structures, such as barns, may also be roosting habitat.

Trees in and adjacent to the Project sites provide suitable roosting habitat for special-status bats and bats protected by California Fish and Game Code Section 4150. Bats may be adversely affected if roosting sites are physically disturbed or are exposed to a substantial increase in noise or human presence during project activities while bats are present. Bat maternity colonies (April 1 to August 31) could be adversely affected if construction activities cause roost site abandonment. Alterations that affect bats usability of a site include changes that obstruct entrances or that change the airflow, temperature, and humidity of roost sites (Johnson et al. 2004). This would be a potentially significant impact. Implementation of avoidance and minimization measures outlined below would minimize potential direct and indirect impacts to bat maternal roosts by requiring pre-construction surveys to identify maternity roosting in the trees within and adjacent to the Project sites. As a result, this impact would be reduced to a less-than-significant level.

Avoidance and Minimization Measures

The following mitigation measures would be implemented prior to and during Project activities to avoid and minimize potential impacts to special-status bats.

Avoidance and Minimization Measure 1: Conduct Environmental Awareness Training

(Described in the crotch bumble bee section)

Avoidance and Minimization Measure 2: Minimize Vegetation Removal

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 7: Monitor during Initial Ground Disturbance and Vegetation Removal

(Described in special-status amphibian section)

Avoidance and Minimization Measure 12: Best Management Practices (BMPs)

(Described in special-status amphibian section)

Avoidance and Minimization Measure 18: Conduct Preconstruction Bat Survey

A qualified biologist will conduct a pre-construction roost survey of all trees proposed for removal or trimming with the BSAs for the presence of bat roosts. Field surveys shall be conducted early in the breeding season before any construction activities begin, when bats are establishing maternity roosts but before pregnant females give birth (April through early May).

- If no roosting bats are found, then no further mitigation is required.
- If a bat maternity roost is found, then disturbance of the roost shall be avoided. Reduction of the buffer depends on the species of bat, the location of the roost relative to project activities, activities during the time the roost is active, and others project-specific conditions.
  - No work shall occur in the buffer until it is determined that the bats have left on their own, or until the end of the maternity season. Alternatively, a qualified bat biologist may exclude the roosting bats in consultation with the CDFW, thereby allowing construction to continue after successful exclusion activities.
  - Removal of a bat roost tree outside of the maternity season shall be conducted in two phases: day 1 will include liming the tree and on day 2 the tree shall be removed.

American Badger

The Project would result in temporary impacts to potential habitat for this species. If American badger is present within the Project Area during Project activities, there could be direct impacts to individuals. Grading and vegetation removal within the Project sites could directly affect denning or foraging American badger. Additionally, noise associated with construction activities involving heavy equipment operation could temporarily disturb any individuals denning nearby. However, with the implementation of the avoidance and minimization measures outlined below, impacts to American badger are expected to be lowered to a less-that-significant level. Over the long term, the site would continue to function for American badger as it currently functions.

Avoidance and Minimization Measures

The following mitigation measures would be implemented prior to and during Project activities to avoid and minimize potential impacts to American badger.

Avoidance and Minimization Measure 1: Conduct Environmental Awareness Training

(Described in the crotch bumble bee section)

Avoidance and Minimization Measure 2: Minimize Vegetation Removal

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 3: Install and Maintain Temporary Fencing Around Environmentally Sensitive Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 4: Restore Temporarily Disturbed Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 7: Monitor during Initial Ground Disturbance and Vegetation Removal

(Described in special-status amphibian section)

Avoidance and Minimization Measure 19: Conduct a Preconstruction American Badger Survey

The following measures would be implemented to minimize or avoid potential impacts to American badger:

- A qualified biologist would conduct a preconstruction survey for American badger and active dens within the BSAs.
- For surveys in inaccessible areas, the biologist would use binoculars to scan any suitable denning substrate for potential individuals or dens.
- The preconstruction survey would be conducted no more than 14 days before the initiation of construction activities.
- If no active dens are found during the preconstruction surveys, then no additional mitigation is required.
- If an active special-status mammal den is identified within the BSAs, a no-disturbance buffer would be established around the den to avoid disturbance of the denning mammal until a qualified biologist determines that the young have dispersed. The extent of these buffers would be determined by the biologist and would depend on the species identified,

level of noise or construction disturbance, line-of-sight between the den and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers.

- If any non-denning species are observed in the BSAs before or during construction, the species would be allowed to move out of harm's way on its own.

Compensatory Mitigation

While the quantity and quality of the grassland that the Project would impact is discountable in comparison to the amount of grassland in the vicinity of the Project, USFWS and CDFW may require compensatory mitigation to offset Project impacts to California tiger salamander upland habitat, California red-legged frog upland habitat, and Swainson's hawk foraging habitat. Coordination with USFWS and CDFW would be required. Compensatory mitigation is not anticipated to be required for all other species.

6.2 Waters of the U.S. and State

Tables 6 and 7 below summarize the Project impacts to Corps jurisdictional features (the area between the OHWM limits of Chualar Creek) and to CDFW and RWQCB (the area between the TOB limits of Chualar Creek) (Appendix A, Figure 9a-c).

Table 6. Potential Project Impacts to Corps Jurisdictional Features

Jurisdictional Features	Permanent	Temporary
Bridge 302 Project Site		
Ephemeral stream (Chualar Creek)	0	0.01
Bridge 303 Project Site		
Ephemeral stream (Chualar Creek)	<0.01	0.01
Bridge 304&305 Project Site		
Ephemeral stream (Chualar Creek)	<0.01	0.02
Total	**<0.01**	**0.04**

Table 7. Potential Project Impacts to CDFW and RWQCB Jurisdictional Features

Jurisdictional Features	Permanent	Temporary
Bridge 302 Project Site		
Ephemeral stream (Chualar Creek)	0	0.01
Urban/non-vegetated (within TOB)	<0.01	0.02
Wild oats and annual brome grassland (within TOB)	<0.01	0.01
Subtotal for Bridge 302 Project Site	**<0.01**	**0.04**
Bridge 303 Project Site		
Ephemeral stream (Chualar Creek)	<0.01	<0.01
Urban/non-vegetated (within TOB)	<0.01	<0.01
Wild oats and annual brome grassland (within TOB)	<0.01	0.01

Subtotal for Bridge 303 Project Site	**<0.01**	**0.01**
Bridge 304&305 Project Site		
Ephemeral stream (Chualar Creek)	<0.01	0.02
Urban/non-vegetated (within TOB)	<0.01	0.01
Wild oats and annual brome grassland (within TOB)	0.00	0.05
Subtotal for Bridge 304&305 Project Site	**<0.01**	**0.07**
Total	**<0.01**	**0.12**

During construction, permanent impacts to Chualar Creek would result from the new fill within the channel associated with construction of the replacement bridge and widening the roadway approaches. Temporary impacts to Chualar Creek would include disturbance by vegetation removal, removal of the existing bridge, and installation of temporary road diversion. Additionally, earth moving adjacent to Chualar Creek due to construction of the new bridge abutments could result in increased sediment loads, turbidity, and siltation into the stream. The accidental introduction of washwater, solvents, oil, cement, or other pollutants during construction could also harm the aquatic environment in Chualar Creek. Implementation of avoidance and minimization measures identified below would ensure that the Project avoids water quality impacts, minimizes disturbance to waters of the U.S. and State and restores temporarily affected areas. Furthermore, all activities within waters of the U.S. and State would be implemented in compliance with all permit conditions included in the Project's CWA section 401 permit from the RWQCB CWA section 404 permit from Corps, and SAA from CDFW.

Avoidance and Minimization Measures

The following avoidance and minimization measures would be implemented prior to and during Project activities to avoid impacts to protected trees and to compensate for protected trees that are impacted.

Avoidance and Minimization Measure 1: Conduct Environmental Awareness Training

(Described in the crotch bumble bee section)

Avoidance and Minimization Measure 3: Install and Maintain Temporary Fencing Around Environmentally Sensitive Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 4: Restore Temporarily Disturbed Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 20: Implement Water Quality BMPs

Before any ground-disturbing activities, the County shall prepare and implement a SWPPP (as required under the SWRCB's General Construction Permit Order 2009-0009-DWQ [and as amended by most current order(s)]) that includes erosion control measures and construction waste containment measures to ensure that waters of the State are protected during and after Project construction. The SWPPP shall include site design to minimize offsite storm water runoff that might otherwise affect adjacent stream habitat.

The SWPPP shall be prepared with the following objectives: (a) to identify pollutant sources, including sources of sediment, that may affect the quality of storm water discharges from the construction of the proposed Project; (b) to identify BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the Project during construction; (c) to outline and provide guidance for BMP monitoring; (d) to identify proposed Project discharge points and receiving waters; to address post-construction BMP implementation and monitoring; and (f) to address sedimentation, siltation, and turbidity.

The SWPPP will require BMPs including, but not limited to:

- Conduct ground disturbing activities adjacent to and within Chualar Creek during the low-flow period (generally between June 1 and October 15).
- Install sediment fencing, fiber rolls, or other equivalent erosion and sediment control measures between the designated work area and Chualar Creek, as necessary, to ensure that construction debris and sediment does not inadvertently enter the drainage. The County will also cover or otherwise stabilize all exposed soil 48 hours prior to potential precipitation events of greater than 0.5 inch.
- No refueling, storage, servicing, or maintenance of equipment shall take place within 100 feet of aquatic habitat.
- All machinery used during construction of the Project shall be properly maintained and cleaned to prevent spills and leaks that could contaminate soil or water.
- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, state, and/or federal regulations.

Compensatory Mitigation

For linear transportation projects that cross a single waterbody more than one time at separate and distant locations, the Corps considers each crossing a single and complete project. Corps does not require that a mitigation for projects that do not create a loss of waters of the U.S. of 1/10 an acre or greater. Since the permanent impacts at each BSA is less than a 1/10 of an acre, it is anticipated that the Corps would not require compensatory mitigation for impacts to waters of the U.S. (Chualar Creek). However, Chualar Creek does fall within the jurisdiction of CDFW and RWQCB.

These state agencies may require mitigation for impacts to Chualar Creek, therefore, coordination would be required.

6.3 Protected Trees

Mature native trees provide habitat and food for numerous bird and wildlife species. Tree species are protected by a local ordinance described under Section 3.9 Monterey County Preservation of Oak and Other Protected Trees Ordinance. When circumstances do not allow for retention of trees, permits are required to remove protected trees. Removal of trees that are protected by the tree ordinance requires permission by the County.

Implementation of avoidance and minimization measures outlined below would reduce impacts to protected trees to less-that-significant level.

Avoidance and Minimization Measures

The following avoidance and minimization measures would be implemented prior to and during Project activities to avoid impacts to protected trees and to compensate for protected trees that are impacted.

Avoidance and Minimization Measure 1: Conduct Environmental Awareness Training

(Described in the crotch bumble bee section)

Avoidance and Minimization Measure 2: Minimize Vegetation Removal

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 3: Install and Maintain Temporary Fencing Around Environmentally Sensitive Areas

(Described in crotch bumble bee section)

Avoidance and Minimization Measure 21: Compensate for Permanent Impacts to Protected Trees

Prior to removal of a protected tree, the applicant shall obtain a Monterey County tree removal permit.

7.0 LITERATURE CITED

Bechard, M. J., C. S. Houston, J. H. Sarasola and A. S. England. 2010. “Swainson's Hawk (Buteo swainsoni).” The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/265.

California Code of Regulations (CCR). Title 14 – Natural Resources, Division 1 – Fish and Game Commission – Department of Fish and Game, Subdivision 3 – General Regulations, Chapter 3 – Miscellaneous, Sections 607.5, 670.1. https://www.law.cornell.edu/regulations/california/title-14/division-1/subdivision-3/chapter-3

California Code of Regulations. Title 14 – Natural Resources, Division 6 – Resource Agency, Chapter 3 – Guidelines for Implementation of the California Environmental Quality Act, Article 20 – Definitions, Cal. Code Regs. Tit. 14, § 15380 – Endangered, Rare or Threatened Species. https://www.law.cornell.edu/regulations/california/Cal-Code-Regs-Tit-14-SS-15380#:~:text=14%2C%20%C2%A7%2015380%20%2D%20Endangered%2C%20Rare%20or%20Threatened%20Species,-State%20Regulations&text=(a)%20%22Species%22%20as,or%20a%20variety%20of%20plant.

California Department of Fish and Game (CDFG). 1993. 5-year Status Review: Swainson’s hawk (Buteo swainsoni). Prepared for the California Fish and Game Commission. Nongame Bird and Mammal Program 1416 Ninth Street, Sacramento, CA

California Department of Fish and Game. 2012. Staff Report on Burrowing Owl Mitigation. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843&inline. Accessed February 2023.

California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Data Base BIOS 6 Viewer. Available online at: https://apps.wildlife.ca.gov/bios6/?al=ds85 . Accessed December 2022 and re-accessed February 2023.

California Department of Fish and Wildlife. 2023. California Natural Diversity Data Base RareFind 5. Available online at: https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx. Accessed December 2022 and re-accessed February 2023 and August 2023.

California Department of Fish and Wildlife. 2019. ACE Dataset Fact Sheet- Terrestrial Connectivity (DS2734). Available online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=150835. Accessed January 2023.

California Department of Fish and Wildlife. 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83992&inline.

California Department of Fish and Wildlife. 2016. 5-year Status Review: Swainson's Hawk (Buteo swainsoni) in California. Sacramento, California.

California Fish and Game Code (CFGC). Sections 1962, 1990, 2050, 3511, 4700, 5050, 5511. https://leginfo.legislature.ca.gov/faces/codes_displayexpandedbranch.xhtml?tocCode=FGC&division=2.&title=&part=&chapter=&article=&nodetreepath=4

California Native Plant Society (CNPS). 2023. Inventory of Rare and Endangered Plants (online edition, v9-01 1.0). California Native Plant Society. Sacramento, CA. Website accessed February 2023 and re-accessed August 2023. http://www.rareplants.cnps.org/.

England, A., J. Estep, and W. Holt. 1995. Nest-site selection and reproductive performance of urban-nesting Swainson's hawks in the Central Valley of California. J. Raptor Res. 29:179-186.

Kochert, M. N., M. R. Fuller, L. S. Schueck, L. Bond, M. J. Bechard, B. Woodbridge, G. L. Holroyd, M. S. Martell, and U. Banasch. 2011. Migration patterns, use of stopover areas, and austral summer movements of Swainson's Hawks. Condor 113:89-106.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=10405&inline

Swainson's Hawk Technical Advisory Committee. 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Website accessed June 16, 222. Swain_proto2000.pdf (nrm.dfg.ca.gov)

United States Fish and Wildlife Service (USFWS). 2023. S IPaC: Information for Planning Consultation. Web application. Available:

https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe0989 3cf75b8dbfb77. Website accessed November 2022 and re-accessed August 2023.

U.S. Fish and Wildlife Service. 2000. Endangered and threatened wildlife and plants; final determination of endangered status for the Santa Barbara County Distinct Vertebrate Population Segment of the California Tiger Salamander (*Ambystoma californiense*).

Whittaker, R. H. 1975. *Communities and Ecosystems*. 2nd ed. New York: Macmillan.

Western Regional Climate Center. 2023. Salinas, California (047668), Period of Record Monthly Climate Summary. Accessed online at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7668. Accessed January 2023.

APPENDIX A. FIGURES

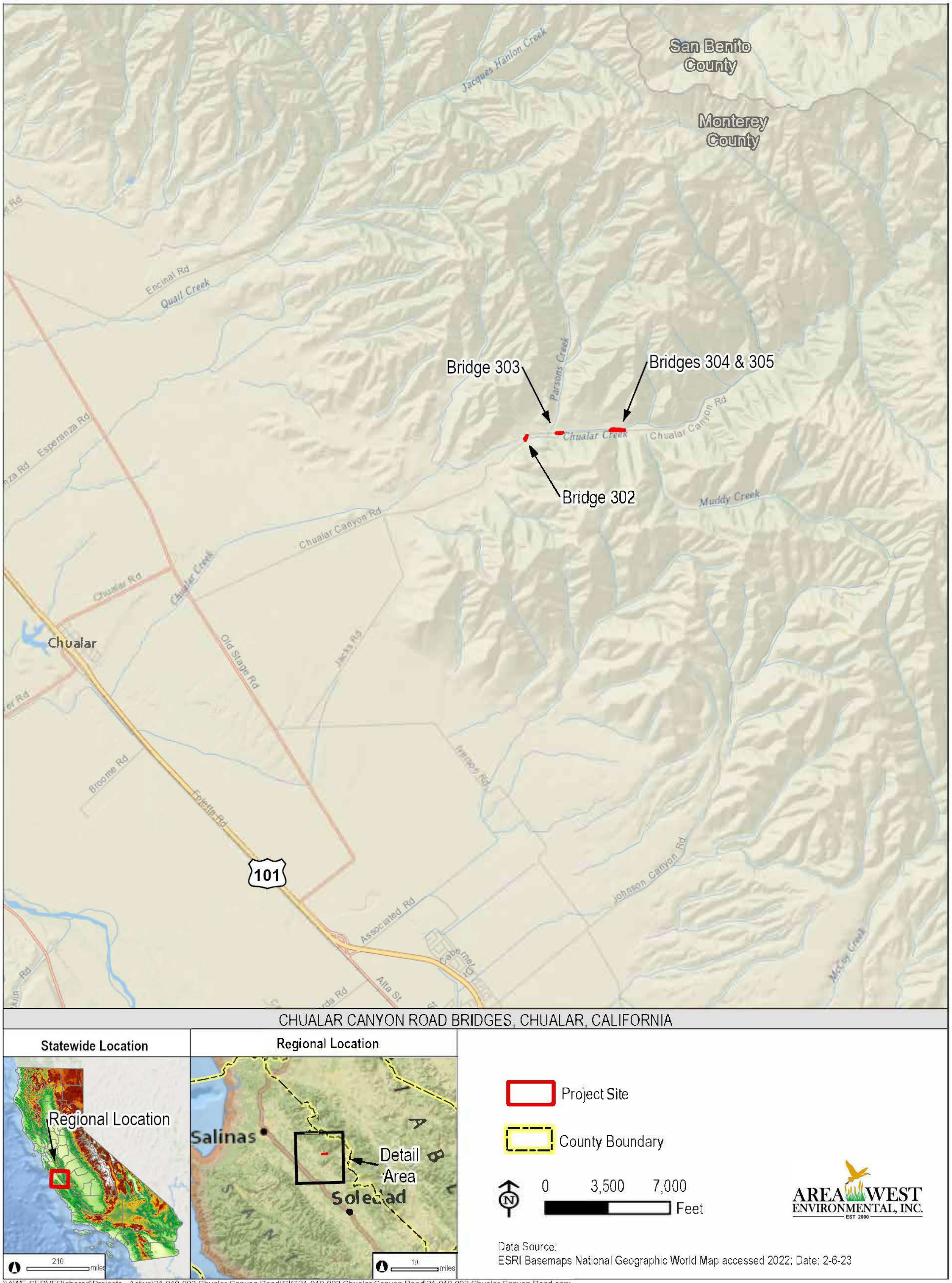
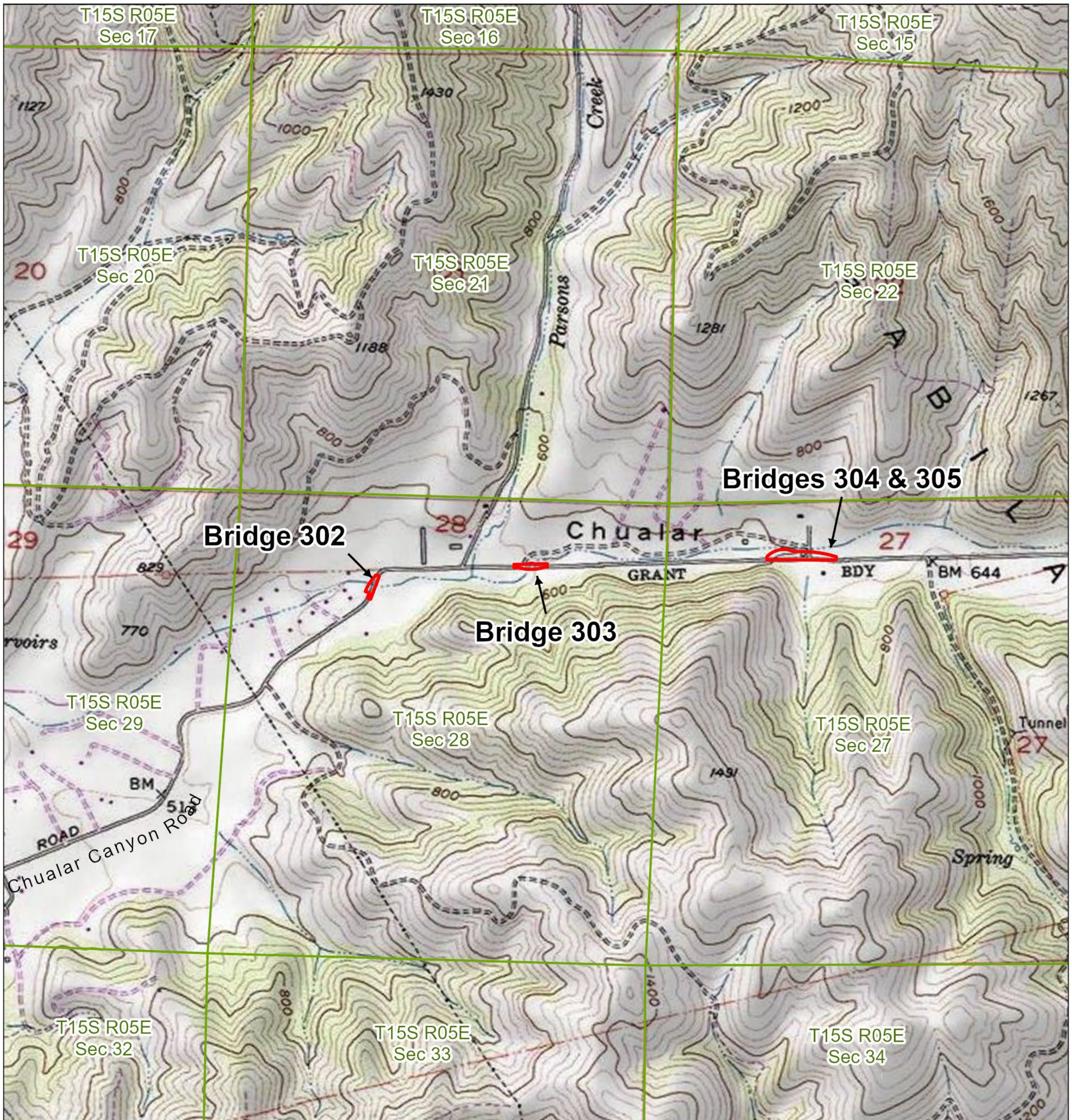


Figure 1. Project Vicinity



CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales, California USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.70 acres.

Coordinates for the center point of the Project Site (calculated in California State Plane Zone 4, NAD 1983):
Latitude: 36.60304, Longitude: -121.42401

Project Site

Township Range Section

0 1,000 2,000 feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 2-6-23

AREA WEST ENVIRONMENTAL, INC. EST 2000

Document Path: \\AWE-SERVER\shared\Projects - Active\21-010-002 Chualar Canyon Road\GIS\21-010-002 Chualar Canyon Road\21-010-002 Chualar Canyon Road.aprx

Figure 2. Project Location

D:\AWE\21-010-002 Chualar Canyon Road\mxd\21_010_002_Chualar_Figure3_302_20230127.mxd

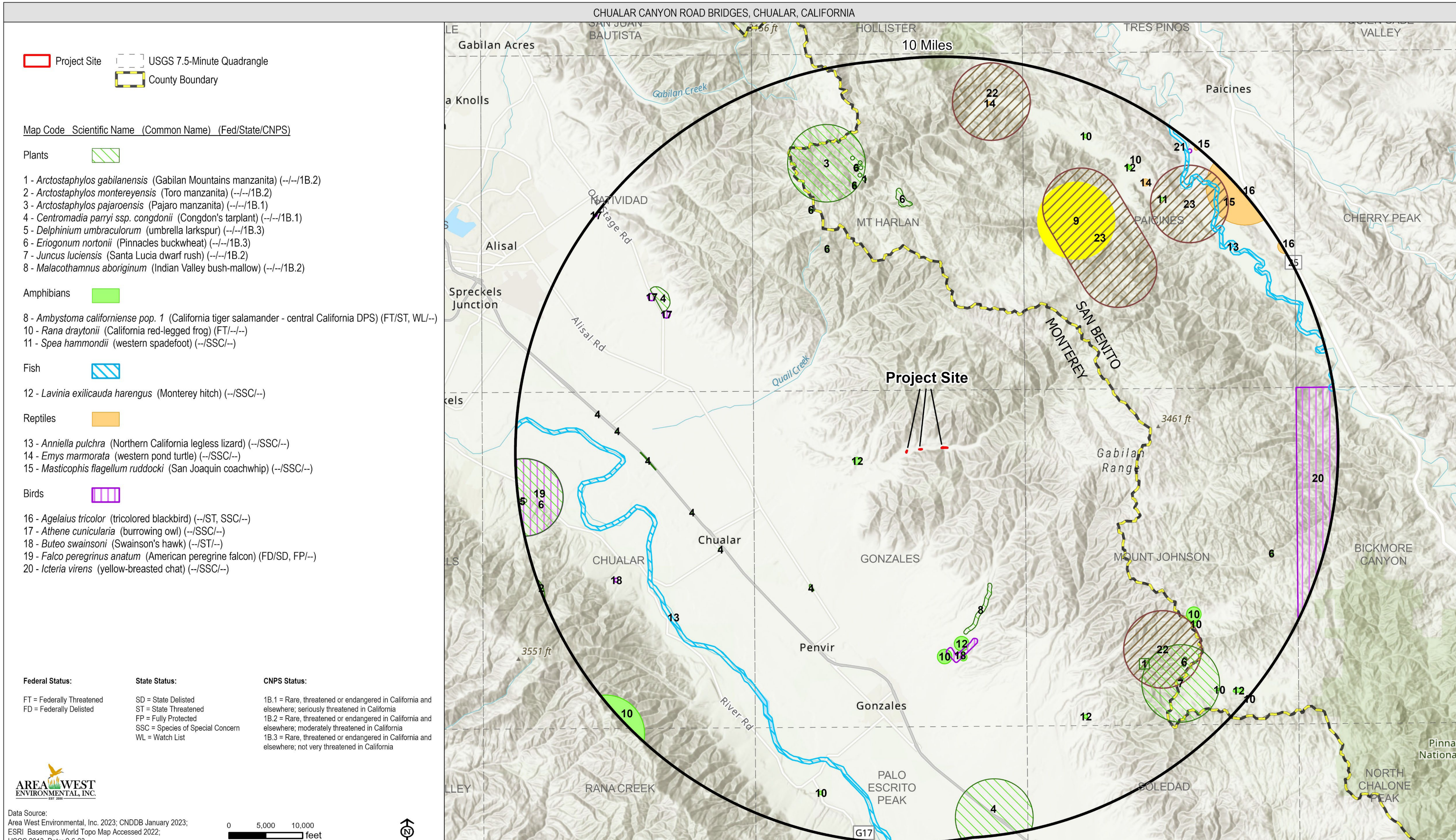
Figure 3a. Aerial Photograph of Project Bridge 302

D:\AWE\21-010-002 Chualar Canyon Road\mxd\21_010_002_Chualar_Figure3_303_20230127.mxd

Figure 3b. Aerial Photograph of Project Bridge 303

D:\AWE\21-010-002 Chualar Canyon Road\mxd\21_010_002_Chualar_Figure3_304_305_20230127.mxd

Figure 3c. Aerial Photograph of Project Bridge 304 and 305



Document Path: D:\AWE\21-010-002 Chualar Canyon Road\aprx\21-010-002 Chualar CNDDB.aprx

Figure 4. CNDDB Occurrence within a 10-mile Radius of the Project Sites

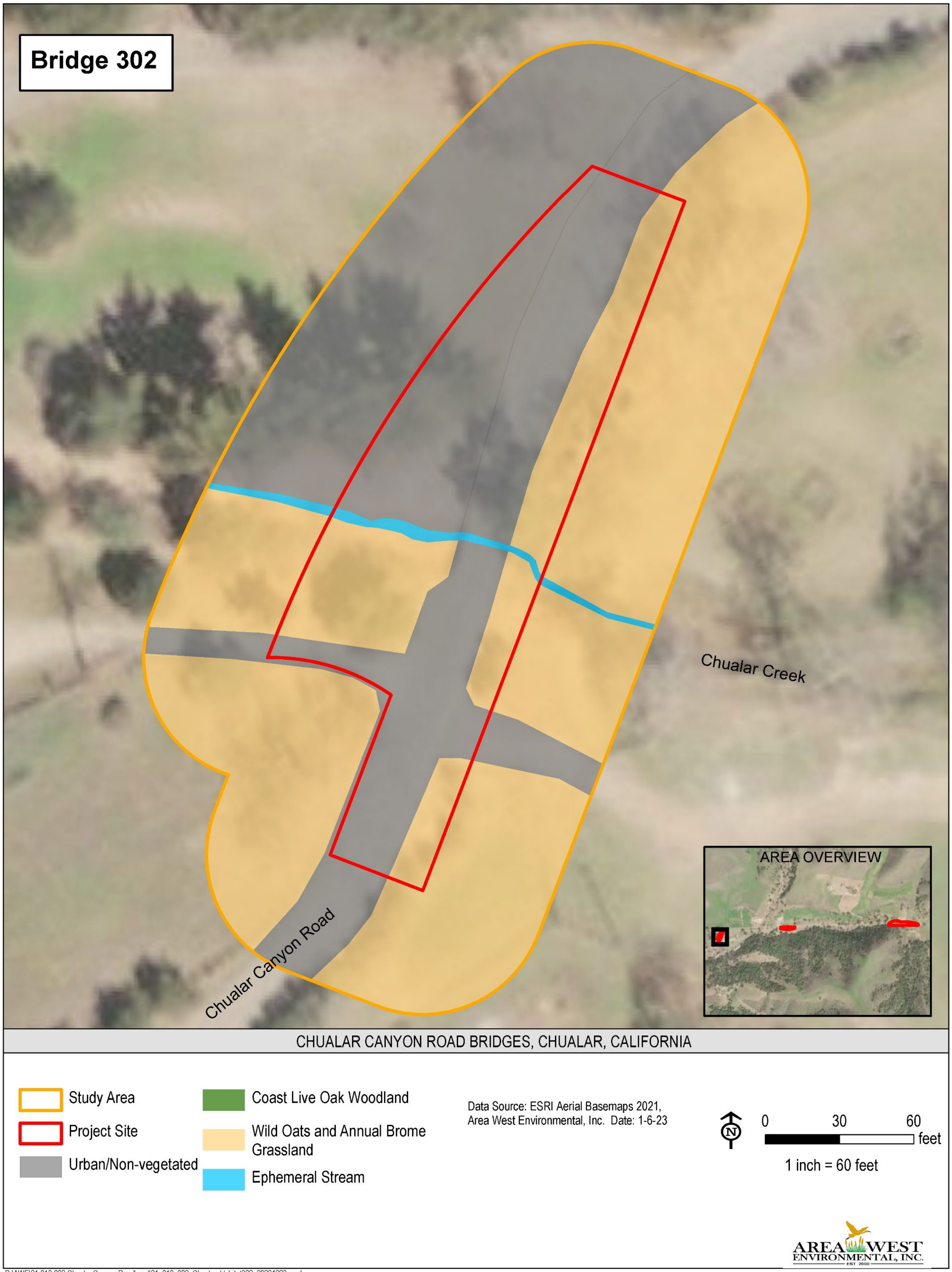
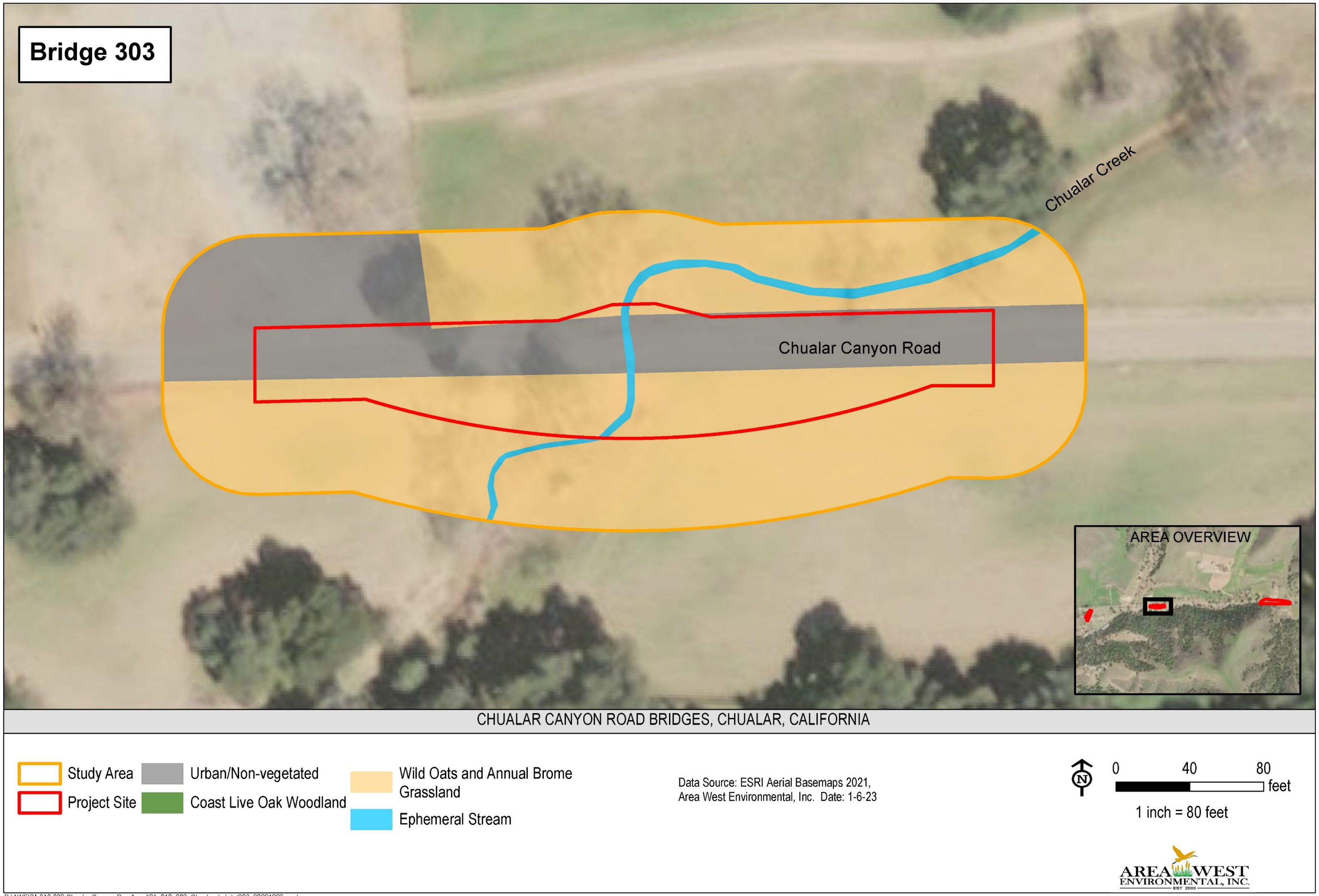


Figure 5a. Vegetation Communities within Bridge 302 BSA



D:\AWE\21-010-002 Chualar Canyon Road\mxd\21_010_002_Chualar_habitat303_20221223.mxd

Figure 5b. Vegetation Communities within Bridge 303 BSA

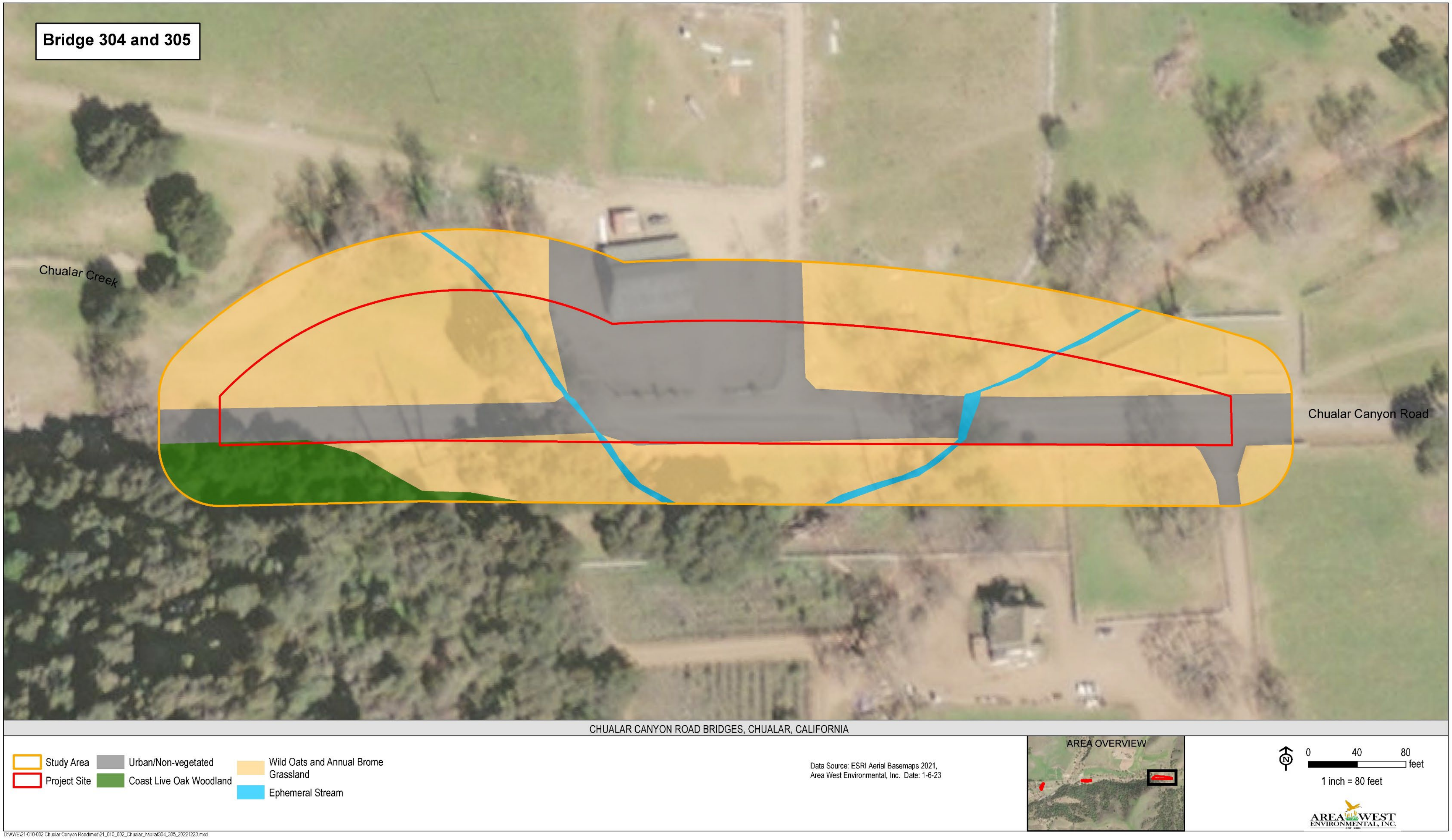


Figure 5c. Vegetation Communities within Bridge 304 and 305 BSA

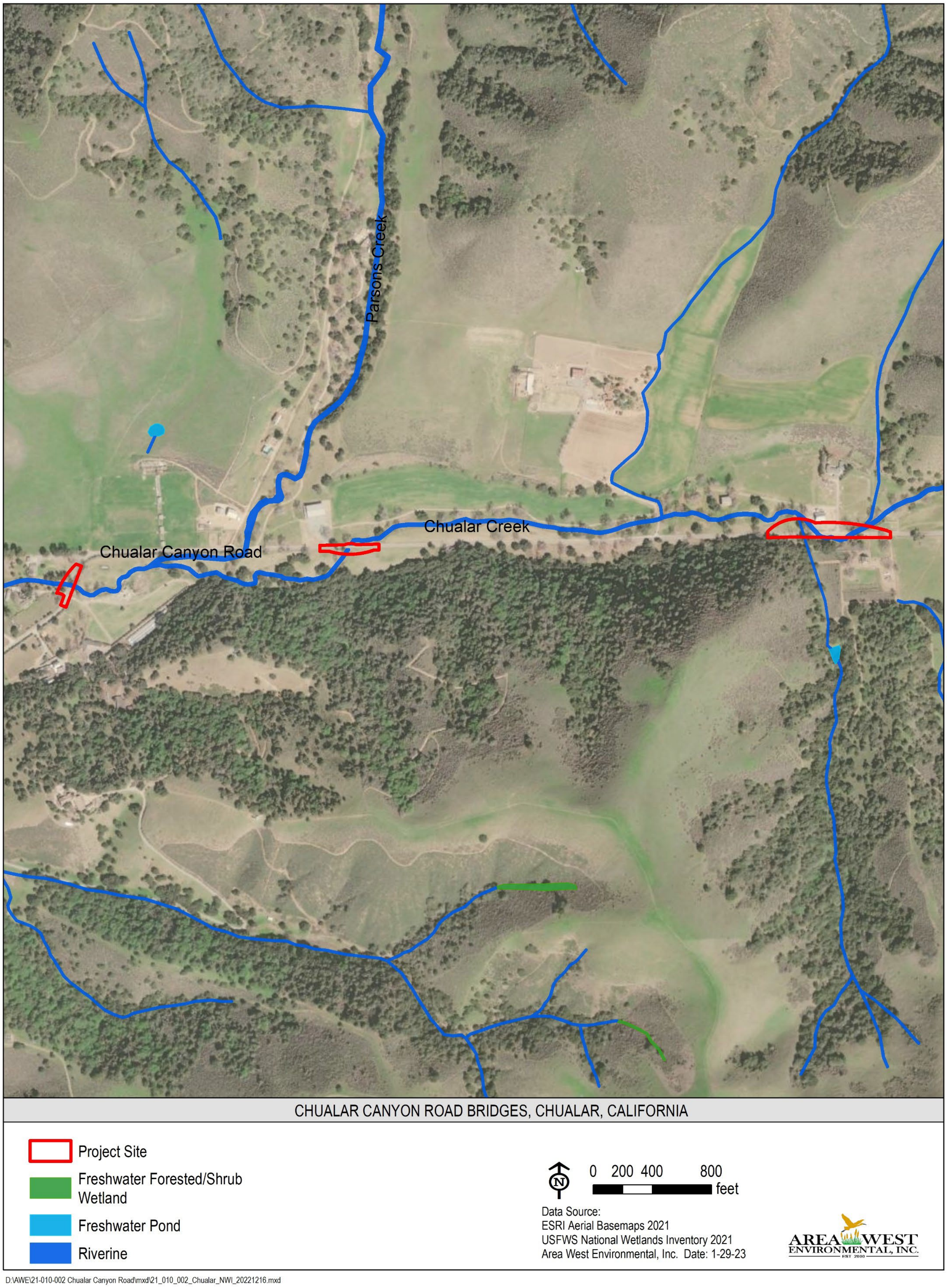
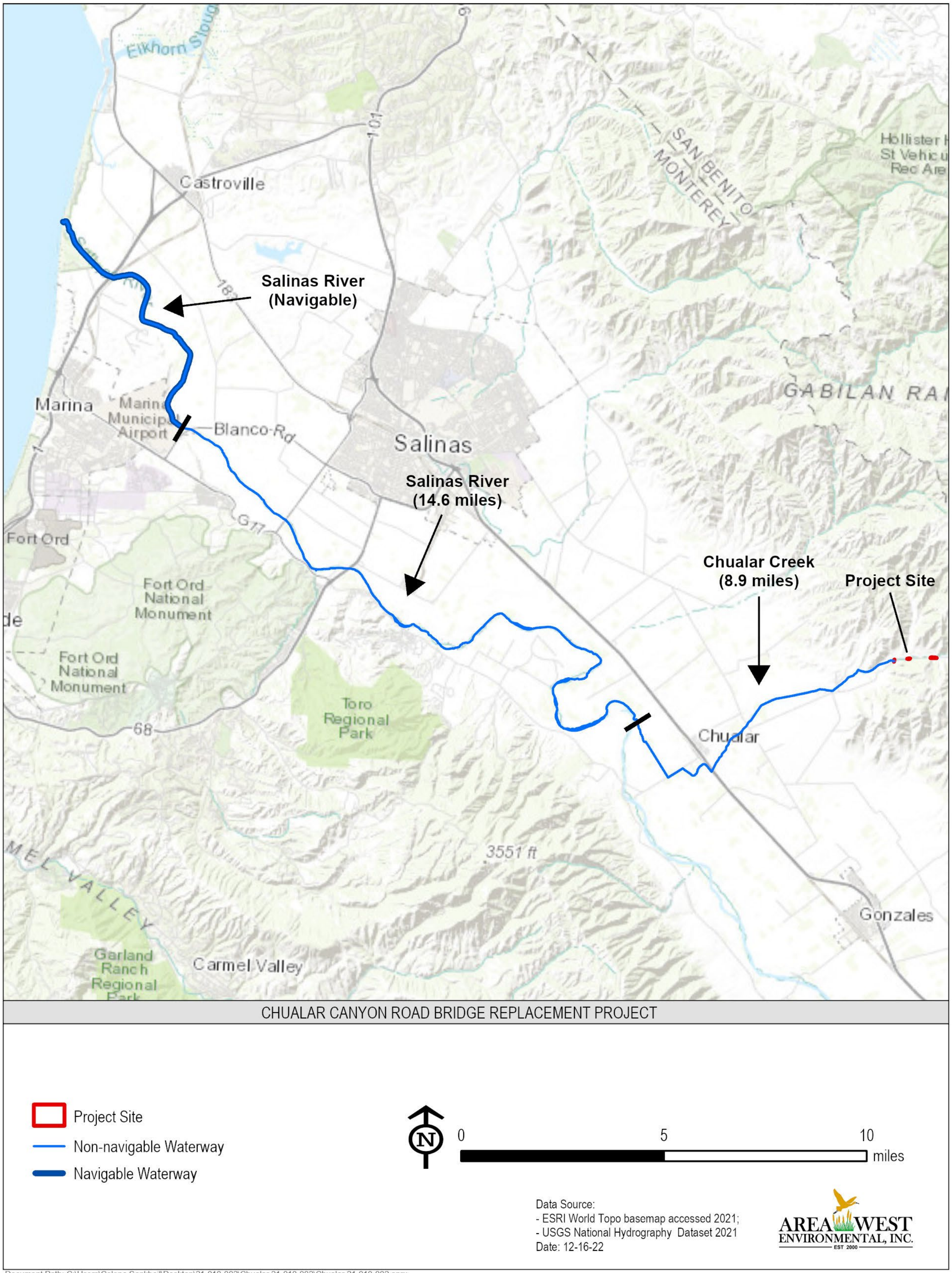


Figure 6. USFWS National Wetland Inventory Results in Project Vicinity



Document Path: C:\Users\Colena Sankbeil\Desktop\21-010-002\Chualar 21-010-002\Chualar 21-010-002.aprx

Figure 7. Project Connection to a Traditional Navigable Water

CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

Project Site
HUC8: Salinas Sub Basin 18060005
HUC10: El Toro Creek-Salinas River Watershed 1806000515
HUC12: Chualar Creek Sub Watershed 180600051504

0 5 10 miles

Data Source:
ESRI National Geographic World Map accessed 202
National Hydrography Dataset 2020;
Date: 12-16-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: D:\AWE\21-010-002 Chualar Canyon Road\mxd\21_010_002_Chualar_HUC_20221216.mxd

Figure 8. Hydrologic Unit Map

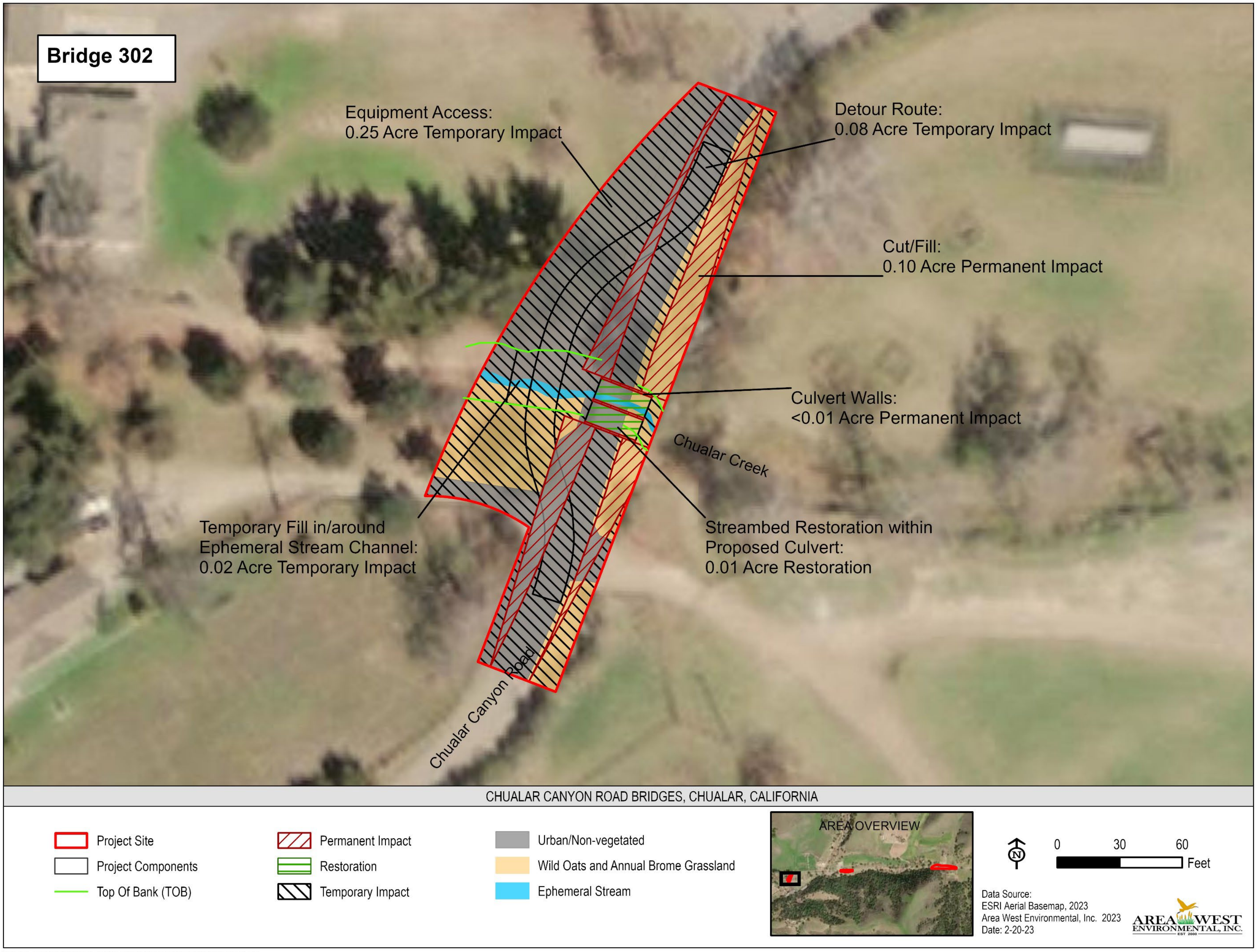


Figure 9a. Potential Project Impacts at Bridge 302

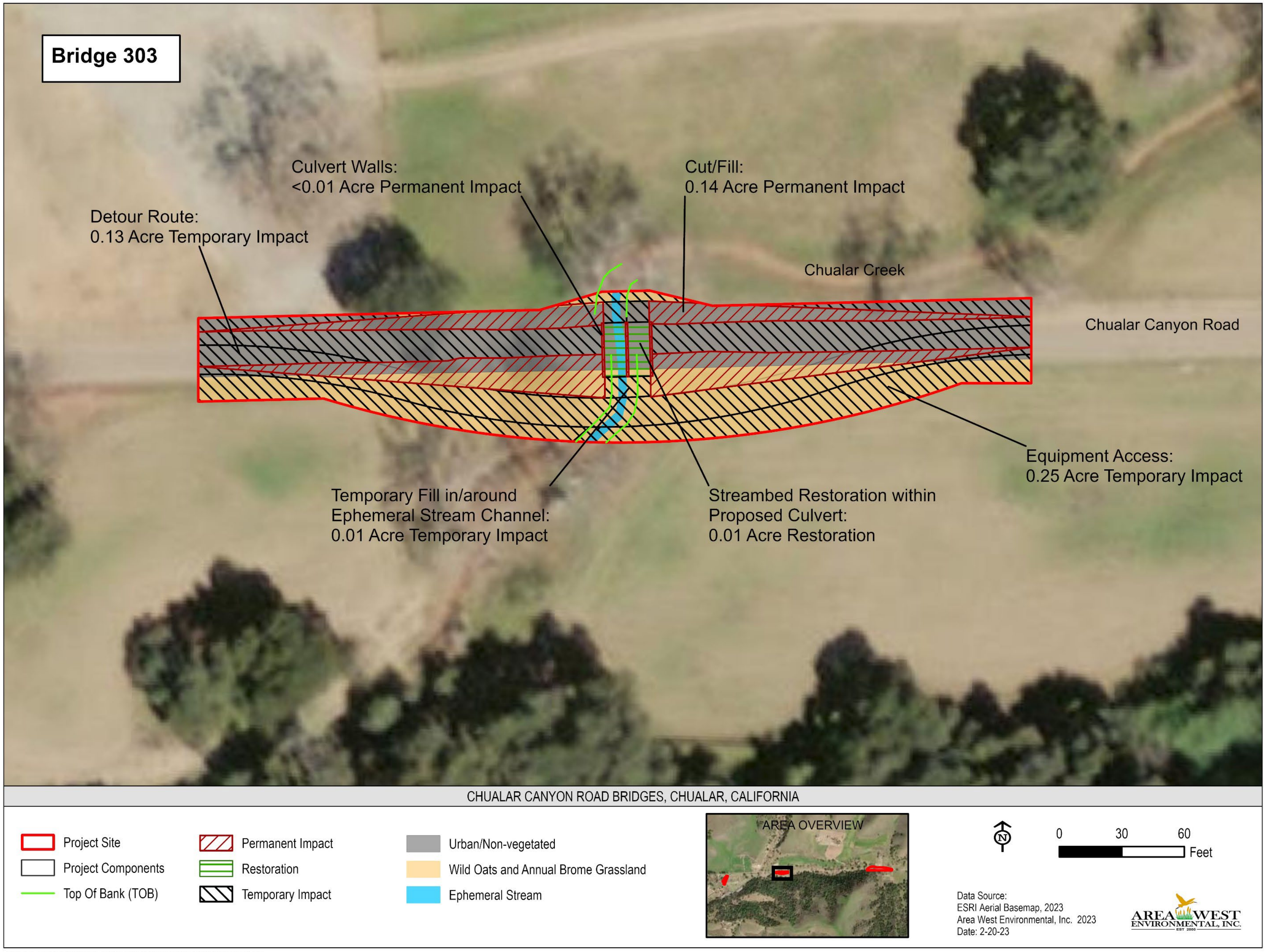


Figure 9b. Potential Project Impacts at Bridge 303

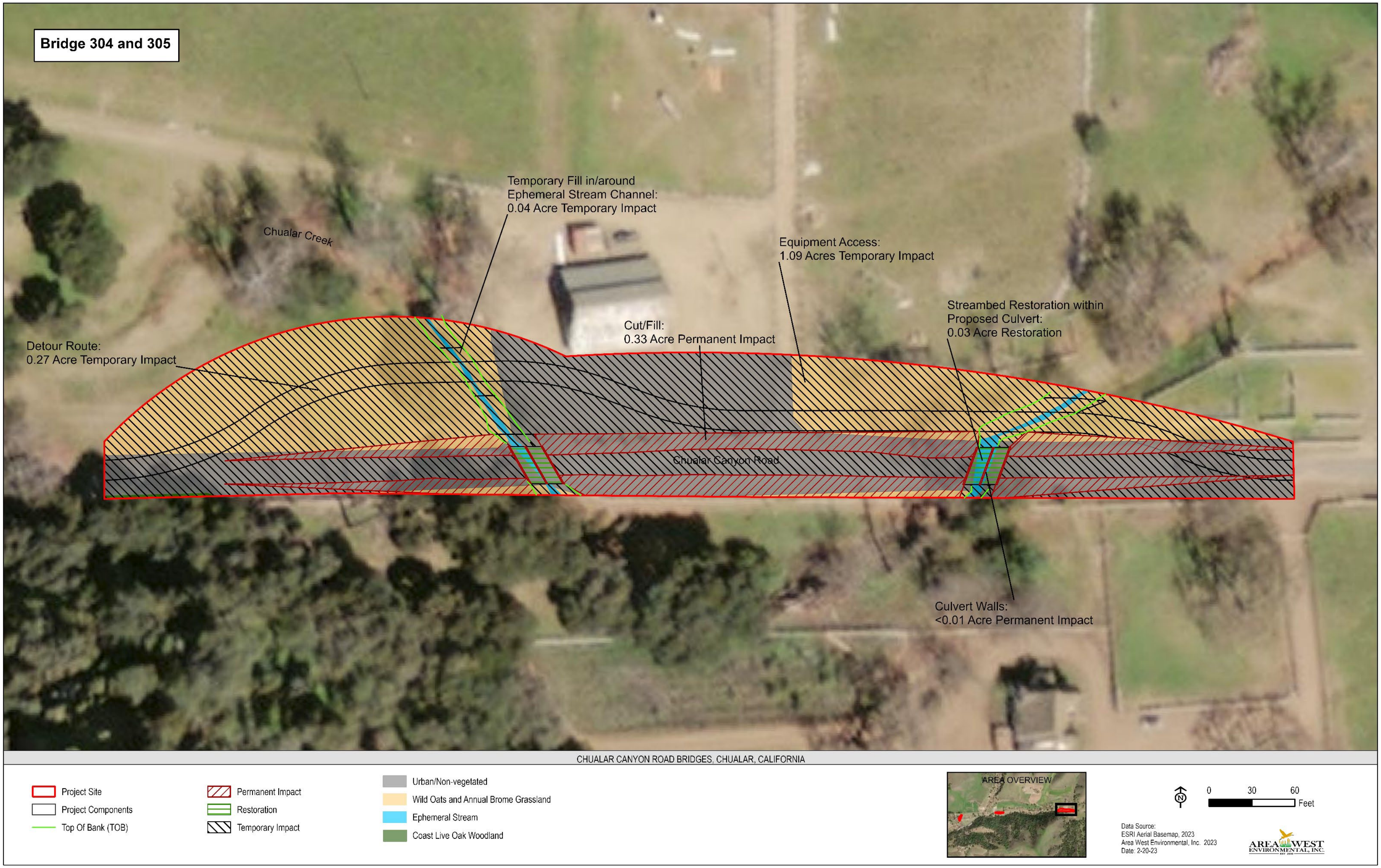


Figure 9c. Potential Project Impacts at Bridge 304 and 305

APPENDIX B. SPECIAL-STATUS SPECIES LISTS

(USFW, NMFS, CNDDB, CNPS)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
Phone: (805) 644-1766 Fax: (805) 644-3958
Email Address: FW8VenturaSection7@FWS.Gov

In Reply Refer To: August 09, 2023
Project Code: 2023-0114937
Project Name: Chualar Canyon Road Bridges Replacement Project

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

To Whom It May Concern:

The enclosed list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

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

Attachment(s):

- Official Species List
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

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

This species list is provided by:

Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
(805) 644-1766

PROJECT SUMMARY

Project Code: 2023-0114937
Project Name: Chualar Canyon Road Bridges Replacement Project
Project Type: Bridge - Replacement
Project Description: Bridges Replacement Project
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.60359805,-121.41317985426343,14z

Counties: Monterey County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 9 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

---

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

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

AMPHIBIANS

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRUSTACEANS

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

FLOWERING PLANTS

NAME	STATUS
Marsh Sandwort *Arenaria paludicola* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2229	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Yellow-billed Magpie *Pica nuttalli* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

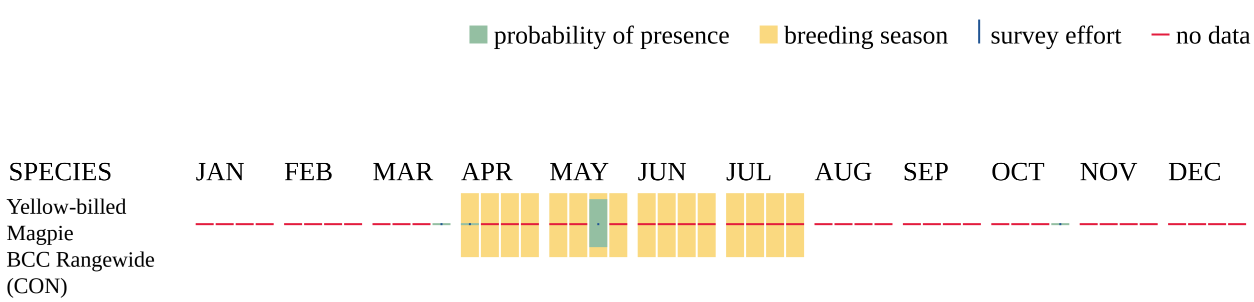
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

IPAC USER CONTACT INFORMATION

Agency:	Area West Environmental
Name:	Samantha Morford
Address:	6248 Main Ave
Address Line 2:	Suite C
City:	Orangevale
State:	CA
Zip:	95630
Email	samanthamorford93@gmail.com
Phone:	9169873362

From:	Samantha Morford
To:	NMFS SpeciesList - NOAA Service Account
Subject:	NMFS Species List for Chualar Canyon Road Bridge Replacement Projects in Monterey County
Date:	Thursday, August 10, 2023 10:50:00 AM
Attachments:	image001.png

Quad Name **Gonzales**

Quad Number **36121-E4**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) - **X**

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat - **X**

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

AREA WEST ENVIRONMENTAL, INC. EST 2000
Samantha Morford | Biologist | 916.987.3362 | smorford@areawest.net
6248 Main Avenue, Suite C, Orangevale, CA 95662 | areawest.net | Follow us on Facebook

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Gonzales (3612154) OR Natividad (3612165) OR Mt. Harlan (3612164) OR Paicines (3612163) OR Mount Johnson (3612153) OR Chualar (3612155) OR Rana Creek (3612145) OR Palo Escrito Peak (3612144) OR Soledad (3612143))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
Anniella pulchra Northern California legless lizard	ARACC01020	None	None	G3	S2S3	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Arctostaphylos gabilanensis Gabilan Mountains manzanita	PDERI042X0	None	None	G1	S1	1B.2
Arctostaphylos montereyensis Toro manzanita	PDERI040R0	None	None	G2?	S2?	1B.2
Arctostaphylos pajaroensis Pajaro manzanita	PDERI04100	None	None	G1	S1	1B.1
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S2	SSC
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
Chorizanthe pungens var. pungens Monterey spineflower	PDPGN040M2	Threatened	None	G2T2	S2	1B.2
Clarkia jolonensis Jolon clarkia	PDONA050L0	None	None	G2	S2	1B.2
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S2	SSC
Delphinium umbraculorum umbrella larkspur	PDRAN0B1W0	None	None	G3	S3	1B.3
Dipodomys venustus elephantinus big-eared kangaroo rat	AMAFD03041	None	None	G4T2	S3	
Dipodomys venustus venustus Santa Cruz kangaroo rat	AMAFD03042	None	None	G4T1	S1	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Eriogonum nortonii Pinnacles buckwheat	PDPGN08470	None	None	G2	S2	1B.3
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
Euphydryas editha bayensis Bay checkerspot butterfly	IILEPK4055	Threatened	None	G5T1	S3	
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Icteria virens yellow-breasted chat	ABPBX24010	None	None	G5	S4	SSC
Juncus luciensis Santa Lucia dwarf rush	PMJUN013J0	None	None	G3	S3	1B.2
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	
Lavinia exilicauda harengus Monterey hitch	AFCJB19013	None	None	G4T3	S3	SSC
Malacothamnus aboriginum Indian Valley bush-mallow	PDMAL0Q020	None	None	G3	S3	1B.2
Malacothamnus palmeri var. involucratus Carmel Valley bush-mallow	PDMAL0Q0B1	None	None	G3T2Q	S2	1B.2
Malacothrix saxatilis var. arachnoidea Carmel Valley malacothrix	PDAST660C2	None	None	G5T2	S2	1B.2
Masticophis flagellum ruddocki San Joaquin coachwhip	ARADB21021	None	None	G5T2T3	S3	SSC
Neotoma macrotis luciana Monterey dusky-footed woodrat	AMAFF08083	None	None	G5T3	S3	SSC
Optioservus canus Pinnacles optioservus riffle beetle	IICOL5E020	None	None	G2	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Perognathus inornatus psammophilus Salinas pocket mouse	AMAFD01062	None	None	G2G3T2?	S1	SSC
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G4	S4	SSC
Plagiobothrys uncinatus hooked popcornflower	PDBOR0V170	None	None	G2	S2	1B.2
Rana boylii pop. 6 foothill yellow-legged frog - south coast DPS	AAABH01056	Proposed Endangered	Endangered	G3T1	S1	
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S3	
Spea hammondii western spadefoot	AAABF02020	None	None	G2G3	S3S4	SSC
Taricha torosa Coast Range newt	AAAAF02032	None	None	G4	S4	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Vulpes macrotis mutica San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S3	

Record Count: 50

CNPS Rare Plant Inventory

CALIFORNIA NATIVE PLANT SOCIETY

Search Results

15 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [**1A:1B:2A:2B**] , 9-Quad include [**3612153:3612165:3612164:3612163:3612145:3612144:3612143:3612155:3612154**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	CA RARE PLANT RANK	LOWEST ELEVATION (FT)	HIGHEST ELEVATION (FT)
Arctostaphylos gabilanensis	Gabilan Mountains manzanita	Ericaceae	perennial evergreen shrub	Jan	None	None	1B.2	985	2295
Arctostaphylos montereyensis	Toro manzanita	Ericaceae	perennial evergreen shrub	Feb-Mar	None	None	1B.2	100	2395
Arctostaphylos pajaroensis	Pajaro manzanita	Ericaceae	perennial evergreen shrub	Dec-Mar	None	None	1B.1	100	2495
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	1B.2	5	195
Centromadia parryi ssp. congdonii	Congdon's tarplant	Asteraceae	annual herb	May-Oct(Nov)	None	None	1B.1	0	755
Chorizanthe pungens var. pungens	Monterey spineflower	Polygonaceae	annual herb	Apr-Jun(Jul-Aug)	FT	None	1B.2	10	1475
Clarkia jolonensis	Jolon clarkia	Onagraceae	annual herb	Apr-Jun	None	None	1B.2	65	2165
Delphinium umbraculorum	umbrella larkspur	Ranunculaceae	perennial herb	Apr-Jun	None	None	1B.3	1310	5250
Eriogonum nortonii	Pinnacles buckwheat	Polygonaceae	annual herb	(Apr)Aug(Sep)May-Jun	None	None	1B.3	985	3200
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	1B.2	10	1345
Juncus luciensis	Santa Lucia dwarf rush	Juncaceae	annual herb	Apr-Jul	None	None	1B.2	985	6695
Malacothamnus aboriginum	Indian Valley bush-mallow	Malvaceae	perennial deciduous shrub	Apr-Oct	None	None	1B.2	490	5580
Malacothamnus palmeri var. involucratus	Carmel Valley bush-mallow	Malvaceae	perennial deciduous shrub	Apr-Oct	None	None	1B.2	100	3610
Malacothrix saxatilis var. arachnoidea	Carmel Valley malacothrix	Asteraceae	perennial rhizomatous herb	(Mar)Jun-Dec	None	None	1B.2	80	3400
Plagiobothrys uncinatus	hooked popcornflower	Boraginaceae	annual herb	Apr-May	None	None	1B.2	985	2495

Showing 1 to 15 of 15 entries

APPENDIX C. NRCS WEB SOIL SURVEY REPORT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

Monterey County, California

Chualar_ProjectSite_20221215

December 16, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map

Map Scale: 1:9,420 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0, 100, 200, 400, 600

Feet: 0, 450, 900, 1800, 2700

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
Area of Interest (AOI)

Soils
Soil Map Unit Polygons
Soil Map Unit Lines
Soil Map Unit Points

Special Point Features
Blowout
Borrow Pit
Clay Spot
Closed Depression
Gravel Pit
Gravelly Spot
Landfill
Lava Flow
Marsh or swamp
Mine or Quarry
Miscellaneous Water
Perennial Water
Rock Outcrop
Saline Spot
Sandy Spot
Severely Eroded Spot
Sinkhole
Slide or Slip
Sodic Spot
Spoil Area
Stony Spot
Very Stony Spot
Wet Spot
Other
Special Line Features

Water Features
Streams and Canals

Transportation
Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background
Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Monterey County, California
Survey Area Data: Version 19, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 11, 2022—May 29, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HbB	Hanford gravelly sandy loam, 0 to 5 percent slopes	2.7	100.0%
Totals for Area of Interest		**2.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Monterey County, California

HbB—Hanford gravelly sandy loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: h93l
Elevation: 150 to 3,500 feet
Mean annual precipitation: 9 to 20 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 250 to 340 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting

Landform: Flood plains, alluvial fans
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear, convex
Parent material: Gravelly coarse-loamy alluvium derived from igneous rock

Typical profile

H1 - 0 to 70 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R014XG906CA - Dry Loamy Bottom
Hydric soil rating: No

Minor Components

Arroyo seco

Percent of map unit: 3 percent
Hydric soil rating: No

Danville

Percent of map unit: 3 percent
Hydric soil rating: No

Elder

Percent of map unit: 3 percent
Hydric soil rating: No

Tujunga

Percent of map unit: 3 percent
Hydric soil rating: No

Metz

Percent of map unit: 3 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Soil List - All Components

This table lists the map unit components and their hydric status in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or

B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.
Federal Register. Doc. 2012-4733 Filed 2-28-12. February, 28, 2012. Hydric soils of the United States.
Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
Vasilas, L.M., G.W. Hurt, and C.V. Noble, editors. Version 7.0, 2010. Field indicators of hydric soils in the United States.

Report—Hydric Soil List - All Components

Hydric Soil List - All Components–CA053-Monterey County, California					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
HbB: Hanford gravelly sandy loam, 0 to 5 percent slopes	Hanford	85	Flood plains,alluvial fans	No	—
	Arroyo Seco	3	—	No	—
	Danville	3	—	No	—
	Elder	3	—	No	—
	Tujunga	3	—	No	—
	Metz	3	—	No	—

Taxonomic Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2003). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. This table shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol.* An example is Alfisols.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalfs (*Ud*, meaning humid, plus *alfs*, from Alfisols).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalfs*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, mesic Typic Hapludalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

References:
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. (The soils in a given survey area may have been classified according to earlier editions of this publication.)

Report—Taxonomic Classification of the Soils

[An asterisk by the soil name indicates a taxadjunct to the series]

Taxonomic Classification of the Soils–Monterey County, California	
Soil name	**Family or higher taxonomic classification**
Hanford	Coarse-loamy, mixed, nonacid, thermic Typic Xerorthents

Soil Erosion

This folder contains a collection of tabular reports that present soil erosion factors and groupings. The reports (tables) include all selected map units and components for each map unit. Soil erosion factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

RUSLE2 Related Attributes

This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factor Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the mineral surface horizon. Missing surface data may indicate the presence of an organic layer.

Report—RUSLE2 Related Attributes

Soil properties and interpretations for erosion runoff calculations. The surface mineral horizon properties are displayed or the first mineral horizon below an organic surface horizon. Organic horizons are not displayed.

RUSLE2 Related Attributes–Monterey County, California

Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
HbB—Hanford gravelly sandy loam, 0 to 5 percent slopes								
Hanford	85	—	A	.17	5	67.9	19.6	12.5

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

APPENDIX D. REPRESENTATIVE PROJECT PHOTOGRAPHS

Northern boundary of Bridge 302 BSA, facing south.

View from the east side edge of Bridge 302, facing east.

Southern boundary of Bridge 302 Project site, facing north-northeast.

Western boundary in center of Bridge 302 Project site, facing east.

 Wild oats and annual brome grassland with active California ground squirrel population, adjacent to Bridge 302 BSA. Facing northwest.	 Eastern boundary of Bridge 303 BSA, facing west.
 View from north side of Bridge 303, facing northeast.	 View from south side of Bridge 303, facing southwest.

 Western boundary of Bridge 303 Project site, facing east.	 Burrow cluster located on north side of road within Bridge 303 Project site.
 Cavity in sycamore located in Bridge 303 Project site.	 Cavity in sycamore located in Bridge 303 Project site.

 View of freshly tilled agricultural lands on south side of road, facing west-southwest towards Bridge 303.	 View of grassland on north side of road, facing northeast, just east of Bridge 303.
 Eastern boundary of Bridge 304-305 Project site, facing west.	 Northern boundary in eastern portion of Bridge 304-305 of Project site, facing southwest toward Bridge 305.


View from south side of Bridge 305, facing southwest.


Western boundary of Bridge 304-305 Project site, facing east.


Northern boundary of western region of Bridge 304-305 of Project site, facing southeast, towards Bridge 304.


View from south side of Bridge 304, facing south-southeast.

 Rodent burrow located within the Bridge 304-305 Project site.	

APPENDIX E. PLANT AND WILDLIFE SPECIES OBSERVED WITHIN THE BIOLOGICAL STUDY AREAS

Plant Species Observed at the Bridge 302 Site

Scientific Name[1]	Common Name	Family	Nativity	Wetland Indicator Status[2]
Trees				
Ailanthus altissima	Tree of heaven	Simaroubaceae	Naturalized	FACU
Olea europaea	Domestic olive	Oleaceae	Naturalized	--
Pinus muricata	Bishop pine	Pinaceae	Native	--
Platanus racemosa	Western sycamore	Platanaceae	Native	FAC
Quercus agrifolia	Coast live oak	Fagaceae	Native	--
Yucca gigantea	Spineless yucca	Asparagaceae	Non-native	--
Shrub				
Artemisia californica	California sagebrush	Asteraceae	Native	--
Diplacus aurantiacus	Orange bush monkeyflower	Phrymaceae	Native	FACU
Nerium oleander	Oleander	Apocynaceae	Naturalized	--
Nicotiana glauca	Tree tobacco	Solanaceae	Naturalized	FAC
Rubus ursinus	California blackberry	Rosaceae	Native	FAC
Herbaceous				
Amsinckia intermedia	Common fiddleneck	Boraginaceae	Native	--
Anagallis arvensis	Scarlet pimpernel	Myrsinaceae	Naturalized	--
Anthriscus caucalis	Bur-chervil	Apiaceae	Naturalized	--
Artemisia douglasiana	Mugwort	Asteraceae	Native	FAC
Avena barbata	Slender wild oat	Poaceae	Naturalized	--
Brassica rapa	Field Mustard	Brassicaceae	Naturalized	FACU
Bromus diandrus	Ripgut grass	Poaceae	Naturalized	--
Calandrinia menziesii	Red maids	Montiaceae	Native	--
Capsella bursa-pastoris	Shepherd's-purse	Brassicaceae	Naturalized	FACU
Cyperus eragrostis	Tall flatsedge	Cyperaceae	Native	FACW
Erigeron canadensis	Horseweed, Canadian horseweed	Asteraceae	Native	FACU
Erodium botrys	Long-beak stork’s-bill	Geraniaceae	Naturalized	FACU
Erodium cicutarium	Redstem filaree	Geraniaceae	Naturalized	--
Festuca myuros	Rat-tail six-week grass	Poaceae	Naturalized	FACU
Foeniculum vulgare	Fennel, sweet fennel	Apiaceae	Naturalized	--
Heterotheca grandiflora	Telegraphweed	Asterceae	Native	--
Hordeum murinum subsp. *leporinum*	Wall barley	Poaceae	Naturalized	--
Malvella leprosa	Alkali-mallow, white-weed	Malvaceae	Native	FACU
Marrubium vulgare	White horehound	Lamiaceae	Naturalized	FACU
Melilotus indicus	Indian sweet-clover, sourclover	Fabaceae	Naturalized	FACU
Mimulus guttatus	Seep monkey-flower	Phrymaceae	Native	OBL
Pholistoma auritum	Blue fiestaflower	Hydrophyllaceae	Native	--
Scleranthus annuus subsp. annuus	Annual knawel	Caryophllyaceae	Naturalized	FACU

Plant Species Observed at the Bridge 302 Site

Scientific Name[1]	Common Name	Family	Nativity	Wetland Indicator Status[2]
Silybum marianum		Asteraceae	Naturalized	--
Urtica urens	Dwarf nettle	Urticaceae	Naturalized	--
Verbena lasiostachys var. lasiostachys	Western vervain	Verbenaceae	Native	FAC

[1]Jepson Flora Project (eds.) 2022, Jepson eFlora, https://ucjeps.berkeley.edu/eflora/, accessed on December 2022.

[2]U.S. Army Corps of Engineers 2020. National Wetland Plant List, version 3.5. http://wetland-plants.usace.army.mil/. Accessed December 2022.
OBL = Obligate wetland
FACW = Facultative wetland
FAC = Facultative
FACU = Facultative upland
UPL = Upland obligate
-- = No indicator status listed on 2020 National Wetland Plant List

Wildlife Species Observed at the Bridge 302 Site

Common Name	Scientific Name
Birds	
California scrub jay	*Aphelocoma californica*
Red-tailed hawk	*Buteo jamaicensis*
Anna’s hummingbird	*Calypte anna*
Turkey vulture	*Cathartes aura*
Acorn woodpecker	*Melanerpes formicivorus*
Wild turkey	*Meleagris gallopavo*
Yellow-billed magpie	*Pica nuttalli*
Black phoebe	*Sayornis nigricans*
Yellow-rumped warbler	*Setophaga coronata*
Mourning dove	*Zenaida macroura*
White-crowned sparrow	*Zonotrichia leucophrys*
Mammals	
California ground squirrel	*Otospermophilus beecheyi*

Plant Species Observed at the Bridge 303 Site

Scientific Name[1]	Common Name	Family	Nativity	Wetland Indicator Status[2]
Trees				
Platanus racemosa	Western sycamore	Platanaceae	Native	FAC
Quercus agrifolia	Coast live oak	Fagaceae	Native	--
Shrub				
Artemisia californica	California sagebrush	Asteraceae	Native	--
Nicotiana glauca	Tree tobacco	Solanaceae	Naturalized	FAC
Herbaceous				
Amsinckia intermedia	Common fiddleneck	Boraginaceae	Native	--
Anthriscus caucalis	Bur-chervil	Apiaceae	Naturalized	--
Avena barbata	Slender wild oat	Poaceae	Naturalized	--
Brassica rapa	Field mustard	Brassicaceae	Naturalized	FACU
Bromus diandrus	Ripgut grass	Poaceae	Naturalized	--
Calandrinia menziesii	Red maids	Montiaceae	Native	--
Capsella bursa-pastoris	Shepherd's-purse	Brassicaceae	Naturalized	FACU
Erigeron canadensis	Horseweed, Canadian horseweed	Asteraceae	Native	FACU
Erodium brachycarpum		Geraniaceae	Naturalized	--
Erodium cicutarium	Redstem filaree	Geraniaceae	Naturalized	--
Festuca myuros	Rat-tail six-weeks grass	Poaceae	Naturalized	FACU
Festuca perennis	Perennial rye grass	Poaceae	Naturalized	FAC
Geranium molle		Geraniaceae	Naturalized	--
Geranium purpureum		Geraniaceae	Naturalized	--
Heterotheca grandiflora	Telegraphweed	Asterceae	Native	--
Hordeum murinum	Wall barley	Poaceae	Naturalized	--
Lactuca serriola	Prickly lettuce	Asteraceae	Naturalized	FACU
Lamium amplexicaule	Henbit	Lamiaceae	Naturalized	
Malvella leprosa	Alkali-mallow, white-weed	Malvaceae	Native	FACU
Pholistoma auritum	Blue fiestaflower	Hydrophyllacea e	Native	--
Polygonum aviculare	Yard knotweed, knotgrass	Polygonaceae	Naturalized	FACW
Scleranthus annuus subsp. annuus	Annual knawel	Caryophllyaceae	Naturalized	FACU
Silybum marianum		Asteraceae	Naturalized	--
Triticum aestivum		Poaceae	Naturalized	--
Urtica dioica	Stinging nettle	Urticaceae	Native	FAC
Urtica urens	Dwarf nettle	Urticaceae	Naturalized	--
Verbena lasiostachys var. lasiostachys	Western vervain	Verbenaceae	Native	FAC

[1]Jepson Flora Project (eds.) 2022, Jepson eFlora, https://ucjeps.berkeley.edu/eflora/, accessed on December 2022.

[2]U.S. Army Corps of Engineers 2020. National Wetland Plant List, version 3.5. http://wetland-plants.usace.army.mil/. Accessed December 2022.
OBL = Obligate wetland
FACW = Facultative wetland
FAC = Facultative

FACU = Facultative upland
UPL = Upland obligate
-- = No indicator status listed on 2020 National Wetland Plant List

Wildlife Species Observed at the Bridge 303 Site

Common Name	Scientific Name
Birds	
Turkey vulture	*Cathartes aura*
California scrub jay	*Aphelocoma californica*
Acorn woodpecker	*Melanerpes formicivorus*
European starling	*Sturnus vulgaris*
Mammals	
Coyote	*Canis latrans*
California mule deer	*Odocoileus hemionus*

Plant Species Observed at the Bridge 304/305 Site

Scientific Name[1]	Common Name	Family	Nativity	Wetland Indicator Status[2]
Trees				
Platanus racemosa	Western sycamore	Platanaceae	Native	FAC
Quercus agrifolia	Coast live oak	Fagaceae	Native	--
Sequoia sempervirens	Coast redwood	Cupressaceae	Native	--
Yucca gigantea	Spineless yucca	Asparagaceae	Non-native	--
Shrub				
Artemisia californica	California sagebrush	Asteraceae	Native	--
Nicotiana glauca	Tree tobacco	Solanaceae	Naturalized	FAC
Herbaceous				
Anthriscus caucalis	Bur-chervil	Apiaceae	Naturalized	--
Avena barbata	Oats	Poaceae	Naturalized	--
Brassica nigra	Black mustard	Brassicaceae	Naturalized	--
Brassica rapa	Field mustard	Brassicaceae	Naturalized	FACU
Bromus diandrus	Ripgut grass	Poaceae	Naturalized	--
Bromus hordeaceus	Soft brome, soft chess	Poaceae	Naturalized	FACU
Bromus madritensis		Poaceae	Naturalized	UPL
Calandrinia menziesii	Red maids	Montiaceae	Native	--
Capsella bursa-pastoris	Shepherd's-purse	Brassicaceae	Naturalized	FACU
Cerastium glomeratum	Sticky mouse-ear chickweed	Caryophllyaceae	Naturalized	UPL
Chenopodium album	Lamb's-quarters, lambsquarter	Chenopodiaceae	Naturalized	FACU
Clarkia purpurea subsp. purpurea		Onagraceae	Native	--
Claytonia perfoliata	Miner's-lettuce	Montiaceae	Native	FAC
Crassula connata	Sand pygmyweed	Crassulaceae	Native	FAC
Epilobium brachycarpum		Onagraceae	Native	--
Erigeron canadensis	Horseweed, Canadian horseweed	Asteraceae	Native	FACU
Erodium botrys	Long-beak stork's-bill	Geraniaceae	Naturalized	FACU
Erodium cicutarium	Redstem filaree	Geraniaceae	Naturalized	--
Festuca myuros	Rat-tail six-weeks grass	Poaceae	Naturalized	FACU
Festuca perennis	Perennial rye grass	Poaceae	Naturalized	FAC
Galium aparine	Sticky-willy, goose grass	Rubiaceae	Native	FACU
Geranium molle		Geraniaceae	Naturalized	--
Geranium purpureum		Geraniaceae	Naturalized	--
Heterotheca grandiflora	Telegraphweed	Asterceae	Native	--
Hordeum murinum	Wall barley	Poaceae	Naturalized	--
Lactuca serriola	Prickly lettuce	Asteraceae	Naturalized	FACU
Lamium amplexicaule	Henbit	Lamiaceae	Naturalized	--
Malva nicaeensis	Bull mallow	Malvaceae	Naturalized	--

Plant Species Observed at the Bridge 304/305 Site

Scientific Name[1]	Common Name	Family	Nativity	Wetland Indicator Status[2]
Matricaria discoidea	Pineapple-weed, rayless chamomile	Asteraceae	Naturalized	FACU
Mimulus guttatus	Seep monkey-flower	Phrymaceae	Native	OBL
Oenothera laciniata	Cut-leaf evening-primrose	Onagraceae	Naturalized	FAC
Pholistoma auritum	Blue fiestaflower	Hydrophyllaceae	Native	--
Poa annua	Annual blue grass	Poaceae	Naturalized	FACU
Polygonum aviculare	Yard knotweed, knotgrass	Polygonaceae	Naturalized	FACW
Polypogon monspeliensis	Annual rabbit's-foot grass	Poaceae	Naturalized	FACW
Scleranthus annuus subsp. annuus	Annual knawel	Caryophllyaceae	Naturalized	FACU
Silybum marianum		Asteraceae	Naturalized	--
Sonchus asper subsp. *asper*	Spiny-leaf sow-thistle, prickly sow-thistle	Asteraceae	Naturalized	FAC
Urtica dioica	Stinging nettle	Urticaceae	Native	FAC
Urtica urens	Dwarf nettle	Urticaceae	Naturalized	--

[1]Jepson Flora Project (eds.) 2022, Jepson eFlora, https://ucjeps.berkeley.edu/eflora/, accessed on December 2022.

[2]U.S. Army Corps of Engineers 2020. National Wetland Plant List, version 3.5. http://wetland-plants.usace.army.mil/. Accessed December 2022.
OBL = Obligate wetland
FACW = Facultative wetland
FAC = Facultative
FACU = Facultative upland
UPL = Upland obligate
-- = No indicator status listed on 2020 National Wetland Plant List

Wildlife Species Observed at the Bridge 304/305 Site

Common Name	Scientific Name
Birds	
Oak titmouse	*Baeolophus inornatus*
Anna's hummingbird	*Calypte anna*
Acorn woodpecker	*Melanerpes formicivorus*
Yellow-billed magpie	*Pica nuttalli*
Black phoebe	*Sayornis nigricans*
European starling	*Sturnus vulgaris*
Mourning dove	*Zenaida macroura*
White-crowned sparrow	*Zonotrichia leucophrys*
Mammals	
California ground squirrel	*Otospermophilus beecheyi*

APPENDIX F. SPECIAL-STATUS PLANT AND WILDLIFE SPECIES WITH POTENTIAL TO OCCUR WITHIN THE BIOLOGICAL STUDY AREAS

Table F-1. Special-Status Plants with Potential to Occur in the Vicinity of the Project [i]

Common and Scientific Name	Legal Status [ii] Federal/ State/CNPS	Distribution	Habitat Association	Identification Period	Species Present/ Absent [iii]	Potential to Occur/ Rationale and Survey Results [iv]
Gabilan mountains manzanita *Arctostaphylos gabilanensis*	--/--/1B.2	Los Angeles, Monterey, and San Benito counties. California endemic.	Open granitic outcrops, chaparral, Coulter-pine/chaparral/Cismontane woodland. Elevation (m): 300-710.	January	A	**None**. The BSAs are outside of species known elevation range. No *Arctostaphylos* species were observed during the December 2022 surveys. The nearest CNDDB occurrence (#2) is approximately 7.1 miles southeast of the Project sites.
Toro manzanita *Arctostaphylos montereyensis*	--/--/1B.2	Monterey county. California endemic.	Chaparral, cismontane woodland, coastal scrub. Sandstone soils. Elevation (m): 30-730.	February - March	A	**None**. Soil does not meet habitat requirements. No *Arctostaphylos* species were observed during the December 2022 surveys. The nearest CNDDB occurrence (#21) is approximately 9.8 miles west of the Project sites.
Pajaro manzanita *Arctostaphylos pajaroensis*	--/--/1B.1	Monterey, San Benito, and Santa Cruz counties. California endemic.	Chaparral, sandstone outcrops. Elevation (m): 30-760.	December - March	A	**None**. Soil does not meet habitat requirements. No *Arctostaphylos* species were observed during the December 2022 surveys. The nearest CNDDB occurrence (#13) is approximately 6.7 miles north of the Project sites.
Marsh sandwort *Arenaria paludicola*	FE/SE/1B.1	Los Angeles, Marin, Riverside, San Bernardino, San Francisco, San Luis Obispo, and Santa Cruz counties.	Wet meadows, marshes, and swamps (brackish, freshwater). Elevation (m): 3-170.	May - August	A	**None**. The BSAs do not contain suitable wetland habitat for this species. Additionally, this species was not observed within the BSAs during the May 2023 botanical survey, conducted during this species identification period. This species is not known to occur within Monterey County. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***

Table F-1. Special-Status Plants with Potential to Occur in the Vicinity of the Project [i]

Common and Scientific Name	Legal Status [ii] Federal/ State/CNPS	Distribution	Habitat Association	Identification Period	Species Present/ Absent [iii]	Potential to Occur/ Rationale and Survey Results [iv]
Alkali milk-vetch *Astragalus tener* var. *tener*	--/--/1B.2	Alameda, Contra Costa, Merced, Monterey, Napa, San Benito, San Francisco, San Joaquin, Santa Clara, Solano, Sonoma, Stanislaus, and Yolo counties. California endemic.	Playas, valley and foothill grassland (adobe clay), vernal pools. Elevation (m): 1-60.	March - June	A	**None**. There is no suitable habitat within the BSAs. The BSAs do not contain wetland features or adobe clay. Additionally, this species was not observed within the BSAs during the May 2023 botanical survey, conducted during this species identification period. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	--/--/1B.1	Alameda, Contra Costa, Monterey, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, and Solano counties. California endemic.	Valley and foothill grasslands (alkaline). Elevation (m): 0-230.	May – October (November)	A	**None**. There is no suitable habitat within the BSAs. The BSAs do not contain alkaline soils. Additionally, this species was not observed within the BSAs during the May 2023 botanical survey, conducted during this species identification period. The nearest CNDDB occurrence (#31) is approximately 4.5 miles southwest of the Project sites.
Monterey spineflower *Chorizanthe pungens* var. *pungens*	FT/--/1B.2	Monterey, San Luis Obispo, and Santa Cruz counties. California endemic.	Chaparral (maritime), cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grasslands. Sandy soils. Elevation (m): 3-450.	April – June (July - August)	A	**None**. There is no suitable habitat within the BSAs. Species occurs in sandy coastal habitats. BSAs are not within the coastal zone. Additionally, this species was not observed within the BSAs during the May 2023 botanical survey, conducted during this species identification period. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***

Table F-1. Special-Status Plants with Potential to Occur in the Vicinity of the Project [i]

Common and Scientific Name	Legal Status [ii] Federal/ State/CNPS	Distribution	Habitat Association	Identification Period	Species Present/ Absent [iii]	Potential to Occur/ Rationale and Survey Results [iv]
Jolon clarkia *Clarkia jolonensis*	--/--/1B.2	Monterey county. California endemic.	Chaparral, cismontane woodland, coastal scrub, riparian woodland. Elevation (m): 20-660.	April - June	A	**None**. There is potentially suitable habitat is present in the coastal live oak woodland in the Bridge 304/305 BSA, however, this species was not observed within any of the BSAs during the May 2023 botanical survey, conducted during this species identification period. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Umbrella larkspur *Delphinium umbraculorum*	--/--/1B.3	Monterey, San Luis Obispo, Santa Barbara, and Ventura counties. California endemic.	Chaparral and cismontane woodlands. Elevation (m): 400-1600.	April - June	A	**None**. BSAs are outside of species known elevation range. Additionally, this species was not observed within the BSAs during the May 2023 botanical survey, conducted during this species identification period. The nearest CNDDB occurrence (#69) is approximately 9.8 miles west of the Project sites.
Pinnacles buckwheat *Eriogonum nortonii*	--/--/1B.3	Monterey and San Benito counties. California endemic.	Chaparral and valley and foothill grassland. Often on recently burned areas. Elevation (m): 300-975.	(April) May – June (August - September)	A	**None**. BSAs are outside of species known elevation range. Additionally, this species was not observed within the BSAs during the May 2023 botanical survey, conducted during this species identification period. The nearest CNDDB occurrence (#13) is approximately 5.6 miles north of the Project sites.

Table F-1. Special-Status Plants with Potential to Occur in the Vicinity of the Project [i]

Common and Scientific Name	Legal Status [ii] Federal/ State/CNPS	Distribution	Habitat Association	Identification Period	Species Present/ Absent [iii]	Potential to Occur/ Rationale and Survey Results [iv]
Fragrant fritillary *Fritillaria liliacea*	--/--/1B.2	Alameda, Contra Costa, Monterey, Marin, San Benito, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma counties. California endemic.	Cismontane woodland, Coastal prairie, Coastal scrub, Valley, and foothill grassland. Often on serpentine, various soils reported though usually on clay, in grassland. Elevation (m): 3-410.	February - April	A	**None**. There is no suitable habitat within the BSAs. The BSAs do not contain serpentine or clay soils. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Santa Lucia dwarf rush *Juncus luciensis*	--/--/1B.2	Lassen, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Riverside, San Benito, San Diego, San Luis Obispo, Santa Barbara, and Shasta counties. California endemic.	Chaparral, Great Basin scrub, lower montane coniferous forest, meadows, seeps, and vernal pools. Elevation (m): 300-2040.	April - June	A	**None**. There is no suitable wetland habitat within the BSAs for this species and the BSAs are outside of species known elevation range. Additionally, this species was not observed within the BSAs during the May 2023 botanical survey, conducted during this species identification period. The nearest CNDDB occurrence (#12) is approximately 8.1 miles southeast of the Project sites.
Indian Valley bush-mallow *Malacothamnus aboriginum*	--/--/1B.2	Fresno, Kings, Monterey, San Benito counties. California endemic.	Chaparral, cismontane woodland. Often on recently burned areas, granitic and rocky substrates. Elevation (m): 150-1700.	April - October	A	**None**. There are patches of suitable soils and cismontane woodland present in the 304/305 BSA, however, this species was not observed within any of the BSAs during the May 2023 botanical survey, conducted during this species identification period. The nearest CNDDB occurrence (#19) is approximately 3.9 miles south of the Project sites.

Table F-1. Special-Status Plants with Potential to Occur in the Vicinity of the Project [i]

Common and Scientific Name	Legal Status [ii] Federal/ State/CNPS	Distribution	Habitat Association	Identification Period	Species Present/ Absent [iii]	Potential to Occur/ Rationale and Survey Results [iv]
Carmel Valley bush-mallow *Malacothamnus palmeri* var. *involucratus*	--/--/1B.2	Monterey county. California endemic.	Chaparral, cismontane woodland, coastal scrub. Elevation (m): 30-1100.	April - October	A	**None**. There are patches of suitable soils and cismontane woodland present in the 304/305 BSA, however, this species was not observed within any of the BSAs during the May 2023 botanical survey, conducted during this species identification period. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Carmel Valley malacothrix *Malacothrix saxatilis* var. *arachnoidea*	--/--/1B.2	Monterey, Santa Barbara, San Benito counties. California endemic.	Chaparral (rocky), coastal scrub. Elevation (m): 25-1036.	(March) June - December	A	**None**. No suitable habitat was present in the BSAs. Additionally, this species was not observed during the December 2022 field surveys conducted during this species blooming period. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Hooked popcornflower *Plagiobothrys uncinatus*	--/--/1B.2	Monterey, San Benito, San Luis Obispo counties. California endemic.	Chaparral, cismontane woodland, valley and foothill grassland. Elevation (m): 300-760.	April - May	A	**None**. The BSAs are outside of species known elevation range. This species is often found in gravelly substrates would do not occur in the BSAs. Additionally, this species was not observed within the BSAs during the May 2023 botanical survey, conducted during this species identification period. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.

i References for distribution, habitat association, bloom period, and plant records:
California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9-01 1.5). CNPS; Sacramento, California. Website http://www.rareplants.cnps.org.

CDFW (California Department of Fish and Wildlife). 2023. California Natural Diversity Database – RareFind 5 and BIOS. CDFW Biogeographic Data Branch; Sacramento, California. Available at: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data

ii Status explanations:
-- = no listing
Federal
FE = listed as endangered under the federal Endangered Species Act.
FT = listed as threatened under the federal Endangered Species Act.
State
SE = listed as endangered under the California Endangered Species Act.
California Native Plant Society
1B = List 1B species: rare, threatened, or endangered in California and elsewhere.
0.1= Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat).
0.2= Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat).
0.3= Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

iii Species Present/Absent Determination:
Present = Species was observed within the BSA during a botanical survey conducted during the appropriate blooming period.
Absent = Species was not observed within the BSA during a botanical survey conducted during the appropriate blooming period.
TBD = Species present is to be determined during subsequent botanical surveys conducted during the appropriate blooming period.

iv Rational/ Survey Results:
ESA impact determinations are provided only for FESA listed species.

Definitions for the Potential to Occur:
None. No suitable habitat present within the biological study area.
Low. Minimal or marginal quality habitat in the biological study area.
Moderate. Suitable habitat occurs within the biological study area.
High. Biological study area provides desirable habitat for species and there is a very high probability for its occurrence.
Present. Species was observed within the biological study area.

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i] Federal	Legal Status [i] State	Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
Invertebrates						
Vernal pool fairy shrimp *Branchinecta lynchi*	FT	--	Central Valley, Central and South Coast Ranges from Tehama County to Santa Barbara County; isolated populations also in Riverside County.	Common in vernal pools and seasonal wetlands; also found in sandstone rock outcrop pools.	A	**None**. There is no suitable habitat present in the BSAs. The BSAs do not contain vernal pools or seasonal wetlands. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***
Crotch bumble bee *Bombus crotchii*	--	SCE	Found primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California. It also occurs in Mexico (Baja California and Baja California Sur) and has been documented in southwest Nevada, near the California border.	Found in open grassland and scrub habitats.	P	**Moderate**. The open grasslands within the BSAs provide suitable habitat for this species. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Monarch butterfly *Danaus plexippus*	FC	--	Found throughout California (Marty and Zakowski 2019. Overwinter in central to southern California coastal region.	California overwintering habitat includes eucalyptus, Monterey pines, and Monterey cypresses. Milkweed is the sole food source for larvae.	P	**Low**. The BSAs are outside of this species overwintering range. Milkweed, this species sole larval host plant, is not known to occur within the BSAs. However, if milkweed were to grow within the BSAs, the BSAs are within early breeding zone for this species. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
Bay checkerspot butterfly *Euphydryas editha bayensis*	FT	--	Disjunct occurrences in San Mateo and Santa Clara Counties.	Associated with dwarf plantain (*Plantago erecta*), purple owl's clover (*Castilleja exserta* spp. *exserta*), and Indian paintbrush (*Castilleja affinis*) that only grow on serpentine soils (Black and Vaughan 2005).	A	**None**. There are no serpentine soils in the BSAs, therefore no potential for host plants. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***
Fish						
Steelhead - Central California Coast DPS *Oncorhynchus mykiss irideus pop. 8*	FT	--	Coastal rivers and streams creeks from Santa Cruz County north to Russian River Basin including Rivers and streams tributary to the San Francisco Bay. From the Russian River to and including Aptos Creek, and all drainages of San Francisco and San Pablo Bays eastward to Chipps Island at the confluence of the Sacramento and San Joaquin Rivers.	Anadromous fish species that spawns and spends a portion of its life in fresh inland streams, maturing in the open ocean. Spawns in small streams where cool, well-oxygenated water is available year-round.	A	**Low**. The portion of Chualar Creek in the BSAs appears to be ephemeral and does not provide suitable habitat for this species. However, Chualar Creek drains into Salinas River which is a known migratory corridor for this species. Available data and field assessment of publicly accessible downstream reach of Chualar Creek does not show fish barriers between Salinas River and Chualar Creek. Therefore, during high flow events it may be possible for individuals to stray upstream Chualar Creek into the BSAs. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***
Monterey hitch *Lavinia exilicauda harengus*	--	SSC	Pajaro and Salinas rivers, tributaries of the Monterey Bay. Pajaro and San Benito watersheds (CDFW 2010).	Common in lowland areas or small reservoirs. Sites known to support Monterey Hitch often have water year-round and large, clear, warm pools in the summer (CDFW 2010).	A	**None**. The portion of Chualar Creek in the BSAs appears to be ephemeral and does not provide suitable habitat for this species. The nearest CNDDB occurrence (#1) is approximately 7.1 miles west of the Project sites.

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
Amphibians						
California tiger salamander *Ambystoma californiense*	FE	ST	Central Valley, including Sierra Nevada foothills up to 1,500 feet and Coastal regions from Butte County south to Santa Barbara County.	Breeds in temporary ponds formed from rain associated with annual grassland. May also occur in hardwood forest, but less common. Adult life is mostly subterranean in burrows, rock cracks and other structures. Seasonal movements associated with breeding are usually up to 1.25 miles.	P	**Moderate**. Suitable upland and dispersal habitat was observed within the BSAs. The BSAs do not contain suitable breed habitat, however, ponds in vicinity of BSAs may. BSAs could be used as a dispersal corridor. Rodent burrows, suitable for estivation, were observed at all BSAs. The nearest CNDDB occurrence (#15) is approximately 5.3 miles southeast of the Project sites. ***May affect, but not likely to adversely affect.***
Foothill yellow-legged frog *Rana boylii*	FPE	SE	Throughout North and South Coast Ranges south to the Transverse Range, across northern California to the west slope of the Cascade Range, and south through the foothills of the Sierra Nevada to Tehachapi Creek, Kern County, up to 6,370 feet amsl. Also, isolated populations are found in San Joaquin Co. on the floor of the Central Valley and known from the mountains of Los Angeles County.	Found in or near rocky streams in a variety of habitats, including forests, chaparral, woodlands, and wet meadow types. Streams and rivers with open, sunny banks, sandy, rocky substrates and banks, deep pools, and shallow riffles. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools. Rarely encountered far from permanent water even during rain events, but may move up to 165 feet from the edge of aquatic habitat. Normal home ranges are less than 33 feet in the longest dimension. Occasional long-distance movements up to 165 feet may occur during periods with high water conditions. Occurs at elevations from sea level to 6,700 feet. (CDFW 2021c, Nafis 2021)	A	**None**. There is no suitable habitat for this species within the BSAs. Chualar Creek does not appear to hold water long enough to support breeding and the substrate of the creek is not suitable egg mass deposit. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
California red-legged frog *Rana draytonii*	FT	SSC	Along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County. Usually occurs below 4,000 feet amsl. Occurs along the Coast Ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges (CDFW 2018d).	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation in humid forests, woodlands, grasslands, coastal scrub, and stream sides with plant cover in lowlands or foothills. Breeding habitat includes permanent or ephemeral water sources, lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry (CDFW 2021c). Upland habitat includes nearly any area within 1-2 miles of a breeding site that stays moist and cool through the summer including vegetated areas with coyote brush, California blackberry thickets, and root masses associated with California bay trees (Fellers 2005). Occurs at elevations from sea level to 4,921 feet.	P	**Moderate**. Suitable upland and dispersal habitat was observed within the BSAs. The BSAs do not contain suitable breeding habitat, however, ponds in vicinity of BSAs may. BSAs could be used as a dispersal corridor. Rodent burrows, suitable for estivation, were observed at all BSAs. The nearest CNDDB occurrence (#766) is approximately 9.3 miles northeast of the Project sites. ***May affect, but not likely to adversely affect.***
Western spadefoot *Spea hammondii*	--	SSC	Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California.	Shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.	P	**Low**. The BSAs may provide suitable habitat for this species. If flows are adequate within Chualar Creek during this species breeding (late winter through March), it could provide suitable breeding habitat. Otherwise, it could be used as dispersal corridor. Ponds in vicinity of project sites may provide suitable breeding habitat. The nearest CNDDB occurrence (#1311) is approximately 1.5 miles west of the Project sites.

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
Coast Range newt *Taricha torosa*	--	SSC	Coastal ranges from Salinas to San Luis Obispo. Isolated populations in Santa Barbara, Los Angeles, Rancho Santa Margarita, Diablo Ranges, and the Cleveland National Forest. Endemic to California (CDFW 2014).	Found in wet and oak forests, chaparral, and grasslands. Use soil, logs, and debris for cover. Shallow streams, ponds, lakes, and rivers are used for breeding. (SDMMP 2022)	P	**Low**. The BSAs may provide suitable habitat for this species. If flows are adequate within Chualar Creek during this species breeding (December through May), it could provide suitable breeding habitat. Otherwise, it could be used as dispersal corridor. Ponds in vicinity of project sites may provide suitable breeding habitat. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Reptiles						
Northern California legless lizard *Anniella pulchra*	--	SSC	Occurs from the San Joaquin River south to Ventura County. Common in suitable habitats in the Coast Range, and spotty throughout the rest of their range, including the San Joaquin Valley floor.	Occurs in moist warm loose soil with plant cover in beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces.	P	**Low**. The stream terrace within the BSAs may provide marginally suitable habitat. The nearest CNDDB occurrence (#228) is approximately 8.8 miles northeast of the Project sites.
Western pond turtle *Emys marmorata*	--	SSC	Occurs throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. (CDFW 2021c).	Found in a wide variety of habitats throughout California, but associated with permanent ponds, lakes, streams, irrigation ditches, and permanent pools along intermittent streams (CDFW 2021c).	A	**None**. The BSAs do not contain suitable habitat for this species. Chualar Creek within the BSAs is ephemeral. The nearest CNDDB occurrence (#88) is approximately 9.7 miles northeast of the Project sites.
San Joaquin coachwhip *Masticophis flagellum ruddocki*	--	SSC	Alameda, Contra Costa, Kern, Lake, Monterey, Merced, San Benito, San Joaquin, Stanislaus, and Tulare counties (CSU Stanislaus)	Common habitats include grasslands, chaparral, deserts, scrubland, and pasture habitats. Known to occur in coastal foothills south of San Francisco Bay. (Palermo 2000)	P	**Moderate**. The grassland vegetation community within the BSAs contains suitable habitat for this species. The nearest CNDDB occurrence (#6) is approximately 9.0 miles northeast of the Project sites.

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
Coast horned lizard *Phrynosoma blainvillii*	--	SSC	Sierra Nevada foothills from Butte County to Kern County and throughout the central and southern California coast.	Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands.	P	**Low**. The BSAs contain marginally suitable habitat for this species. Small open patches of sandy soils in the grassland vegetation community were observed within the BSAs. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Birds						
Tricolored blackbird *Agelaius tricolor*	--	ST	Largely endemic to California; permanent residents in the Central Valley from Butte County to Kern County; at scattered coastal locations from Marin County south to San Diego County; breeds at scattered locations in Lake, Sonoma, and Solano Counties; rare nester in Siskiyou, Modoc, and Lassen Counties. Sacramento-San Joaquin Valleys and low foothills of coast ranges and Sierra Nevada.	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields; nesting habitat must be large enough to support 50 pairs; probably requires water at or near the nesting colony; requires large foraging areas, including marshes, pastures, agricultural wetlands, dairies, and feedlots, where insect prey is abundant.	A	**None**. The BSAs did not contain suitable breeding habitat. There is potential for this species to fly or forage within the BSAs if there is a nearby colony. The nearest CNDDB occurrence (#934) is approximately 7.3 miles northwest of the Project sites.
Golden eagle *Aquila chrysaetos*	--	FP	Foothills and mountains through-out California; uncommon nonbreeding visitor to lowlands such as the Central Valley. Concentrated in the Central Valley and coastal valleys.	Cliffs and escarpments or tall trees for nesting; annual grasslands, chaparral, and oak wood-lands with plentiful medium and large-sized mammals for prey.	P	**Moderate**. Suitable nesting trees and potential foraging habitat is present within the BSAs. No golden eagles or sign (large raptor nests) were observed within or adjacent to the BSAs. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
Burrowing owl *Athene cunicularia*	--	SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast. Central and southern costal habitats, and Central Valley.	Annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent upon burrowing mammals (especially California ground squirrel) for burrows and other refugia, such as culverts.	P	**Moderate**. The grassland vegetation community within the BSAs contain suitable habitat for this species. California ground squirrel burrows were observed within and/or adjacent to the BSAs. No burrowing owls or sign (burrows with whitewash, owl pellets, feathers) were observed in the BSAs. The nearest CNDDB occurrence (#344) is approximately 5.3 miles south of the Project sites.
Swainson's hawk *Buteo swainsonii*	--	ST	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley; the state's highest nesting densities occur near Davis and Woodland, Yolo County.	Nests in oaks or cottonwoods in or near riparian habitats; forages in grasslands, irrigated pastures, and grain fields.	P	**Moderate**. Suitable nesting trees and potential foraging habitat are present within the BSAs. The nearest CNDDB occurrence (#2542) is approximately 9.0 miles west of the Project sites.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT	SE	Breeds along major river valleys. Occurs at isolated sites in Sacramento Valley in northern California and along Kern and Colorado River systems in southern California. The northern limit of breeding in California is Sacramento Valley.	In California, prefers riparian woodlands comprised of various compositions with a dense understory along slow moving watercourses. Typically requires expansive riparian habitat of 25–99 acres of habitat for breeding. Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow almost always a dominant component of the vegetation.	A	**None**. There is no suitable habitat to support this species within the BSAs. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***
Yellow rail *Coturnicops noveboracensis*	--	SSC	Breeding range within California is in the northeastern interior, and as a visitor on the coast and in Suisun Marsh.	Breeding requires densely vegetated marshes or meadows with moist soil or shallow standing water.	A	**None**. There is no suitable habitat to support this species within the BSAs. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
Southwestern willow flycatcher *Empidonax traillii extimus*	FE	SE	Imperial, Inyo, Kern, Los Angeles, Mono, Monterey, Orange, Riverside, San Benito, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Santa Cruz, Tulare, and Ventura counties (USFWS 2022a).	Riparian and willow-dominated areas (Rourke et al. 2004). Suitable habitat is defined as vegetative communities dominated by several willow species, young cottonwood, alder or other associated species with a minimum patch size of 30 feet x 30 feet x 5 feet high (USFS 2008). Potential habitat is defined as including riparian that currently doesn't meet the requirements, but has the potential to, which may include stands of young willows that lack the density or size for suitable habitat (USFS 2008).	A	**None**. There is no suitable habitat to support this species within the BSAs. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***
American peregrine falcon *Falco peregrinus anatum*	FD	FP	Throughout much of North American from Alaska to Canada south to Mexico.	Very uncommon breeding resident, and uncommon as a migrant. Active nesting sites are known along coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of northern California. Breeds mostly in woodland, forest, coastal habitats, in open landscapes with cliffs for nest sites. Nests at elevations up to 3,658 meters, also along rivers and coastlines. In winter, favors an open habitat, often along mudflats, coastlines, lake edges, and mountain chains.	A	**None**. There is no suitable habitat to support this species within the BSAs. There is potential for this species to fly over or forage within the BSAs if there is a nearby nest. The nearest CNDDB occurrence (#58) is approximately 9.6 miles west of the Project sites.
California condor *Gymnogyps californianus*	FE	SE/FP	Found inland from Livermore to Santa Clarita, and Fresno to Bakersfield. Commonly found around Pinnacles National Park, Sespe Condor Sanctuary, Bitter Creek National Wildlife Sanctuary, and Big Sur. Newly introduced within Redwood National Park in Humboldt county. (USFWS 2022b, c)	Limited to redwoods, canyons, and mountains with caves large enough for the bird to nest in (CDFW 2022b).	A	**None**. There is no suitable habitat to support this species within the BSAs. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
Yellow-breasted chat *Icteria virens*	--	SSC	Breeds throughout the state with exception of higher mountains and coastal islands.	Require dense riparian thickets of willows, vine tangles, and dense brush associated with streams, swampy ground and the borders of small ponds.	A	**None**. There is no suitable habitat to support this species within the BSAs. The nearest CNDDB occurrence (#78) is approximately 9.8 miles northeast of the Project sites.
Bank swallow *Riparia riparia*	--	ST	Riparian and other lowland habitats in California west of the deserts during the spring-fall period.	Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	A	**None**. There is no suitable habitat to support this species within the BSAs. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Least Bell's vireo *Vireo bellii pusillus*	FE	SE	Breeds from California – where range has severely contracted from historic distribution in Tehama Co. – south through Central Valley, coastal Santa Clara Co. to San Diego Co., and Owens Valley, Death Valley, and scattered oases in Mojave Desert to s. Nevada, uncommonly in Washington Co., sw. Utah – especially Virgin River drainage and Beaver Dam Wash.	Obligate riparian species. Wide variety of shrubs and small trees for habitat and nest-building; usually dense, low, shrubby vegetation characteristic of early successional stages in riparian areas, brushy fields, young second-growth forest or woodland, scrub oak, coastal chaparral, and mesquite brushlands for wintering grounds habitat. Including cottonwood-willow forests, oak woodlands, and mule fat scrub. (USFWS 1998)	A	**None**. There is no suitable habitat to support this species within the BSAs. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***
Mammals						
Pallid bat *Antrozous pallidus*	--	SSC	Throughout California except for the high Sierra Nevada from Shasta to Kern Counties, and the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County.	Grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. Roosts include crevices in rocky outcrops, cliffs, caves, mines, trees, and various human structures such as bridges, barns, and porches.	P	**Moderate**. There is suitable roosting habitat for this species within the BSAs. Western sycamores containing large cavities suitable for bachelor or maternity roost were observed within the BSAs. Nearby structures, such as barns may also be roosting habitat. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
Townsend's big-eared bat *Corynorhinus townsendii*	--	SSC	Klamath Mountains, Cascades, Sierra Nevada, Central Valley, Transverse and Peninsular Ranges, Great Basin, and the Mojave and Sonora Deserts.	This species is found in all but subalpine and alpine habitats and may be found at any season throughout its range. Primarily cavity-roosting and most often found in caves, mines, and tunnels, while also found in tree hollows. Found from redwood forests to inland desert, oak woodlands of Coast Range, and Sierra Nevada foothills. Very sensitive to disturbances and may abandon a roost after a single disturbance. (Bolster 1998; CDFW 2021c)	P	**Moderate**. There is suitable roosting habitat for this species within the BSAs. Western sycamores containing large cavities suitable for bachelor or maternity roost were observed within the BSAs. Nearby structures, such as barns may also be roosting habitat. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Western mastiff bat *Eumops perotis californicus*	--	SSC	Occurs along the eastern San Joaquin Valley from El Dorado County, through Kern County; also found along the south Coast, Peninsular, and Transverse Ranges, from San Francisco to the Mexico border.	Roosts and breeds in deep, narrow rock crevices; may also use crevices in trees, buildings, and tunnels; forages in a variety of semiarid to arid habitats.	P	**Moderate**. There is suitable roosting habitat for this species within the BSAs. Western sycamores containing large cavities suitable for bachelor or maternity roost were observed within the BSAs. Nearby structures, such as barns may also be roosting habitat. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
Monterey dusky-footed woodrat *Neotoma macrotis luciana*	--	SSC	Endemic to the coastal ranges between Monterey Bay and Morro Bay (NatureServe 2007).	Found in riparian, oak woodland, shrubland, and chaparral habitats (NatureServe 2007).	P	Bridge 303 BSA: **None**. There is no suitable for this species in the Bridge 303 BSA. Bridge 302 and Bridge 304 and 305 BSAs: **Low**. A potential rodent nest was observed within a western sycamore tree in the Bridge 302 site. Approximately 950 feet east of this nest structure, there is coast live oak woodland that could provide suitable foraging habitat. The coast live oak woodland in the Bridge 304 and 305 BSA may provide suitable foraging habitat for this species as well. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
Salinas pocket mouse *Perognathus inornatus psammophilus*	--	SSC	Found throughout several valleys in California, including the Sacramento, San Joaquin, and Salinas Valleys. Range extends into the Mojave Desert, Tehachapi Mountains and Sierra Nevada foothills (Brylski 1998).	Open grassland and desert-shrub communities with alluvial sandy soils. Sandy loam flats dominated by *Bromus* and herbs. Uncultivated, sandy soils on valley floor (Brylski 1998).	P	**Low**. The grassland vegetation community within the BSAs may provide marginally suitable habitat for this species. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.
American badger *Taxidea taxus*	--	SSC	Found throughout most of the state, except in the northern North Coast area.	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	P	**Moderate**. The grassland vegetation community in combination with the loamy soils within the BSAs may provide suitable habitat for this species. California ground squirrels were observed within and adjacent to the BSAs. There are no CNDDB occurrences of this species within a 10-mile radius of the Project sites.

Table F-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status [i]		Distribution	Habitat Requirements	Habitat Present/ Absent [ii]	Potential to Occur/Rationale [iii]
	Federal	State				
San Joaquin kit fox *Vulpes macrotis mutica*	FE	ST	Restricted to the San Joaquin Valley and adjacent foothills to the west.	Grasslands, scrublands, irrigated pastures, croplands, annual grassland, oak, savanna, and freshwater marsh. Excavate dens in open areas with sandy to loamy soil. May not require a water source. Some agricultural areas or edges may provide habitat for this species.	A	**None**. While the grassland vegetation community in combination with the loamy soils within the BSAs may provide suitable habitat for this species, the BSAs are outside of this species known geographical range. There no CNDDB occurrences of this species within a 10-mile radius of the Project sites. ***No effect.***

[i] **Status explanations:**
-- = no listing

Federal
FC = Candidate for listing under the federal Endangered Species Act.
FD = Federally delisted.
FE = Listed as endangered under the federal Endangered Species Act.
FT = Listed as threatened under the federal Endangered Species Act.
FPE = Proposed for listing as endangered under the federal Endangered Species Act.

State
SCE = Candidate for listing as Endangered under the California Endangered Species Act.
SE = Listed as endangered under the California Endangered Species Act.
ST = Listed as threatened under the California Endangered Species Act.
FP= Designated as a fully protected species under the California Fish and Game Code.
SSC = CDFW species of special concern

[ii] **Habitat Designations:**
Absent = No habitat present in the BSA and no further analysis needed.
Habitat Present= Habitat is or may be present and the species may be present in the BSA; further analysis needed.

[iii] **Rationale**
ESA impact determinations are provided only for FESA listed species.

Definitions for the Potential to Occur:
None. No suitable habitat present within the biological study area.
Low. Minimal or marginal quality habitat in the biological study area.
Moderate. Suitable habitat occurs within the biological study area.
High. Biological study area provides desirable habitat for species and there is a very high probability for its occurrence.
Present. Species was observed within the biological study area.

*Marine mammals and turtles included on special-status species search lists were not included in the species table. There is no potential for marine species to occur within or adjacent to the BSA.

Source: USFWS 2023, CDFW 2023, and NMFS 2023

Appendix C
Aquatic Resources Delineation Report for the Chualar Bridges Replacement Project, Monterey County, California

AREA WEST ENVIRONMENTAL, INC.
EST 2000

August 10, 2023

Garrett Dekker
Moffatt & Nichol
4225 East Conant Street, Long Beach, CA 90808
Email: gdekker@moffattnichol.com

SUBJECT: Aquatic Resources Delineation Report for the Chualar Bridges Replacement Project, Monterey County, California

Garrett,

Area West Environmental, Inc. (AWE) prepared this aquatic resource delineation report to document potential aquatic resources delineated at the Chualar Bridges Replacement Project (Project) on Chualar Canyon Road. The Project sites are located at Bridge Number 302, 303, 304, and 305 on Chualar Canyon Road, within the Community of Chualar, Monterey County, California (Attachment A, Figure 1). The Project sites are located within the *Gonzales* U.S. Geological Survey (USGS) 7.5-minute quadrangle map (Attachment A, Figure 2). Bridge Numbers 302 and 303 occur in Township 15 South, Range 5 East, Section 28 and Bridge Numbers 304 and 305 occur in Township 15 South, Range 5 East, Section 27.

The purpose of this letter is to provide information consistent with the U.S. Army Corps of Engineers (Corps) Minimum Standards for Aquatic Resources Delineations. Results of this delineation are considered preliminary, subject to review by the San Francisco District of the Corps during the verification process. The following information is provided in this submittal:

- Summary of the proposed Project (provided below);
- Summary of the methods used to delineate jurisdictional features and the results of the delineation (provided below);
- Figures showing the Project vicinity and location (Attachment A - Figures 1 and 2);
- Aquatic Resources Map (Attachment A - Figure 3a-c);
- U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory Map (NWI) (USFWS 2022) (Attachment A - Figure 4);
- Representative site photographs (Attachment B);
- List of vascular plants observed within the Project Site (Attachment C);
- National Resources Conservation Service (NRCS) Web Soil Survey Report (NRCS 2022) (Attachment D);
- Arid West Ephemeral and Intermittent Streams Ordinary High Water Mark (OHWM) Datasheet (Attachment E);

- ORM Upload Sheet (Attachment F); and
- Shapefiles.

Proposed Project

Project Background and Setting

The Project is located along Chualar Canyon Road, within the rural Community of Chualar, Monterey County, California. The Project is surrounded by single family residences on multi-acre parcels, and other agricultural lands. The four bridges within the Project (Bridge Numbers 302, 303, 304, and 305) were inspected in January 2020 and deficiencies were identified with the concrete and steel abutments and the bridges were rated low under legal loads. The Project proposes to repair and/or replace all four bridges.

Directions to the Project Sites

From the Corps San Francisco office, 450 Golden Gate Avenue floor, San Francisco:

1. Get on U.S. Highway 101 (US-101) South from Polk Street and 10th Street;
2. Head west on Turk Street toward Polk Street;
3. Turn south on Polk Street which will merge into 10th Street, continue on 10th Street;
4. Make a slight left to merge onto US-101 South toward San Jose;
5. Stay on US-101 South for approximately 115 miles;
6. Take Exit 317 for Chualar River Road/Main Street in Monterey County;
7. At the intersection turn to the east to go under US-101;
8. Then immediately turn to the north on Grant Street, which is parallel to US-101;
9. Turn to the east on Chualar Road and at the intersection with Old Stage Road, turn to the south on Old Stage Road;
10. In approximately 0.4 mile, turn east onto Chualar Canyon Road;
11. In approximately 3.2 miles Bridge 302 will be visible, and Bridges 303, 304, and 305 are slightly to the east of Bridge 302 along Chualar Canyon Road.

Access to the Project Sites

The Project sites can be accessed from Chualar Canyon Road. Portions of the Project sites are located on private property. Permission to enter private property would need to be requested and granted prior to entry.

Aquatic Resources Delineation Methods

The study area for the aquatic resource delineation includes the Project sites for each bridge location as shown in Attachment A - Figures 3a-c. The Project sites delineated includes the proposed Project work area, including temporary road crossings necessary to allow local and emergency vehicle access through the bridge replacement locations during construction. The study area is slightly larger than the proposed work area to allow for slight design changes.

Land use at and surrounding the Project sites is Farmlands, Grazing, Permanent Grazing, and Rural Grazing (Monterey County 2023). The Project site for each proposed bridge replacement location consists of the existing Chualar Canyon Road, adjacent agricultural grazed land and rural residential parcels. Chualar Creek flows through each of the Project sites.

AWE Biologists Samantha Morford and Katheryn Pitkin conducted the field delineation on December 19 and 20, 2022. Representative site photographs are included as Attachment B and a list of vascular plants observed is included as Attachment C.

Surveys were conducted using the 1987 *U.S. Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Corps 2008a). The boundaries of potential aquatic features were recorded using a handheld iPad paired to a Bad Elf Flex Geographic Positioning System (GPS) unit with sub-meter accuracy. Data was collected in latitude/longitude in the NAD83 datum. The Project sites were walked to survey for potentially jurisdictional aquatic features. The private property on the north and south side of Chualar Canyon Road at Bridge 303 and the private property on the south side of Chualar Canyon Road at Bridge 304 and 305 was inaccessible due to lack of landowner response to a request for permission to access. In these inaccessible areas, the biologists surveyed from the roadway with aid of binoculars as needed to assist with the identification of OHWM indicators or wetland indicators (hydrophytic vegetation or wetland hydrology). Due to the small footprint, the entirety of the Project sites was visible from the roadway.

Typically, an area must meet criteria for hydrophytic vegetation, hydric soils, and wetland hydrology to be identified as a potential wetland under Corps jurisdiction. Features that did not meet the hydrophytic vegetation wetland criteria were reviewed to determine if they met the definition of other waters of the U.S. (i.e., had evidence of an OHWM) using the 2008 *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Corps 2008b). The ordinary high-water mark (OHWM) along each bank of potential other waters, was mapped with a handheld GPS and was based on changes in the plant community, sediment marks on vegetation, and/or debris wrack lines. The accessible portions of the Project sites were walked by the biologists and potentially jurisdictional features were mapped using the GPS unit. Vegetation communities were mapped by hand on an aerial photograph field map. Special attention was given to locating areas with a prevalence of hydrophytic vegetation or drainages defined by an OHWM.

Results

According to the NRCS Web Soil Survey, there is one soil map unit within the Project sites (Attachment D):

- Hanford gravelly sandy loam, 0 to 5 percent slopes (100% of Project sites). This soil has a gravelly sandy loam texture and is derived from igneous rock. This soil unit is well drained with very low runoff. This soil map unit is not listed as a hydric soil.

Review of the USFWS's NWI identified Chualar Creek as a riverine feature within the Project sites. Additionally, an unnamed stream that flows south to north to the Bridge 304 and 305 Project site was identified during the NWI review. No other wetlands or waterbody features were identified on the NWI within the Project sites. The principal hydrologic sources in the Project sites are flows from Chualar Creek and some direct precipitation and localized surface runoff from the roadway. Chualar Creek generally flows from east to west through the Project sites. Flows from Chualar Creek drain into the Salinas River, approximately 9 miles downstream from the Project sites. The Salinas River is considered a Traditional Navigable Water. The Salinas River drains into the Pacific Ocean. The Project is located within the USGS Hydrologic Unit Code (HUC) 12-digit Chualar Creek sub watershed (HUC 180600051504).

Urban/non-vegetated, wild oats and annual brome grassland, and coast live oak woodland vegetation communities were identified within the Project sites. Ephemeral stream, Chualar Creek, was also mapped within the Project sites, however no wetlands were observed. The following sections describe each vegetation community and the ephemeral stream observed within the Project sites.

Urban/Non-vegetated

Urban/non-vegetated portions of the Project sites are characterized by the presence of anthropogenic features, including Chualar Canyon Road, paved and graveled driveways, landscaping, and barren area associated with residential and agricultural buildings.

Vegetation. Within the Bridge 302 Project site, the urban/non-vegetated community was dominated by upland species and included spineless yucca (*Yucca gigantea*) (--), oleander (*Nerium oleander*) (--), a bishop pine (*Pinus muricata*) (--) and a maintained lawn. Within the Bridge 303, 304, and 305 Project sites, little vegetation was present and all species observed were upland species.

Soils. Due to the lack of hydrophytic vegetation, no soil data was collected.

Hydrology. No wetland hydrology indicators were observed within this habitat.

Because there was an absence of hydrophytic vegetation and no evidence of wetland hydrology in this habitat, urban/non-vegetated areas are not expected to qualify as a waters of the U.S.

Wild Oats and Annual Brome Grassland

The wild oats and annual brome grasslands community occurs throughout the Project sites and is the dominant vegetation community. The majority of this habitat consists of non-native herbaceous species and is characterized by a Semi-natural Alliance between *Avena* spp. and *Bromus* spp. An upland ditch occurs in this habitat in the Bridge 302 Project site.

Vegetation. Within the Bridge 302 Project site, dominant grass species in this community included oat (*Avena spp.*) (--), ripgut grass (*Bromus diandrus*) (--), and wall barley (*Hordeum murinum*) (--). Additional herbaceous species included field mustard (*Brassica rapa*) (FACU), Canada horseweed (*Erigeron canadensis*) (FACU), fennel (*Foeniculum vulgare*) (--), Pacific blackberry (*Rubus ursinus*) (FAC), mugwort (*Artemisia douglasiana*) (FAC), blue fiesta flower (*Pholistoma auritum*) (--), red maids (*Caladrinia menziesii*) (--), telegraph weed (*Heretheca grandiflora*) (--), and redstem filaree (*Erodium cicutarium*) (--). Scattered trees are also present within this community at the Bridge 302 Project site; coast live oak (*Quercus agrifolia*) (--), western sycamore (*Platanus racemosa*) (FAC), and domestic olive (*Olea europaea*) (--).

Within the Bridge 303 Project site, dominant grass species in this community included oat (--), ripgut brome (--), and wall barley (--). Additional herbaceous species included field mustard (FACU), prickly lettuce (*Lactuca serriola*) (FACU), California sagebrush (*Artemisia californica*) (--), blue fiesta flower (--), red maids (--), tree tobacco (*Nicotiana glauca*) (FAC), Canada horseweed (FACU), stinging nettle (*Urtica dioica*) (FAC), telegraph weed (--), and redstem filaree (--). Two tree species were present within this community at the Bridge 303 Project site; western sycamore (FAC) and coast live oak (--).

Within the Bridge 304 and 305 Project site, identifiable grass species included oat (--), ripgut brome (--), and wall barley (--). Additional herbaceous species included field mustard (FACU), prickly lettuce (FACU), California sagebrush (--), blue fiesta flower (--), red maids (--), tree tobacco (FAC), Canada horseweed (FACU), stinging nettle (FAC), telegraph weed (--), and redstem filaree (--). Three tree species were present within this community at the Bridge 304 and 305 Project site; western sycamore (FAC), coast redwood (*Sequoia sempervirens*) (--), and coast live oak (--).

None of the wild oats and annual brome grasslands community was dominated by hydrophytic vegetation.

Soils. Due to the lack of hydrophytic vegetation, no soils data was collected.

Hydrology. No wetland hydrology indicators were observed within this habitat.

Because there was an absence of hydrophytic vegetation and no evidence of wetland hydrology in this habitat urban/non-vegetated areas are not expected to qualify as a waters of the U.S.

Coast Live Oak Woodland

A small area of coast live oak woodland community occurs at the western edge of the Bridge 304 and 305 Project site along the southwest side of Chualar Canyon Road.

Vegetation. This vegetation community is dominated by coast live oak (--) with a wild oats and annual brome understory. Dominant grass species in the understory included oat (--), ripgut brome (--), and wall barley (--). Additional herbaceous species in the understory included prickly lettuce (FACU), red maids (--), Canada horseweed (FACU), and redstem filaree (--).

Soils. Due to the lack of hydrophytic vegetation, no soils data was collected.

Hydrology. No wetland hydrology indicators were observed within this habitat.

Because there was an absence of hydrophytic vegetation and no evidence of wetland hydrology in this habitat urban/non-vegetated areas are not expected to qualify as a waters of the U.S.

Ephemeral Stream

Chualar Creek bisects all three Project sites. Within the Project sites, Chualar Creek is an ephemeral stream (ES-302, ES-303, ES-304, and ES-305) (Attachment A, Figures 3a-c). Four OHWM datasheets (OHWM-1, -2, -3, and -4) were completed for these features and are included in Attachment E.

Vegetation. At the Bridge 302 Project site, the creek channel below the OHWM was largely devoid of vegetation. A thick leaf litter layer was present.

At the Bridge 303, 304 and 305 Project sites, the creek channel below the OHWM was largely obscured by the thick leaf litter layer. However, at the time of the December 2022 surveys, there was some grass starting to grow through areas where the leaf litter was thinner. Due to the time of the year, this grass species was unidentifiable, but appeared to be an upland species because it was also growing in the adjacent grassland and along the roadway.

Soils. Due to the presence of bed and bank and OHWM indicators and lack of hydrophytic vegetation, no soils data was collected in this habitat type.

Hydrology. Chualar Creek generally flows from east to west. At the Bridge 302 Project site, water flows from east to west; at the Bridge 303 Project site, water flows north to south through the creek; at the Bridge 304 and 305 Project site, water drains from the north and flows south through Bridge 305 and then flows turn to the north, through Bridge 304. At all four bridges, the OHWM indicator observed was a slight break in slope. Due to the thick layer of leaf litter, OHWM indicators were partially obscured. Flows from Chualar Creek drain into the Salinas River, a traditional navigable waterway. No water was observed at any of the Project sites during the December 2022 field surveys.

At all four Project sites, Chualar Creek has a OHWM and is hydrologically connected to Salinas River, a traditional navigable waterway. Therefore, this ephemeral stream, Chualar Creek, is expected to qualify as a waters of the U.S.

Please contact me at (916) 987-3362 if you have any questions or require additional information. Otherwise, we look forward to receiving written confirmation of the Corps' preliminary jurisdictional determination at your earliest convenience.

Sincerely,

Samantha Morford

Senior Biologist

Attachments:

- Attachment A. Figures
    - Figure 1. Project Vicinity
    - Figure 2. Project Location
    - Figure 3. Aquatic Resources Delineation Map
    - Figure 4. National Wetlands Inventory Map
- Attachment B. Site Photographs
- Attachment C. List of Vascular Plants Observed
- Attachment D. NRCS Web Soil Survey Report
- Attachment E. OHWM Datasheets
- Attachment F. ORM Upload Sheet
- Shapefiles

References

Corps. *See* U.S. Army Corps of Engineers.

Environmental Laboratory, Department of the Army. 1987. Corps of Engineers Wetland Delineation Manual. (Technical Report Y-87-1.) U.S. Army Corps of Engineers. Waterways Experimental Station. Vicksburg, MI.

Monterey County. 2023. Monterey County GIS/Maps- Parcel Report Web App. Available online: https://www.co.monterey.ca.us/government/departments-a-h/housing-community-development/monterey-county-gis-maps. Accessed January 2023.

NRCS. *See* U.S. Department of Agriculture, Natural Resources Conservation Service.

U.S. Army Corps of Engineers. 2020. National Wetland Plant List, version 3.5. http://wetland-plants.usace.army.mil/. Website accessed December 2022.

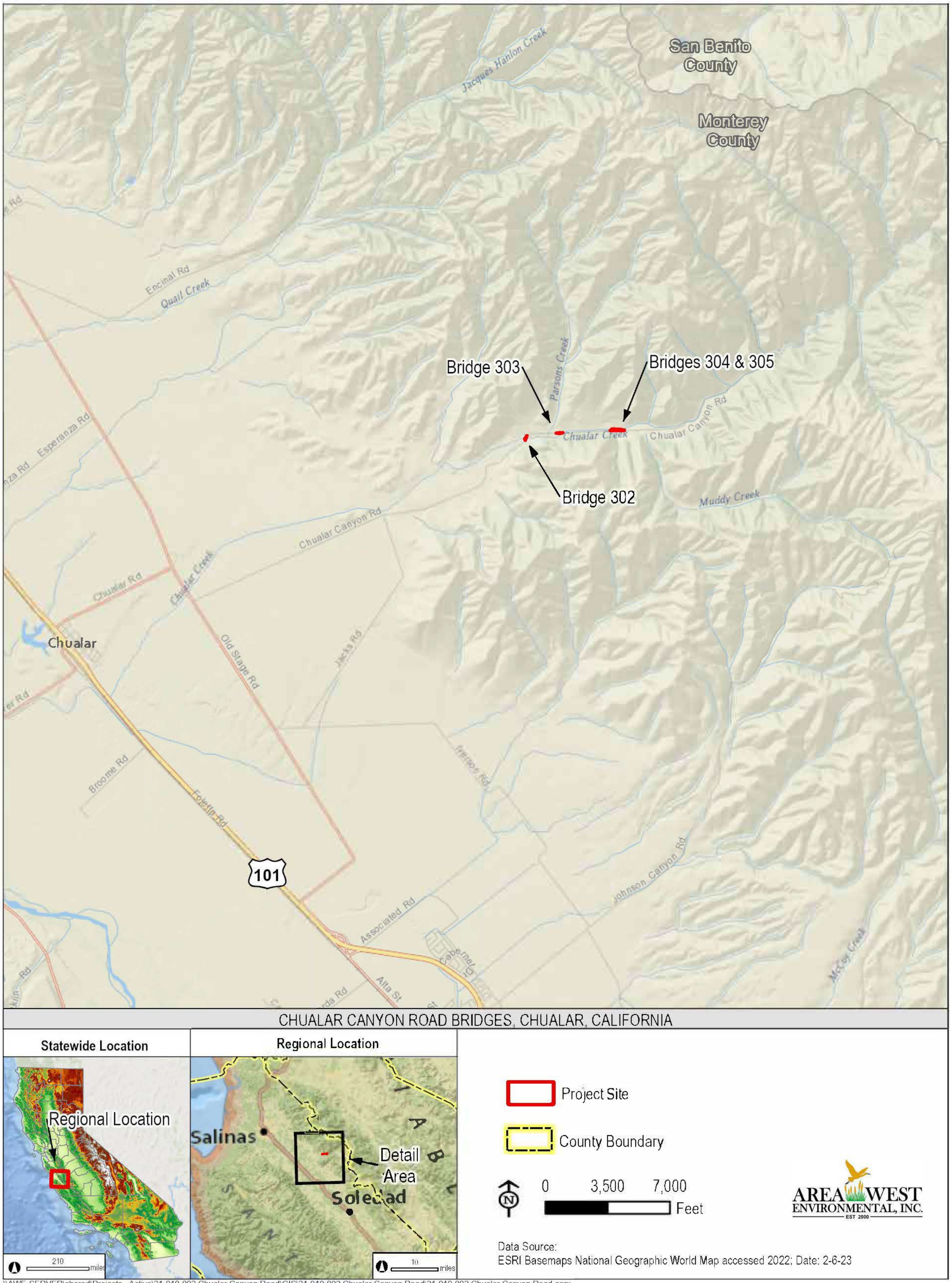
_____. 2008a. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). U.S. Army Corps of Engineers, Engineer Research and Development Center. Vicksburg, Michigan. September 2008.

_____. 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. U.S. Army Corps of Engineers, Engineer Research and Development Center. Hanover, NH. August 2008.

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 2022. Web Soil Survey. Available online: http://websoilsurvey.nrcs.usda.gov/app/. Website accessed December 2022.

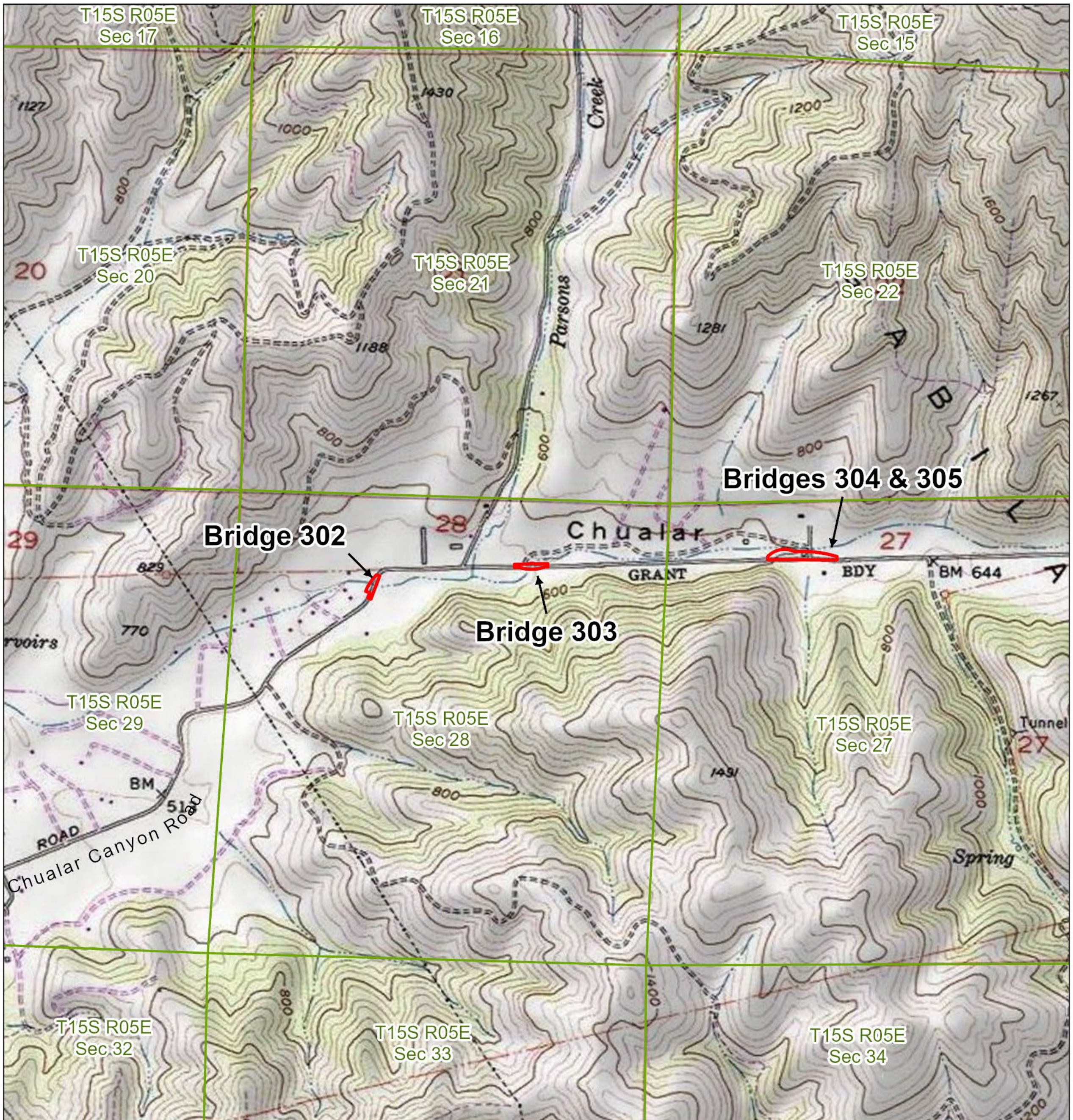
U.S. Fish and Wildlife Service. 2022. National Wetlands Inventory. Available online: http://www.fws.gov/nwi/. Website accessed December 2022.

Attachment A. Figures



\\AWE-SERVER\shared\Projects - Active\21-010-002 Chualar Canyon Road\GIS\21-010-002 Chualar Canyon Road\21-010-002 Chualar Canyon Road.aprx

Figure 1. Project Vicinity



CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales, California USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.70 acres.

Coordinates for the center point of the Project Site (calculated in California State Plane Zone 4, NAD 1983):
Latitude: 36.60304, Longitude: -121.42401

Project Site

Township Range Section

0 1,000 2,000 feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 2-6-23

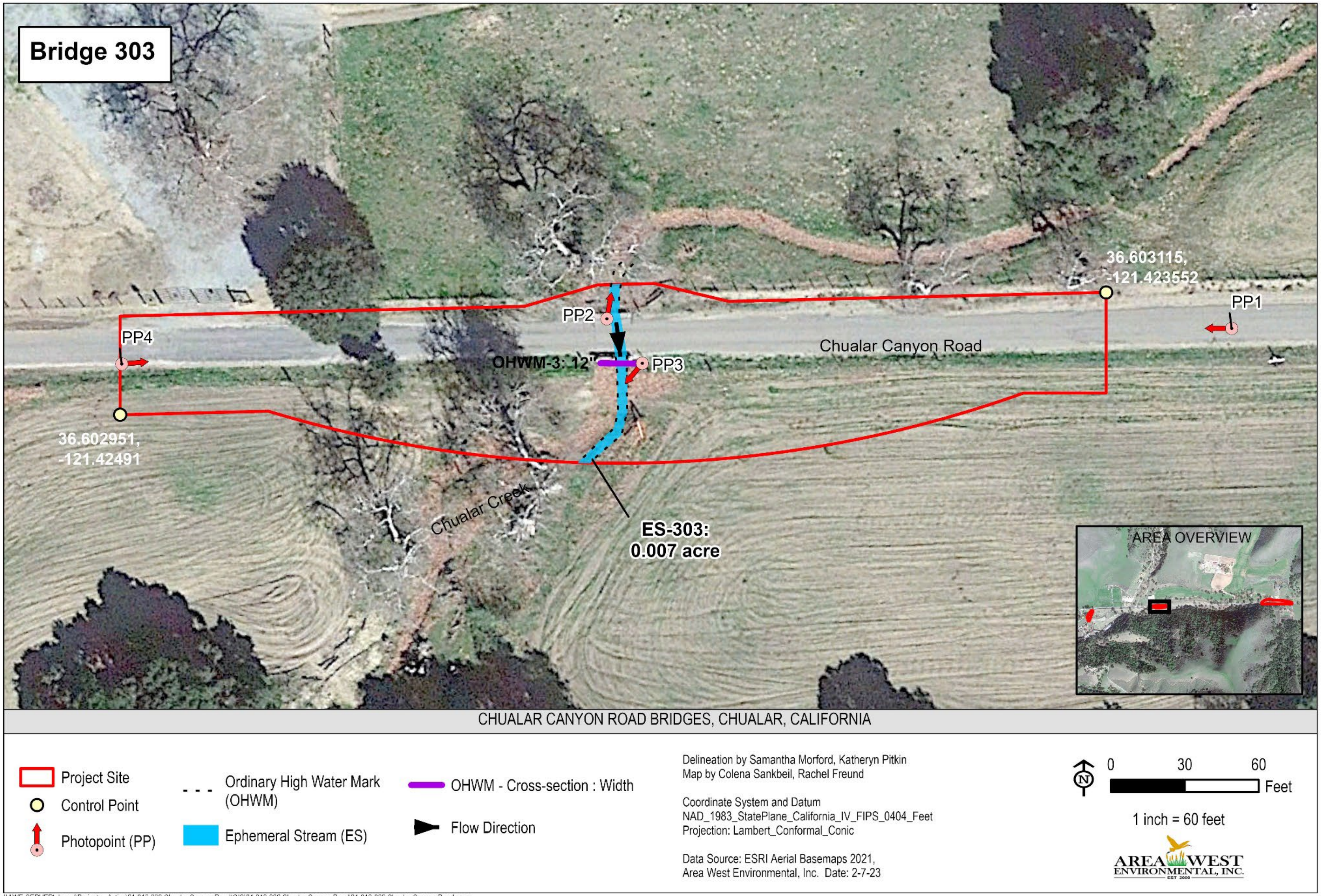
AREA WEST ENVIRONMENTAL, INC. EST 2000

Document Path: \\AWE-SERVER\shared\Projects - Active\21-010-002 Chualar Canyon Road\GIS\21-010-002 Chualar Canyon Road\21-010-002 Chualar Canyon Road.aprx

Figure 2. Project Location

\\AWE-SERVER\shared\Projects - Active\21-010-002 Chualar Canyon Road\GIS\21-010-002 Chualar Canyon Road\21-010-002 Chualar Canyon Road.aprx

Figure 3a. Aquatic Resources at Bridge 302 Project Site



\\AWE-SERVER\shared\Projects - Active\21-010-002 Chualar Canyon Road\GIS\21-010-002 Chualar Canyon Road\21-010-002 Chualar Canyon Road.aprx

Figure 3b. Aquatic Resources at Bridge 303 Project Site

Figure 3c. Aquatic Resources at Bridge 303 Project Site

\\AWE-SERVER\shared\Projects - Active\21-010-002 Chualar Canyon Road\GIS\21-010-002 Chualar Canyon Road\21-010-002 Chualar Canyon Road.aprx

Figure 4. National Wetland Inventory Map

Attachment B. Site Photographs

Bridge 302 Photo Point 1. Taken just outside of the northern boundary of Project site. Facing southwest.

Bridge 302 Photo Point 2. View from the eastern side of Bridge 302. Facing east, looking upstream in Chualar Creek.

Bridge 302 Photo Point 3. Southern boundary of Project site. Facing north-northeast.

Bridge 302 Photo Point 4. Western boundary of this Project site. Facing east, look upstream within Chualar Creek.

Bridge 303 Photo Point 1. Just outside of the eastern boundary of Project site. Facing west.

Bridge 303 Photo Point 2. View from north side of Bridge 303. Facing north-northeast, looking upstream within Chualar Creek.

Bridge 303 Photo Point 3. View from south side of Bridge 303. Facing southwest, looking downstream at Chualar Creek.

Bridge 303 Photo Point 4. Western boundary of Project site. Facing east.


Bridge 304-305 Photo Point 1. Eastern boundary of Project site. Facing west.


Bridge 304-305 Photo Point 2. View of the northern boundary of Project site. Facing southwest, looking downstream in Chualar Creek.


Bridge 304-305 Photo Point 3. View from south side of Bridge 305. Facing southwest, looking downstream in Chualar Creek.


Bridge 304-305 Photo Point 4. Western boundary of Project site. Facing east.

 Bridge 304-305 Photo Point 5. Northern boundary of western region of Project site. Facing southeast, looking upstream within Chualar Creek.	 Bridge 304-305 Photo Point 6. View from south side of Bridge 305. Facing south-southeast, looking upstream within Chualar Creek.

Attachment C. List of Vascular Plants Observed

Plant Species Observed at the Bridge 302 Site

Scientific Name[1]	Common Name	Family	Nativity	Wetland Indicator Status[2]
Trees				
Ailanthus altissima	Tree of heaven	Simaroubaceae	Naturalized	FACU
Olea europaea	Domestic olive	Oleaceae	Naturalized	--
Pinus muricata	Bishop pine	Pinaceae	Native	--
Platanus racemosa	Western sycamore	Platanaceae	Native	FAC
Quercus agrifolia	Coast live oak	Fagaceae	Native	--
Yucca gigantea	Spineless yucca	Asparagaceae	Non-native	--
Shrub				
Artemisia californica	California sagebrush	Asteraceae	Native	--
Diplacus aurantiacus	Orange bush monkeyflower	Phrymaceae	Native	FACU
Nerium oleander	Oleander	Apocynaceae	Naturalized	--
Nicotiana glauca	Tree tobacco	Solanaceae	Naturalized	FAC
Rubus ursinus	California blackberry	Rosaceae	Native	FAC
Herbaceous				
Artemisia douglasiana	Mugwort	Asteraceae	Native	FAC
Avena spp.	Oat	Poaceae	Naturalized	--
Brassica rapa	Field mustard	Brassicaceae	Naturalized	FACU
Bromus diandrus	Ripgut grass	Poaceae	Naturalized	--
Calandrinia menziesii	Red maids	Montiaceae	Native	--
Cyperus eragrostis	Tall flatsedge	Cyperaceae	Native	FACW
Erigeron canadensis	Horseweed, Canadian horseweed	Asteraceae	Native	FACU
Erodium cicutarium	Redstem filaree	Geraniaceae	Naturalized	--
Foeniculum vulgare	Fennel, sweet fennel	Apiaceae	Naturalized	--
Heterotheca grandiflora	Telegraphweed	Asterceae	Native	--
Hordeum murinum	Wall barley	Poaceae	Naturalized	--
Pholistoma auritum	Blue fiestaflower	Hydrophyllaceae	Native	--

[1]Jepson Flora Project (eds.) 2022, Jepson eFlora, https://ucjeps.berkeley.edu/eflora/, accessed on December 2022.

[2]U.S. Army Corps of Engineers 2020. National Wetland Plant List, version 3.5. http://wetland-plants.usace.army.mil/. Accessed December 2022.

OBL = Obligate wetland
FACW = Facultative wetland
FAC = Facultative
FACU = Facultative upland
UPL = Upland obligate
-- = No indicator status listed on 2020 National Wetland Plant List

Plant Species Observed at the Bridge 303 Site

Scientific Name[1]	Common Name	Family	Nativity	Wetland Indicator Status[2]
Trees				
Platanus racemosa	Western sycamore	Platanaceae	Native	FAC
Quercus agrifolia	Coast live oak	Fagaceae	Native	--
Shrub				
Artemisia californica	California sagebrush	Asteraceae	Native	--
Nicotiana glauca	Tree tobacco	Solanaceae	Naturalized	FAC
Herbaceous				
Avena spp.	Oat	Poaceae	Naturalized	--
Brassica rapa	Field mustard	Brassicaceae	Naturalized	FACU
Bromus diandrus	Ripgut grass	Poaceae	Naturalized	--
Calandrinia menziesii	Red maids	Montiaceae	Native	--
Erigeron canadensis	Horseweed, Canadian horseweed	Asteraceae	Native	FACU
Erodium cicutarium	Redstem filaree	Geraniaceae	Naturalized	--
Heterotheca grandiflora	Telegraphweed	Asterceae	Native	--
Hordeum murinum	Wall barley	Poaceae	Naturalized	--
Lactuca serriola	Prickly lettuce	Asteraceae	Naturalized	FACU
Pholistoma auritum	Blue fiestaflower	Hydrophyllaceae	Native	--
Urtica dioica	Stinging nettle	Urticaceae	Native	FAC

[1]Jepson Flora Project (eds.) 2022, Jepson eFlora, https://ucjeps.berkeley.edu/eflora/, accessed on December 2022.

[2]U.S. Army Corps of Engineers 2020. National Wetland Plant List, version 3.5. http://wetland-plants.usace.army.mil/. Accessed December 2022.

OBL = Obligate wetland
FACW = Facultative wetland
FAC = Facultative
FACU = Facultative upland
UPL = Upland obligate
-- = No indicator status listed on 2020 National Wetland Plant List

Plant Species Observed at the Bridge 304/305 Site

Scientific Name[1]	Common Name	Family	Nativity	Wetland Indicator Status[2]
Trees				
Platanus racemosa	Western sycamore	Platanaceae	Native	FAC
Quercus agrifolia	Coast live oak	Fagaceae	Native	--
Sequoia sempervirens	Coast redwood	Cupressaceae	Native	--
Yucca gigantea	Spineless yucca	Asparagaceae	Non-native	--
Shrub				
Artemisia californica	California sagebrush	Asteraceae	Native	--
Nicotiana glauca	Tree tobacco	Solanaceae	Naturalized	FAC
Herbaceous				
Avena spp.	Oats	Poaceae	Naturalized	--
Brassica rapa	Field mustard	Brassicaceae	Naturalized	FACU
Bromus diandrus	Ripgut grass	Poaceae	Naturalized	--
Calandrinia menziesii	Red maids	Montiaceae	Native	--
Erigeron canadensis	Horseweed, Canadian horseweed	Asteraceae	Native	FACU
Erodium cicutarium	Redstem filaree	Geraniaceae	Naturalized	--
Heterotheca grandiflora	Telegraphweed	Asterceae	Native	--
Hordeum murinum	Wall barley	Poaceae	Naturalized	--
Lactuca serriola	Prickly lettuce	Asteraceae	Naturalized	FACU
Pholistoma auritum	Blue fiestaflower	Hydrophyllace	Native	--
Urtica dioica	Stinging nettle	Urticaceae	Native	FAC

[1]Jepson Flora Project (eds.) 2022, Jepson eFlora, https://ucjeps.berkeley.edu/eflora/, accessed on December 2022.

[2]U.S. Army Corps of Engineers 2020. National Wetland Plant List, version 3.5. http://wetland-plants.usace.army.mil/. Accessed December 2022.

OBL = Obligate wetland
FACW = Facultative wetland
FAC = Facultative
FACU = Facultative upland
UPL = Upland obligate
-- = No indicator status listed on 2020 National Wetland Plant List

Attachment D. NRCS Web Soil Survey Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

Monterey County, California

Chualar_ProjectSite_20221215

December 16, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map

Map Scale: 1:9,420 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0, 100, 200, 400, 600

Feet: 0, 450, 900, 1800, 2700

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Monterey County, California
Survey Area Data: Version 19, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 11, 2022—May 29, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HbB	Hanford gravelly sandy loam, 0 to 5 percent slopes	2.7	100.0%
Totals for Area of Interest		**2.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Monterey County, California

HbB—Hanford gravelly sandy loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: h93l
Elevation: 150 to 3,500 feet
Mean annual precipitation: 9 to 20 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 250 to 340 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting

Landform: Flood plains, alluvial fans
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear, convex
Parent material: Gravelly coarse-loamy alluvium derived from igneous rock

Typical profile

H1 - 0 to 70 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R014XG906CA - Dry Loamy Bottom
Hydric soil rating: No

Minor Components

Arroyo seco

Percent of map unit: 3 percent
Hydric soil rating: No

Danville

Percent of map unit: 3 percent
Hydric soil rating: No

Elder

Percent of map unit: 3 percent
Hydric soil rating: No

Tujunga

Percent of map unit: 3 percent
Hydric soil rating: No

Metz

Percent of map unit: 3 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Soil List - All Components

This table lists the map unit components and their hydric status in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or

B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.
Federal Register. Doc. 2012-4733 Filed 2-28-12. February, 28, 2012. Hydric soils of the United States.
Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
Vasilas, L.M., G.W. Hurt, and C.V. Noble, editors. Version 7.0, 2010. Field indicators of hydric soils in the United States.

Report—Hydric Soil List - All Components

Hydric Soil List - All Components–CA053-Monterey County, California					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
HbB: Hanford gravelly sandy loam, 0 to 5 percent slopes	Hanford	85	Flood plains,alluvial fans	No	—
	Arroyo Seco	3	—	No	—
	Danville	3	—	No	—
	Elder	3	—	No	—
	Tujunga	3	—	No	—
	Metz	3	—	No	—

Taxonomic Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2003). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. This table shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol.* An example is Alfisols.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalfs (*Ud*, meaning humid, plus *alfs*, from Alfisols).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalfs*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, mesic Typic Hapludalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

References:
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. (The soils in a given survey area may have been classified according to earlier editions of this publication.)

Report—Taxonomic Classification of the Soils

[An asterisk by the soil name indicates a taxadjunct to the series]

Taxonomic Classification of the Soils–Monterey County, California	
Soil name	**Family or higher taxonomic classification**
Hanford	Coarse-loamy, mixed, nonacid, thermic Typic Xerorthents

Soil Erosion

This folder contains a collection of tabular reports that present soil erosion factors and groupings. The reports (tables) include all selected map units and components for each map unit. Soil erosion factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

RUSLE2 Related Attributes

This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factor Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the mineral surface horizon. Missing surface data may indicate the presence of an organic layer.

Report—RUSLE2 Related Attributes

Soil properties and interpretations for erosion runoff calculations. The surface mineral horizon properties are displayed or the first mineral horizon below an organic surface horizon. Organic horizons are not displayed.

RUSLE2 Related Attributes–Monterey County, California

Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
HbB—Hanford gravelly sandy loam, 0 to 5 percent slopes								
Hanford	85	—	A	.17	5	67.9	19.6	12.5

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Attachment E. OHWM and Wetland Determination Datasheets

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Chualar Canyon
Project Number: 21-010-002
Stream: Chualar Creek
Investigator(s): S. Morford, K. Pitkin

Date: 12-19-22 **Time:** 1:52pm
Town: Chualar **State:** CA
Photo begin file#: PP2 **Photo end file#:** PP3

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
Chualar canyon that flows under Bridge 305

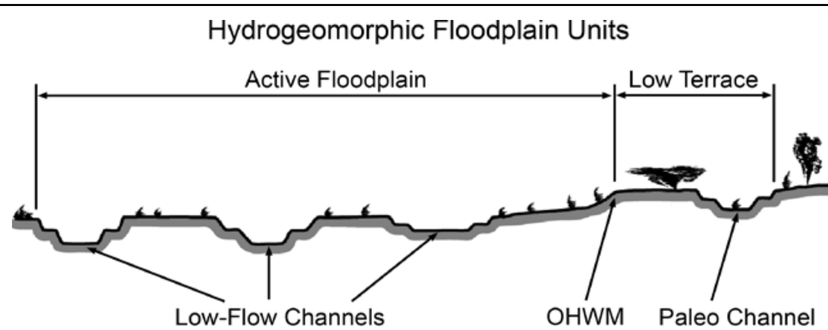
Projection: **Coordinates:** 36.603609,-121.412438 36.603583,-121.412414 **Datum:** NAD 1983

Potential anthropogenic influences on the channel system:
Northwest bank contains fill material. Bank appears to be raised captures stormwater runoff from road and adjacent farm. Water may be diverted for agricultural use.

Brief site description:
Ephemeral stream that captures sheetflow from adjacent hillside and properties.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates: 1998-2022
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event



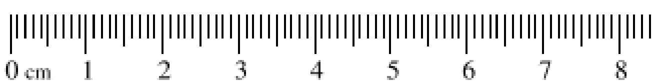
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:

☐ Mapping on aerial photograph ☑ GPS
☐ Digitized on computer ☐ Other:

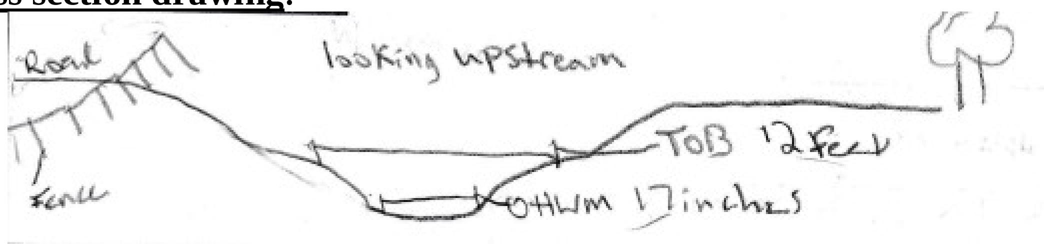
Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
			Boulder	Gravel
	10.08	256		
			Cobble	
	2.56	64		
			Pebble	
	0.157	4		
			Granule	
	0.079	2.00		
			Very coarse sand	Sand
	0.039	1.00		
			Coarse sand	
	0.020	0.50		
			Medium sand	
1/2	0.0098	0.25		
			Fine sand	
1/4	0.005	0.125		
			Very fine sand	
1/8	0.0025	0.0625		
			Coarse silt	Silt
1/16	0.0012	0.031		
			Medium silt	
1/32	0.00061	0.0156		
			Fine silt	
1/64	0.00031	0.0078		
			Very fine silt	
1/128	0.00015	0.0039		
			Clay	Mud



Project ID: 21-010-002 **Cross section ID:** OHWM-1 **Date:** 12/19/22 **Time:** 1:51pm

Cross section drawing:



OHWM

GPS point: ____________________________

Indicators:

- [ ] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: ____________________
- [ ] Other: ____________________

Comments:

Indicator very slight and difficult to see through thick organic layer.

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: ____________________________

Characteristics of the floodplain unit:

Average sediment texture: Coarse silt

Total veg cover: 3 % Tree: ____% Shrub: ____% Herb: 3 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: ____________________
- [ ] Other: ____________________
- [ ] Other: ____________________

Comments:

Thick organic material (leaf litter and branches).

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ____________________________

Characteristics of the floodplain unit:

Average sediment texture: ___________________

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____________________
- ☐ Other: _____________________
- ☐ Other: _____________________

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ____________________________

Characteristics of the floodplain unit:

Average sediment texture: ___________________

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____________________
- ☐ Other: _____________________
- ☐ Other: _____________________

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Chualar Canyon
Project Number: 21-010-002
Stream: Chualar Creek
Investigator(s): S. Morford, K. Pitkin

Date: 12-19-22 **Time:** 3:19pm
Town: Chualar **State:** CA
Photo begin file#: PP5 **Photo end file#:** PP6

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
Chualar creek that flows under Bridge 304

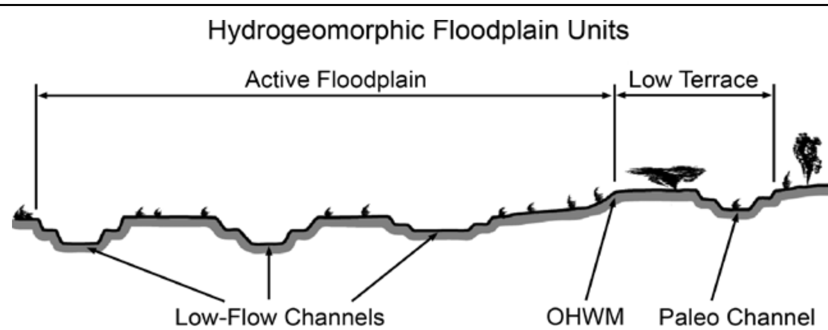
Projection: 36.603654,-121.413767 36.603691,-121.413683 **Datum:** NAD 1983
Coordinates:

Potential anthropogenic influences on the channel system:
Sheep, miniature pony, and sheepdog have access to channel and project site. Stream captures agricultural runoff and road runoff.

Brief site description:
Ephemeral stream. Not much vegetation, annual grassland understory, sycamore overstory. Leaf litter debris in stream.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates: 1998-2022
- ☑ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☑ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

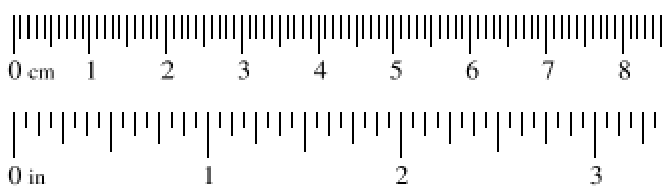


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☑ GPS
   - ☑ Digitized on computer
   - ☐ Other:

Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
			Boulder	Gravel
	10.08	256		
			Cobble	
	2.56	64		
			Pebble	
	0.157	4		
			Granule	
	0.079	2.00		
			Very coarse sand	Sand
	0.039	1.00		
			Coarse sand	
	0.020	0.50		
			Medium sand	
1/2	0.0098	0.25		
			Fine sand	
1/4	0.005	0.125		
			Very fine sand	
1/8	0.0025	0.0625		
			Coarse silt	Silt
1/16	0.0012	0.031		
			Medium silt	
1/32	0.00061	0.0156		
			Fine silt	
1/64	0.00031	0.0078		
			Very fine silt	
1/128	0.00015	0.0039		
			Clay	Mud



Project ID: 21-010-002 **Cross section ID:** OHWM-2 **Date:** 12/19/22 **Time:** 4:05pm

Cross section drawing:

OHWM

GPS point: ____________________________

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: ____________________
- ☐ Other: ____________________

Comments:

Indicators slight, difficult to see through thick organic layer.

Floodplain unit: ☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ____________________________

Characteristics of the floodplain unit:

Average sediment texture: Fine silt

Total veg cover: 2 % Tree: 1 % Shrub: ____ % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☑ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: ____________________
- ☐ Other: ____________________
- ☐ Other: ____________________

Comments:

Thick organic layer.

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ____________________________

Characteristics of the floodplain unit:

Average sediment texture: __________________

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

☐ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks ☐ Soil development

☐ Ripples ☐ Surface relief

☐ Drift and/or debris ☐ Other: ____________________

☐ Presence of bed and bank ☐ Other: ____________________

☐ Benches ☐ Other: ____________________

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ____________________________

Characteristics of the floodplain unit:

Average sediment texture: __________________

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

☐ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks ☐ Soil development

☐ Ripples ☐ Surface relief

☐ Drift and/or debris ☐ Other: ____________________

☐ Presence of bed and bank ☐ Other: ____________________

☐ Benches ☐ Other: ____________________

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Chualar Canyon **Project Number:** 21-010-002 **Stream:** Chualar Creek **Investigator(s):** S. Morford, K. Pitkin	**Date:** 12-20-22 **Time:** 8:40am **Town:** Chualar **State:** CA **Photo begin file#:** PP2 **Photo end file#:** PP3
Y ☑ / N ☐ Do normal circumstances exist on the site?	**Location Details:** Chualar creek that flows under Bridge 303
Y ☐ / N ☑ Is the site significantly disturbed?	**Projection:** 36.603022,-121.424248 36.603022,-121.424189 **Datum:** NAD 1983 **Coordinates:**

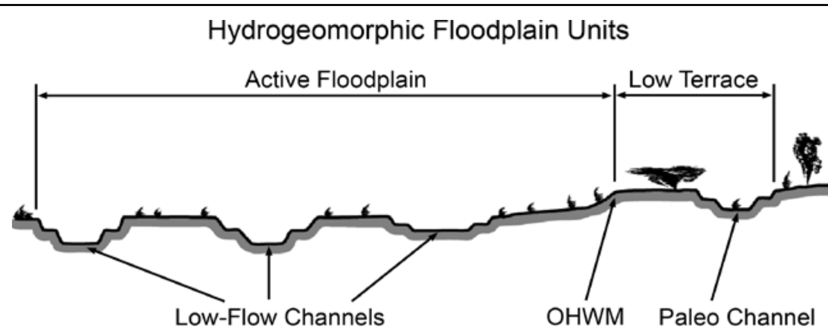
Potential anthropogenic influences on the channel system:
Captures runoff from road and adjacent pasture land. Small ATV access road (dirt) crosses stream downstream of cross section.

Brief site description:
Small ephemeral stream that crosses under Chualar Canyon Road. Adjacent land is annual grassland.

Checklist of resources (if available):

☑ Aerial photography
Dates: 1998-2022
☐ Topographic maps
☐ Geologic maps
☐ Vegetation maps
☑ Soils maps
☐ Rainfall/precipitation maps
☐ Existing delineation(s) for site
☐ Global positioning system (GPS)
☐ Other studies

☐ Stream gage data
Gage number:
Period of record:
☐ History of recent effective discharges
☐ Results of flood frequency analysis
☐ Most recent shift-adjusted rating
☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

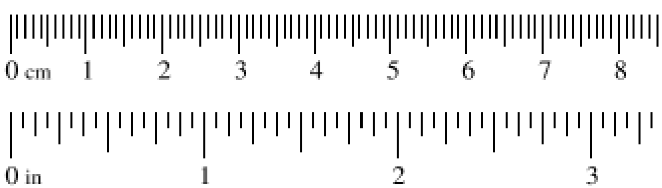


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   ☐ Mapping on aerial photograph ☑ GPS
   ☑ Digitized on computer ☐ Other:

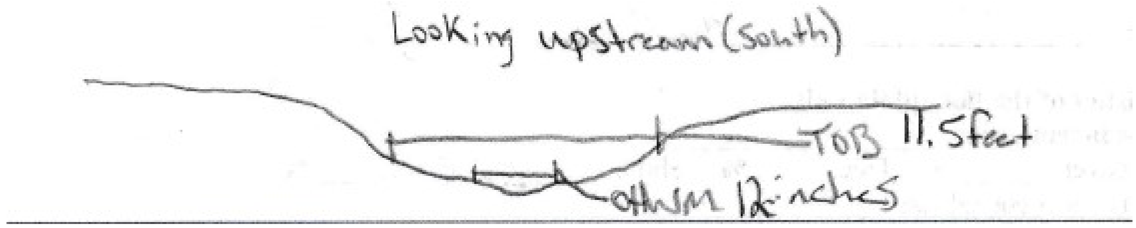
Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
			Boulder	Gravel
	10.08	256		Gravel
			Cobble	Gravel
	2.56	64		Gravel
			Pebble	Gravel
	0.157	4		Gravel
			Granule	Gravel
	0.079	2.00		
			Very coarse sand	Sand
	0.039	1.00		Sand
			Coarse sand	Sand
	0.020	0.50		Sand
			Medium sand	Sand
1/2	0.0098	0.25		Sand
			Fine sand	Sand
1/4	0.005	0.125		Sand
			Very fine sand	Sand
1/8	0.0025	0.0625		
			Coarse silt	Silt
1/16	0.0012	0.031		Silt
			Medium silt	Silt
1/32	0.00061	0.0156		Silt
			Fine silt	Silt
1/64	0.00031	0.0078		Silt
			Very fine silt	Silt
1/128	0.00015	0.0039		
			Clay	Mud



Project ID: 21-010-002 **Cross section ID:** OHWM-3 **Date:** 12/20/22 **Time:** 8:40am

Cross section drawing:



OHWM

GPS point: ____________________

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: ____________
- ☐ Other: ____________

Comments:

Slight break in slope. Difficult to see with this layer of leaves and organic material.

Floodplain unit: ☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ____________________

Characteristics of the floodplain unit:

Average sediment texture: Coarse silt

Total veg cover: 2 % Tree: ____% Shrub: ____% Herb: 2 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: ____________
- ☐ Other: ____________
- ☐ Other: ____________

Comments:

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ____________________________

Characteristics of the floodplain unit:

Average sediment texture: ___________________

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

☐ NA
☐ Early (herbaceous & seedlings)
☐ Mid (herbaceous, shrubs, saplings)
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks
☐ Ripples
☐ Drift and/or debris
☐ Presence of bed and bank
☐ Benches
☐ Soil development
☐ Surface relief
☐ Other: _____________________
☐ Other: _____________________
☐ Other: _____________________

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ____________________________

Characteristics of the floodplain unit:

Average sediment texture: ___________________

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

☐ NA
☐ Early (herbaceous & seedlings)
☐ Mid (herbaceous, shrubs, saplings)
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks
☐ Ripples
☐ Drift and/or debris
☐ Presence of bed and bank
☐ Benches
☐ Soil development
☐ Surface relief
☐ Other: _____________________
☐ Other: _____________________
☐ Other: _____________________

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Chualar Canyon **Project Number:** 21-010-002 **Stream:** Chualar Creek **Investigator(s):** S. Morford, K. Pitkin	**Date:** 12-20-22 **Time:** 9:30am **Town:** Chualar **State:** CA **Photo begin file#:** PP2 **Photo end file#:** PP4
Y ☑ / N ☐ Do normal circumstances exist on the site?	**Location Details:** Chualar creek that flows under Bridge 302
Y ☐ / N ☑ Is the site significantly disturbed?	**Projection:** 36.602168,-121.430826 36.602251,-121.430800 **Datum:** NAD 1983 **Coordinates:**

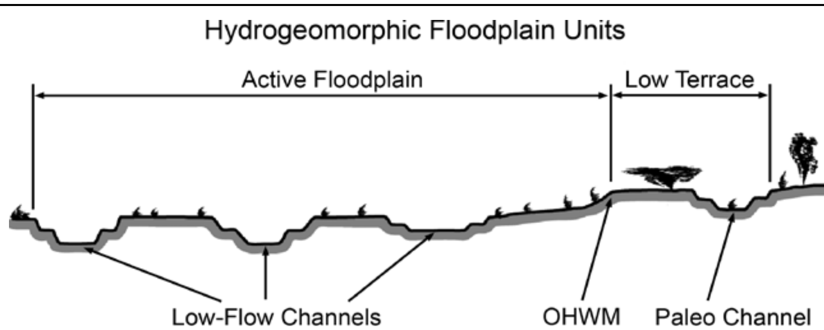
Potential anthropogenic influences on the channel system:
Road running through bed of channel on south side. Receives road and agricultural runoff.

Brief site description:
Ephemeral stream that crosses Chualar Canyon Road at Bridge 302. Adjacent landuse is agricultural and residential.

Checklist of resources (if available):

☑ Aerial photography
Dates: 1998-2022
☐ Topographic maps
☐ Geologic maps
☐ Vegetation maps
☑ Soils maps
☐ Rainfall/precipitation maps
☐ Existing delineation(s) for site
☐ Global positioning system (GPS)
☐ Other studies

☐ Stream gage data
Gage number:
Period of record:
☐ History of recent effective discharges
☐ Results of flood frequency analysis
☐ Most recent shift-adjusted rating
☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event



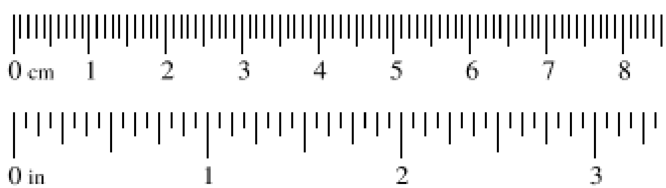
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:

☐ Mapping on aerial photograph ☑ GPS
☑ Digitized on computer ☐ Other:

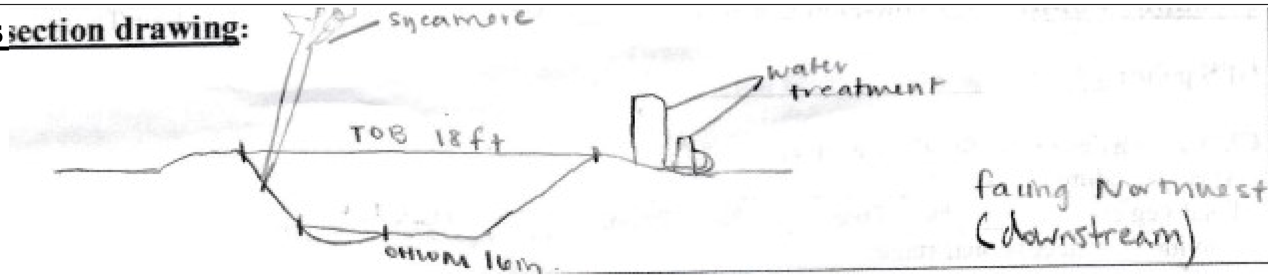
Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
			Boulder	Gravel
	10.08	256		Gravel
			Cobble	Gravel
	2.56	64		Gravel
			Pebble	Gravel
	0.157	4		Gravel
			Granule	Gravel
	0.079	2.00		
			Very coarse sand	Sand
	0.039	1.00		Sand
			Coarse sand	Sand
	0.020	0.50		Sand
			Medium sand	Sand
1/2	0.0098	0.25		Sand
			Fine sand	Sand
1/4	0.005	0.125		Sand
			Very fine sand	Sand
1/8	0.0025	0.0625		
			Coarse silt	Silt
1/16	0.0012	0.031		Silt
			Medium silt	Silt
1/32	0.00061	0.0156		Silt
			Fine silt	Silt
1/64	0.00031	0.0078		Silt
			Very fine silt	Silt
1/128	0.00015	0.0039		
			Clay	Mud



Project ID: 21-010-002 **Cross section ID:** OHWM-4 **Date:** 12/20/22 **Time:** 9:30am

Cross section drawing:



OHWM

GPS point: ____________________________

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☑ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: ____________________
- ☐ Other: ____________________

Comments:

Leaf litter debris, high organic material, remanant concrete rock slope protection.

Floodplain unit: ☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ____________________________

Characteristics of the floodplain unit:

Average sediment texture: Coarse silt

Total veg cover: 0 % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: ____________________
- ☐ Other: ____________________
- ☐ Other: ____________________

Comments:

Indicators are difficult to see because of thick organic material and leaf litter.

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ______________________________

Characteristics of the floodplain unit:

Average sediment texture: ____________________

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: ______________________
- ☐ Other: ______________________
- ☐ Other: ______________________

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ______________________________

Characteristics of the floodplain unit:

Average sediment texture: ____________________

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: ______________________
- ☐ Other: ______________________
- ☐ Other: ______________________

Comments:

Attachment F. ORM Upload Sheet

Appendix D
Historic Evaluation of Bridges 302, 303, 304, and 305, Chualar Canyon Road, Monterey County, California

JRP Historical Consulting LLC 2850 Spafford Street, Davis, CA 95618 | 530-757-2521 | jrphistorical.com

LETTER REPORT

January 13, 2023

TO: Becky Rozumowicz
Area West Environmental, Inc.
6248 Main Avenue, Suite C
Orangevale, CA 95662

FROM: Christopher McMorris, Principal / Architectural Historian
Cheryl Brookshear, Architectural Historian
2850 Spafford Street
Davis, CA 95618

SUBJECT: Historic evaluation of Bridges 302, 303, 304, and 305, Chualar Canyon Road, Monterey County, California

---

Project Description

The County of Monterey (County) is planning to retrofit or replace the four concrete slab bridges that are located along a one and a quarter mile stretch of Chualar Canyon Road east of Chualar (County Bridges 302, 303, 304, and 305). Engineering studies have been conducted for the bridges and alternatives for retrofit or replacement are currently being designed and assessed. The resulting project design will be informed by ongoing environmental studies.

The project has the potential to affect the waters of the United States, therefore, the County must meet requirements of Section 404 of the Clean Water Act and will seek authorization from the US Army Corps of Engineers. This requirement makes the project a federal undertaking and subject to compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation in Title 36 Code of Federal Regulations Part 800 (36 CFR 800). The permit is the only federal involvement and the US Army Corps of Engineers will be the lead agency for compliance with Section 106. The County, which is funding and proposing the project, will be the lead agency for the purposes of the California Environmental Quality Act (CEQA).

The project's Area of Potential Effect (APE) is in three segments that contain the road right of way for the subject bridges and approaches, along with adjacent land to the north or south of each bridge to accommodate temporary road detours.

Summary of Findings

As part of the project's Section 106 and CEQA compliance, JRP Historical Consulting, LLC (JRP) conducted a historic evaluation of the subject bridges. This study concludes that the four concrete slab bridges on Chualar Road do not meet the criteria for listing in the National Register of Historic Places (NRHP). This conclusion is in accordance with NHPA Section 106 and 36 CFR Part 800.4. Furthermore, the four bridges do not meet the criteria for listing in the California Register of Historical Resources (CRHR) and are not historical resources under CEQA, as per CEQA Guidelines Section 15064.5(a). Please refer to the attached set of California Department of Parks and Recreation (DPR) 523 Forms in Attachment 1 for a full NRHP eligibility analysis, historic context, physical description of the resources, and photographs.

Fieldwork and Research Methodology

JRP reviewed the Information Center records search results (NWIC File 22-0788, 12/12/2022) conducted for this project and the California Office of Historic Preservation's Built Environment Resource Directory for Monterey County that lists previously recorded or identified historic resources in the project vicinity. The subject bridges do not appear to have been previously studied and the above-referenced sources do not list other historic resources in the vicinity of the subject bridges.

JRP identified potential interested parties for this project: Monterey County Historic Advisory Commission, Monterey County Chief of Planning, Monterey County Historical Society, Monterey County Free Libraries- Gonzales Branch, and the Salinas Public Library. Letters were sent to these organizations on December 14, 2022 and follow up communication via telephone or e-mail was conducted January 3, 2023. Responses did not provide any information regarding historic resources or present issues regarding the project. Please see the letter to interested parties, follow-up communications, and communications log in Attachment 2.

JRP Architectural Historian Cheryl Brookshear and Research Assistant Andrew Young conducted the field survey on December 20, 2022, and prepared a description of the subject bridges on a set of DPR 523 Forms, including photographs and maps of the structure. Survey included the superstructure and above ground substructure of each bridge; no ground disturbing methods were employed.

JRP conducted research in primary and secondary sources online, including county property records, newspaper articles, historic aerial photographs, historic maps, bridge inspection reports, bridge as-built drawings, and published histories. This background research was used to establish the appropriate historic context and bridge-specific development history of the road and the design and construction history of the bridges. The historic context and bridges' history, along with the evaluation, are presented on the set of DPR 523 forms in Attachment 1.

Preparers' Qualifications

This study was conducted under the general direction of Christopher D. McMorris (M.S., Historic Preservation, Columbia University, New York), a Principal at JRP with more than 24 years of experience conducting these types of studies. Mr. McMorris provided overall project direction and guidance, and reviewed and edited this report (and the attached set of DPR 523 forms). Based on his level of experience and education, Mr. McMorris meets the Secretary of the Interior's Professional Qualification Standards under History and Architectural History (as defined in 36 CFR Part 61).

JRP Historical Consulting, LLC

JRP Architectural Historian Cheryl Brookshear (M.S., Historic Preservation, University of Pennsylvania) has 15 years of experience as a historian/architectural historian working on a variety of research and cultural resource management projects throughout California. Ms. Brookshear conducted research and authored the DPR 523 form. Ms. Brookshear meets the Secretary of the Interior's Professional Qualification Standards under History and Architectural History (as defined in 36 CFR Part 61).

JRP Research Assistant Andrew Young (M.A. History / Public History, California State University, Sacramento, In Progress) assisted Ms. Brookshear with research and fieldwork.

Attachment 1:
DPR 523 Forms

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # ______
HRI # ______
Trinomial ______
NRHP Status Code 6Z

Other Listings ______
Review Code ______ Reviewer ______ Date ______

***Resource Name or #** (Assigned by recorder) Monterey County Bridges 302, 303, 304, 305

P1. Other Identifier: Chualar Canyon Road Bridges

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** Monterey

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Gonzales **Date** 1984 **T** 15S; **R** 5E; N ½ **of Sec** 27 and 28; M.D. **B.M.**

c. Address Chualar Canyon Road City Chualar (vic) Zip 93925

d. UTM: (give more than one for large and/or linear resources) Zone ______; ______mE/ ______mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

These four bridges are located on Chualar Canyon Road. The road begins at Old Stage Road east of the community of Chualar and continues along Chualar creek into the Gabilan Range. The bridges are along a 1.5 mile stretch of straight road in an east west direction beginning just east of a T intersection with a road from the north and Parsons Creek.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Monterey County Bridges 302, 303, 304, and 305 are located on Chualar Canyon Road in the Gabilan Range that form the eastern side of the Salinas Valley. The local county road winds up the canyon from the Old Stage Road near the Salinas River before ending near the range's ridge four miles east. The four county bridges cross Chualar Creek and its tributaries in a mile and a half road segment from where Parsons Creek meets Chualar Creek and continuing east. The road lies in a narrow canyon between mountains through an area that is lightly settled in either large lot rural residential or agricultural use (**Photograph 1**). The four bridges are similar in their construction. They have board formed concrete abutments with associated wingwalls. Each bridge is approximately 18 feet wide intended to convey a single lane in each direction. The bridge span is composed of pre-cast concrete slabs set upon the abutments. (See Continuation Sheet.)

***P3b. Resource Attributes:** (List attributes and codes) HP 19 - Bridges

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) **Photograph 1:** Bridge 305 with Bridge 304 in the background; camera facing west; December 19, 2022.

***P6. Date Constructed/Age and Sources:** ☒ Historic ☐ Prehistoric ☐ Both

c. 1901-1936 *Salinas Californian*; deck and span structure replaced 1940 and 1948.

***P7. Owner and Address:**
Monterey County
168 West Alisal Street
Salinas, CA 93901

***P8. Recorded by:** (Name, affiliation, address)
C. Brookshear and A. Young
JRP Historical Consulting, LLC
2850 Spafford Street
Davis, CA 95618

***P9. Date Recorded:** December 19, 2022

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") JRP Historical Consulting, LLC, Letter Report for Monterey County Bridges 302, 303, 304, and 305 Replacement Project, prepared for Monterey County Public Works, Facilities, and Parks, 2023.

***Attachments:** ☐ None ☐ Location Map ☒ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (list) ______

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) Monterey County Bridges 302, 303, 304, 305

B1. Historic Name: Chualar Canyon Road Bridges
B2. Common Name: Monterey County Bridges 302, 303, 304, and 305
B3. Original Use: Bridge B4. Present Use: Bridge
***B5. Architectural Style:** Utilitarian
***B6. Construction History:** (Construction date, alteration, and date of alterations) Road extant by 1884, County ownership of road in 1901, road paving in 1936, likely original bridge construction (extant abutments) c.1901-1936, bridge deck of 302 replaced in 1940, abutments widened and decks replaced on bridges 303, 304, and 305 in 1948.
***B7. Moved?** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** __________ **Original Location:** ______________
***B8. Related Features:** Chualar Canyon Road
B9. Architect: Unknown; H.F. Cozzens b. Builder: Monterey County
***B10. Significance: Theme** Transportation **Area** Monterey County
Period of Significance n/a **Property Type** Bridge **Applicable Criteria** n/a
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The four bridges on Chualar Canyon Road in the Gabilan Range do not meet the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), nor do they appear to be historical resources for the purposes of the California Environmental Quality Act (CEQA). These structures have been evaluated in accordance with Section 106 of the National Historic Preservation Act of 1966 as amended and Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code.

Historic Context

Chualar Canyon Road is the sole vehicle road to Chualar Canyon and the surrounding Gabilan Range. The road dates to the nineteenth century, and Monterey County adopted the road in the early twentieth century, initially paving it in the 1930s. The dead-end road served local ranches, but in the past 50 years many of the parcels flanking the road have developed into large parcel rural residential properties. The four bridges cross Chualar Creek, a seasonal waterway that meanders along the bottom of the canyon. (See Continuation Sheet.)

B11. Additional Resource Attributes: (List attributes and codes) _______

***B12. References:** Augusta Fink, *Monterey County: The Dramatic Story of its Past* (Santa Cruz, CA: Western Tanager Press, 1982); *The Salinas Californian;* PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," for Monterey County Parks Department, 2011; General Land Office, Land Patents; Parsons Brinckerhoff and Engineering and Industrial Heritage, "A Context for Common Historic Bridge Types," NCHRP Project 25-25 Task 15, for National Cooperative Highway Research Program, Transportation Research Council, National Research Council, October 2005; Office of County Surveyor, "Chualar Canyon Bridge District No. 3, [302 Bridge]" October 1940; and see B10 footnotes.

B13. Remarks:

***B14. Evaluator:** Cheryl Brookshear

***Date of Evaluation:** December 2022

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

See Continuation Sheet.

P3a. Description (continued):

The reinforced slabs are topped with asphalt. Concrete wheel curbs are located on each side of the deck along with railings. Individual bridges are discussed below, and their general statistics are presented in **Table 1**.[1]

Table 1. Bridge statistics summary

Bridge	Length	Width	Skew	Alterations
302	16 feet	18 feet	5 degrees	Bridge span and deck replaced in 1940
303	15 feet	18.5 feet	0 degrees	Bridge span and deck replaced in 1948
304	15 feet	18.5 feet	32 degrees	Bridge span and deck replaced; bridge widened approximately 6 feet 1948
305	11.75	18.5 feet	20 degrees	Bridge span and deck replaced 1948; wing walls reinforced with metal and metal frame added below bridge possibly 1998.

Bridge 302 is the westernmost of the four bridges (**Photograph 2**). The upper faces of the wingwalls have been shorn up and supported with slump concrete above the board formed concrete that constitutes the abutment and wingwall structure (**Photograph 3**). The eastern wing walls are similarly supported with a rock filled wire basket providing additional protection on the south side (**Photograph 4**). The abutment seat has been partially filled with concrete to keep the concrete slab at grade. The bridge span is composed of five, reinforced concrete slabs; three four-foot-wide slabs and two three-foot slabs on the sides. Asphalt consistent with the road covers the deck (**Photograph 5**). Atop the concrete slab are one-foot-wide wheel guards flanking the roadway. The solid concrete guards rise about ten inches above the deck and have curved ends at the bridge approaches. The guards sit flat with the outer edge of the deck. Bolted to the exterior of the span are wooden guard-rails. Square wood posts rise about three feet above the deck. A single wood rail runs between the posts along the deck and two rails are used to connect the deck rail with an additional post at the approach.

Bridge 303 is the second westernmost bridge (**Photograph 6**). The board formed concrete abutments have concrete wingwalls on the north face, and are unprotected on the south side. The abutment seat has been partially filled with concrete to keep the concrete slab at grade (**Photograph 7**). A displaced piece of wing wall is at the northwest corner. The deck is constructed of three six-foot wide slabs. Asphalt consistent with the road covers the deck. Atop the concrete slab are one-foot-wide wheel guards that flank the roadway (**Photograph 8**). These guards are bolted to the deck. A solid base rises up six inches and the top four inches overhangs the base about four inches. The end of the guard is curved where it meets the bridge approach. Three pieces of angle iron are bolted to each side of the deck rising about three feet above the deck. Metal beam guard rail connects these posts.

Bridge 304 is near the eastern end of the section of road with the subject bridges (**Photograph 9**). The structure's board formed concrete abutments are only 15-feet wide and make up the southern part of the abutments and wing walls. The northern six feet of abutment is an angled iron cap atop the concrete abutment extending south (**Photograph 10**). The deck span is bolted to the cap. Steel sheets form the remaining abutment wall and south wingwalls. The abutment seat has been partially filled. The deck is constructed of three six-foot wide slabs (**Photograph 11**). Asphalt consistent with the road covers the deck. Atop the concrete slab are one-foot-wide wheel guards flanking the roadway. These guards are bolted to the deck. A solid base rises up six inches and the top four inches overhangs the base about four inches. The end of the guard is curved where it meets the bridge approach. Three metal angles are bolted to each side of the deck rising about three feet above the deck. Metal beam guard rail connects the posts.

[1] The four bridges recorded herein do not have bridge numbers assigned by the California Department of Transportation (Caltrans). This is likely because the structures have spans that are less than twenty feet and are not subject to Caltrans' bridge inspection program that include bridges owned by the state and local agencies.

Bridge 305 is the easternmost bridge and most altered (**Photograph 12**). The abutments are supported with an angle iron frame and perforated metal plates line the walls. Grouted stone wing walls at the sides indicate walls behind the metal substructure (**Photograph 13**). The abutments are wider than the associated roadway. A metal frame beneath the slab provides additional support (**Photograph 14**). Angled supports come up from the base of the abutment to a stringer across the roadway. The stringers are connected longitudinally with additional angled metal beams. Three six-foot wide concrete slabs sit atop the framework forming the span and deck. Asphalt consistent with the road covers the deck. Atop the concrete slab are one-foot-wide wheel guards flanking the roadway (**Photograph 15**). These guards are bolted to the deck. The wheel guards are cast in a single piece with three support posts spaced along the back side. The upper four inches forms an overhanging rail with curved ends. Three posts are bolted to each side of the bridge rising about three feet above the bridge deck. The end posts are wood and the central post is angle iron. Metal beam guard rail connects the posts.

B10. Significance (continued):

Chualar Canyon is located on the east side of the northern Salinas Valley. The Salinas River flows through Salinas Valley's rich agricultural land, some of the most productive in the world, fed by creeks like Chualar Creek flowing out of the surrounding hills. Europeans began to arrive in the area in 1769 and settled at Monterey in 1770. The Spanish introduced free roaming cattle and a variety of small-scale crops including fruit, olives, grapes, wheat, and corn. European settlement expanded under Mexican rule extending down the Salinas Valley in a series of ranchos. Among the ranchos the Mexican government granted in 1839 was *Rancho Santa Rosa de Chualar* consisting of 8,890 acres that crossed a swath of the Salinas Valley and up the Chualar Canyon granted to Juan Malarin. Grants were given to the north and south of *Rancho Chualar* around the same time. By the end of the Mexican period most of the Salinas Valley had been divided into large rancho tracts, but was lightly settled with the agriculture centered around free range cattle and subsistence crops. The few transportation routes included El Camino Real, which connected the coastal Missions and the Salinas River. The river provided transportation for the few trade goods in the valley.[2]

When the United States took control of California in the late 1840s, it unleashed a period of change upon the cluster of Mexican ranchos. The population of Monterey County, just like that of California increased rapidly with the discovery of gold in the state. After trying mining, many new residents decided to pursue agriculture as a more stable endeavor, and this created demand for desirable rancho lands. The Treaty of Guadalupe Hildago in 1848 that ceded California to the United States guaranteed that rancho owners could retain their property. The process was intended to integrate the Spanish and Mexican grants into the American legal system; however, many owners lost their property during the following decades. Juan Malarin had trained as a lawyer within the Spanish system, but was unable to prevail in the English-based American system. In multiple rounds of litigation over *Rancho Chualar* and several of his father's properties, he was forced to mortgage *Rancho Chualar* to pay legal fees. When drought struck the area in 1863-1864, Malarin, like many local rancho owners, lost much of the stock on his lands. Malarin was unable to profit from traditional hide and tallow sales, and mortgage holder David Jacks foreclosed on the property and became the new owner.[3]

The transfer and subdivision of ranchos under pressure from American settlers brought change to Salinas Valley agriculture. Like many of the Anglo settlers, Jacks introduced grains and cereals as large-scale crops in the valley. During this period wheat was grown both in the valley and the surrounding hills. Land holders with large tracts divided them into smaller farms which were leased out. Wagons and boats transported crops to Pajaro Landing, Brennan's Landing, and Moss Landing on Monterey Bay.[4]

---

[2] PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," for Monterey County Parks Department, 2011, 28-30, 33-34, 36, 38, 45-46; Augusta Fink, *Monterey County: The Dramatic Story of its Past* (Santa Cruz, CA: Western Tanager Press, 1982) 78.
[3] PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," 46-48, 56; Fink, *Monterey County: The Dramatic Story of its Past,* 137, 140.
[4] PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," 46-47, 53, 56, 66-70; E.S. Harrison, *Monterey County Illustrated: Resources, History, Biography* (Salinas, CA: Salinas Board of Trade, 1890c.) 27.

The arrival of the railroad and new financing methods introduced a period of rapid change in the 1870s. The Southern Pacific Railroad (SPRR) began constructing a branch south from Gilroy in 1871 reaching Pajaro Junction that year. The line opened to Salinas in 1872. Jacks grasped the potential benefits and offered the railroad right of way across *Chualar* and guaranteed shipping traffic to the railroad. On his part he platted a community along the route with substantial warehouses and shipping facilities. Across the Salinas Valley agricultural contracts facilitated development of intensive agriculture. Crop contracts provided an incentive for farmers to grow specific crops. Companies and marketing groups offered set contract prices at the beginning of the growing season, allowing the farmer greater certainty in final prices. The farmers were thereby encouraged to invest in their crops with increasing use of fertilizers and pesticides. Apples and sugar beets were the most commonly contracted crops in the area.[5]

Jacks continued to encourage the cultivation of wheat and other grains upon *Chualar,* but in Chualar Canyon diversification took hold. The southern half of the canyon was part of the rancho, but the northern half and eastern end were available for homesteading. Three families established homesteads in the canyon in the 1870s and 1880s: William Old, John Watson, and William Burrows (**Plate 1**).

Plate 1. General Land Office Survey from 1884 showing the beginning of settlement in Chualar Canyon. The red line is the rancho boundary, and the early road in green (annotated by JRP) followed its edge passing houses belonging to Burrows, Watson, and Old in order left to right. This map includes the road segment where the four bridges recorded herein are located.[6]

The settlers developed a pattern of diverse agriculture by the 1890s. While grains and alfalfa for Jacks' growing number of leased dairies were the main crops, the families also grew vegetables, established orchards, and raised small stock including

[5] PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," 71-72, 79, 95-96; Fink, *Monterey County: The Dramatic Story of its Past,* 143.
[6] General Land Office, Plat Map Township 15 South Range 5 East, 1884, [Home - BLM GLO Records] accessed November 2022. Annotated by JRP.

goats. Further up the canyon in the Gabilan Range the land continued to be used for grazing and stock operations. Also, far up the canyon was a small gold mining operation. These properties were reached by an unofficial dirt road by the 1880s.[7]

Through the early twentieth century the Salinas Valley continued diverse agricultural development. Wheat began to decline in the 1890s although was still grown into the early twentieth century. Jacks encouraged the development of dairies upon *Chualar* by constructing standard dairy buildings and residences on his leased properties. Cooled railcars were developed in the 1860s, but became much more dependable in the 1920s. This innovation facilitated diversification as crops traditionally grown as truck crops for local consumption were grown for mass shipment across the country. The variety of crops resulted in the Salinas Valley becoming known as "America's Salad Bowl." The climatic zones created by the valley floor and surrounding hills allowed for cultivation of a variety of vegetables, strawberries, grapes, and nursey stock.[8]

Agricultural development in the Salinas Valley necessitated and supported infrastructure such as roads. A road across privately owned land into the Chualar Canyon had been developed by 1884, but likely initiated as Old, Watson, and Burrows homesteaded in the canyon in the late 1870s. Monterey County formalized the road in 1901, purchasing a 40-foot right of way from the farmers for the road. From the valley, the road followed Chualar Creek, and as it entered the foothills the road took a straight path crossing the wandering creek and its tributaries. It is unclear when the four small bridges recorded herein (Bridges 302-305) were added to the road. Demand for these small bridges was likely not strong because of the seasonal and intermittent nature of the creek and limited local traffic. The county's $2 million bonds for county-wide road improvements in 1928, for example, did not include any work on Chualar Canyon Road. At this time Monterey County was still doing basic road improvements with gravel.[9]

It is possible that the bridges were not constructed until 1936 when the road was first paved. The board formed concrete abutments are indicative of an early to mid-twentieth century construction date. While the original span and decking material is unknown, they were single span bridges and the abutment shelf that the superstructure sat upon indicates a thicker span which would be consistent with a timber beam or stringer bridge. This type of bridge was constructed with thick timber beams spanning the distance between abutments or piers and a wooden deck above that. This type of construction is among the earliest of bridge types and constituted a common standardized plan among several states and was popular for short spans in lightly trafficked areas throughout the early twentieth century through the 1950s. The abutment seats on Chualar Canyon Road had to be built up for the existing concrete slabs to be at grade with the road (**Plate 2**). This indicates the previous span had a more substantial substructure like that necessary for a timber beam bridge. Increasing vehicle weight necessitated stronger timbers or alternate materials.[10]

The county began to make improvements to the recorded bridges in 1940, beginning with Bridge 302. The existing span was removed and replaced with the extant pre-cast reinforced concrete span. Modern construction began to utilize concrete for bridges in the early twentieth century, and short, pre-cast, reinforced slabs were utilized since the first decade of the century. The bridge was simple with the five reinforced slabs laid next to one another acting as both the substructure and deck. Bridge

---

[7] "Chualar Canyon Items," *The Salinas Californian,* October 2, 1898; PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," 53; General Land Office, Plat Map Township 15 South Range 5 East, 1884, Home - BLM GLO Records accessed November 2022; General Land Office, Land Patent William Burrows April 30, 1883, Home - BLM GLO Records accessed November 2022; General Land Office, Land Patent John R Watson, April 30, 1883, Home - BLM GLO Records accessed November 2022; General Land Office, Land Patent William R Old, June 1, 1898, Home - BLM GLO Records accessed November 2022; "Chualar Canyon's Gold," *The Salinas Californian,* February 15, 1909, 1.

[8] PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," 32, 39, 41.

[9] "Legal Notice Superior Court of California County of Monterey Case No. P29706 Notice of Sale of Real Property," *The Salinas Californian,* August 27, 1993, 16; "Supervisors Put in Busy Afternoon," *The Salinas Californian*, December 10, 1909; "Chualar Group is Present at Grange Meet," *The Salinas Californian,* July 15, 1936; "Chualar," *The Salinas Californian,* October 18, 1928; "County to Spend $177,099 for Road Work Next Season," *The Salinas Californian,* August 10, 1928; "Harmony Reigns in Highway Parley," *The Salinas Californian,* September 4, 1928.

[10] Parsons Brinckerhoff and Engineering and Industrial Heritage, "A Context for Common Historic Bridge Types," NCHRP Project 25-25 Task 15, for National Cooperative Highway Research Program, Transportation Research Council, National Research Council, October 2005, 3-80 – 3-80; Moffatt & Nichol, "Bridge Inspection Report Bridge 302 Chualar Canyon Road," For Monterey County Resource Management Agency, 2020; .

302 is one of a multitude of such bridges constructed across the country before and after World War II. The remaining three bridges, Bridge 303, 304, and 305 did not receive similar updates until after World War II likely because of wartime material shortages, and improvements to small bridges on secondary roads were not a priority during the war. While the abutments are similar to that of Bridge 302, the updated bridge substructure and deck show less attention to design and construction. They appear to have been assembled based upon available materials to meet increasing needs. The plans for the updates were signed by County Engineer Howard F. Cozzens, who began his county career in 1914 when he became the County Surveyor. As the surveyor he developed road and bridge plans across the county. When the state called for counties to establish centralized road construction and maintenance divisions in 1919, Cozzens was appointed to that position. Cozzens continued the development of Monterey County's roads and bridges until his retirement in 1954. His work included development of the 24-foot wide Monterey-Salinas Road, the cut for the Monterey-Carmel Road, and sizable bridges in Nacimiento, King City, and Watsonville. His small-scale bridges following World War II were noted for their use of dock landing ship decking purchased as war surplus. The bridges on Chualar Canyon Road do not appear to be among the bridges employing surplus decking.[11]

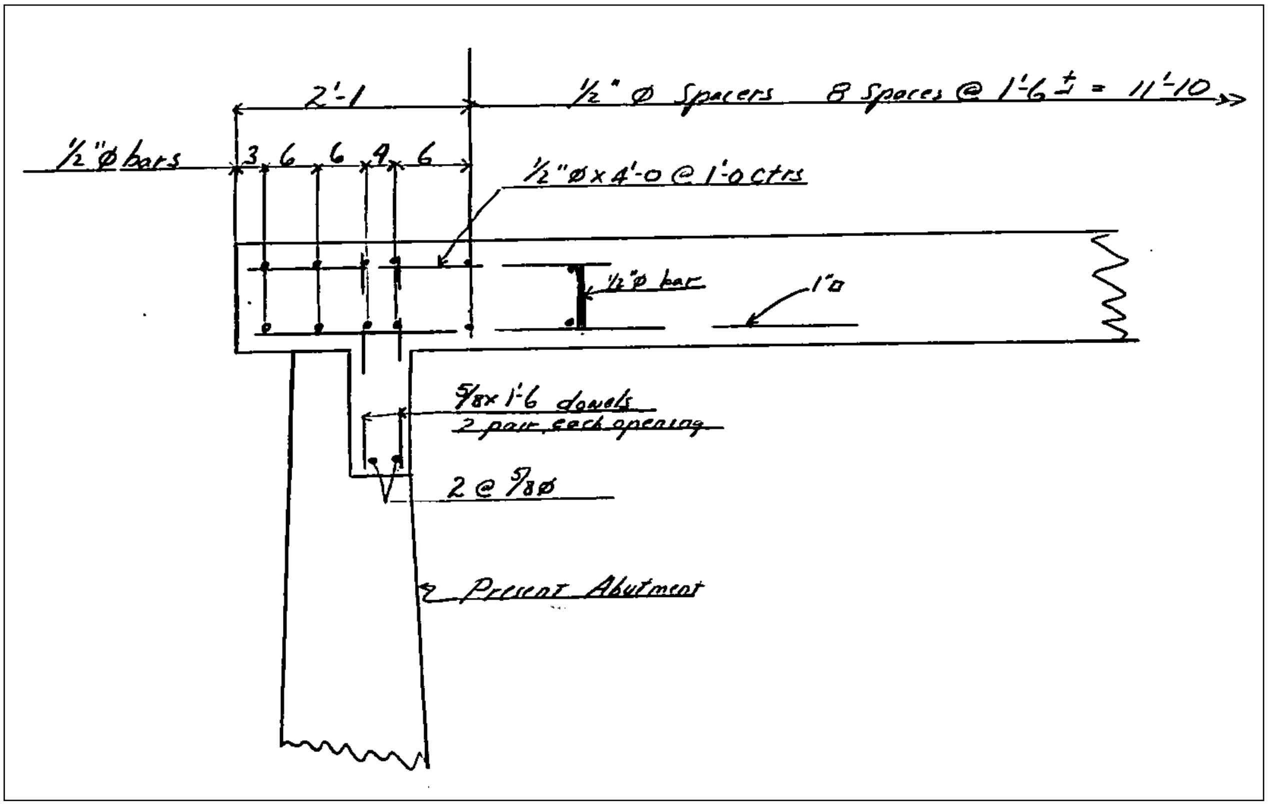


Plate 2. Cross section of abutment in 1940 rehabilitation plan. Notice a footing extending down from the slab to meet the existing abutment seat.[12]

The county improved the three eastern bridges in 1948. Slabs for these structures are wider than those of Bridge 302, with only three necessary to span the width rather than the five used at Bridge 302. Bridge 303 was a simple retrofit with the abutment seat built up to support the concrete slab. Bridges 304 and 305 were widened approximately six feet as well as having their spans replaced. The abutments were widened with the addition of a metal cap that extended the abutment seat. New wing walls for the abutments were created with metal panels. While Bridge 305 is not significantly larger than any of the others it has a steel substructure beneath the reinforced slabs. No rationale was recorded in any of the sources for this additional structure. The bridges have remained largely unchanged since the 1948 improvements. The bridges appear to have been resurfaced along with the road, and asphalt added atop the concrete deck. Erosion has affected some of the wing walls and

[11] "Howard Cozzens Retires as Road Commissioner," *Salinas Californian,* January 2, 1954, 9A.
[12] Office of County Surveyor, "Chualar Canyon Bridge District No. 3, [302 Bridge]" October 1940, from Monterey County Public Works.

they have been shored up with slump concrete. Newspaper accounts of flooding in 1998 indicate that at least one bridge in the area was fortified by firefighters as an emergency measure. This may correspond with the metal framework under Bridge 305.[13]

Evaluation

Under NRHP Criterion A or CRHR Criterion 1, these bridges do not have significant associations with important historic events or trends. Chualar Canyon is one of several small offshoots from Salinas Valley. While agriculturally diverse and productive, it does not share the uniquely high production of the valley or have associations with important Salinas Valley crop types such as sugar beets or dairies. The bridges serve a secondary county road that provides access to local traffic and does not represent an important transportation route.

These bridges do not have an association with the life of an individual important to history (NRHP Criterion B / CRHR Criterion 2). It does not appear that the bridges are associated with any specific individual. They were built by the county to serve the various residences in Chualar Canyon.

Under NRHP Criterion C / CRHR Criterion 3 these bridges are not significant as important examples of a type, period, or method of construction. These bridges are common, simple bridge types found across the nation. Slab bridges can be found throughout the world beginning in the pre-common era, re-introduced for modern roadways in the early twentieth century. The addition of reinforced concrete slabs to these bridges in the 1940s was well after reinforced concrete had been introduced and used widely in California. The original design of the bridges is unknown, but was likely a similar common bridge type like timber beam. Furthermore, the bridges are not the work of a master architect or builder, and their utilitarian designs do not possess high artistic value.

Under NRHP Criterion D / CRHR Criterion 4, these bridges are not a significant or likely source of important historical information. The structures do not appear to have any likelihood of yielding important information about historic construction materials or technologies. Also, the association of the roadway and the bridges is typical of the period and does not provide important information within the broader economic, social, and cultural setting of the area. This evaluation does not address non-built environment resources or pre-historic resources.

The bridges have been altered since their original construction likely between 1901 and 1936. This has significantly altered the original design as the original bridge type is unknown. Those alterations also resulted in the loss of materials, and workmanship. Since the bridges were updated in 1940 and 1948, they have remained largely unaltered, although Bridge 305 appears to have substructure added. The bridges retain their original location, feeling, setting, and association, but are not significant within their historical context.

[13] Parsons Brinckerhoff and Engineering and Industrial Heritage, "A Context for Common Historic Bridge Types," NCHRP Project 25-25 Task 15, for National Cooperative Highway Research Program, Transportation Research Council, National Research Council, October 2005, 3-82 – 3-85, 3-99; Yomi S. Wronge, "Tornado Gives Hollister a Little Love Tap," *The Salinas Californian,* March 26, 1998, 1; Moffatt & Nichol, "Bridge Inspection Report Bridge 302 Chualar Canyon Road," For Monterey County Resource Management Agency, 2020; Moffatt & Nichol, "Bridge Inspection Report Bridge 303 Chualar Canyon Road," For Monterey County Resource Management Agency, 2020; Moffatt & Nichol, "Bridge Inspection Report Bridge 304 Chualar Canyon Road," For Monterey County Resource Management Agency, 2020; Moffatt & Nichol, "Bridge Inspection Report Bridge 305 Chualar Canyon Road," For Monterey County Resource Management Agency, 2020.

Photographs (continued):

Photograph 2: Bridge 302; camera facing southwest; December 19, 2022.

Photograph 3: Bridge 302, showing the east side abutment where slump concrete sits atop the original board formed concrete; camera facing east; December 19, 2022.

Photograph 4: Bridge 302, showing the rock filled wire basket supporting its southwestern wing wall; camera facing south; December 19, 2022.

Photograph 5: Bridge 302; camera facing south; December 19, 2022.

Photograph 6: Bridge 303; camera facing west; December 19, 2022.

Photograph 7: Bridge 303; camera facing south; December 19, 2022.

Photograph 8: Bridge 303, showing its south side wheel guard and how the guard rail blots into the deck; camera facing northwest; December 19, 2022.

Photograph 9: Bridge 304; camera facing northwest; December 19, 2022.

Photograph 10: Bridge 304, showing where the northern edge of the east abutment has been extended; camera facing south; December 19, 2022.

Photograph 11: Bridge 304; camera facing northwest; December 19, 2022.

Photograph 12: Bridge 305; camera facing northeast; December 19, 2022.

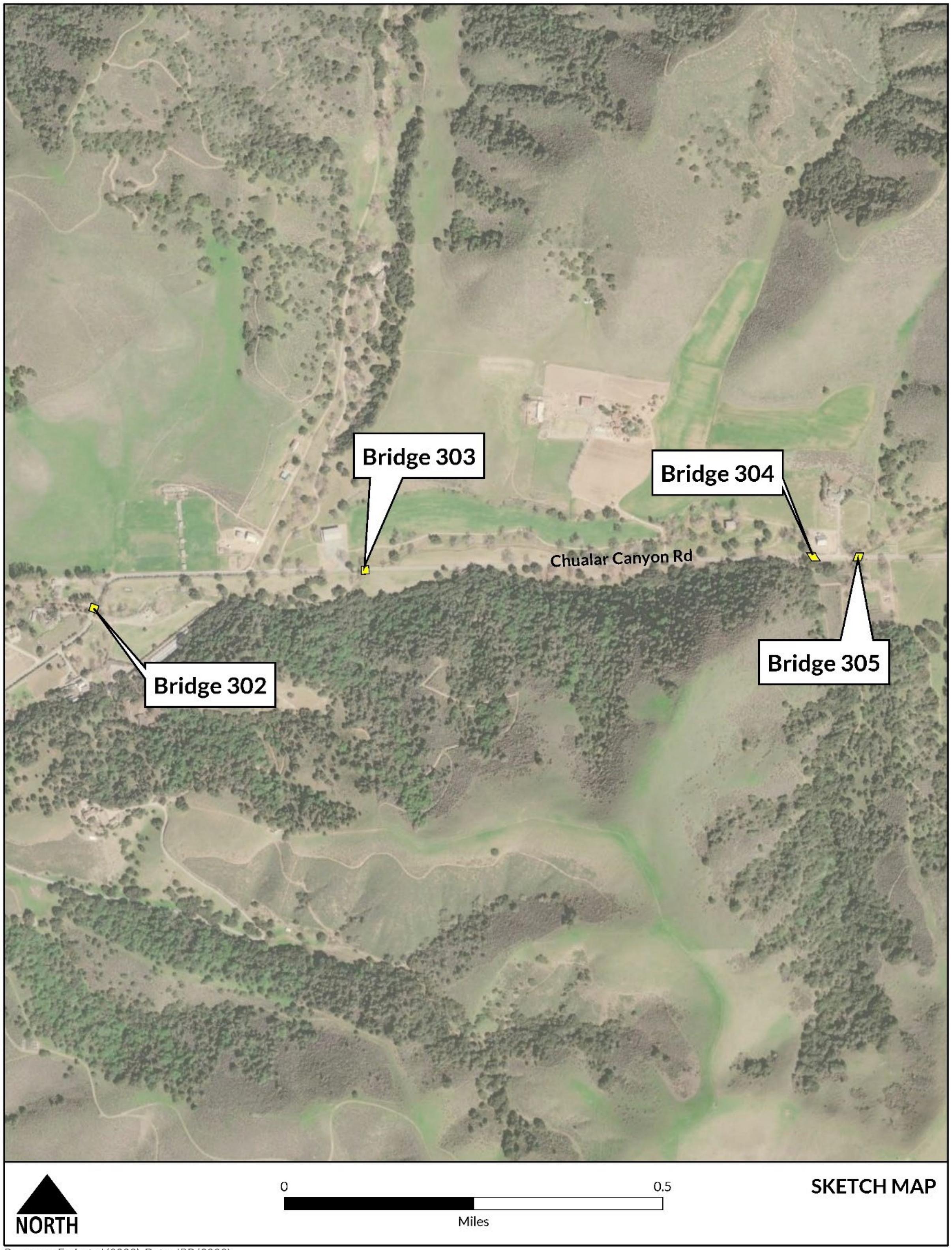
Photograph 13: Bridge 305, showing stone walls partially covered with metal substructure; camera facing north; December 19, 2022.

Photograph 14: Bridge 305, showing the metal frame beneath the deck; camera facing north; December 19, 2022.

Photograph 15: Bridge 305, showing the wheel guard and guard rail; camera facing southeast; December 19, 2022.

***Resource Name or #** (Assigned by recorder) Monterey County Bridges 302, 303, 304, 305

***Recorded by** C. Brookshear and A. Young *Date December 19, 2022 ☒ Continuation ☐ Update



Base map: Esri, et al (2022). Data: JRP (2022).

Attachment 2:
Outreach to Potential Interested Parties

JRP Historical Consulting LLC

Communication Log

2850 Spafford Street, Davis, CA 95618
(530) 757.2521 | jrphistorical.com

Project	Chualar Canyon Road Bridge Rehabilitations, Monterey County, California.
Subject	Contacting interested parties re: historic resources
Project Proponent	County of Monterey
Notes Prepared By	Cheryl Brookshear, Staff Architectural Historian, JRP Historical Consulting, LLC

Notes:

Participants	Contact Time	Notes
Phil Angelo Historic Advisory Commission County of Monterey South 2nd Floor 1441 Schilling Place Salinas, CA 93901 831-755-5025 (dept) 831-784-5731 (direct) angelop@co.monterey.ca.us	12/14/2022	Letter sent via standard US Postal Service.
	1/3/2023	Follow up e-mail sent. Mr. Angelo replied that there were no known resources in the project vicinity. If any were identified information should be forwarded to him for county action.
Craig Spencer Chief of Planning County of Monterey South 2nd Floor 1441 Schilling Place Salinas, CA 93901 831-755-5233 spencerc@co.monterey.ca.us	12/14/2022	Letter sent via standard US Postal Service.
	1/3/2023	Follow up email sent. No response received.
James Perry Monterey County Historical Society PO Box 3576 Salinas, CA 93912 831-757-8085 (office) 831-747-0385 (cell) mchs@redshift.com	12/14/2022	Letter sent via standard US Postal Service.
	1/3/2023	Follow up email sent. No response received.
Christopher Gallegos Gonzales Branch Monterey County Free Libraries 851 Fifth Street Gonzales, CA 93926 (831) 386-6871 No published e-mail County librarian: TheyerHA@co.monterey.ca.us	12/14/2022	Letter sent via standard US Postal Service.
	1/3/2023	Follow up email sent to county librarian. No response received.

Communication Log

2850 Spafford Street, Davis, CA 95618
(530) 757.2521 | jrphistorical.com

Participants	Contact Time	Notes
Salinas Public Library 350 Lincoln Avenue Salinas, CA 93901 831-758-7311 No published e-mail Web portal e-mail	12/14/2022	Letter sent via standard US Postal Service.
	1/3/2023	Follow up sent via web portal regarding reference & local history. No response received.

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

December 12, 2022

James Perry
Historic Advisory Commission
County of Monterey
South 2nd Floor
1441 Schilling Place
Salinas, CA 93901

Craig Spencer
Chief of Planning
County of Monterey
South 2nd Floor
1441 Schilling Place
Salinas, CA 93901

Monterey County Historical Society
PO Box 3576
Salinas, CA 93912

Salinas Public Library
350 Lincoln Avenue
Salinas, CA 93901

Christopher Gallegos
Gonzales Branch
Monterey County Free Libraries
851 Fifth Street
Gonzales, CA 93926

Re: Chualar Canyon Road Bridges Rehabilitation or Replacement Project

Dear Friends of History:

The County of Monterey is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road at and east of Parsons Creek to eliminate current bridge deficiencies (see enclosed map). The proposed project will allow the bridges to carry legal loads including emergency response equipment. Several alternatives are currently being investigated.

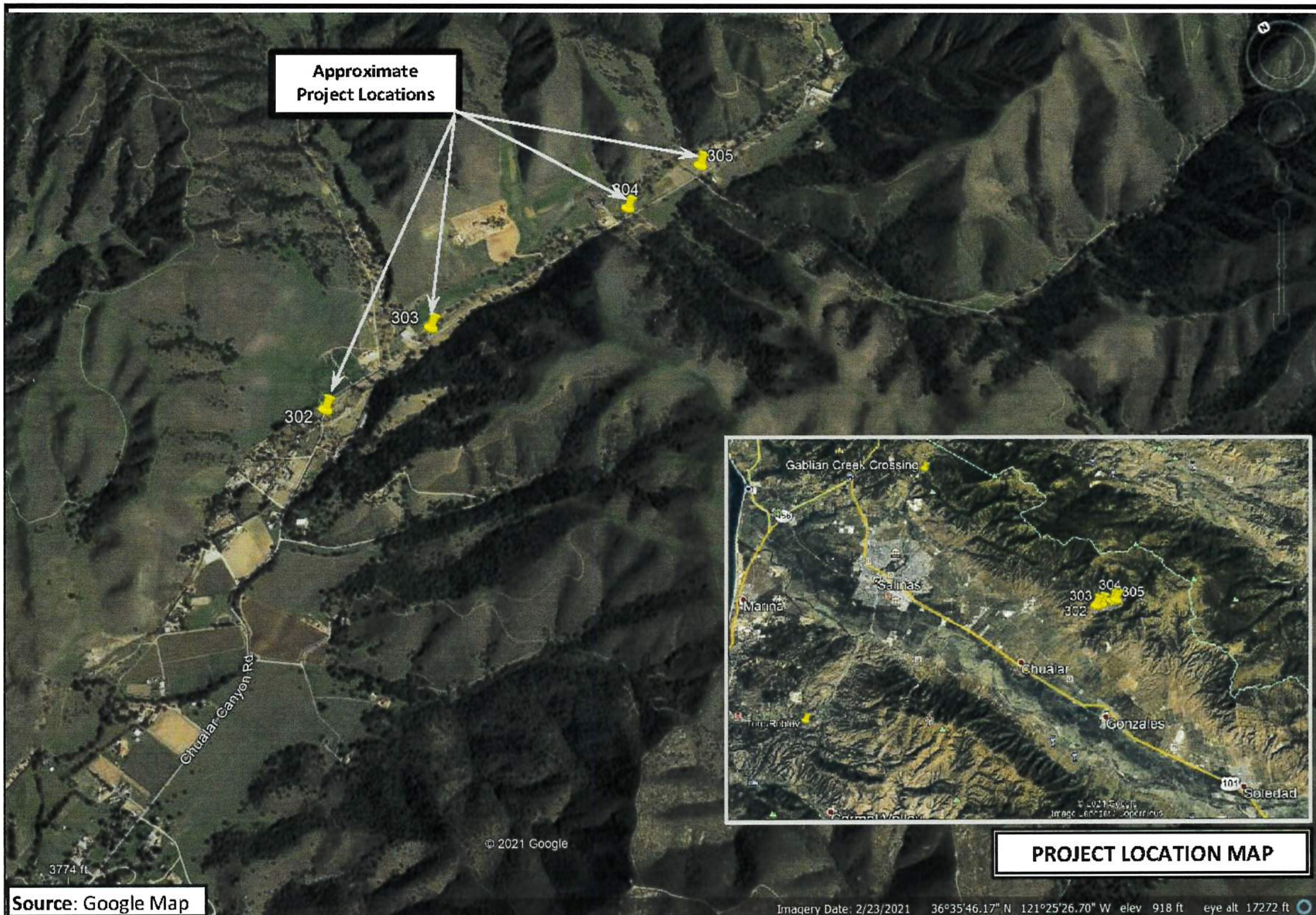
JRP Historical Consulting, LLC (JRP) has been retained to conduct an inventory and evaluation of potential historic properties that may be affected by the project. JRP is determining whether such properties are eligible for listing in the National Register of Historic Places (NRHP) and/or the California Register of Historical Resources (CRHR). JRP's work is part of the environmental studies process for the proposed project and is being conducted for compliance with Section 106 of the National Historic Preservation Act and the California Environmental Quality Act. JRP will be visiting a variety of repositories as a part of our research and any associated research requests will come under a separate inquiry.

This letter is to solicit feedback from you and the community, and to invite you and your organization to participate in the environmental process as it relates to historic resources for this project. Please let us know if you, your organization, or other members of the public have concerns related to known historic resources in the area, or wish to continue to receive information about historic resource investigations related to the project by responding via email to JRP Vice President, Christopher McMorris at cmcmorris@jrphistorical.com within the next 30 days. Thank you.

Sincerely,

Douglas Poochigian, P.E.

Douglas Poochigian, P.E.
Civil Engineer,
Monterey County Department of Public Works,
Facilities and Parks



Source: Google Map

PARIKH
Practicing in the Geosciences

CUALAR CANYON ROAD BRIDGES
MONTEREY COUNTY, CALIFORNIA

JOB NO.: 2021-126-GEO

PLATE NO. 1

Chualar Canyon Road Bridges

Cheryl Brookshear <CBrookshear@jrphistorical.com>
Tue 1/3/2023 9:27 AM
To: angelop@co.monterey.ca.us <angelop@co.monterey.ca.us>;spencerc@co.monterey.ca.us <spencerc@co.monterey.ca.us>;mchs@redshift.com <mchs@redshift.com>;TheyerHA@co.monterey.ca.us <TheyerHA@co.monterey.ca.us>

1 attachments (736 KB)
Letter to Interested Parties (History) - Chualar Canyon Road Bridges.pdf;

Hello,

In December JRP sent you a letter on behalf of Monterey County Public Works regarding proposed replacement or improvement of four small bridges along Chualar Canyon Road (See attached). JRP is conducting research to determine if there are historical resources within the project area. Public organizations and individuals are encouraged to bring forward any concerns about potential historic resources in the project vicinity. Our study is ending soon, so please contact us immediately with any concerns.

Thank you,
Cheryl

JRP Historical Consulting LLC **Cheryl Brookshear M.S. | Historian/Architectural Historian**
(530) 757-2521 ext. 113 office | 530-383-5708 cell **cbrookshear@jrphistorical.com**

I am currently working remotely. The best way to reach me is via e-mail or leave a message at the extension listed above.

Select Language ▼

Your message has been sent! We will reply to your question at the email address you provided within 48 hours.

Thank you,

Salinas Public Library

Go back to the form

RE: Chualar Canyon Road Bridges

Angelo, Philip <AngeloP@co.monterey.ca.us>
Tue 1/3/2023 10:00 AM
To: Cheryl Brookshear <CBrookshear@jrphistorical.com>
Cc: Spencer, Craig <SpencerC@co.monterey.ca.us>

Hello Cheryl,

Thank you for reaching out, I took a look at our GIS information and wasn't able to identify any known historical resources in the project vicinity.

If your investigation identifies any of the bridges are historical, we'd like to coordinate with public works to ensure that the project is referred to the Historic Resources Review Board (HRRB) for review and a recommendation in accordance with 2010 General Plan Public Services Element Policies 12.5 and 12.14.

Best,

Phil Angelo
Associate Planner
Monterey County - Housing & Community Development
1441 Schilling Place, South 2nd Floor
Direct: (831) 784-5731
AngeloP@co.monterey.ca.us

From: Cheryl Brookshear <CBrookshear@jrphistorical.com>
Sent: Tuesday, January 3, 2023 9:27 AM
To: Angelo, Philip <AngeloP@co.monterey.ca.us>; Spencer, Craig <SpencerC@co.monterey.ca.us>; mchs@redshift.com; Theyer, Hillary A. <TheyerHA@co.monterey.ca.us>
Subject: Chualar Canyon Road Bridges

Hello,

In December JRP sent you a letter on behalf of Monterey County Public Works regarding proposed replacement or improvement of four small bridges along Chualar Canyon Road (See attached). JRP is conducting research to determine if there are historical resources within the project area. Public organizations and individuals are encouraged to bring forward any concerns about potential historic resources in the project vicinity. Our study is ending soon, so please contact us immediately with any concerns.

Thank you,
Cheryl

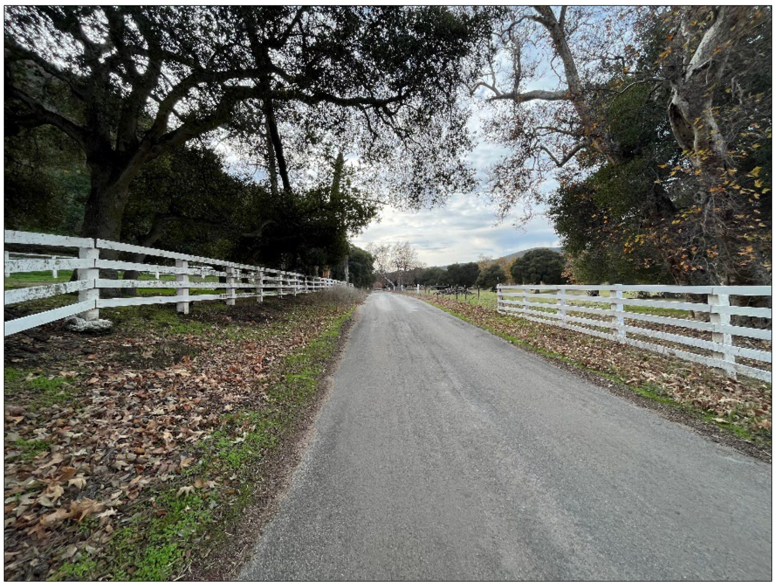
JRP Historical Consulting LLC
Cheryl Brookshear M.S. | Historian/Architectural Historian
(530) 757-2521 ext. 113 office | 530-383-5708 cell
cbrookshear@jrphistorical.com

Appendix E
Cultural Resources Report Chualar Canyon Road Bridge Replacement Project

Cultural Resources Report

Chualar Canyon Road Bridge Replacement Project

Chualar
Monterey County, California
Gonzales 7.5 Minute Quadrangle



Prepared for:
Moffatt & Nichol
4225 E Conant Street
Long Beach, CA 90808
Contact: Garrett Dekker
(925) 956-4947/
gdekker@moffattnichol.com

Prepared by:
Area West Environmental, Inc.
6248 Main Avenue, Suite C
Orangevale, CA 95662
Contact: Becky Rozumowicz-Kodsuntie
(916) 987-3362/becky@areawest.net

November 2023

Summary of Findings

The Project proposes to retrofit or replace four bridges over Chualar Canyon Creek along Chualar Canyon Road in Chualar, California for which deficiencies were identified with the concrete and steel abutments and a rating of low was given under legal loads.

Monterey County will be the lead agency for compliance under the California Environmental Quality Act (CEQA). The U.S. Army Corps of Engineers (Corps) is anticipated to be the federal lead agency, if aquatic resources under their jurisdiction would be affected, for regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800).

Area West Environmental, Inc. conducted archival records searches and conducted an archaeological pedestrian survey of the Project area. No known historic or prehistoric cultural resources are located within the Area of Potential Effects (APE). No surface prehistoric archaeological resources were located within the Archaeological APE during the pedestrian surveys conducted December 19 and 20, 2022 and May 16, 2023. Attachment 1 addresses the historic resources evaluation conducted for the Project.

Mitigation measures addressing the potential for previously unidentified cultural resources are recommended to minimize the potential for significant impacts to undiscovered historical resources and unique archaeological resources during project-related ground-disturbing activities. Additional survey(s) will be needed if the Project limits are extended beyond the present survey limits.

Appendices

Attachments

1. INTRODUCTION

The purpose of this report is to review documentation on file at the Northwest Information Center (NWIC) of the California Historical Resources Information System, housed at Sonoma State University in Rohnert Park, California, assess the cultural resources, if any, associated with the Project site, and determine site sensitivity for cultural resources.

Area West Environmental, Inc. conducted archival records searches, assessed buried site sensitivity, and conducted a pedestrian survey of the Project area.

Monterey County is evaluating alternatives for the retrofit/replacement of four bridges over Chualar Canyon Creek along Chualar Canyon Road in Chualar, California. Four bridges (Bridge No. 302, 303, 304, and 305) were inspected in January 2020 and deficiencies were identified with the concrete and steel abutments and the bridges were rated low under legal loads.

2. PROJECT LOCATION AND DESCRIPTION

The Project site is located in the unincorporated community of Chualar, Monterey County, California in a rural setting on Chualar Canyon Road surrounded by single family rural residences and agricultural lands (Appendix A, Figure 1). The Project is located on the Gonzales U.S. Geological Survey 7.5-minute quadrangle map within Sections 27 and 28, Township 15 South, Range 5 East, of the Mt. Diablo Base Meridian (Appendix A, Figure 2).

2.1 UNDERTAKING

Whichever alternative is ultimately chosen, the Project is subject to the discretionary authority of Monterey County, and therefore, compliance with CEQA and the state CEQA Guidelines is required, including CEQA regulations pertaining to archaeological, historical, and tribal cultural resources. Additionally, the Project may affect waters of the U.S., including wetlands, which are subject to a permit from the U.S. Army Corps of Engineers, under Section 404 of the Clean Water Act. Issuance of a permit or other project approval by a federal agency triggers compliance with Section 106 of the National Historic Preservation Act (NHPA).

2.2 ARCHAEOLOGICAL AREA OF POTENTIAL EFFECTS

The archaeological Area of Potential Effects (APE) is approximately 2.52 acres, which corresponds to the Project site boundaries (Appendix A, Figures 3-5).

3. SOURCES CONSULTED

Topographic and aerial maps of the property and vicinity were reviewed to identify landforms and nearby natural water sources. The aerial map of the APE was examined to determine the presence or absence of surface anomalies. Online resources were searched for regional and local history. A Historic Evaluation of Bridges 302, 303, 304, and 305 (Attachment 1) was conducted for the project.

3.1 RECORDS SEARCH RESULTS

The Northwest California Information Center (NWIC) of the California Historical Resource Information System located at California State University, Sonoma, was contacted and provided the results of a record search dated December 12, 2022. The record search included the Project APE and a ¼-mile radius around the APE.

The literature search conducted by the NCIC included the following:

- Office of Historic Preservation – Historic Properties Directory & Determinations of Eligibility, Monterey County (requested, but none listed);
- Archaeological Determinations of Eligibility, Monterey County (requested, but none listed);
- California Inventory of Historic Resources (1976) (requested, but none listed);
- historical maps: Plat map of the Chualar Rancho 1858, and portions of the 1868, 1884, 1907, and 1968 USGS Gonzales 7.5' quadrangles;
- local inventories (requested, but none listed); and
- previous reports of surveys within the quarter-mile search radius.

The NWIC results included nine archived reports within the Project's APE and four archived reports within a quarter-mile radius of the Project.

There are no prehistoric resources and no historic resources within the APE nor located within the ¼-mile search radius.

A listing of the reports is provided in Appendix C.

3.2 NATIVE AMERICAN CONSULTATION

The Native American Heritage Commission (NAHC) was contacted to request a search of the Sacred Lands and for a list of Native American representatives. Results were provided on December 6, 2022. The record search returned a negative result for the Sacred Lands File. Additional contacts from Monterey County list of Native American contacts for AB 52 consultation were identified.

Emails to Native American contacts were sent on January 6, 2023 and letters were mailed on January 7, 2023. The Esselen Tribe of Monterey County (ETMC), the Salinan Tribe of Monterey, and the Ohlone/Costanoan-Esselen Nation responded with requests to initiate consultation. No other responses have been received to date.

The ETMC responded with a letter dated January 6, 2023; they requested that all construction crew receive cultural sensitivity training and a Tribal monitor be present during ground disturbing activities. ETMC requested copies of environmental documents produced for the project. The

Salinan Tribe of Monterey responded by email on January 12, 2023; they requested a Phase I study be performed (as described in this document) and a copy of the report be shared. The Salinan Tribe of Monterey also requested a Tribal monitor be present during ground disturbing activities. The Ohlone/Costanoan-Esselen Nation responded with a letter dated February 2, 2023 requesting consultation with the lead agencies.

Results of the NAHC tribal contact list, Native American outreach tracking sheet, and correspondence with Native American representatives are included in Appendix D.

4. BACKGROUND

This section reviews the environmental, prehistoric, ethnographic, and historical contexts for the Project APE.

4.1 ENVIRONMENTAL SETTING

The APE is located on Chualar Canyon Road in the community of Chualar and has relatively flat topography with the exception of Chualar Creek. The canyon is located in the Gabilan range which forms the eastern boundary of the Salinas Valley.

The APE consists primarily paved road with surrounding vegetation consisting of non-native grassland which is grazed by cattle, goats, sheep, and horses.

Elevation within the Project area is approximately 515 feet above mean sea level. Representative photographs of the Project location are presented in Appendix B.

4.2 CULTURAL SETTING

4.2.1 EARLY HISTORY AND ETHNOGRAPHY [BASED ON DOANE AND BRESCHINI 2004]

Chualar Canyon lies within the currently recognized ethnographic territory of the Ohlone linguistic group and the Esselen language speakers. In depth discussion of the linguistic groups, triblet territorial boundaries, and the reconstruction of pre-Mission era population distribution can be found in Breschini, Haversat, and Hampson (1983) and Milliken (2006).

Early archaeological remains in Central California dating before 3000 to 3500 years ago have yet to be documented throughout the region, as they were likely inundated by water. Indicators spread around the San Francisco Bay - San Joaquin Delta Area suggest that initial habitation could date anywhere from 4000 to 11,000 B.P.

Pre-contact populations within the Project area are understood to have followed a generalized California hunting and gathering subsistence pattern. The acorn is the most widespread and well-known resource used by indigenous peoples in the modern State of California. Acorns played an important role in the success of animal populations such as elk, deer, black bears, wild pigs, birds, and squirrels, all of which were hunted locally. The native oak groves and surrounding grasslands of the Gabilan Range provided food, shelter, and raw materials utilized in construction, clothing, basketry, hunting equipment, and food processing items. Direct evidence for indigenous use of controlled burns to encourage better harvesting outcomes is plentiful and oral accounts detail that intentional planting was not part of this strategy (McCarthy 1993).

4.2.2 MISSION PERIOD [ADAPTED FROM MILLIKEN 2006]

Central California was entirely populated by indigenous communities in 1770 when Father Junipero Serra and Don Gaspar de Portola met at Monterey. Mission San Carlos was established the same year and relocated to Rio del Carmelo (modern Carmel-by-the-Sea) in 1771. During the 1770s and 1780s, companies of colonists and settlers were escorted overland and by sea to take up residence in the lands claimed for Spain. Juan Bautista de Anza and his company took an inland route from Sonora to Monterey, passing through the Salinas Valley in 1774. As the Franciscan missionaries established missions they also set out to convert any and all indigenous peoples to Catholicism. The mission registers have since been used to reconstruct the tribal homelands and relationships which were changed or dismantled by the European expansion. Between 1775 and 1791, priests and military troops ushered communities from the Santa Lucia and Gabilan ranges, as well as the Salinas Valley, over to the mission in Carmel for baptism. Many of these neophytes (new converts) returned home and eventually a community formed which resulted in the founding of Mission Soledad in 1792.

Using the Community Distribution Model, it can be estimated that for the Chualar mapping region of the South Coast Ranges Central Coast Research Zone, the two predominant rancherias detailed in the mission registers were Ensen (Mission Carmel) and Guachirron (Mission Soledad). Population density for the immediate pre-mission period is estimated to have been 1.48 person per square mile.

4.3 SITE SENSITIVITY

The APE and vicinity are considered to have a high sensitivity for the presence of subsurface prehistoric resources, such as habitation sites. Through a modern lens, more suitable habitation and resource processing areas are located along the Salinas River, however the original sources of water that may have supported occupation sites may no longer be present nor adequate. Impacts from livestock grazing may have additionally impacted the landscape, specifically in relation to oak groves and game trails or trade routes, obscuring surface indicators of high site sensitivity.

The most recent Monterey County archaeological sensitivity map (Monterey County 2018) shows the project within an area of high archaeological sensitivity. Three considerations were included in the sensitivity designations: distribution of known sites; uncertainty in the number of resources; and proximity to river courses and major drainages (Monterey County 2007). The Chualar Canyon area's designation stems from both uncertainty of the number of resources and the topography associated with Chualar Creek.

Site sensitivity for subsurface historic resources is addressed in the historic resources evaluation conducted for the Project (Attachment 1). The study concludes that the four concrete slab bridges on Chualar Canyon Road do not meet the criteria for listing in the National Regiser of Historic Places (NRHP). Chualar Canyon Road is a dead-end road that dates to the nineteenth century and served local ranches. While agriculturally diverse and productive, it does not share the uniquely high production of the valley or have associations with important Salinas Valley historic agriculture.

Examination of ethnographic, archaeological and historical information in the Project area indicates there is the possibility of encountering one or more of the following types of prehistoric or historic cultural resources:

- Surface finds of basalt, chert or obsidian in the form of flakes or artifacts;
- Food processing stations, which would include bedrock mortars and single cups in boulders, or mobile grinding stones;
- Occupation sites;
- Historic resources related to homesteads (privies, foundations, etc.), mining, timber production, or agriculture.

4.4 Field Methods and Study Findings

A general surface-level pedestrian survey was conducted for the Project on December 19 and 20, 2022 by Jennifer Pennell, a bio- and zooarchaeologist with 5 years of experience as an archaeologist and cultural resource management specialist who has a M.A.A. in Archaeology. A detailed pedestrian survey was conducted on May 16, 2023 by Mary Bailey of AWE. Ms. Bailey has been involved in northern California archaeology since 1988, has a Master of Arts degree in Archaeology and meets the Secretary of the Interior qualifications as a Principal Investigator in archaeology. The bridge sites were surveyed as completely as possible given variable private property access and avoiding major vegetation removal or excavation. Ground surface visibility was impacted by the pavement and lack of consistent under-bridge access though this did not significantly impact the ability to evaluate the surface.

No surface cultural resources were located during the pedestrian surveys.

4.5 Unidentified Cultural Materials

Previously unidentified subsurface cultural materials may be present.

5. Impacts

The retrofitting or replacement of the four bridges is unlikely to impact cultural resources. However future site development could unearth previously unidentified cultural materials.

6. Mitigation Measures

Although no cultural resources were located during the pedestrian survey and the Project is considered to have a low sensitivity for the presence of cultural resources, there is always the possibility of encountering subsurface cultural materials. With mitigation efforts, the potential impact to cultural resources can be reduced to a less-than-significant level.

6.1 RECOMMENDED MITIGATION MEASURE-1: WORKER CULTURAL SENSITIVITY TRAINING

Prior to subsurface disturbance activities, individuals conducting the work will be required to participate in Worker Cultural Sensitivity Training. Workers will be advised to watch for cultural resource materials, including evidence of pre-contact cultural resources (freshwater shells, beads, bone tool remnants or an assortment of bones, soil changes including subsurface ash lens or soil darker “midden” in color than surrounding soil, lithic materials such as flakes, tools or grinding rocks, etc.), or historic-era cultural resources (adobe foundations or walls, structures and remains with square nails, refuse deposits or bottle dumps, often associated with wells or old privies).

6.2 RECOMMENDED MITIGATION MEASURE-2: TRIBAL CULTURAL MONITOR DURING GROUND DISTURBANCE

To minimize the potential for significant impacts to Tribal cultural resources and to help identify Tribal cultural resources, a Tribal monitor shall be present during all subsurface construction activities (such as demolition, pavement removal, and excavation). The Tribal cultural monitor will participate in evaluation of inadvertent discoveries (Mitigation Measure-3). The County shall fund the costs of the qualified Tribal monitor.

6.3 RECOMMENDED MITIGATION MEASURE-3: PROCEDURES FOR INADVERTENT DISCOVERY OF CULTURAL RESOURCES DURING GROUND-DISTURBING ACTIVITIES

If a potentially significant historical or archaeological resource is encountered during subsurface construction activities (such as demolition, pavement removal, and excavation), all construction activities within a 50-foot radius of the identified potential resource shall cease until a qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation (DPR) forms. The archaeologist shall determine whether the item requires further study, in consultation with the Tribal cultural monitor. If, after the qualified archaeologist conducts appropriate technical analyses, the item is determined to be significant under CEQA, the archaeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlined in Public Resources Code section 21083.2. Upon the County’s approval of the recommended mitigation measures, the County and contractor shall implement said measures. The County shall fund the costs of the qualified archaeologist and required analysis and shall include this mitigation measure in the construction contract to inform contractors of this requirement.

6.4 RECOMMENDED MITIGATION MEASURE-4: PROCEDURES FOR DISCOVERY OF HUMAN REMAINS

If human remains are discovered, all work must immediately cease, and the local coroner must be contacted. Procedures for the discovery of human remains will be followed in accordance with provisions of the State Health and Safety Code, Sections 7052 and 7050.5 and the State Public Resources Code (PRC) Sections 5097.9 to 5097.99. If the Coroner determines that the remains are those of a Native American, the Coroner shall contact the NAHC and subsequent procedures shall be followed, according to State Public Resources Code Sections 5097.9 to 5097.99, regarding notification of the Native American Most Likely Descendant.

7. References Cited

Breschini Gary S., Trudy Haversat, and R. Paul Hampson
1983 *A Cultural Resources Overview of the Coast and Coast-Valley Study Areas [California]*. Archaeological Consulting, Salinas, California. Submitted to the Bureau of Land Management, Contract No. YA-553-CT1-1099.

Byrd, Brian F., Adrian Whitaker, Patricia Mikkelsen, and Jeffrey Rosenthal
2017 *San Francisco Bay-Delta Regional Context and Research Design for Native American Archaeological Resources, Caltrans District 4*. Far Western Anthropological Research Group, Davis, California. Submitted to the California Department of Transportation. On file at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California.

Department of Parks and Recreation, California Office of Historic Preservation
2022 California State Law and Historic Preservation: Statutes, Regulations and Administrative Policies Regarding Historic Preservation and Protection of Cultural and Historic Resources. Electronic document, http://ohp.parks.ca.gov/pages/1069/files/10%20comb.pdf, accessed December 21, 2022.

Doane, Mary, and Gary S. Breschini
2004 Preliminary Archaeological Reconnaissance for Portions of APN 415-121-013 in Chualar Canyon, Monterey County, California. Submitted to Joseph Massolo. On file at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California.

Elsasser, Albert B.
1978 Development of Regional Prehistoric Cultures. In California, edited by Robert F. Heizer, pp. 37-57. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Hoover, Mildred B., Douglas E. Kyle, Hero E. Rensch, Ethel G. Rensch, and William N. Abeloe
2002 *Historic Spots in California,* 5th ed. Stanford University Press, Palo Alto, California.

Kroeber, Alfred L.
1976 Handbook of the Indians of California. Republication of 1925 edition. Dover Publications, New York.

Levy, Richard
1978 Costanoan. In California, edited by Robert F. Heizer, pp. 485-495. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

National Park Service, Department of the Interior
2022 Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (As Amended and Annotated). Electronic document, http://www.cr.nps.gov/local-law/arch_stnds_0.htm, accessed December 20, 2022.

Milliken, Randall T.
2006 *Ethnogeography of the South Coast Ranges, with Special Attention to Priest Valley, Monterey County*. Far West Anthropological Research Group, Davis, California. Limited distribution technical report submitted to the California Department of Transportation, District 5, San Luis Obispo, California.

Monterey County, Planning and Building Inspection Department
2008 Cultural Resources. In the Draft Environmental Impact Report of the Monterey County 2007 General Plan. Electronic document, https://www.co.monterey.ca.us/home/showpublisheddocument/43974/636386650008800000, accessed January 31, 2023.

Monterey County, Resource Management Agency, Planning Division
2016 Archaeological Sensitivity Zones. Monterey County. https://montereyco.maps.arcgis.com/apps/webappviewer/index.html?id=90ca28af371c482bac6ff01dd914fccf, accessed January 31, 2023.

Appendix A – Figures

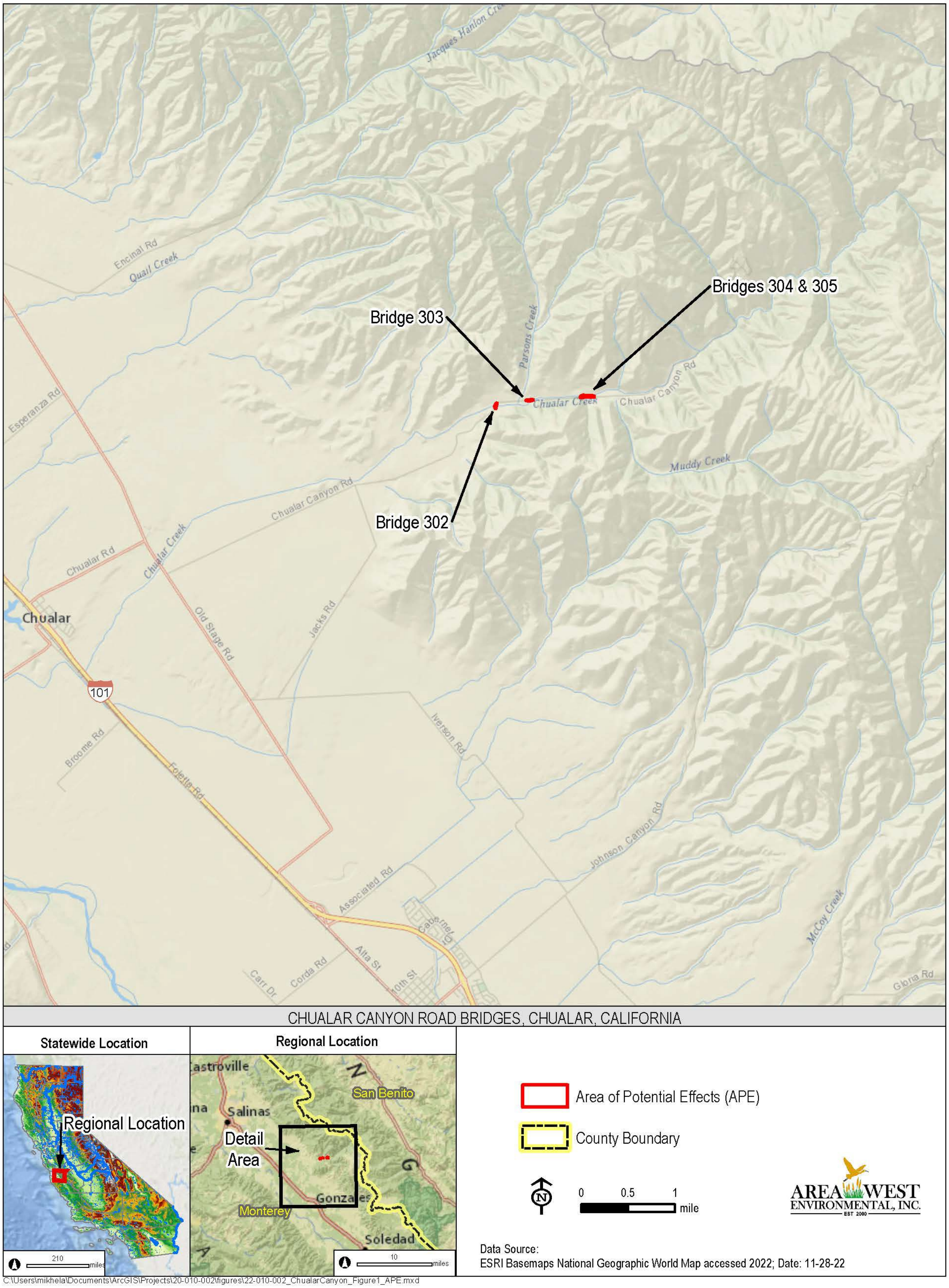


Figure 1. Project Location

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)

Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Vicinity

C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure3_302_APE.mxd

Figure 3. APE Bridge 302

C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure3_303_APE.mxd

Figure 4. APE Bridge 303

Figure 5. APE Bridges 304 and 305

Appendix B – Photographs

Guardrail on northern side of Bridge 305. December 19, 2022. Facing west-northwest.


Guardrail on southern side of Bridge 305. December 19, 2022. Facing south-southwest.


Overview of structure on southside of Bridge 305. December 19, 2022. Facing south-southwest.


View of Bridge 305 from northwestern abutment wingwall. December 19, 2022. Facing northeast.


Closeup of lettering under Bridge 305. December 19, 2022. Facing northeast.


View under Bridge 305 through wire grate. December 19, 2022. Facing south.

 View upstream of the Chualar Creek drywash. December 19, 2022. Facing north-northeast.	 View of Bridge 305 including wingwalls and pipe. December 19, 2022. Facing south.
 View of Chualar Creek drywash with barn in the distance. December 19, 2022. Facing north-northwest.	 Concrete base for fence post discarded in Chualar Creek drywash. December 19, 2022. Facing southwest.
 Concrete base for fence post discarded in Chualar Creek drywash. December 19, 2022. Facing southeast.	 View upstream of the Chualar Creek drywash. December 19, 2022. Facing north-northeast.

View of guardrail on southern side of Bridge 304. December 19, 2022. Facing south.

View of guardrail on northern side of Bridge 304 with barn in the distance. December 19, 2022. Facing northeast.

View of bridge structure on northern side. December 19, 2022. Facing east.

View of Chualar Canyon Road towards Bridge 304 from eastern APE boundary of Bridge 303. December 20, 2022. Facing east.

View of Chualar Creek drywash and soft shoulder on the north side of Chualar Canyon Road. December 20, 2022. Facing northeast.

View of Chualar Creek drywash and Trespass Warning sign on north side of Chualar Canyon Road. December 20, 2022. Facing northwest.

 View of wooden post stump behind Type P object marker on northern side of Bridge 303. December 20, 2022. Facing northwest.	 Overview of Chualar Creek drywash from Bridge 303. December 20, 2022. Facing north.
 Guardrail on southern side of Bridge 303. December 20, 2022. Facing south.	 View of Chualar Creek drywash from Bridge 303. December 20, 2022. Facing south.
 View of 4x4 access trail across Chualar Creek on southern side of Bridge 303. December 20, 2022. Facing southeast.	 View of Bridge 303's structure from southwest corner. December 20, 2022. Facing northeast.

 View under Bridge 303 from the southwest. December 20, 2022. Facing northeast.	 Overhead view of old pipe located directly north of wooden post stump by Bridge 303. December 20, 2022. Facing south.
 View of Bridge 302. December 20, 2022. Facing south.	 View of concrete and rock debris west of Bridge 302. December 20, 2022. Facing southwest.
 View of west side of Bridge 302 over the Chualar Creek drywash. December 20, 2022. Facing south.	 View under Bridge 302. December 20, 2022. Facing east.

<table>
<tr>
<td>
View downstream of the Chualar Creek drywash. December 20, 2022. Facing west.</td>
<td>
View upstream of the Chualar Creek drywash from Bridge 302. December 20, 2022. Facing east.</td>
</tr>
<tr>
<td>
View upstream of the Chualar Creek drywash from Bridge 302. December 20, 2022. Facing northeast.</td>
<td>
View of Bridge 302 over Chualar Creek. December 20, 2022. Facing northwest.</td>
</tr>
<tr>
<td>
View of Chualar Canyon Road towards Bridges 303-305. December 20, 2022. Facing northeast.</td>
<td>
View of Chualar Canyon Road towards Bridge 302. December 20, 2022. Facing south.</td>
</tr>
</table>

 View of embankment on the east side of Bridge 302. December 20, 2022. Facing south.	 View of Bridge 302 from the north. December 20, 2022. Facing south.

Appendix C – Northwest Information Center Records Search Results

Northwest Information Center
Sonoma State University
1400 Valley House Drive, Suite 210
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
https://nwic.sonoma.edu

12/12/2022 NWIC File No.: 22-0788

Jennifer Pennell
Area West Environmental, Inc.
6248 Main Ave, Ste C
Orangevale, CA 95622

Re: Chualar Canyon Road Bridges

The Northwest Information Center received your record search request for the project area referenced above, located on the Gonzales USGS 7.5' quad(s). The following reflects the results of the records search for the project area and a ¼ mi. radius:

Resources within project area:	None listed
Resources within ¼ mi. radius:	None listed
Reports within project area:	S-848, 2164, 3453, 7850, 28524, 30204, 32596, 48927, 49718
Reports within ¼ mi. radius:	S-32418, 34466, 39195, 46435

Resource Database Printout (list): ☐ enclosed ☐ not requested ☒ nothing listed

Resource Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed

Resource Digital Database Records: ☐ enclosed ☐ not requested ☒ nothing listed

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed

Report Digital Database Records: ☒ enclosed ☐ not requested ☐ nothing listed

Resource Record Copies: ☐ enclosed ☐ not requested ☒ nothing listed

Report Copies: ☒ enclosed ☐ not requested ☐ nothing listed

OHP Built Environment Resources Directory: ☐ enclosed ☐ not requested ☒ nothing listed

Archaeological Determinations of Eligibility: ☐ enclosed ☐ not requested ☒ nothing listed

CA Inventory of Historic Resources (1976): ☐ enclosed ☐ not requested ☒ nothing listed

GLO and/or Rancho Plat Maps: ☒ enclosed ☐ not requested ☐ nothing listed

Historical Maps: ☐ enclosed ☐ not requested ☒ nothing listed

Local Inventories: ☐ enclosed ☐ not requested ☒ nothing listed

Caltrans Bridge Survey: ☒ enclosed ☐ not requested ☒ nothing listed

Ethnographic Information: ☒ enclosed ☐ not requested ☐ nothing listed

Historical Literature: ☐ enclosed ☐ not requested ☒ nothing listed

Shipwreck Inventory: ☐ enclosed ☒ not requested ☐ nothing listed

*Notes: ** Current versions of these resources are available on-line:

Caltrans Bridge Survey:
https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/f0004338-common-bridge-types-2004-a11y

Soils Survey: http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=CA

Shipwreck Inventory: https://www.slc.ca.gov/shipwrecks/

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

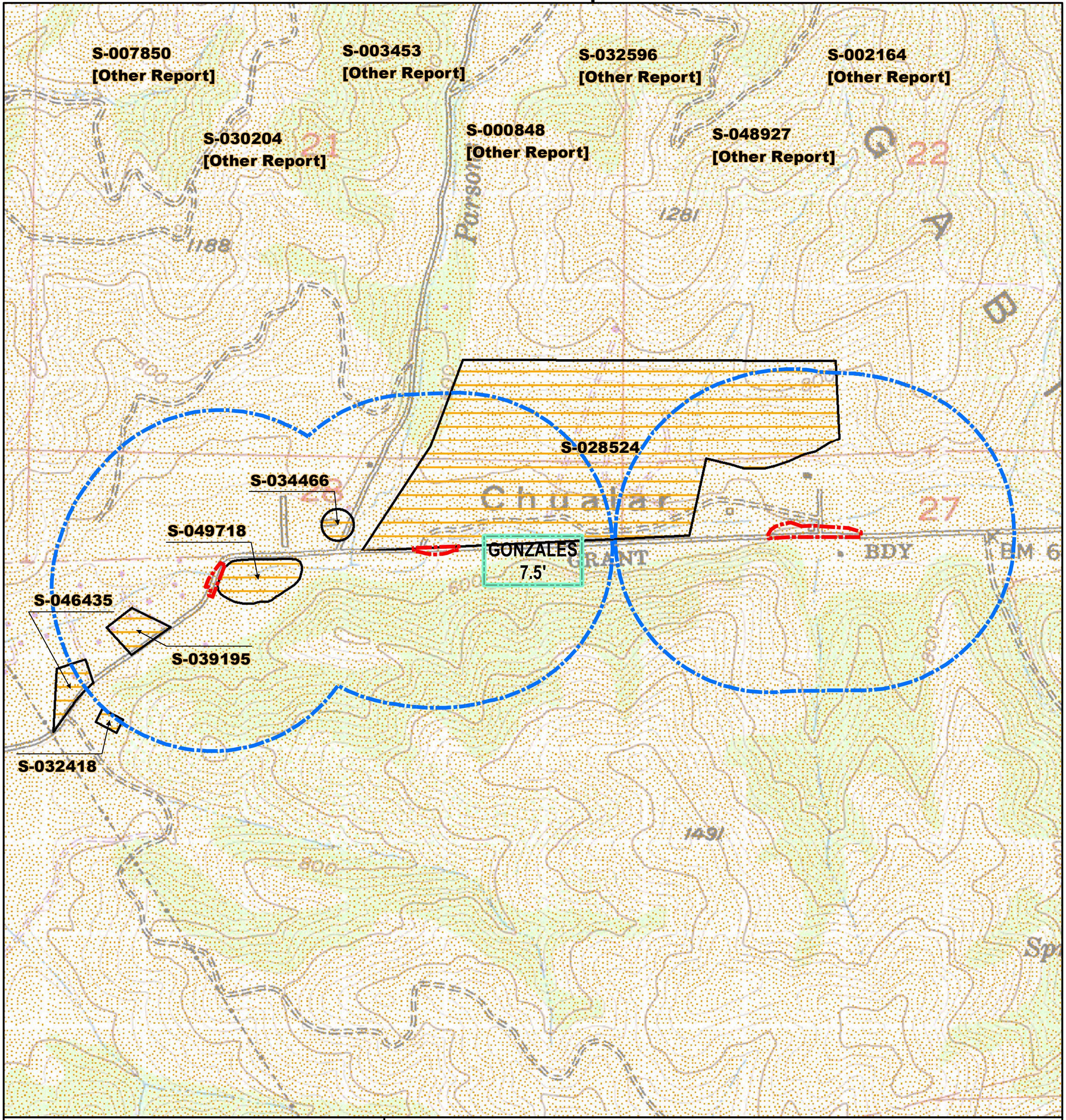
Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Annette Neal

Researcher

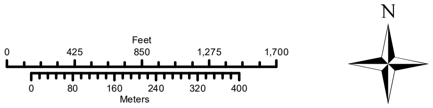
Chular Canyon Road Bridges
Results Map



Northwest Information Center

22-0788 12 December 2022 A. Neal

May depict confidential cultural resource locations.
Do not distribute.



- 22-0788_Chular_Cyn_Rd_Bridges
- 22-0788_1/4 mi. Buffer
- Reports (polygons)
- Other reports
- Quad outlines
- County outlines

District 05

Monterey County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
44C0002	PAJARO RIVER	0.5 MI S BEACH RD	5. Bridge not eligible for NRHP	1992	
44C0005	PINEY CREEK	0.2 MI W Carmel Valley R	5. Bridge not eligible for NRHP	2000	
44C0007	SALINAS RIVER	0.1 MI W OF SH 101	2. Bridge is eligible for NRHP	1915	1960
44C0009	SAN ANTONIO RIVER	5 MI SOUTH OF SH 101	5. Bridge not eligible for NRHP	1921	
44C0011	NACIMIENTO CREEK	14.9 MI NW OF MISSION RD	5. Bridge not eligible for NRHP	1950	
44C0012	LEWIS CREEK	0.1 MI NE SH 198	5. Bridge not eligible for NRHP	1948	
44C0013	LEWIS CREEK	0.15 MI E OF SH 198	5. Bridge not eligible for NRHP	1948	
44C0014	NORTH FORK SAN ANTONIO CREEK	15 MI NW MISSION ROAD	5. Bridge not eligible for NRHP	1945	
44C0017	CARMEL RIVER	0.1 MI S CARMEL VALLEY RD	5. Bridge not eligible for NRHP	1971	
44C0018	CARMEL RIVER	0.25 MI S OF G16	4. Historical Significance not determined	1994	
44C0019	NORTH FORK LITTLE SUR RIVER	5.7 MI SE SH 1	5. Bridge not eligible for NRHP	1950	
44C0020	SOUTH FORK LITTLE SUR RIVER	5.8 MI SE SH 1	5. Bridge not eligible for NRHP	1950	
44C0021	SALINAS RIVER	2.0 MI W/O SH 101	4. Historical Significance not determined	1991	
44C0022	SALINAS RIVER	1 MI NE RESERVATION RD	5. Bridge not eligible for NRHP	1971	
44C0023	PINE CANYON CREEK	0.5 MI SOUTH OF SH 101	5. Bridge not eligible for NRHP	1943	
44C0027	JOLON CREEK	NEAR MISSION RD	5. Bridge not eligible for NRHP	1942	
44C0029	BIG SANDY CREEK	AT INDIAN VALLEY RD	5. Bridge not eligible for NRHP	1964	
44C0030	PANCHO RICO CREEK	0.2 MI S PANCHO RICO RD	5. Bridge not eligible for NRHP	1935	
44C0031	CHALONE CREEK	1.1 MI N OF ELM AVE	5. Bridge not eligible for NRHP	1976	
44C0033	ELKHORN ROAD OH	0.1 MI N GARIN RD	5. Bridge not eligible for NRHP	1970	
44C0035	SALINAS RIVER	0.2 MI E RIVER RD	5. Bridge not eligible for NRHP	1930	
44C0036	LITTLE CHOLAME CREEK	0.03 MI S RANCHITA CYN RD	5. Bridge not eligible for NRHP	1910	
44C0037	TEMBLADERO SLOUGH	0.1 MI S SR 183	5. Bridge not eligible for NRHP	1930	
44C0039L	SANBORN ROAD OH	0.3 MI N ABBOT ST	5. Bridge not eligible for NRHP	1948	
44C0039R	SANBORN ROAD OH	0.3 MI N ABBOT ST	5. Bridge not eligible for NRHP	1967	
44C0042	SPENCE UP	NR INTERSECTION HWY 101	4. Historical Significance not determined	1930	
44C0043	CARNEROS CREEK	4.7 MI N SH 101	5. Bridge not eligible for NRHP	1962	2008
44C0045	PANCHO RICO CREEK	4 MI E SARGENT RD	5. Bridge not eligible for NRHP	1982	
44C0046	PANCHO RICO CREEK	4.5 MI E SARGENT RD	5. Bridge not eligible for NRHP	1982	
44C0047	SAN ANTONIO RIVER	3 MI S OF JOLON RD.	5. Bridge not eligible for NRHP	1964	
44C0048	TEMBLADERO SLOUGH	0.2 MI S SR 183	5. Bridge not eligible for NRHP	1966	
44C0049	DOLAN ROAD OH	1.7 MI E SR 1	5. Bridge not eligible for NRHP	1968	
44C0050	SALINAS RIVER	JUST E OF HWY 101	5. Bridge not eligible for NRHP	1931	1954
44C0051	SALINAS RIVER	0.3 MI E OF RTE 101	2. Bridge is eligible for NRHP	1940	
44C0052	LITTLE BEAR CREEK	0.2 MI N BORONDA RD	5. Bridge not eligible for NRHP	1962	
44C0054	TEMBLADERO SLOUGH	0.15 MI S SR 183	5. Bridge not eligible for NRHP	1942	
44C0055	PAJARO RIVER	0.05 MI N SAN JUAN RD	5. Bridge not eligible for NRHP	1998	
44C0056	SALINAS RIVER	0.1 MI W METZ RD	5. Bridge not eligible for NRHP	1968	
44C0057	POTRERO CREEK	0.5 MI S OF G16	5. Bridge not eligible for NRHP	1971	
44C0058	HARRIS CREEK	0.32 MI N INTERLAKE RD	5. Bridge not eligible for NRHP	1969	
44C0060	WEST LAUREL POC	0.25 MI E OF BORONDA RD	5. Bridge not eligible for NRHP	1968	
44C0061	GABILAN CREEK	0.9 MI S OLD STAGE ROAD	5. Bridge not eligible for NRHP	1971	
44C0062	EL TORO CREEK	0.5 MI W OF SH 68	5. Bridge not eligible for NRHP	1973	

District 05

Monterey County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
44C0064	CUSTOM HOUSE TUNNEL (LIGHTHOUSE)	300 FT W OF DEL MONTE AVE	5. Bridge not eligible for NRHP	1968	
44C0065	EAST ALISAL STREET UP	NEAR FRONT ST	5. Bridge not eligible for NRHP	1965	
44C0066	ARROYO SECO RIVER	ARROYO SECO ROAD	5. Bridge not eligible for NRHP	1943	
44C0067	MAIN CANAL	0.3 MI N OF SH 183	5. Bridge not eligible for NRHP	1960	
44C0068	SALINAS RIVER	0.4 MI E RESERVATION RD	5. Bridge not eligible for NRHP	2002	
44C0070	PALOMA CREEK	4 MI N ARROYO SECO RD	5. Bridge not eligible for NRHP	1959	
44C0071	TASH CREEK	4.5 MI N/W ARROYO SECO RD	5. Bridge not eligible for NRHP	1959	
44C0072	PALOMA CREEK	6.3 MI N ARROYO SECO RD	5. Bridge not eligible for NRHP	1959	
44C0073	FINCH CREEK	12.3 MI N/W ARROYO SECO R	5. Bridge not eligible for NRHP	1963	
44C0074	FINCH CREEK	12.7 MI NW ARROYO SECO RD	5. Bridge not eligible for NRHP	1972	
44C0075	FINCH CREEK	13.6 MI NW ARROYO SECO RD	5. Bridge not eligible for NRHP	1963	
44C0076	FINCH CREEK	14.1 MI NW ARROYO SECO RD	5. Bridge not eligible for NRHP	1947	1974
44C0077	FINCH CREEK	15.1 MI NW ARROYO SECO RD	5. Bridge not eligible for NRHP	1972	
44C0078	TULARCITOS CREEK	23.9 MI NW ARROYO SECO RD	5. Bridge not eligible for NRHP	1976	
44C0079	TULARCITOS CREEK	24.5 MI NW ARROYO SECO RD	5. Bridge not eligible for NRHP	1950	1973
44C0080	GABILAN CREEK	0.4 MI E SAN JUAN GRADE R	5. Bridge not eligible for NRHP	1975	
44C0081	KEMP CANYON CREEK	AT SH 101	5. Bridge not eligible for NRHP	1942	
44C0082	HARTNELL GULCH	0.05 MI S MADISON ST	2. Bridge is eligible for NRHP	1914	2007
44C0083	SCENIC DRIVE UC	NEAR SH 68	5. Bridge not eligible for NRHP	1965	
44C0084	EL ESTERO LAKE WEST	AT CAMINO EL ESTERO	4. Historical Significance not determined	1991	
44C0085	EL ESTERO LAKE EAST	AT CAMINO AGUAJITO	4. Historical Significance not determined	1991	
44C0088	KEMP CANYON CREEK	NEAR JOLON RD	5. Bridge not eligible for NRHP	1961	
44C0089	LEWIS CREEK	0.25 MI E OF RTE 25	5. Bridge not eligible for NRHP	1930	1947
44C0090	LEWIS CREEK	2.9 MI EAST OF RTE 25	5. Bridge not eligible for NRHP	2002	
44C0091	LEWIS CREEK	2.6 ME E OF RTE 25	5. Bridge not eligible for NRHP	1947	
44C0093	SALINAS RIVER	0.75 MI N DEL MONTE BLVD	5. Bridge not eligible for NRHP	1943	
44C0095	SANTA RITA CREEK	0.1 MI S OF BOLIVAR	5. Bridge not eligible for NRHP	1970	
44C0096	MAIN CANAL	INTX WESTLAKE & RICO ST	5. Bridge not eligible for NRHP	1987	
44C0097	CALERA CREEK	JUST W CORRAL DE TIERRA	5. Bridge not eligible for NRHP	1961	
44C0098	CALERA CREEK	1.6 MI SOUTH OF SR 68	5. Bridge not eligible for NRHP	1947	
44C0099	CARMEL RIVER	0.5 MI S CARMEL VALLEY RD	5. Bridge not eligible for NRHP	1946	
44C0100	TEMBLADERO SLOUGH	0.8 MI S SH1	5. Bridge not eligible for NRHP	1959	
44C0101	SALINAS RIVER	E OF SH 101 NR SAN ARDO	5. Bridge not eligible for NRHP	1929	
44C0103	CANYON DEL REY CREEK	BTWN SH 1 & SH 218	5. Bridge not eligible for NRHP	1977	
44C0104	CUNNINGHAM PARK POC	0.2 MI E YOSEMITE ST	5. Bridge not eligible for NRHP	1960	
44C0105	NATIVIDAD CREEK	0.2 MI E CONSTITUTION BLV	5. Bridge not eligible for NRHP	1970	
44C0106	HITCHCOCK CANYON CREEK	0.1 MI N OSITOS	5. Bridge not eligible for NRHP	1950	
44C0107	LAS GAZAS CREEK	0.1 MI NW BORONDA ROAD	5. Bridge not eligible for NRHP	1980	
44C0110	ALISAL CREEK	0.15 MI S ALISAL ROAD	5. Bridge not eligible for NRHP	1945	
44C0112	HITCHCOCK CANYON CREEK	AT SOUTHBANK ROAD	5. Bridge not eligible for NRHP	1950	
44C0114	ROBINSON CANYON RIVER	0.9 MI S CARMEL VALLEY RD	5. Bridge not eligible for NRHP	1950	
44C0115	CARMEL RIVER	0.3 MI S CARMEL VALLEY RD	5. Bridge not eligible for NRHP	1947	
44C0116	CARMEL RIVER	0.6 MI S CARMEL VALLEY RD	5. Bridge not eligible for NRHP	1963	

Structure Maintenance & Investigations

SM&I

Historical Significance - Local Agency Bridges

August 2013

District 05

Monterey County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
44C0117	TORO CREEK	0.05 MI S SR 68	5. Bridge not eligible for NRHP	1971	2012
44C0119	CACHAGUA CREEK	INT CACHAGUA & TASSAJARA	5. Bridge not eligible for NRHP	1950	
44C0120	CACHAGUA CREEK	3.3 MI W/O G16	5. Bridge not eligible for NRHP	1940	
44C0121	CACHAGUA CREEK	2.3 MI W TASSAJARA ROAD	5. Bridge not eligible for NRHP	1945	
44C0122	CACHAGUA CREEK	4.7 MI WEST OF G 16	5. Bridge not eligible for NRHP	1965	
44C0123	CACHAGUA CREEK	0.1 MI S CACHAGUA ROAD	5. Bridge not eligible for NRHP	1945	
44C0124	LAS GAZAS CREEK	6.5 MI S CARMEL VALLEY RD	5. Bridge not eligible for NRHP	1947	
44C0126	SPRECKELS CANAL	0.6 MI.S ARROYO SECO ROAD	5. Bridge not eligible for NRHP	1940	2003
44C0128	RELIZ CREEK	0.6 MI S/O ELM AVE	5. Bridge not eligible for NRHP	1953	
44C0129	RELIZ CREEK	3.5 MI SOUTH OF ELM AVE	5. Bridge not eligible for NRHP	1953	
44C0130	MAIN CANAL	0.2 MI E SR 183	5. Bridge not eligible for NRHP	1962	
44C0131	GABILAN CREEK	1 MI N OF CRAZY HORSE RD	5. Bridge not eligible for NRHP	1940	
44C0132	N GABILAN CREEK	1.5 MI N CRAZY HORSE RD	5. Bridge not eligible for NRHP	1940	
44C0133	MUD CREEK	2.5 MI N CRAZY HORSE RD	5. Bridge not eligible for NRHP	1945	
44C0134	GABILAN CREEK	1.26 MI N CRAZY HORSE RD	5. Bridge not eligible for NRHP	1948	
44C0136	CARNEROS CREEK	0.2 MI S SAN JUAN RD	5. Bridge not eligible for NRHP	1975	
44C0137	CARNEROS CREEK	0.25 MI S TARPEY RD	5. Bridge not eligible for NRHP	1950	
44C0138	CARNEROS CREEK	0.1 MI S HALL RD	5. Bridge not eligible for NRHP	1950	
44C0139	VINEYARD CANYON CREEK	0.1 MI N VINEYARD CNYN RD	5. Bridge not eligible for NRHP	1940	
44C0140	CHOLAME CREEK	0.1 MI W SLACKS CANYON RD	5. Bridge not eligible for NRHP	1950	
44C0141	LITTLE CHOLAME CREEK	0.03 MI E VINEYARD CYN RD	5. Bridge not eligible for NRHP	1960	
44C0143	CHOLAME CREEK	5 MI S TURKEY FLAT ROAD	5. Bridge not eligible for NRHP	1950	
44C0144	CHOLAME CREEK	3.0 MI S TURKEY FLAT RD	5. Bridge not eligible for NRHP	1960	
44C0145	LITTLE CHOLAME CREEK	1 MI N VINEYARD CANYON RD	5. Bridge not eligible for NRHP	1915	
44C0146	LITTLE CHOLAME CREEK	3 MI N VINEYARD CANYON RD	5. Bridge not eligible for NRHP	1971	
44C0147	LITTLE CHOLAME CREEK	4 MI N VINEYARD CANYON RD	5. Bridge not eligible for NRHP	1971	
44C0148	LITTLE CHOLAME CREEK	5.0 MI N VINYARD CYN RD	5. Bridge not eligible for NRHP	1972	
44C0149	BIG SANDY CREEK	2 MI W INDIAN VALLEY RD	5. Bridge not eligible for NRHP	1969	
44C0150	BIG SANDY CREEK	0.2 MI N BIG SANDY CRK RD	5. Bridge not eligible for NRHP	1962	
44C0151	PANCHO RICO CREEK	2.0 MI N SLACK CANYON RD	5. Bridge not eligible for NRHP	1955	
44C0152	SAN LORENZO CREEK	5.5 MI W SLACK CANYON RD	5. Bridge not eligible for NRHP	1966	
44C0154	DAVIS ROAD OH	JUST N SH 183	5. Bridge not eligible for NRHP	1983	
44C0156	PINE CANYON CREEK	6.4 MI SW OF JOLON ROAD	5. Bridge not eligible for NRHP	1965	
44C0157	SAN LORENZO CREEK	SAN BENITO COUNTY LINE	5. Bridge not eligible for NRHP	1950	
44C0159	LEWIS CREEK	0.05 MI NE OF SR 198	5. Bridge not eligible for NRHP	1950	1999
44C0160	NORTH FORK LEWIS CREEK	0.1 MI NE OF SH 198	5. Bridge not eligible for NRHP	1950	
44C0161	NORTH FORK LEWIS CREEK	2 MI NE OF SR 198	5. Bridge not eligible for NRHP	1950	
44C0162	PALO COLORADO CREEK	1.2 MI SE SH 1	5. Bridge not eligible for NRHP	1961	
44C0163	TURNER CREEK	5.2 MI SE SH 1	5. Bridge not eligible for NRHP	1954	
44C0164	MILL CREEK	6.9 MI SE SH 1	5. Bridge not eligible for NRHP	1954	
44C0165	BIXBY CREEK	0.94 MI SE SH 1	5. Bridge not eligible for NRHP	1965	
44C0166	PACIFIC STREET POC	0.2 MI N OF SCOTT ST	5. Bridge not eligible for NRHP	1980	
44C0167	OLD SALINAS RIVER	1 KM W SH1	5. Bridge not eligible for NRHP	1982	

District 05

Monterey County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
44C0168	EAST MARKET STREET ON-RAMP OC	FRONT ST	5. Bridge not eligible for NRHP	1979	
44C0169	EAST MARKET STREET UP	NEAR FRONT ST	5. Bridge not eligible for NRHP	1979	
44C0170	ROBINSON CANYON ROAD UC	AT ROBINSON CANYON ROAD	5. Bridge not eligible for NRHP	1985	
44C0171	MARRIOTT HOTEL POC	DELMONTE AV NEAR CAL PRIN	5. Bridge not eligible for NRHP	1985	
44C0178	PAJARO RIVER	1.2 km S SR 129	5. Bridge not eligible for NRHP	1998	
44C0180	ARROYO SECO RIVER	0.5 MI SW OF SR 101	5. Bridge not eligible for NRHP	2007	
44C0181	ARROYO SECO RIVER	11 MILES WEST OF ELM AVE	5. Bridge not eligible for NRHP	2000	
44C0182	GABILAN CREEK	0.15 MI S OF SAN JUAN GR.	5. Bridge not eligible for NRHP	2005	
44C0183	ARROYO SECO RIVER	2 MI WEST OF SR 101	5. Bridge not eligible for NRHP	2010	
44C0184	MOSS LANDING SLOUGH	SANDHOLT ROAD	5. Bridge not eligible for NRHP	2006	
44C0188	SAN LORENZO CREEK	IN KING CITY	5. Bridge not eligible for NRHP	2009	

District 05

Monterey County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
44 0002L	SALINAS RIVER	05-MON-101-60.75	5. Bridge not eligible for NRHP	1999	
44 0002R	SALINAS RIVER	05-MON-101-60.75	5. Bridge not eligible for NRHP	1999	
44 0009L	JOLON ROAD UC	05-MON-101-R9.67	5. Bridge not eligible for NRHP	1936	
44 0009R	JOLON ROAD UC	05-MON-101-R9.67	5. Bridge not eligible for NRHP	1964	
44 0012	GRANITE CANYON	05-MON-001-64.33	2. Bridge is eligible for NRHP	1932	
44 0014	SAN JOSE CREEK	05-MON-001-71.18	5. Bridge not eligible for NRHP	1965	
44 0016	WILDCAT CREEK	05-MON-001-69.02	2. Bridge is eligible for NRHP	1933	
44 0017	MALPASO CREEK	05-MON-001-67.85	2. Bridge is eligible for NRHP	1935	
44 0018	GARRAPATA CREEK	05-MON-001-62.97	2. Bridge is eligible for NRHP	1931	
44 0019	BIXBY CREEK	05-MON-001-59.37	2. Bridge is eligible for NRHP	1932	
44 0020	LITTLE SUR RIVER	05-MON-001-56.1	5. Bridge not eligible for NRHP	1953	
44 0021	BIG SUR RIVER	05-MON-001-46.6	5. Bridge not eligible for NRHP	1940	
44 0023	ESPINOSA SLOUGH	05-MON-183-R7.3	5. Bridge not eligible for NRHP	1978	
44 0024	TEMBLADERO SLOUGH	05-MON-183-R8.11	5. Bridge not eligible for NRHP	1978	
44 0028	VILLA CREEK	05-MON-001-7.07	5. Bridge not eligible for NRHP	1961	
44 0029	SALMON CREEK	05-MON-001-2.23	5. Bridge not eligible for NRHP	1949	
44 0030	SAN LORENZO CREEK	05-MON-198-R13.77	4. Historical Significance not determined	1994	
44 0032L	SALINAS RIVER	05-MON-101-R41.36	5. Bridge not eligible for NRHP	1968	
44 0032R	SALINAS RIVER	05-MON-101-R41.36	5. Bridge not eligible for NRHP	1956	1968
44 0033L	CASTROVILLE OH	05-MON-156-R1.59	5. Bridge not eligible for NRHP	1942	
44 0033R	CASTROVILLE OH	05-MON-156-R1.59	5. Bridge not eligible for NRHP	1966	
44 0035	CASTRO CANYON	05-MON-001-43.12	5. Bridge not eligible for NRHP	1937	
44 0036	ROCKY CREEK	05-MON-001-60.05	2. Bridge is eligible for NRHP	1932	
44 0037	SOLEDAD UP	05-MON-146-.23-SOL	4. Historical Significance not determined	1936	
44 0039	SCENIC DRIVE OC	05-MON-068-3.07	5. Bridge not eligible for NRHP	1930	
44 0040L	SALINAS RIVER	05-MON-068-R17.69	5. Bridge not eligible for NRHP	1966	
44 0040R	SALINAS RIVER	05-MON-068-R17.69	5. Bridge not eligible for NRHP	1966	
44 0041	SCENIC DRIVE OC	05-MON-068-L4.02	5. Bridge not eligible for NRHP	1930	
44 0046	TORRE CANYON	05-MON-001-39.72	5. Bridge not eligible for NRHP	1955	
44 0047	SYCAMORE DRAW	05-MON-001-39.28	5. Bridge not eligible for NRHP	1981	
44 0049	ANDERSON CANYON	05-MON-001-35.35	5. Bridge not eligible for NRHP	1961	
44 0051	BUCK CREEK	05-MON-001-R33.67	5. Bridge not eligible for NRHP	1965	
44 0052	HOT SPRINGS CREEK	05-MON-001-32.81	5. Bridge not eligible for NRHP	1963	
44 0053	LIME CREEK	05-MON-001-32.25	5. Bridge not eligible for NRHP	1975	
44 0054	DOLAN CREEK	05-MON-001-31.17	5. Bridge not eligible for NRHP	1961	
44 0055	SALINAS UNDERPASS	05-MON-183-.57-SAL	4. Historical Significance not determined	1936	
44 0056	BIG CREEK	05-MON-001-28.09	2. Bridge is eligible for NRHP	1938	
44 0057	VICENTE CREEK	05-MON-001-R25.89	5. Bridge not eligible for NRHP	1964	
44 0058	LIMEKILN CREEK	05-MON-001-20.95	5. Bridge not eligible for NRHP	1957	
44 0060	PFEIFFER CANYON	05-MON-001-45.52	5. Bridge not eligible for NRHP	1968	
44 0061	KIRK CREEK	05-MON-001-18.91	5. Bridge not eligible for NRHP	1975	
44 0062	MILL CREEK	05-MON-001-18.46	5. Bridge not eligible for NRHP	1934	1956
44 0063	WILD CATTLE CREEK	05-MON-001-17.32	5. Bridge not eligible for NRHP	1975	

District 05

Monterey County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
44 0064	PREWITT CREEK	05-MON-001-14.93	5. Bridge not eligible for NRHP	1985	
44 0066	WILLOW CREEK	05-MON-001-11.67	5. Bridge not eligible for NRHP	1961	
44 0068	JUAN HIGUERA CREEK	05-MON-001-47.98	5. Bridge not eligible for NRHP	1985	
44 0069L	PAJARO RIVER	05-MON-001-R101.98	5. Bridge not eligible for NRHP	1967	2001
44 0069R	PAJARO RIVER	05-MON-001-R101.98	5. Bridge not eligible for NRHP	1967	2001
44 0070E	N1-W68, E68-N1 CONNECTOR	05-MON-068-L4.25-MON	5. Bridge not eligible for NRHP	1959	
44 0074	ELKHORN SLOUGH	05-MON-001-96.44	5. Bridge not eligible for NRHP	1985	
44 0078	SOUTH GONZALES OC	05-MON-101-69.37	5. Bridge not eligible for NRHP	1962	
44 0079L	RESERVATION ROAD UC	05-MON-068-R17.19	5. Bridge not eligible for NRHP	1966	
44 0079R	RESERVATION ROAD UC	05-MON-068-R17.19	5. Bridge not eligible for NRHP	1966	
44 0081	FORT ORD PUC	05-MON-001-R83.24	5. Bridge not eligible for NRHP	1943	1973
44 0089	FIFTH STREET OVERCROSSING	05-MON-101-70.86	5. Bridge not eligible for NRHP	1963	1990
44 0090E	SOUTH SOLEDAD SEPARATION	05-MON-146-1.48	5. Bridge not eligible for NRHP	1960	
44 0091L	NORTH SOLEDAD OH	05-MON-101-62.7	5. Bridge not eligible for NRHP	1960	
44 0091R	NORTH SOLEDAD OH	05-MON-101-62.7	5. Bridge not eligible for NRHP	1960	
44 0092	NORTH GONZALES OC	05-MON-101-72.61	5. Bridge not eligible for NRHP	1963	
44 0093L	EAST MARKET STREET UC	05-MON-101-87.3-SAL	5. Bridge not eligible for NRHP	1954	1986
44 0093R	EAST MARKET STREET UC	05-MON-101-87.3-SAL	5. Bridge not eligible for NRHP	1954	1986
44 0094	SHERWOOD DRIVE OC	05-MON-101-87.97-SAL	5. Bridge not eligible for NRHP	1953	1974
44 0095L	SR 183 - 101 SEPERATION	05-MON-183-.01-SAL	5. Bridge not eligible for NRHP	1953	
44 0096L	SPRECKELS ROAD UC	05-MON-068-R18.08	5. Bridge not eligible for NRHP	1967	
44 0096R	SPRECKELS ROAD UC	05-MON-068-R18.08	5. Bridge not eligible for NRHP	1967	
44 0099S	NORTH 183 - 101 SEPERATION	05-MON-183-.01-SAL	5. Bridge not eligible for NRHP	1965	
44 0107	ROUTE156/101 SEPARATION	05-MON-156-T5.17	5. Bridge not eligible for NRHP	1969	
44 0115	ARROYO SECO ROAD OC	05-MON-101-60.4	5. Bridge not eligible for NRHP	1958	
44 0116	SOLEDAD PRISON OC	05-MON-101-66.4	5. Bridge not eligible for NRHP	1959	
44 0117	CAMPHORA OVERCROSSING	05-MON-101-64.63	5. Bridge not eligible for NRHP	1959	
44 0119L	ABBOTT UNDERCROSSING	05-MON-101-82.47	5. Bridge not eligible for NRHP	1954	
44 0120L	SANBORN ROAD UC	05-MON-101-86.12-SAL	5. Bridge not eligible for NRHP	1954	
44 0120R	SANBORN ROAD UC	05-MON-101-86.12-SAL	5. Bridge not eligible for NRHP	1954	
44 0121	ROUTE 68/101 SEPARATION	05-MON-068-22-SAL	2. Bridge is eligible for NRHP	1954	
44 0122L	ALISAL ROAD UC	05-MON-101-87.06-SAL	5. Bridge not eligible for NRHP	1954	
44 0122R	ALISAL ROAD UC	05-MON-101-87.06-SAL	5. Bridge not eligible for NRHP	1954	
44 0123	DRAINAGE CANAL	05-MON-101-87.97-SAL	5. Bridge not eligible for NRHP	1953	1974
44 0124	AIRPORT BLVD OC	05-MON-101-85.62-SAL	5. Bridge not eligible for NRHP	1955	
44 0127L	BROADWAY UC	05-MON-101-R41.19	5. Bridge not eligible for NRHP	1968	
44 0127R	BROADWAY UC	05-MON-101-R41.19	5. Bridge not eligible for NRHP	1968	
44 0128	MAIN STREET OVERCROSSING	05-MON-101-76.97	5. Bridge not eligible for NRHP	1958	
44 0130	W LAUREL DRIVE OC	05-MON-101-R89.27	5. Bridge not eligible for NRHP	1965	
44 0131L	BORONDA ROAD OC	05-MON-101-R91.01	5. Bridge not eligible for NRHP	1965	
44 0131R	BORONDA ROAD OC	05-MON-101-R90.97	5. Bridge not eligible for NRHP	2000	
44 0133	SOUTH GREENFIELD OC	05-MON-101-52.66	5. Bridge not eligible for NRHP	1961	
44 0134	OAK AVENUE OC	05-MON-101-53.36-GNFD	5. Bridge not eligible for NRHP	1961	

District 05

Monterey County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
44 0135	WALNUT AVENUE OC	05-MON-101-53.86	5. Bridge not eligible for NRHP	1961	
44 0136	N GREENFIELD OC	05-MON-101-54.79	5. Bridge not eligible for NRHP	1961	
44 0137	CAMP ROBERTS OC	05-MON-101-R.84	5. Bridge not eligible for NRHP	1965	
44 0139L	NACIMIENTO RIVER	05-MON-101-R2.43	5. Bridge not eligible for NRHP	1965	
44 0139R	NACIMIENTO RIVER	05-MON-101-R2.43	5. Bridge not eligible for NRHP	1965	
44 0140	EAST GARRISON OC	05-MON-101-R2.15	5. Bridge not eligible for NRHP	1965	
44 0141L	SAN ANTONIO RIVER	05-MON-101-R6.66	5. Bridge not eligible for NRHP	1965	
44 0141R	SAN ANTONIO RIVER	05-MON-101-R6.66	5. Bridge not eligible for NRHP	1965	
44 0142L	NORTH BRADLEY UC	05-MON-101-R7.94	5. Bridge not eligible for NRHP	1965	
44 0142R	NORTH BRADLEY UC	05-MON-101-R7.94	5. Bridge not eligible for NRHP	1965	
44 0145L	MUNRAS AVENUE UC	05-MON-001-R75.74-MON	5. Bridge not eligible for NRHP	1968	
44 0145R	MUNRAS AVENUE UC	05-MON-001-R75.74-MON	5. Bridge not eligible for NRHP	1968	
44 0146L	AGUAJITO ROAD UC	05-MON-001-R77.37-MON	5. Bridge not eligible for NRHP	1968	
44 0146R	AGUAJITO ROAD UC	05-MON-001-R77.37-MON	5. Bridge not eligible for NRHP	1968	
44 0149E	W68-S1, S1-E68 CONNECTOR	05-MON-068-R3.96-MON	5. Bridge not eligible for NRHP	1968	
44 0151	FAIRGROUND ROAD OC	05-MON-068-R4.04-MON	5. Bridge not eligible for NRHP	1967	
44 0152S	FREMONT STREET OC (S)	05-MON-001-R78.18-MON	5. Bridge not eligible for NRHP	1968	
44 0153K	FREMONT STREET OC	05-MON-001-R78.18-MON	5. Bridge not eligible for NRHP	1968	
44 0156L	DEL MONTE AVE UC	05-MON-001-R78.89-MON	5. Bridge not eligible for NRHP	1968	
44 0156R	DEL MONTE AVE UC	05-MON-001-R78.89-MON	5. Bridge not eligible for NRHP	1968	
44 0157K	DEL MONTE OFF RAMP OC	05-MON-001-R78.85-MON	5. Bridge not eligible for NRHP	1968	
44 0158L	ORD VILLAGE UC	05-MON-001-R80.67-SNDC	5. Bridge not eligible for NRHP	1968	
44 0158R	ORD VILLAGE UC	05-MON-001-R80.67-SNDC	5. Bridge not eligible for NRHP	1968	
44 0162L	ROUTE 1/218 SEPARATION	05-MON-001-R79.33-SEA	5. Bridge not eligible for NRHP	1968	
44 0162R	ROUTE 1/218 SEPARATION	05-MON-001-R79.33-SEA	5. Bridge not eligible for NRHP	1968	
44 0164L	TRAFTON ROAD UC	05-MON-001-R101.5	5. Bridge not eligible for NRHP	1967	
44 0164R	TRAFTON ROAD UC	05-MON-001-R101.5	5. Bridge not eligible for NRHP	1967	
44 0165	TIOGA AVENUE OC	05-MON-001-R80.09-SNDC	5. Bridge not eligible for NRHP	1968	
44 0166	ELM AVENUE OC	05-MON-101-53.11-GNFD	5. Bridge not eligible for NRHP	1961	
44 0168L	SLOAT AVENUE UC	05-MON-001-R77.59-MON	5. Bridge not eligible for NRHP	1968	
44 0168R	SLOAT AVENUE UC	05-MON-001-R77.59-MON	5. Bridge not eligible for NRHP	1968	
44 0171	ALVARADO ROAD OC	05-MON-101-R15.46	5. Bridge not eligible for NRHP	1964	
44 0172	LOS LOBOS OC	05-MON-101-R17.86	5. Bridge not eligible for NRHP	1964	
44 0173	CAMP ROBERTS EQUIPMENT UC	05-MON-101-R4.35	5. Bridge not eligible for NRHP	1965	
44 0174K	NORTH MAIN STREET RAMP OC	05-MON-101-R88.28-SAL	5. Bridge not eligible for NRHP	1965	
44 0175L	LITTLE BEAR CREEK	05-MON-101-R91.27	5. Bridge not eligible for NRHP	1965	1972

District 05

Monterey County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
44 0175R	LITTLE BEAR CREEK	05-MON-101-R91.29	5. Bridge not eligible for NRHP	1965	1972
44 0177L	SALINAS RIVER	05-MON-101-R30.8	5. Bridge not eligible for NRHP	1971	
44 0177R	SALINAS RIVER	05-MON-101-R30.8	5. Bridge not eligible for NRHP	1971	
44 0178	FIRST STREET OC	05-MON-101-R39.77	5. Bridge not eligible for NRHP	1968	
44 0179L	SAN LORENZO CREEK	05-MON-101-R40.42	5. Bridge not eligible for NRHP	1968	
44 0179R	SAN LORENZO CREEK	05-MON-101-R40.42	5. Bridge not eligible for NRHP	1968	
44 0180L	CANAL STREET UC	05-MON-101-R40.72-KNC	5. Bridge not eligible for NRHP	1968	
44 0180R	CANAL STREET UC	05-MON-101-R40.72-KNC	5. Bridge not eligible for NRHP	1968	
44 0181L	JOLON UC	05-MON-101-R41.95	5. Bridge not eligible for NRHP	1968	
44 0181R	JOLON UC	05-MON-101-R41.95	5. Bridge not eligible for NRHP	1968	
44 0182	PARIS VALLEY ROAD OC	05-MON-101-R28.14	5. Bridge not eligible for NRHP	1971	
44 0183L	LOCKWOOD-SAN LUCAS ROAD UC	05-MON-101-R29.9	5. Bridge not eligible for NRHP	1971	
44 0183R	LOCKWOOD-SAN LUCAS ROAD UC	05-MON-101-R29.9	5. Bridge not eligible for NRHP	1971	
44 0184L	RANCHO UNDERCROSSING	05-MON-101-R30.65	5. Bridge not eligible for NRHP	1971	
44 0184R	RANCHO UNDERCROSSING	05-MON-101-R30.65	5. Bridge not eligible for NRHP	1971	
44 0185	ROUTE 183/156 SEPARATION	05-MON-183-8.99	5. Bridge not eligible for NRHP	1966	1996
44 0186L	TEMBLADERO SLOUGH	05-MON-156-R.9	5. Bridge not eligible for NRHP	1966	
44 0186R	TEMBLADERO SLOUGH	05-MON-156-R.9	5. Bridge not eligible for NRHP	1966	
44 0187L	CASA VERDE AVENUE UC	05-MON-001-R78.45-MON	5. Bridge not eligible for NRHP	1968	
44 0187R	CASA VERDE AVENUE UC	05-MON-001-R78.45-MON	5. Bridge not eligible for NRHP	1968	
44 0188L	SAND CITY UC	05-MON-001-R80.27-SNDC	5. Bridge not eligible for NRHP	1968	
44 0188R	SAND CITY UC	05-MON-001-R80.27-SNDC	5. Bridge not eligible for NRHP	1968	
44 0190L	WILD HORSE UC	05-MON-101-R37.31	5. Bridge not eligible for NRHP	1969	
44 0190R	WILD HORSE UC	05-MON-101-R37.31	5. Bridge not eligible for NRHP	1969	
44 0191L	SOLEDAD DRIVE UC	05-MON-001-R76-MON	5. Bridge not eligible for NRHP	1968	
44 0191R	SOLEDAD DRIVE UC	05-MON-001-R76-MON	5. Bridge not eligible for NRHP	1968	
44 0192L	IRIS CANYON ROAD UC	05-MON-001-R76.47-MON	5. Bridge not eligible for NRHP	1968	
44 0192R	IRIS CANYON ROAD UC	05-MON-001-R76.47-MON	5. Bridge not eligible for NRHP	1968	
44 0193L	SAN ARDO UC	05-MON-101-R21.99	5. Bridge not eligible for NRHP	1971	
44 0193R	SAN ARDO UC	05-MON-101-R21.99	5. Bridge not eligible for NRHP	1971	
44 0195	LAYOUS OVERCROSSING	05-MON-101-R35.83	5. Bridge not eligible for NRHP	1969	
44 0196	GEIL STREET POC	05-MON-156-R1.35	5. Bridge not eligible for NRHP	1966	1996
44 0197L	ROUTE 101/198 SEPARATION	05-MON-101-R32	5. Bridge not eligible for NRHP	1971	
44 0197R	ROUTE 101/198 SEPARATION	05-MON-101-R32	5. Bridge not eligible for NRHP	1971	
44 0198	SAN LUCAS UP	05-MON-198-R.7	5. Bridge not eligible for NRHP	1971	
44 0199	MAIN ENTRANCE OC	05-MON-001-R82.89	5. Bridge not eligible for NRHP	1973	
44 0200	FIRST STREET UC	05-MON-001-R83.27	5. Bridge not eligible for NRHP	1973	
44 0201L	FORT ORD UC	05-MON-001-R83.47	5. Bridge not eligible for NRHP	1973	
44 0201R	FORT ORD UC	05-MON-001-R83.47	5. Bridge not eligible for NRHP	1973	
44 0202	EIGHTH STREET OC	05-MON-001-R83.89	5. Bridge not eligible for NRHP	1973	

District 05

Monterey County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
44 0203	NORTH ENTRANCE OC	05-MON-001-R84.48	5. Bridge not eligible for NRHP	1973	
44 0211L	SOUTH MARINA OH	05-MON-001-R85.14	5. Bridge not eligible for NRHP	1976	
44 0211R	SOUTH MARINA OH	05-MON-001-R85.14	5. Bridge not eligible for NRHP	1976	
44 0212L	LAKE DRIVE UC	05-MON-001-R85.51	5. Bridge not eligible for NRHP	1976	
44 0212R	LAKE DRIVE UC	05-MON-001-R85.51	5. Bridge not eligible for NRHP	1976	
44 0213L	RESERVATION ROAD UC	05-MON-001-R86.48	5. Bridge not eligible for NRHP	1976	
44 0213R	RESERVATION ROAD UC	05-MON-001-R86.48	5. Bridge not eligible for NRHP	1976	
44 0214L	LAPIS UC	05-MON-001-R87.65	5. Bridge not eligible for NRHP	1976	
44 0214R	LAPIS UC	05-MON-001-R87.65	5. Bridge not eligible for NRHP	1976	
44 0215	NEPONSET OC	05-MON-001-R88.64	5. Bridge not eligible for NRHP	1976	
44 0216L	SALINAS RIVER	05-MON-001-R89.18	5. Bridge not eligible for NRHP	1976	
44 0216R	SALINAS RIVER	05-MON-001-R89.19	5. Bridge not eligible for NRHP	1976	
44 0217	MOLERA ROAD OC	05-MON-001-R90.39	5. Bridge not eligible for NRHP	1976	
44 0218R	ROUTE 1/156 SEPARATION	05-MON-001-R90.93	5. Bridge not eligible for NRHP	1976	
44 0219	TEMBLADERO SLOUGH	05-MON-001-T91.99	5. Bridge not eligible for NRHP	1976	
44 0227	ROBERTS LAKE OUTLET	05-MON-001-R79.34-SEA	5. Bridge not eligible for NRHP	1967	
44 0228	ROSENBURG FARM UC	05-MON-101-R23.45	5. Bridge not eligible for NRHP	1971	
44 0229	ANSBERRY FARM UC	05-MON-101-R25.81	5. Bridge not eligible for NRHP	1971	
44 0230	TRESCONY FARM UC	05-MON-101-R28.76	5. Bridge not eligible for NRHP	1971	
44 0231	ECHENIQUE FARM UC	05-MON-101-R28.96	5. Bridge not eligible for NRHP	1971	
44 0236L	TORO PARK UNDERCROSSING	05-MON-068-15.83	5. Bridge not eligible for NRHP	1989	
44 0236R	TORO PARK UNDERCROSSING	05-MON-068-15.83	5. Bridge not eligible for NRHP	1989	
44 0239	DOLORES PUC	05-MON-001-35.83	5. Bridge not eligible for NRHP	1980	
44 0240	PFEIFFER SIDEHILL VIADUCT	05-MON-001-35.9	5. Bridge not eligible for NRHP	1981	
44 0241	MUD SIDEHILL VIADUCT	05-MON-001-9.1	5. Bridge not eligible for NRHP	1979	
44 0243	DAVIS ROAD OVERCROSSING	05-MON-183-R1.96-SAL	5. Bridge not eligible for NRHP	1983	
44 0244	VILLA SIDEHILL VIADUCT	05-MON-001-7.24	5. Bridge not eligible for NRHP	1984	
44 0245	WILLOW SIDEHILL VIADUCT	05-MON-001-12.13	5. Bridge not eligible for NRHP	1985	
44 0246	LIMEKILN SIDEHILL VIADUCT	05-MON-001-20.69	5. Bridge not eligible for NRHP	1985	
44 0251	DARLA SIDEHILL VIADUCT	05-MON-001-56.25	5. Bridge not eligible for NRHP	1986	
44 0252	ELLEN SIDEHILL VIADUCT	05-MON-001-56.44	5. Bridge not eligible for NRHP	1986	
44 0253	CAROL SIDEHILL VIADUCT	05-MON-001-56.51	5. Bridge not eligible for NRHP	1986	
44 0254	MAXINE SIDEHILL VIADUCT	05-MON-001-57.59	5. Bridge not eligible for NRHP	1986	
44 0262K	KEMP CANYON CREEK	05-MON-101-R9.65	5. Bridge not eligible for NRHP	1942	
44 0263	LEWIS CREEK	05-MON-025-11.73	4. Historical Significance not determined	1995	
44 0264	EL TORO CREEK	05-MON-068-13.3	5. Bridge not eligible for NRHP	1997	
44 0265	CARMEL RIVER	05-MON-001-72.28	5. Bridge not eligible for NRHP	1995	
44 0266	JULIA VIADUCT	05-MON-001-36.2	5. Bridge not eligible for NRHP	2000	
44 0267	BURNS CREEK	05-MON-001-34.24	5. Bridge not eligible for NRHP	1999	
44 0269	RAIN ROCKS SIDEHILL VIADUCT	05-MON-001-21.3	5. Bridge not eligible for NRHP	1999	
44 0271	SAN MIGUEL CANYON ROAD OC	05-MON-101-96.1	5. Bridge not eligible for NRHP	2004	2012
44 0276Y	PRUNEDALE OC	05-MON-156-T5.1	5. Bridge not eligible for NRHP	2005	
44 0277F	S101-W156 CONNECTOR OC	05-MON-101-95.35	5. Bridge not eligible for NRHP	2004	

District 05

Monterey County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
44 0278	PRUNEDALE UC	05-MON-156-T5	5. Bridge not eligible for NRHP	2005	
44 0279	FOREST BOUNDARY VIADUCT	05-MON-001-1.49	5. Bridge not eligible for NRHP	2000	
44 0281	SALINAS ROAD OC	05-MON-001-T101.05	5. Bridge not eligible for NRHP	2012	
44 0287	LEWIS CREEK SIDEHILL VIADUCT	05-MON-198-21.1	5. Bridge not eligible for NRHP	2006	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-000848	Agency Nbr - Contract AA550-CT6-52	1976	David A. Fredrickson	A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Vol. III, Socioeconomic Conditions, Chapter 7: Historical & Archaeological Resources	The Anthropology Laboratory, Sonoma State College; Winzler & Kelly Consulting Engineers	
S-002164	Voided - S-4868	1978	Gary S. Breschini and Trudy Haversat	The Monterey County Archaeological Resource Project: A Project-Specific Research Design.		27-000100, 27-000148, 27-000180, 27-000224, 27-000236, 27-000356, 27-000386
S-003453	Voided - E-165 MNT	1950	Roy Meadows, Roy Martin, and Ann Fisher	Notes on the Carmel Indians (notes taken from Roy Meadows and Roy Martin on March 4th, 1950); and Southern Costanoan-Esselen Notes (notes taken from Ann Fisher on March 4th, 1950)		
S-007850		1983	Gary S. Breschini, Trudy Haversat, R. Paul Hampson, MaryEllen Ryan, Charles R. Smith, Georgia Lee, and Laurence H. Shoup	A Cultural Resources Overview of the Coast and Coast-Valley Study Areas	Archaeological Consulting	
S-028524	Submitter - AC 3587; Submitter - AC 3587B; Voided - VOIDED S-32387, see S-28524 citation a	2004	Mary Doane and Gary S. Breschini	Preliminary Archaeological Reconnaissance for Portions of APN 415-121-013 in Chular Canyon, Monterey County, California	Archaeological Consulting	
S-028524a		2006	Mary Doane and Gary S. Breschini	Preliminary Archaeological Reconnaissance for APN 415-121-013, in Chualar Canyon, Monterey County, California	Archaeological Consulting	
S-030204		2003	Donna L. Gillette	The Distribution and Antiquity of the California Pecked Curvilinear Nucleated (PCN) Rock Art Tradition.	University of California, Berkeley	01-002148, 21-000384, 23-000810
S-032596	Caltrans - EA No. 447600; Other - Contract #04A2098	2006	Randall Milliken, Jerome King, and Patricia Mikkelsen	The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways	Consulting in the Past; Far Western Anthropological Research Group, Inc.	
S-048927		1997	Donald Scott Crull	The Economy and Archaeology of European-made Glass Beads and Manufactured Goods Used in First Contact Situations in Oregon, California and Washington	University of Sheffield, England	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-049718	Submitter - Project 5250	2017	Gary S. Breschini	Preliminary Archaeological Assessment of Portions of Assessor's Parcel 145-072-023, Carmel, Monterey County, California	Archaeological Consulting	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-028524a		2006	Mary Doane and Gary S. Breschini	Preliminary Archaeological Reconnaissance for APN 415-121-013, in Chualar Canyon, Monterey County, California	Archaeological Consulting	
S-032418	Submitter - AC 3917	2006	Mary Doane and Trudy Haversat	Preliminary Archaeological Reconnaissance for a Portion of APN 145-072-022 in Chualar Canyon, Monterey County, California	Archaeological Consulting	
S-034466	Submitter - AC 4097	2007	Mary Doane and Gary S. Breschini	Preliminary Archaeological Reconnaissance for a Portion of APN 415-021-031 in Chualar Canyon, Monterey County, California, AC 4097	Archaeological Consulting	
S-039195		2012	Mary Doane and Gary S. Breschini	Preliminary Archaeological Assessment for APN 145-101-005, Near Chualar, Monterey County, California	Archaeological Consulting	
S-046435	Submitter - Project 5088	2015	Mary Doane and Gary S. Breschini	Preliminary Archaeological Assessment of APN 145-101-003, Near Chular, Monterey County, California	Archaeological Consulting	

Appendix D – Native American Correspondence

Native American Heritage Commission
Native American Contact List
Monterey County
12/6/2022

Amah Mutsun Tribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA, 95632
Phone: (916) 743 - 5833
vlopez@amahmutsun.org
Costanoan
Northern Valley Yokut

Amah MutsunTribal Band of Mission San Juan Bautista
Irene Zwierlein, Chairperson
3030 Soda Bay Road
Lakeport, CA, 95453
Phone: (650) 851 - 7489
Fax: (650) 332-1526
amahmutsuntribal@gmail.com
Costanoan

Costanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street
Pomona, CA, 91766
Phone: (909) 629 - 6081
Fax: (909) 524-8041
rumsen@aol.com
Costanoan

Esselen Tribe of Monterey County
Tom Little Bear Nason, Chairman
P. O. Box 95
Carmel Valley, CA, 93924
Phone: (831) 659 - 2153
Fax: (831) 659-0111
TribalChairman@EsselenTribe.org
Costanoan
Esselen

Esselen Tribe of Monterey County
Susan Morley, Cultural Resources
3059 Bostick Avenue
Marina, CA, 93933
Phone: (831) 262 - 2300
Cultural-Resources@EsselenTribe.org
Costanoan
Esselen

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA, 95024
Phone: (831) 637 - 4238
ams@indiancanyons.org
Costanoan

Indian Canyon Mutsun Band of Costanoan
Kanyon Sayers-Roods, MLD Contact
1615 Pearson Court
San Jose, CA, 95122
Phone: (408) 673 - 0626
kanyon@kanyonkonsulting.com
Costanoan

Ohlone/Costanoan-Esselen Nation
Louise Miranda-Ramirez, Chairperson
P.O. Box 1301
Monterey, CA, 93942
Phone: (408) 629 - 5189
ramirez.louise@yahoo.com
Costanoan
Esselen

Ohlone/Costanoan-Esselen Nation
Christanne Arias, Vice Chairperson
519 Viejo Gabriel
Soledad, CA, 93960
Phone: (831) 235 - 4590
Costanoan
Esselen

Salinan Tribe of Monterey, San Luis Obispo Counties
Patti Dunton, Tribal Administrator
7070 Morro Road, Suite A
Atascadero, CA, 93422
Phone: (805) 464 - 2650
info@salinantribe.com
Salinan

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas, CA, 93906
Phone: (831) 443 - 9702
kwood8934@aol.com
Foothill Yokut
Mono

Xolon-Salinan Tribe
Karen White, Chairperson
P. O. Box 7045
Spreckels, CA, 93962
Phone: (831) 238 - 1488
xolon.salinan.heritage@gmail.com
Salinan

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Chualar Canyon Road Bridges Project, Monterey County.

Native American Heritage Commission
Native American Contact List
Monterey County
12/6/2022

Xolon-Salinan Tribe
Donna Haro, Tribal Headwoman
P. O. Box 7045 — Salinan
Spreckels, CA, 93962
Phone: (925) 470 - 5019
dhxolonaakletse@gmail.com

Rumsen Am:a Tur:ataj Ohlone
Dee Dee Ybarra, Chairperson
14671 Farmington Street — Costanoan
Hesperia, CA, 92345
Phone: (760) 403 - 1756
rumsenama@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Chualar Canyon Road Bridges Project, Monterey County.

Native American Outreach Tracking Sheet
County of Monterey - Chualar Canyon Road Bridges Rehabilitation or Replacement Project

Consultation Member	Affiliation	E-mail Sent	Letter Mailed	Responses and Notes
Valentin Lopez, Chairperson	Amah Mutsun Tribal Band	1/6/2023	1/7/2023	No response received to date
Irene Zwierlein, Chairperson	Amah Mutsun Tribal Band of Mission San Juan Bautista	1/6/2023	1/7/2023	No response received to date
Tony Cerda, Chairperson	Costanoan Rumsen Carmel Tribe	1/6/2023	1/7/2023	No response received to date
Tom Little Bear Nason, Chairman	Esselen Tribe of Monterey County (ETMC)	1/6/2023	1/7/2023	1/6/2023: Letter requesting consultation for the proposed Project. ETMC requests ground disturbing activity be montiored by ETMC traid cultural monitors and sensitivity training by ETMC for all construction crews. ETMC requests digital copies of environmental reports.
Susan Morley, Cultural Resources	Esselen Tribe of Monterey County	1/6/2023	1/7/2023	1/9/2023: E-mail response received with attached letter from Chairman, Tom Little Bear Nason
Ann Marie Sayers, Chairperson	Indian Canyon Mutsun Band of Costanoan	1/6/2023	1/7/2023	No response received to date
Kanyon Sayers-Roods, MLD Contact	Indian Canyon Mutsun Band of Costanoan	1/6/2023	1/7/2023	No response received to date
Louise Miranda-Ramirez, Chairperson	Ohlone/Costanoan-Esselen Nation	1/6/2023	1/7/2023	2/2/2023: Letter requesting consultation with lead agencies.
Christanne Arias, Vice Chairperson	Ohlone/Costanoan-Esselen Nation		1/7/2023	No response received to date
Patti Dunton, Tribal Administrator	Salinan Tribe of Monterey, San Luis Obispo Counties	1/6/2023	1/7/2023	1/12/2023: E-mail response was received, requesting a phase I study be performed, and a copy of the report. The Tribe request that all ground disturbing activities be monitored by a cultural resource specialist from Salinan Tribe of Monterey.
Kenneth Woodrow, Chairperson	Wuksache Indian Tribe/Eshom Valley Band	1/6/2023	1/7/2023	No response received to date
Karen White, Chairperson	Xolon-Salinan Tribe	1/6/2023	1/7/2023	No response received to date
Donna Haro, Tribal Headwoman	Xolon-Salinan Tribe	1/6/2023	1/7/2023	No response received to date
Dee Dee Ybarra, Chairperson	Rumsen Am:a Tur:ataj Ohlone	1/6/2023	1/7/2023	No response received to date
Isaac Bojorquez, Chairman	KaKoon Ta Ruk Band of Ohlone-Costanoan	1/6/2023	1/7/2023	No response received to date

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA, 95024

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Ann Marie Sayers, Chairperson:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

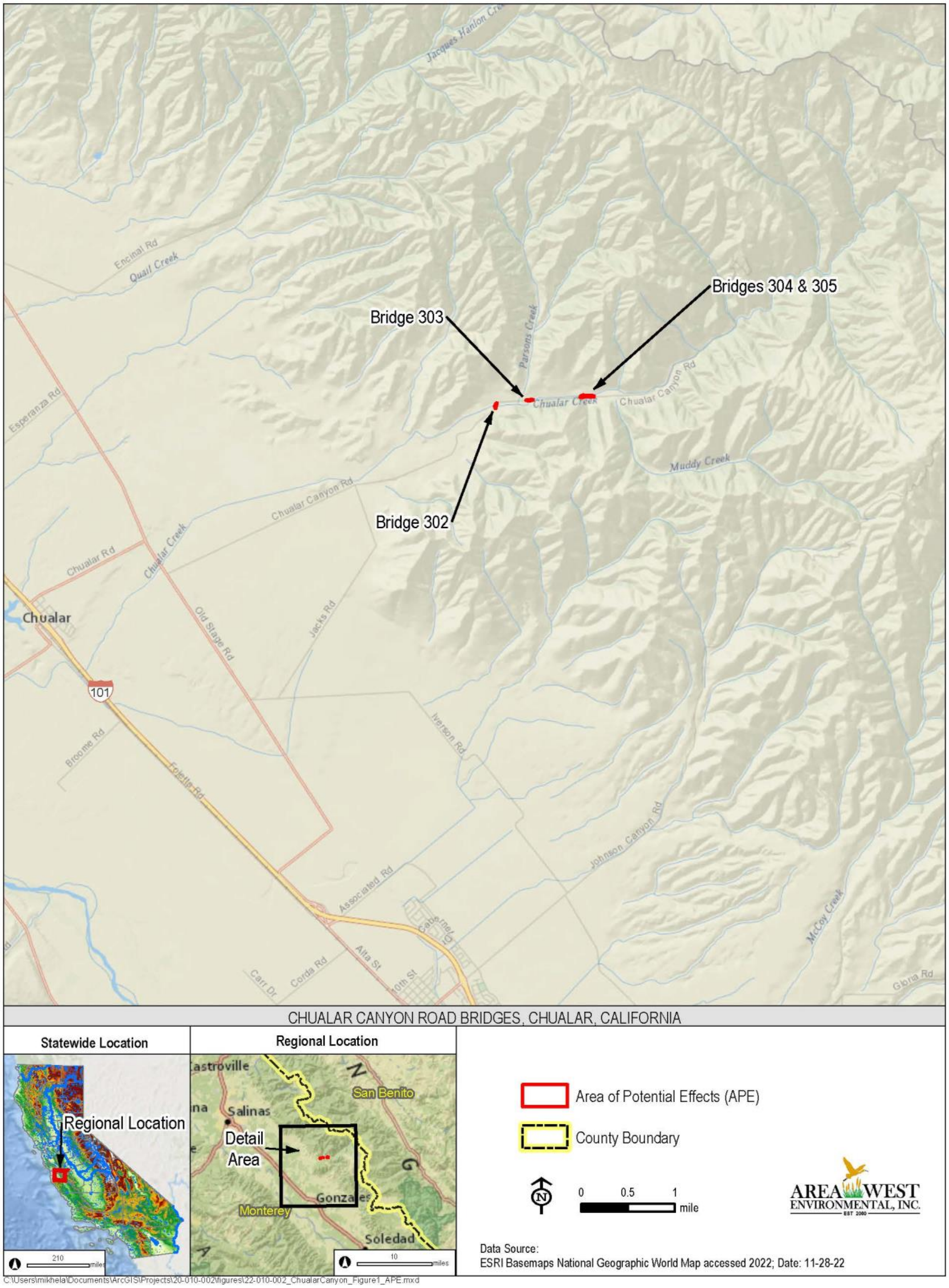
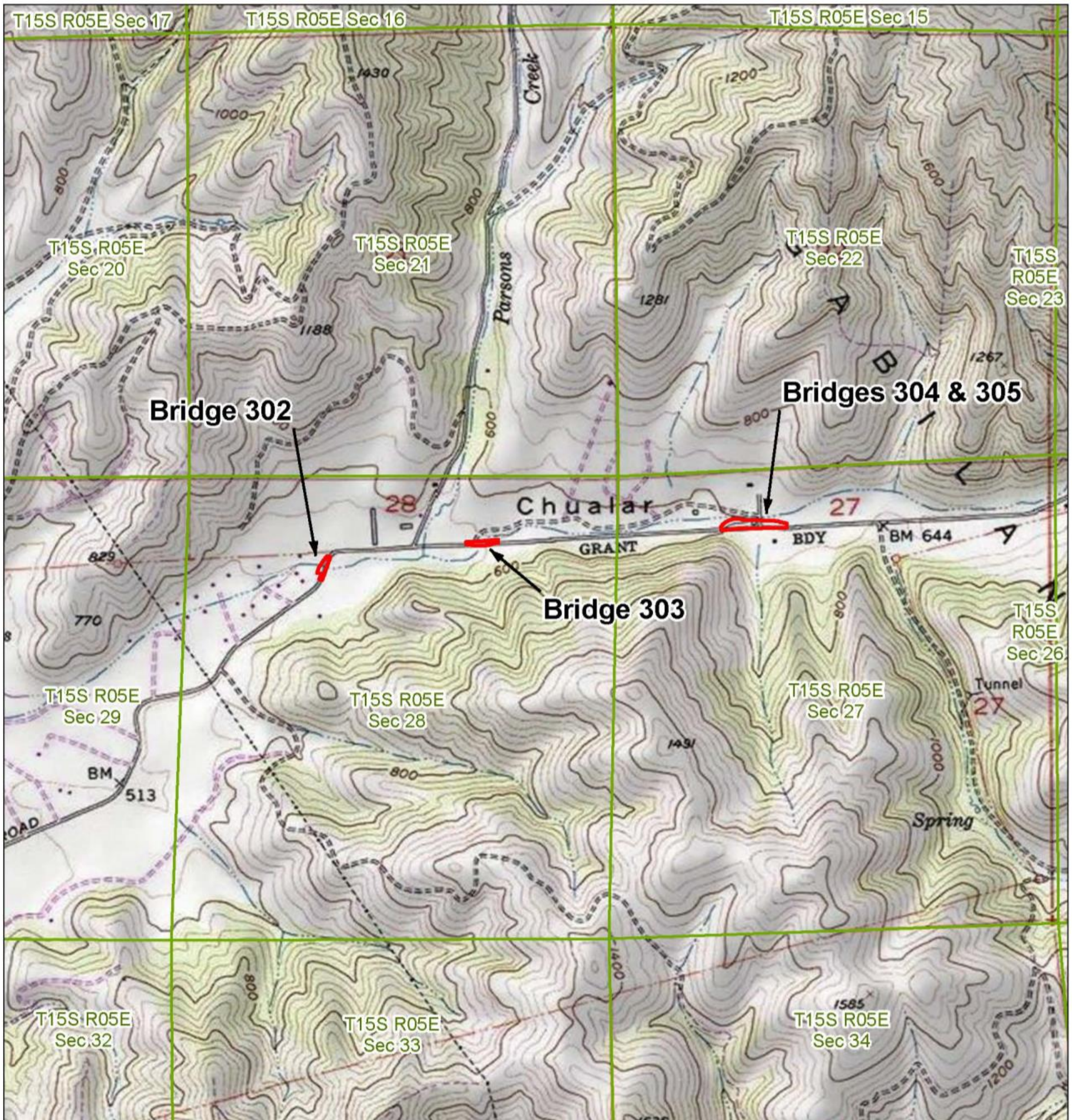


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us



CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)
Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

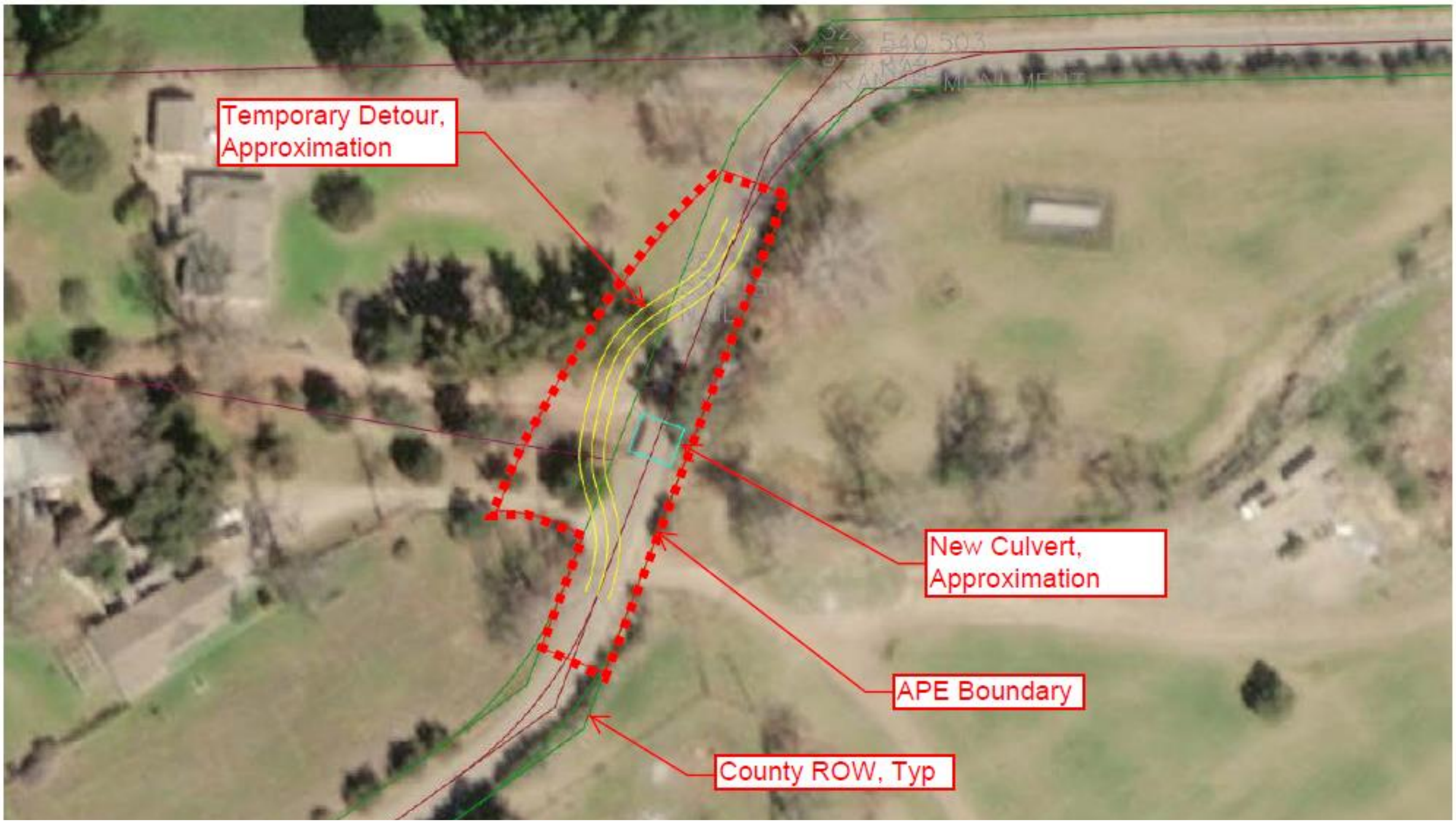


Figure 3a. Bridge 302

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements | Bridge 303 | November 2, 2022
Monterey County RMA | Area of Potential Effects Map | Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

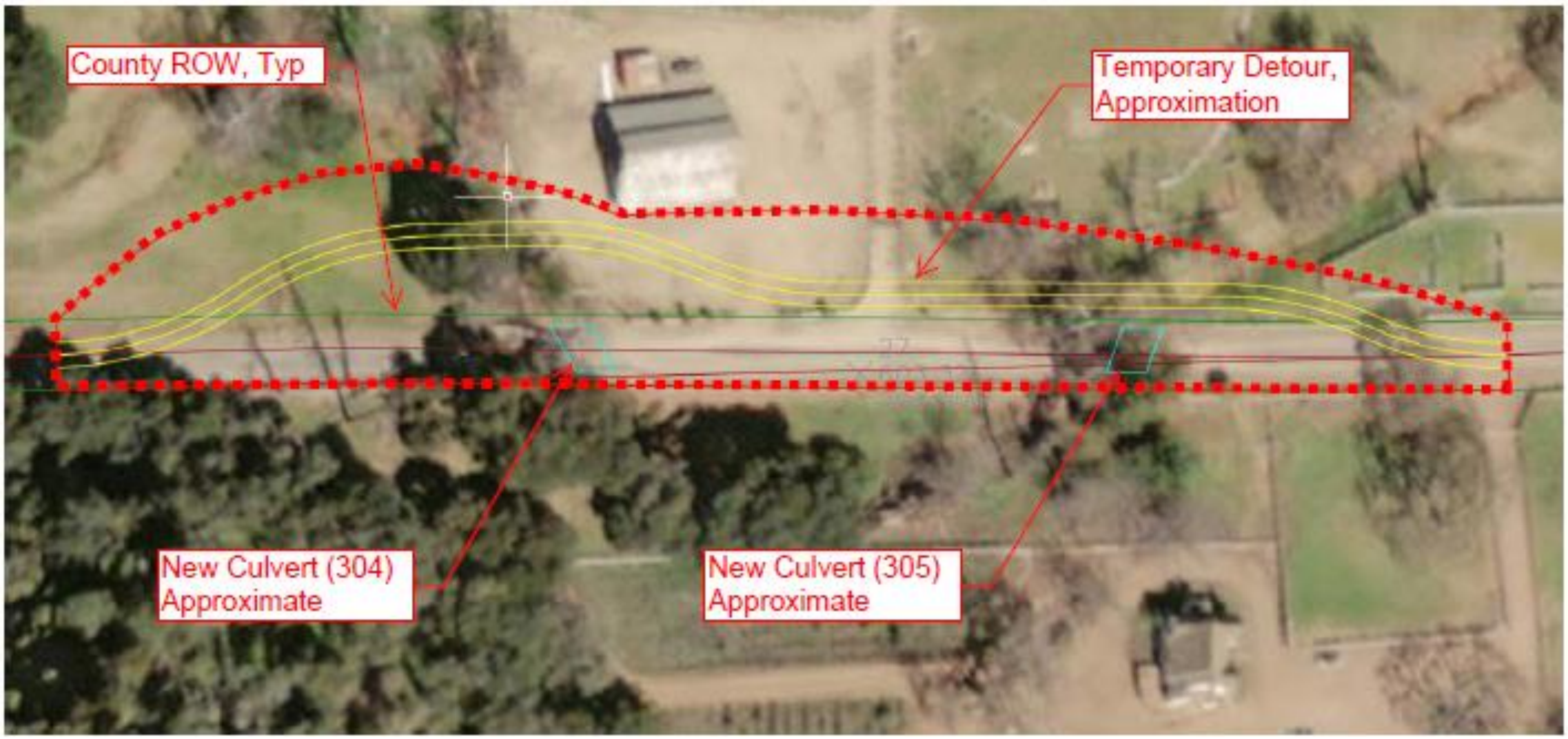


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Christanne Arias, Vice Chairperson
Ohlone/Costanoan-Esselen Nation
519 Viejo Gabriel
Soledad, CA, 93960

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Christanne Arias, Vice Chairperson:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

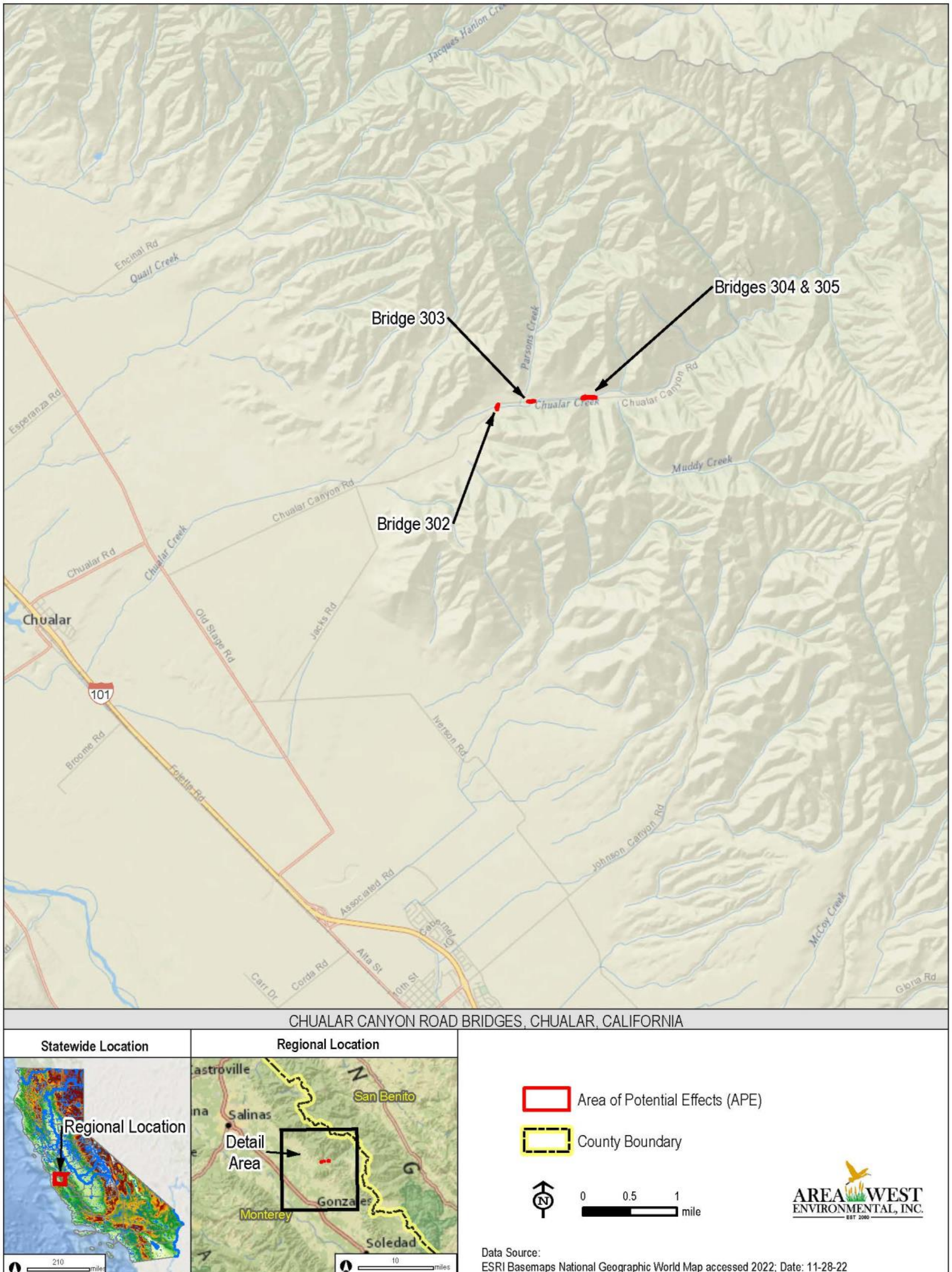
Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us



C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure1_APE.mxd

Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)

Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

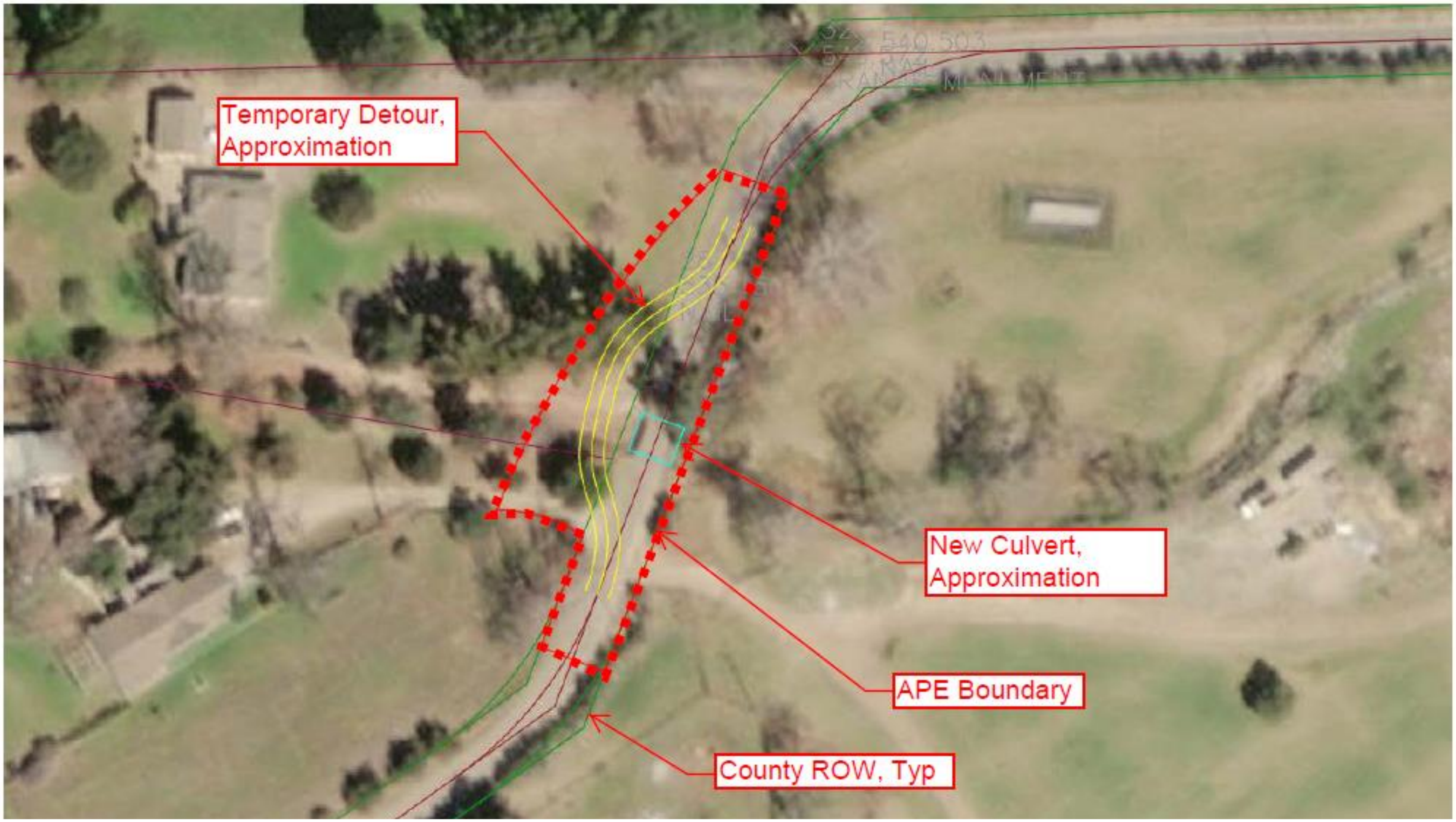


Figure 3a. Bridge 302

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 303
Area of Potential Effects Map

November 2, 2022
Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

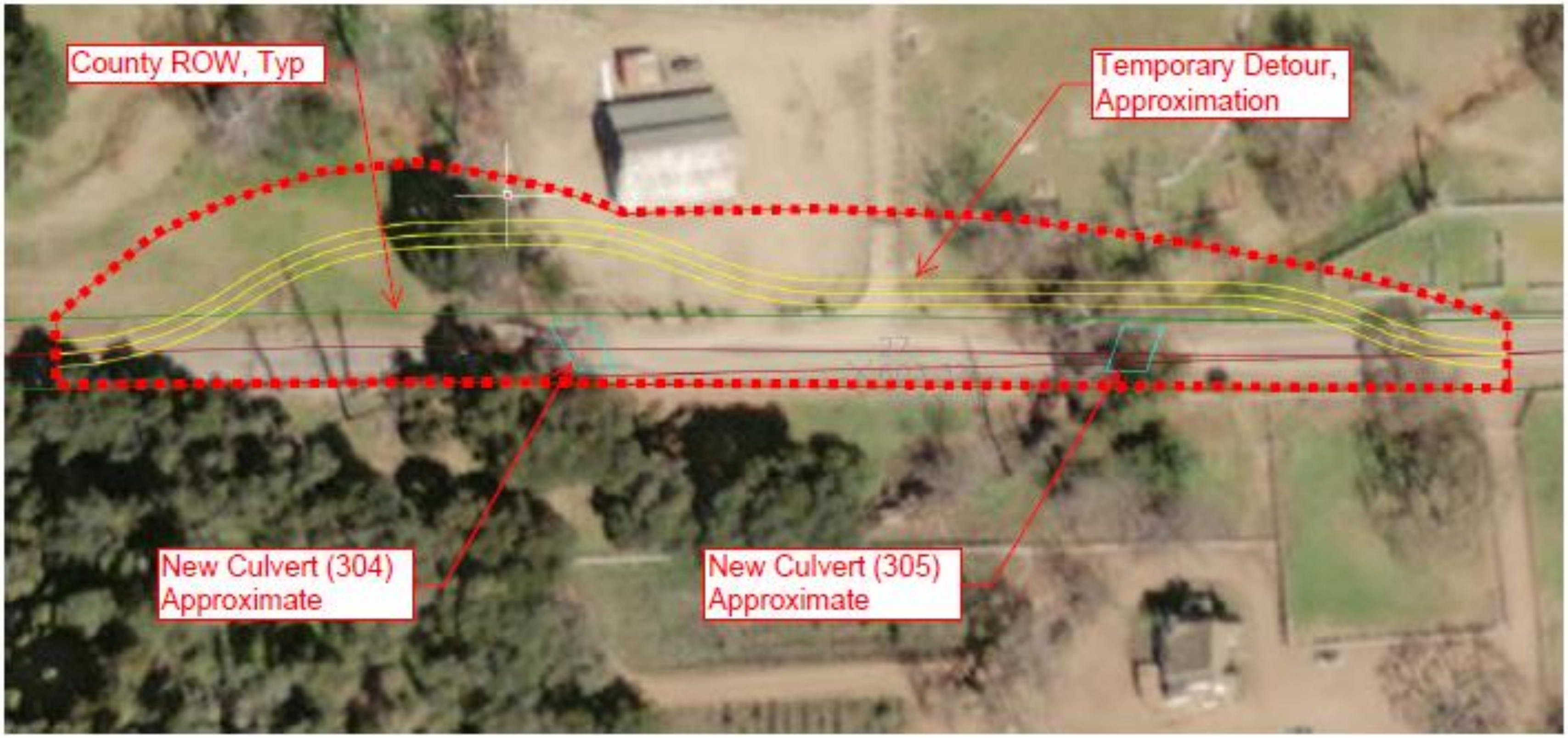


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Dee Dee Ybarra, Chairperson
Rumsen Am:a Tur:ataj Ohlone
14671 Farmington Street
Hesperia, CA, 92345

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Dee Dee Ybarra, Chairperson:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-4800
www.co.monterey.ca.us

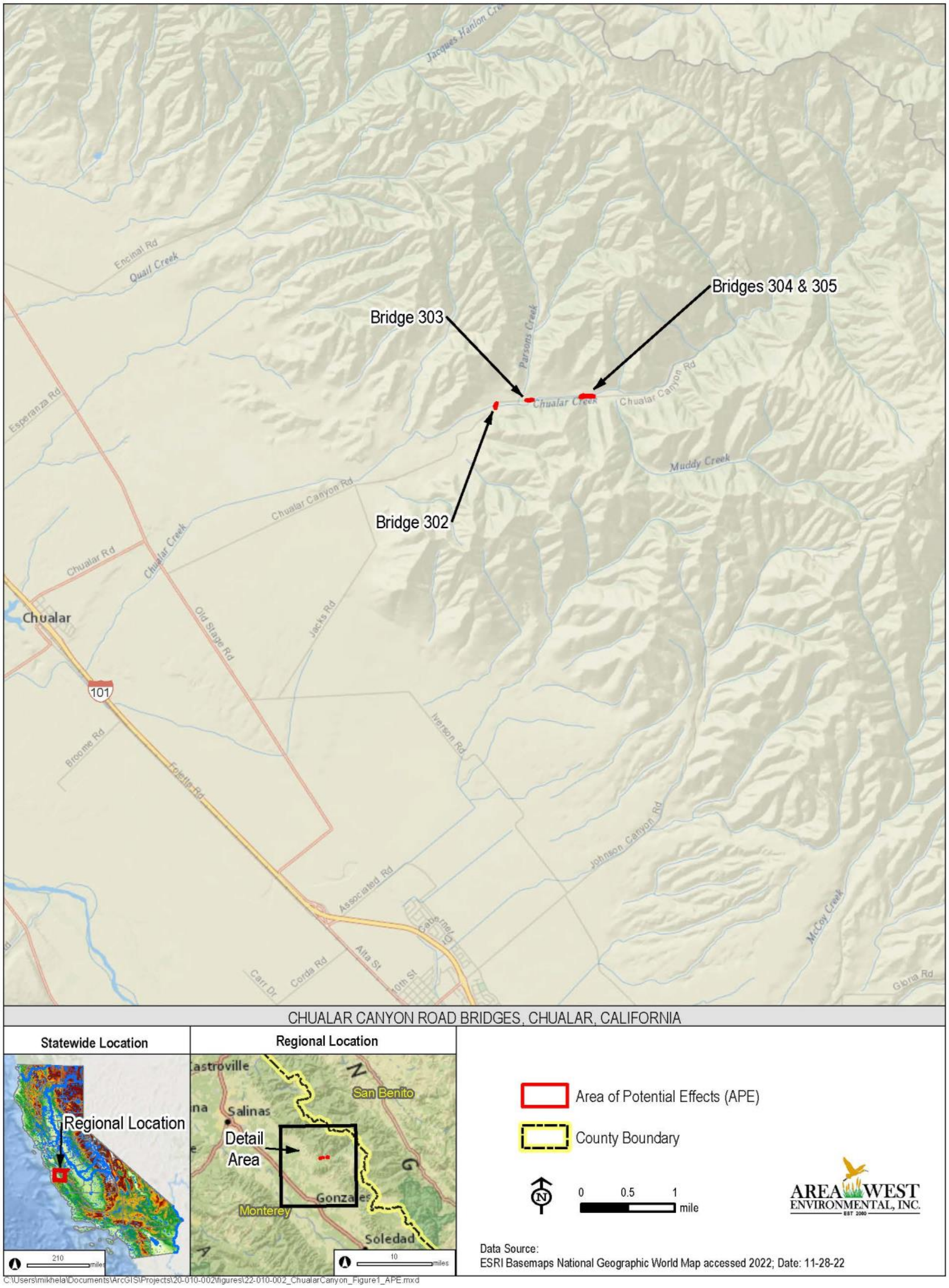


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)
Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

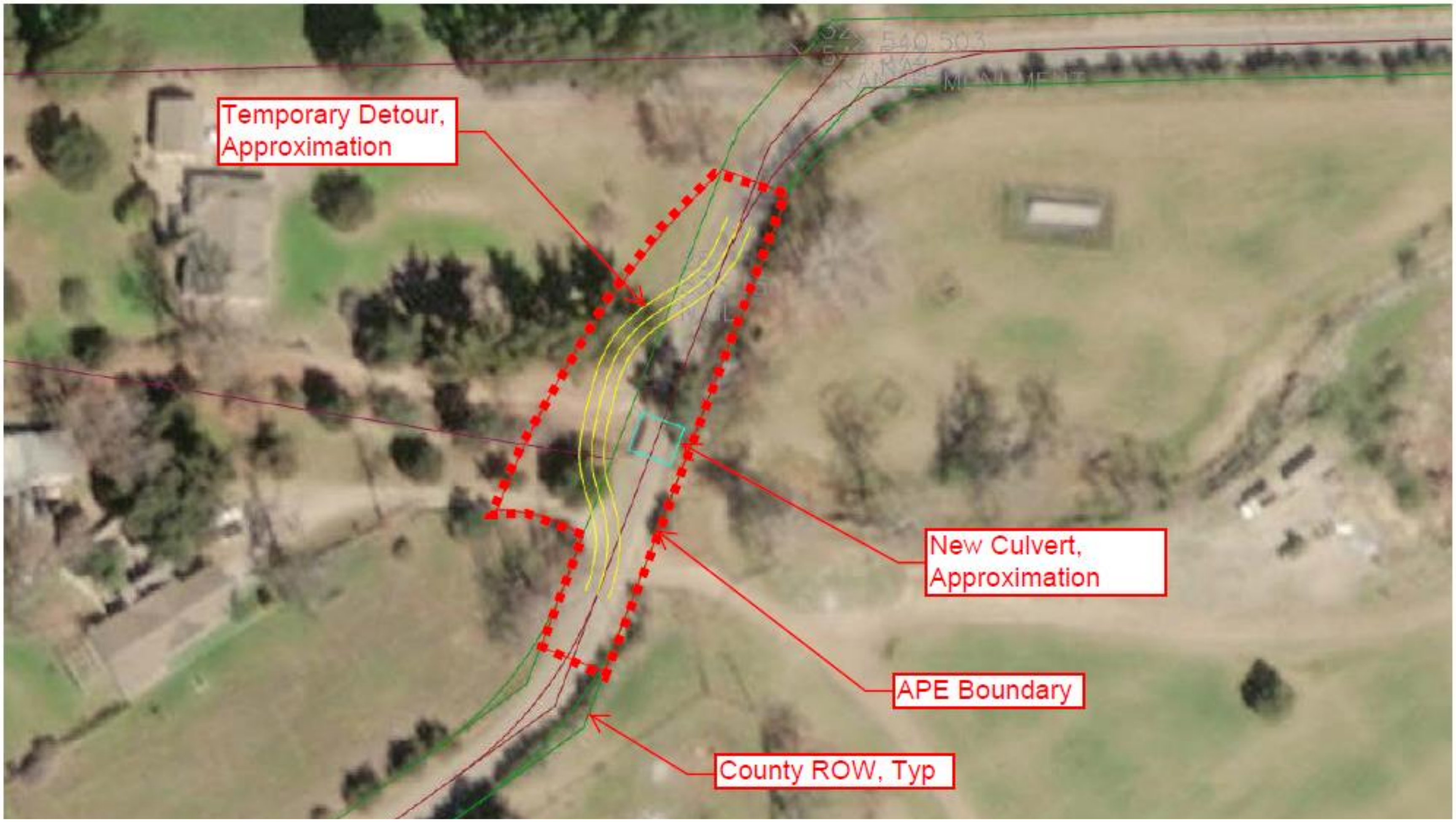


Figure 3a. Bridge 302

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 303
Area of Potential Effects Map

November 2, 2022
Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

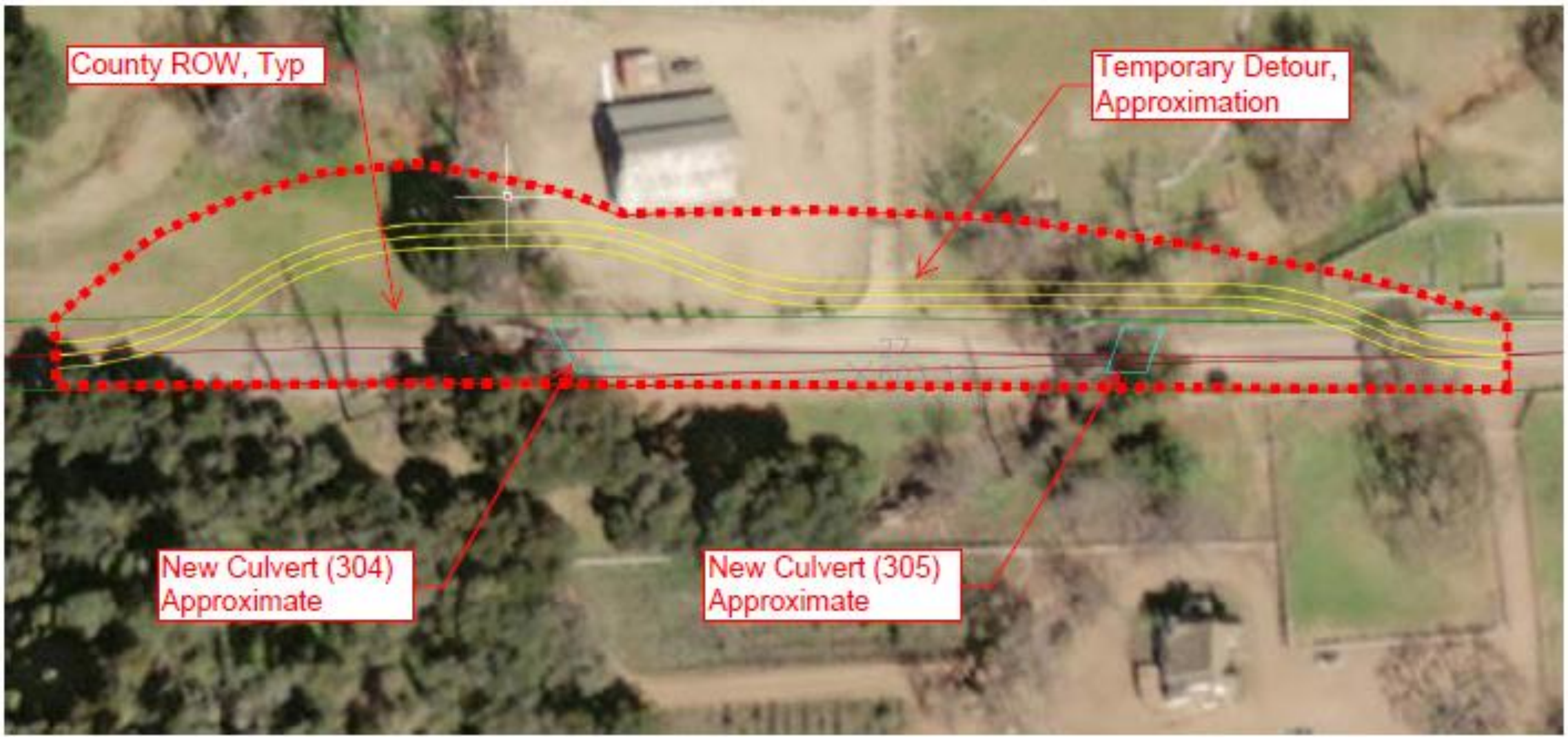


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Donna Haro, Tribal Headwoman
Xolon-Salinan Tribe
P. O. Box 7045
Spreckels, CA, 93962

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Donna Haro, Tribal Headwoman:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

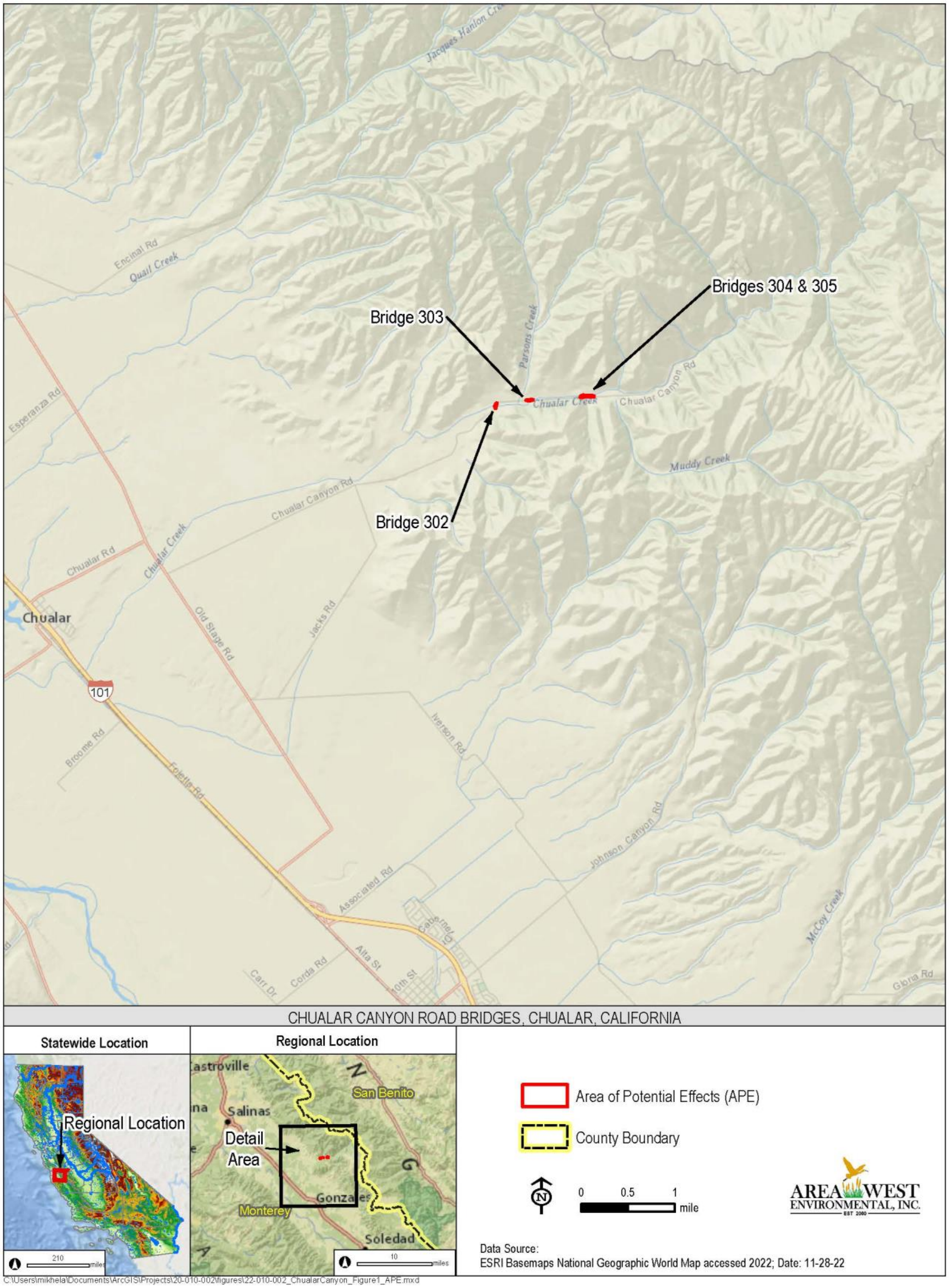


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)
Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

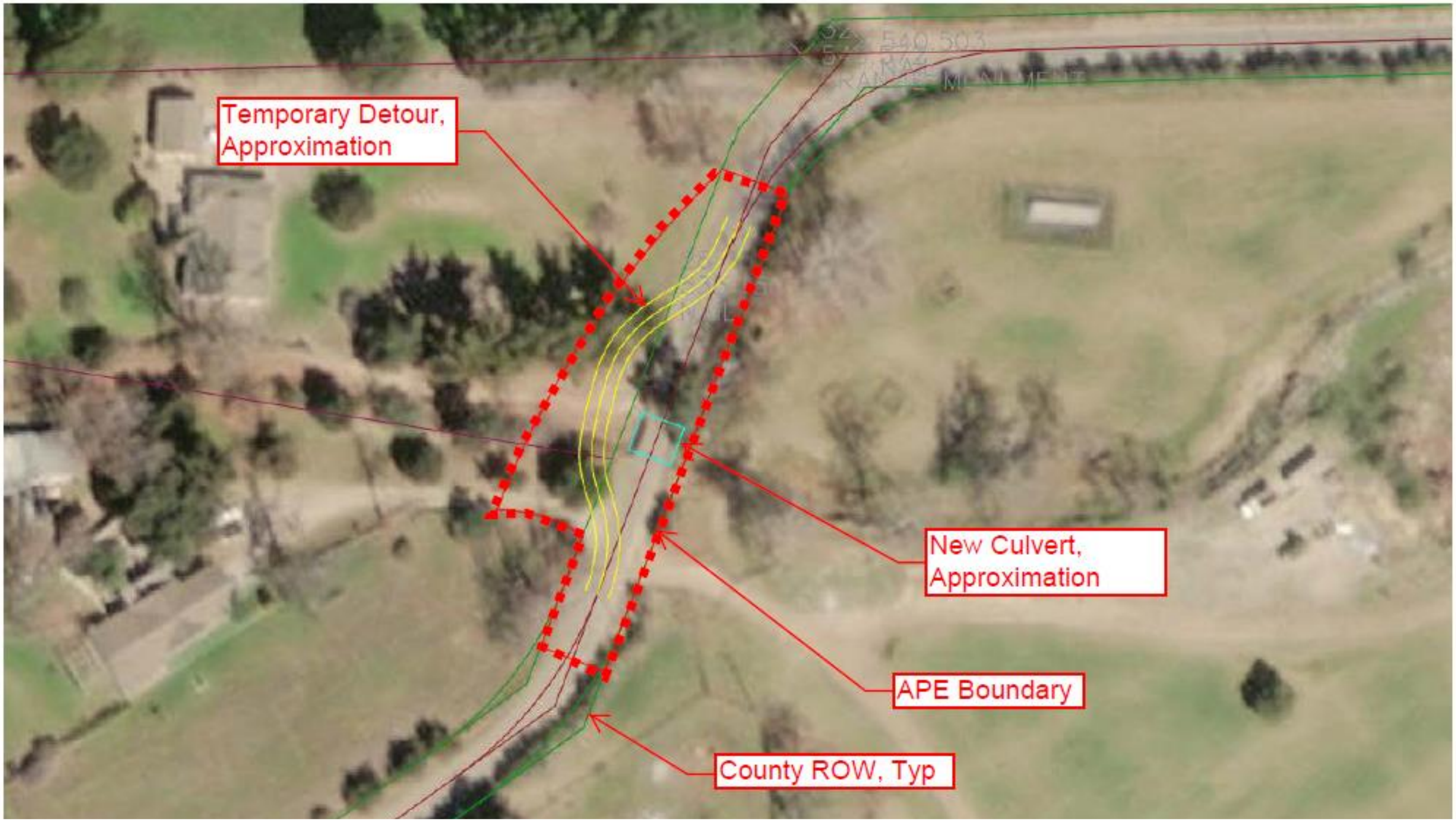


Figure 3a. Bridge 302

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 303
Area of Potential Effects Map

November 2, 2022
Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

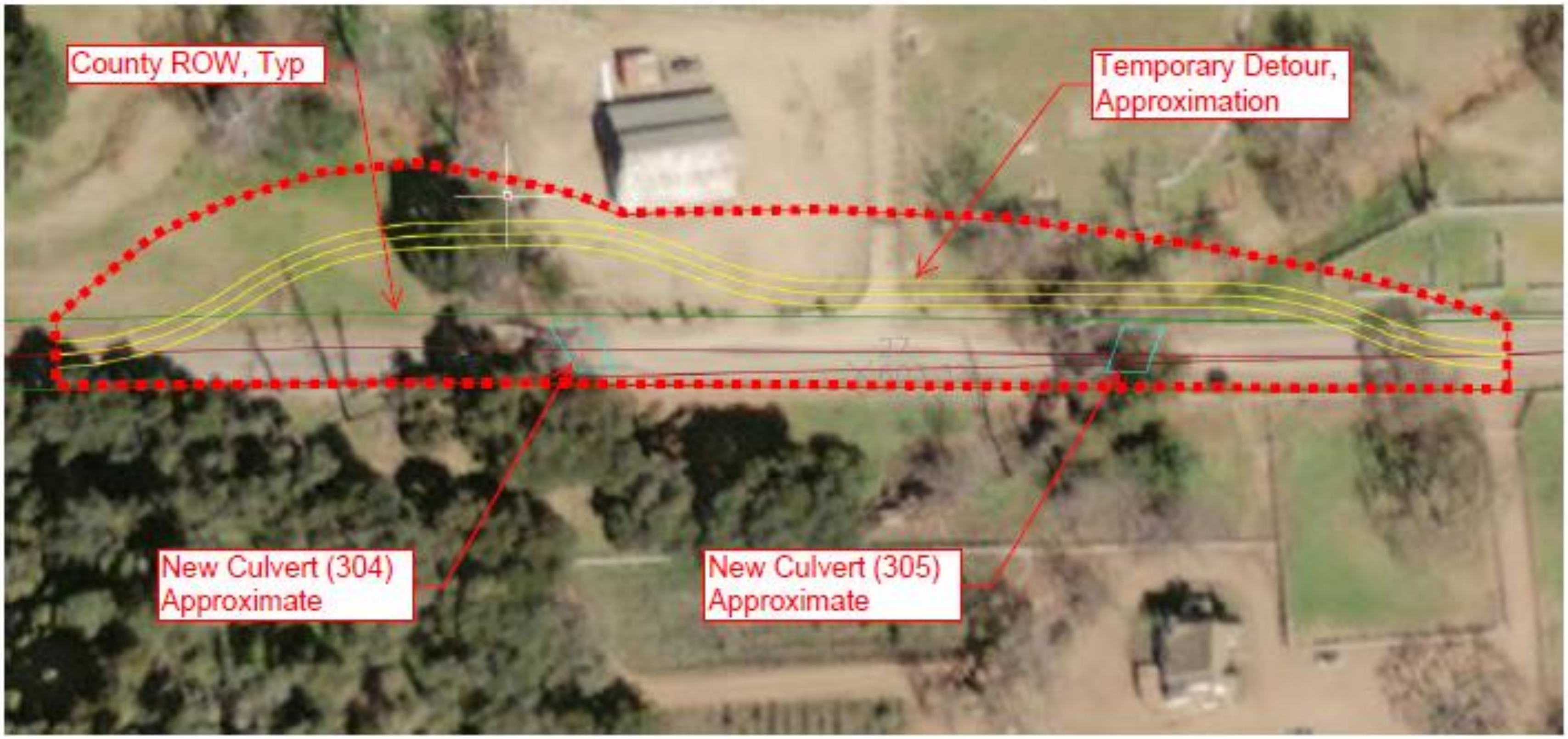


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Irene Zwierlein, Chairperson
Amah Mutsun Tribal Band of Mission San Juan Bautista
3030 Soda Bay Road
Lakeport, CA, 95453

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Irene Zwierlein, Chairperson:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

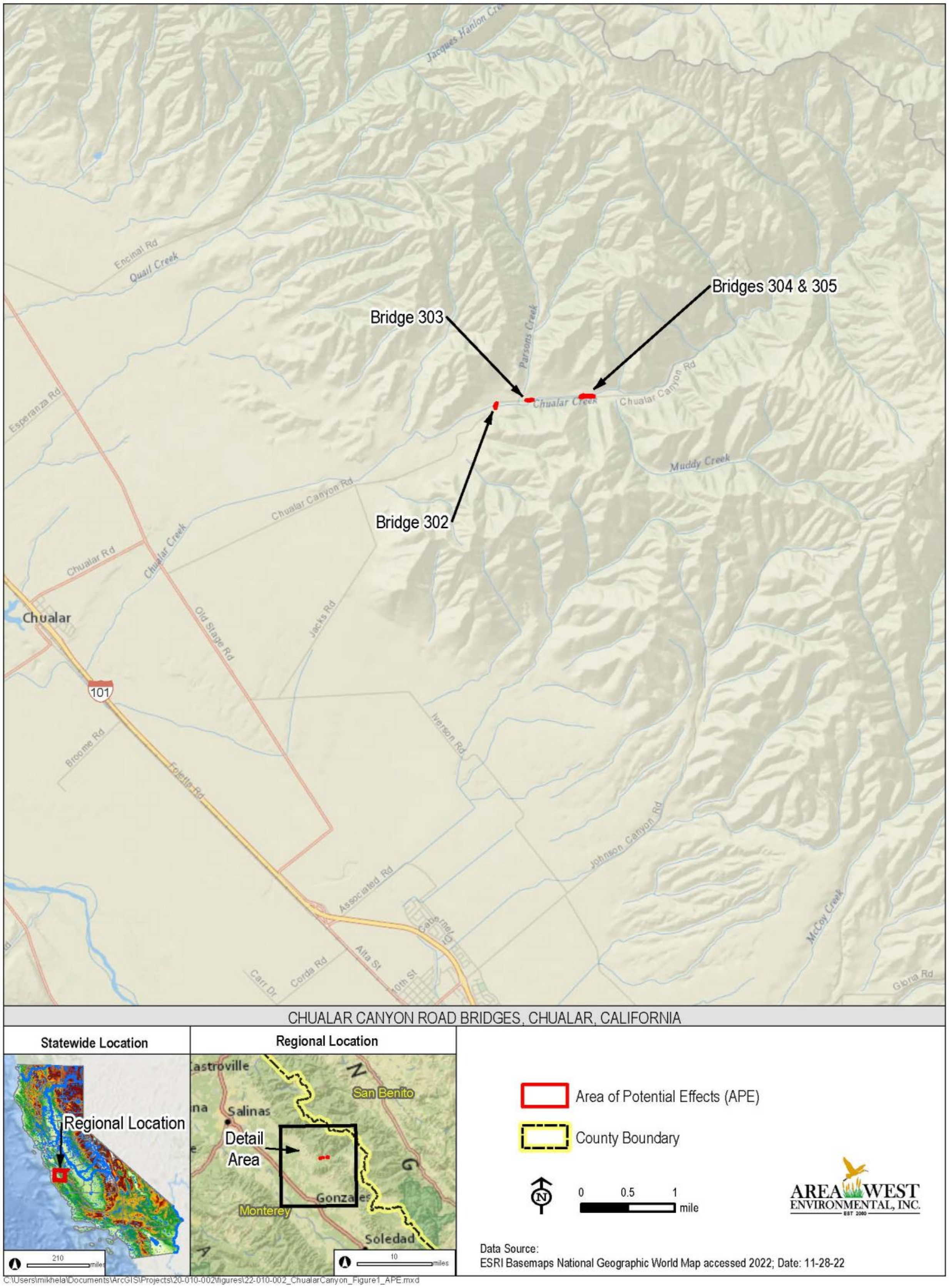


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)

Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

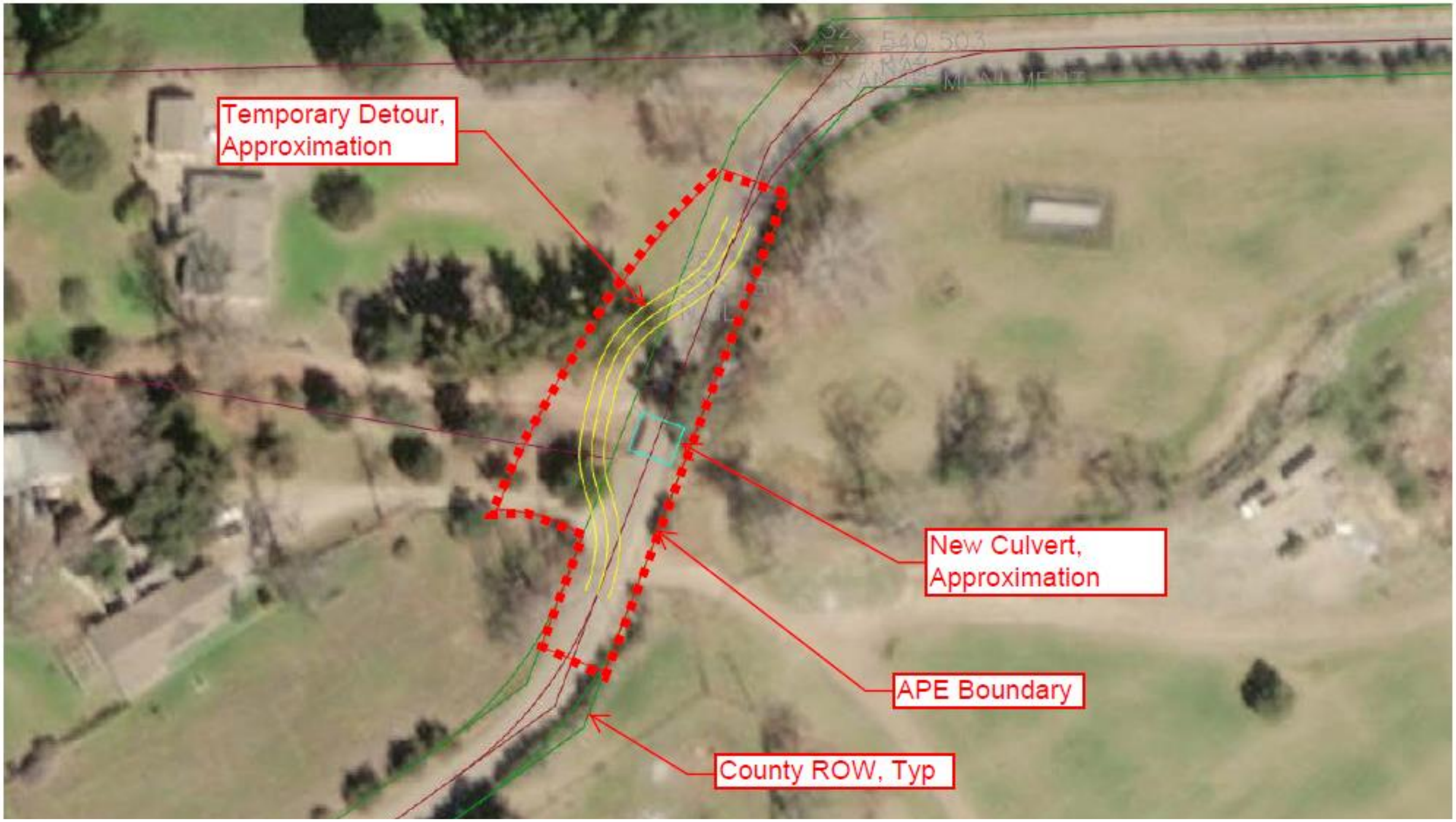


Figure 3a. Bridge 302

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements	Bridge 303	November 2, 2022
Monterey County RMA	Area of Potential Effects Map	Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

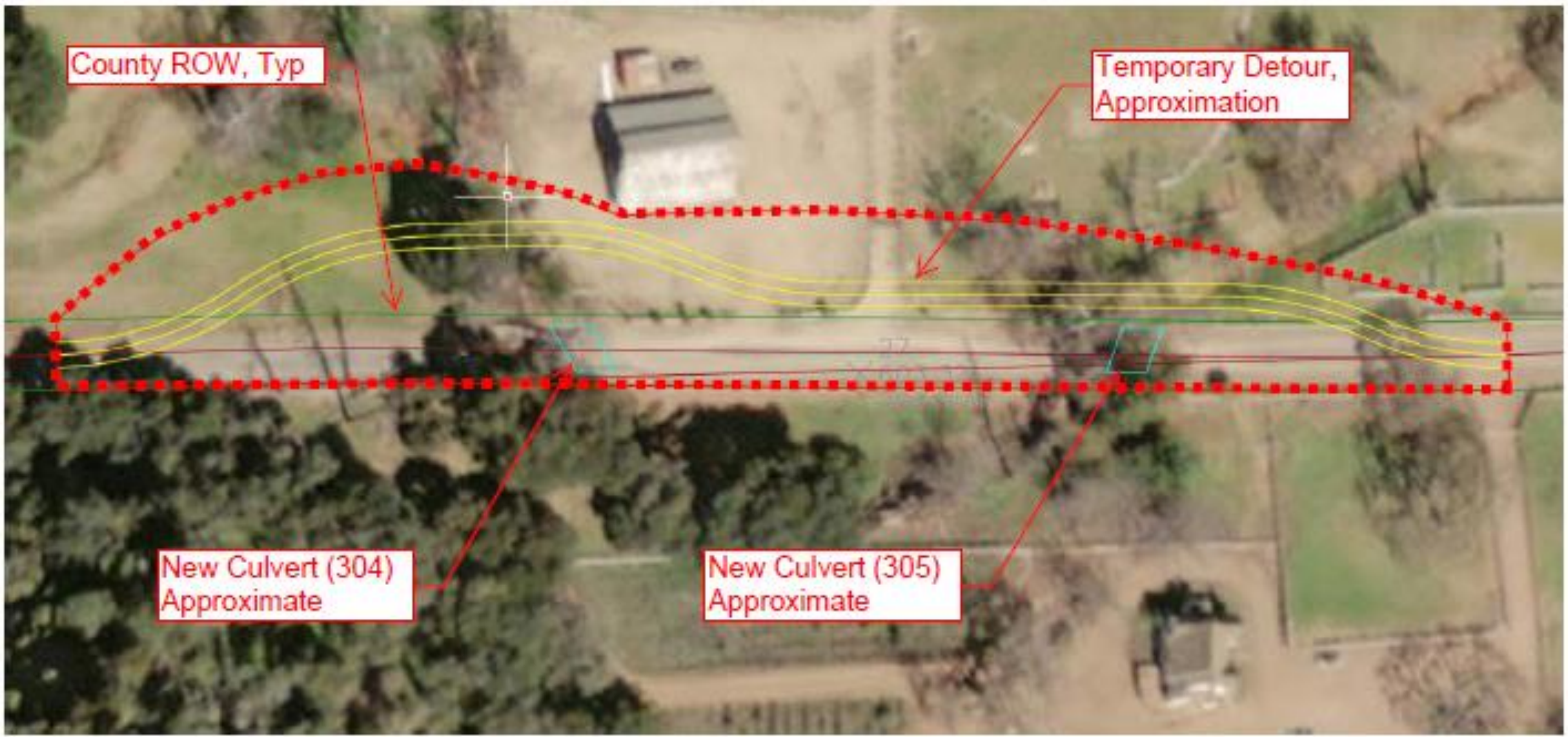


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Isaac Bojorquez, Chairman
KaKoon Ta Ruk Band of Ohlone-Costanoan
P.O. Box 541
Esparto, CA, 95627

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Isaac Bojorquez, Chariman:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

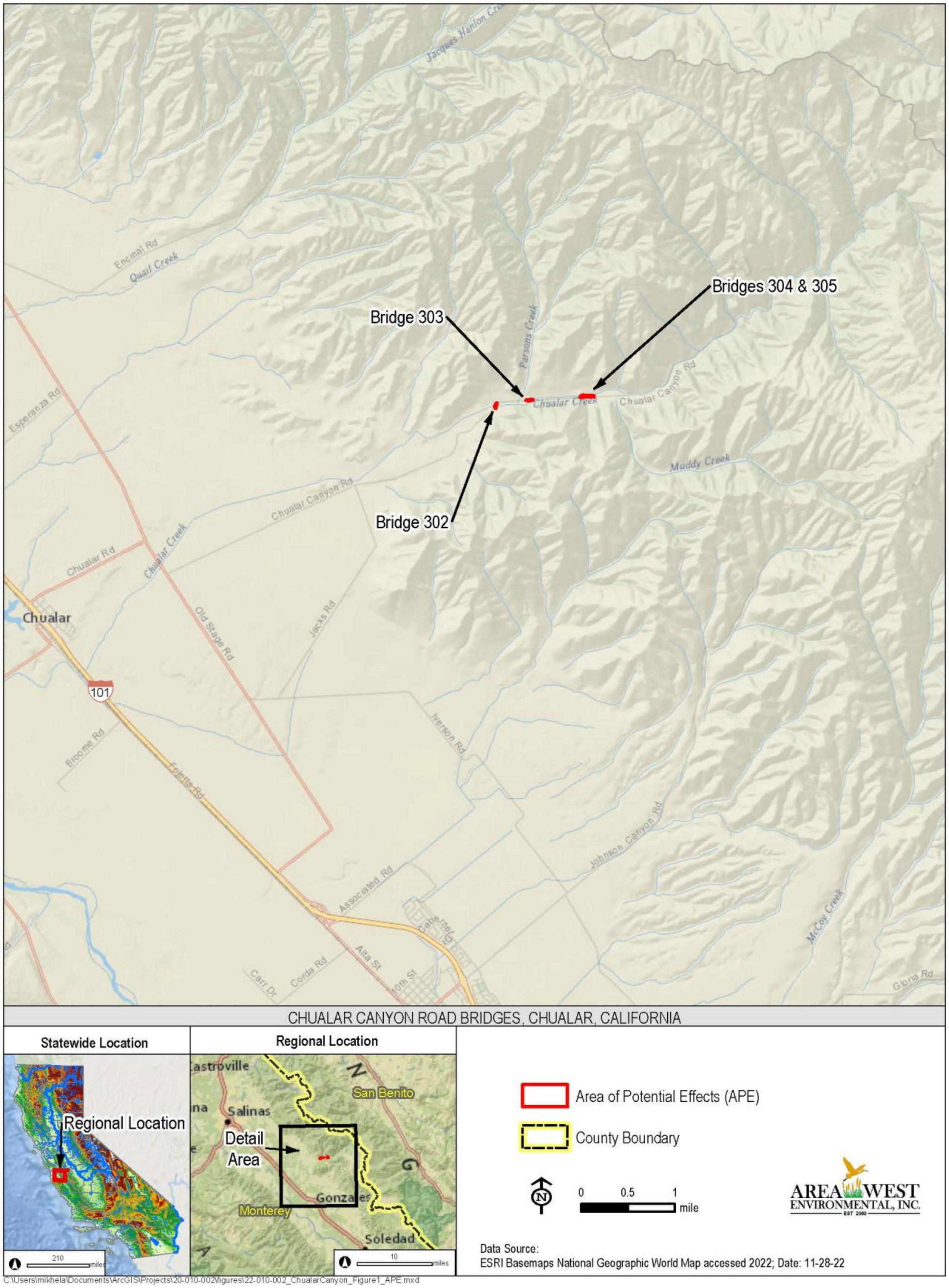


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)

Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

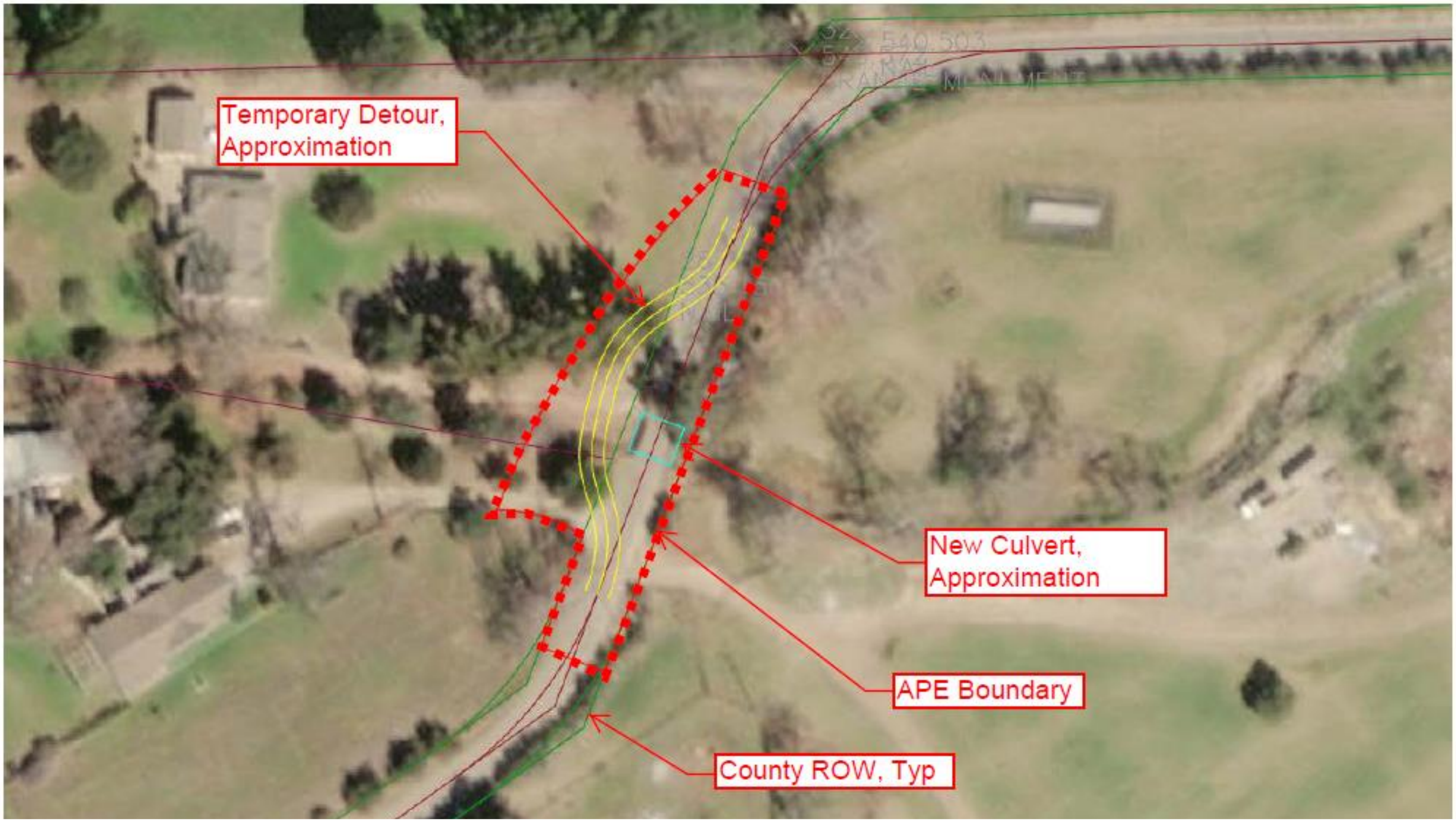


Figure 3a. Bridge 302

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 303
Area of Potential Effects Map

November 2, 2022
Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements Monterey County RMA	Bridges 304 and 305 Area of Potential Effects Map	November 11, 2022 Project No. 211199

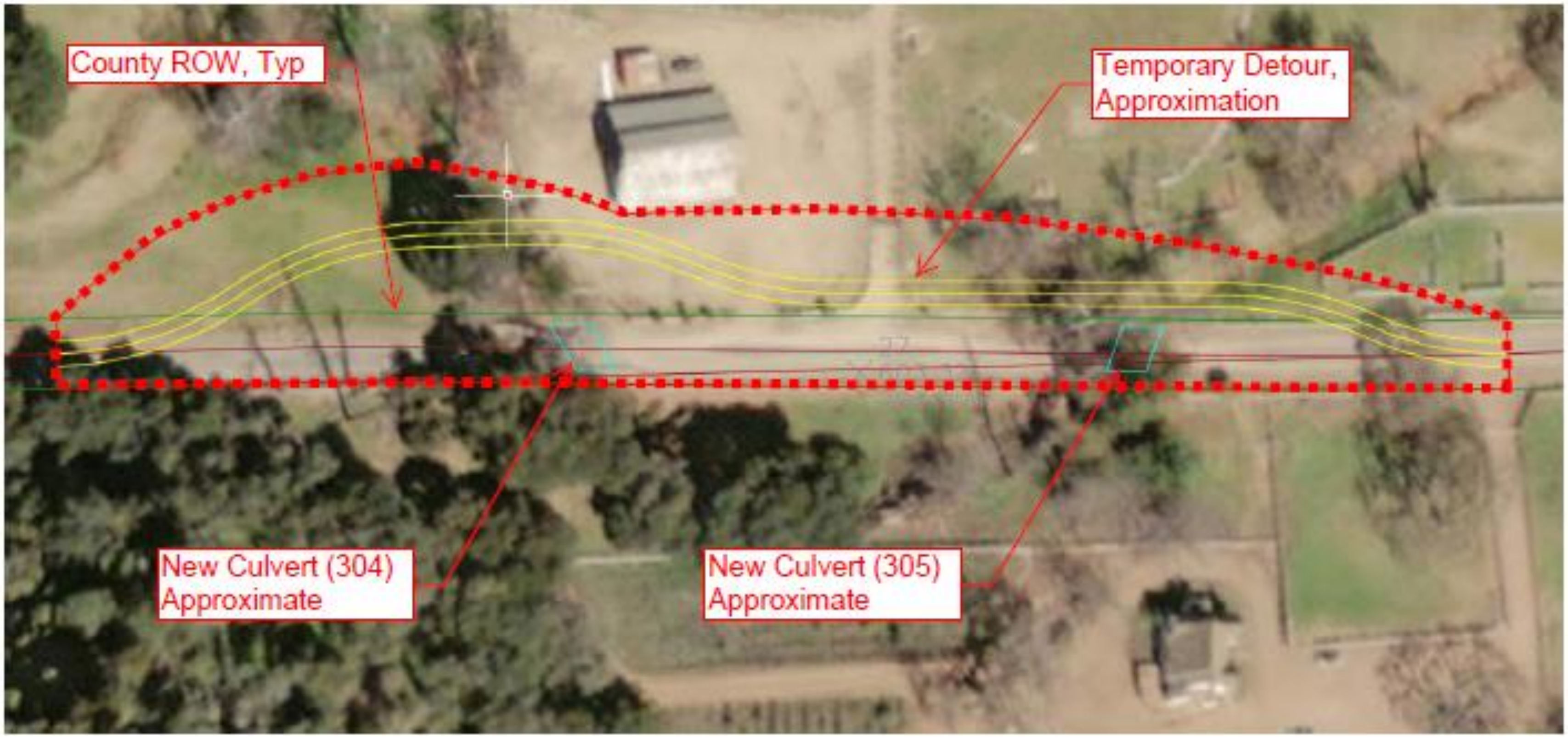


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Kanyon Sayers-Roods, MLD Contact
Indian Canyon Mutsun Band of Costanoan
1615 Pearson Court
San Jose, CA, 95122

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Kanyon Sayers-Roods, MLD Contact:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

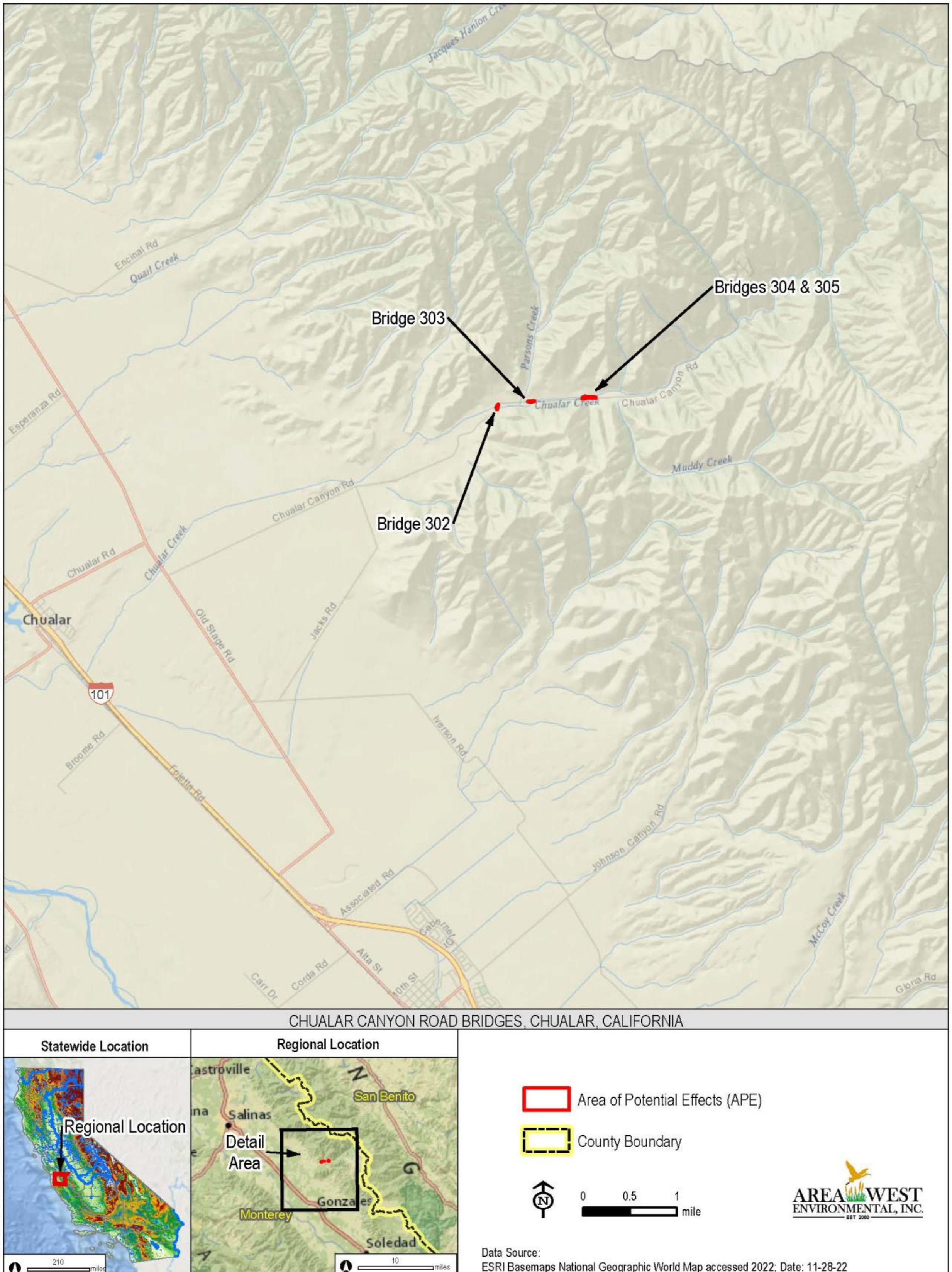
Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us



C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure1_APE.mxd

Figure 1. Project Vicinity

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

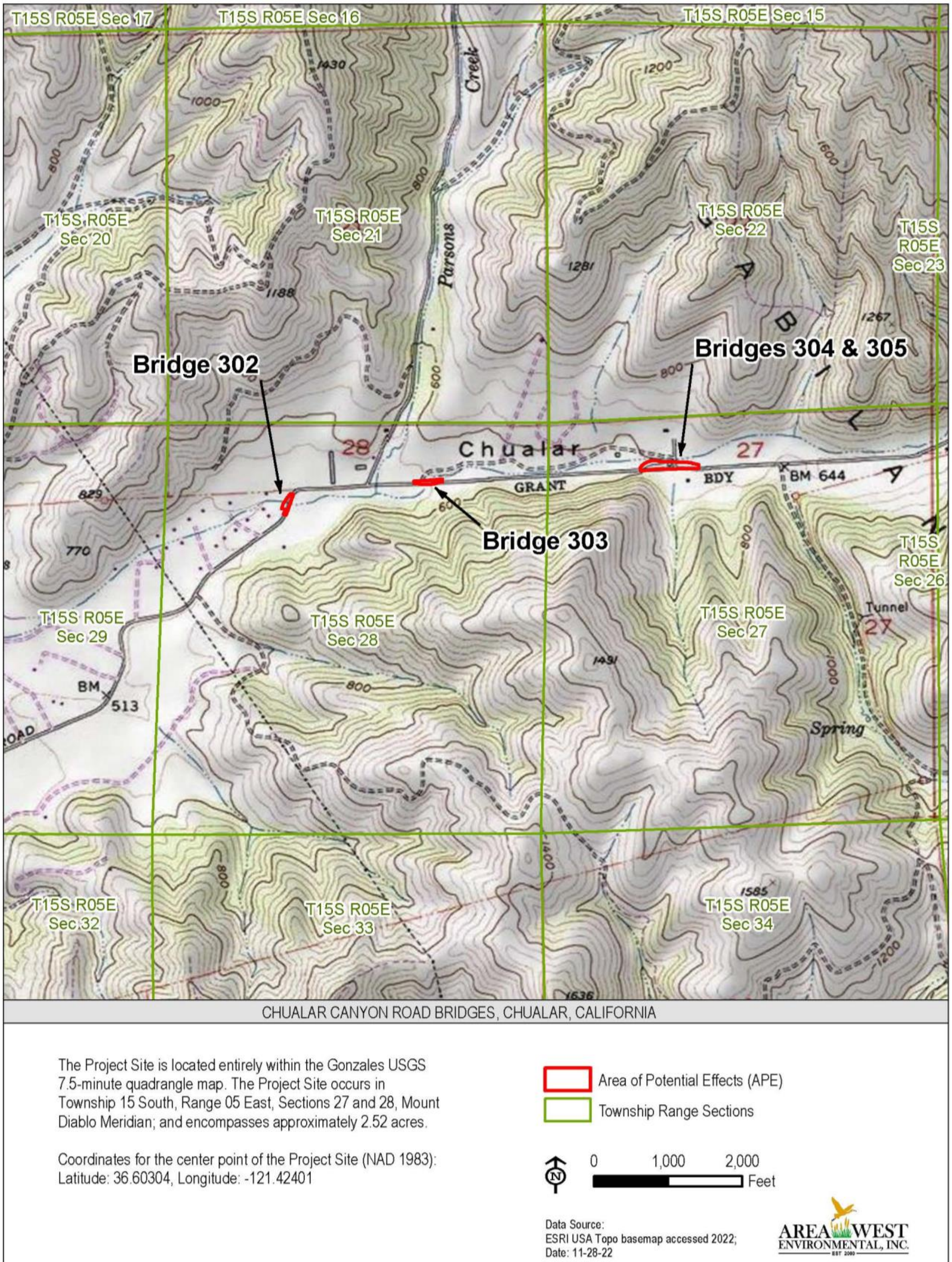


Figure 2. Project Location

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

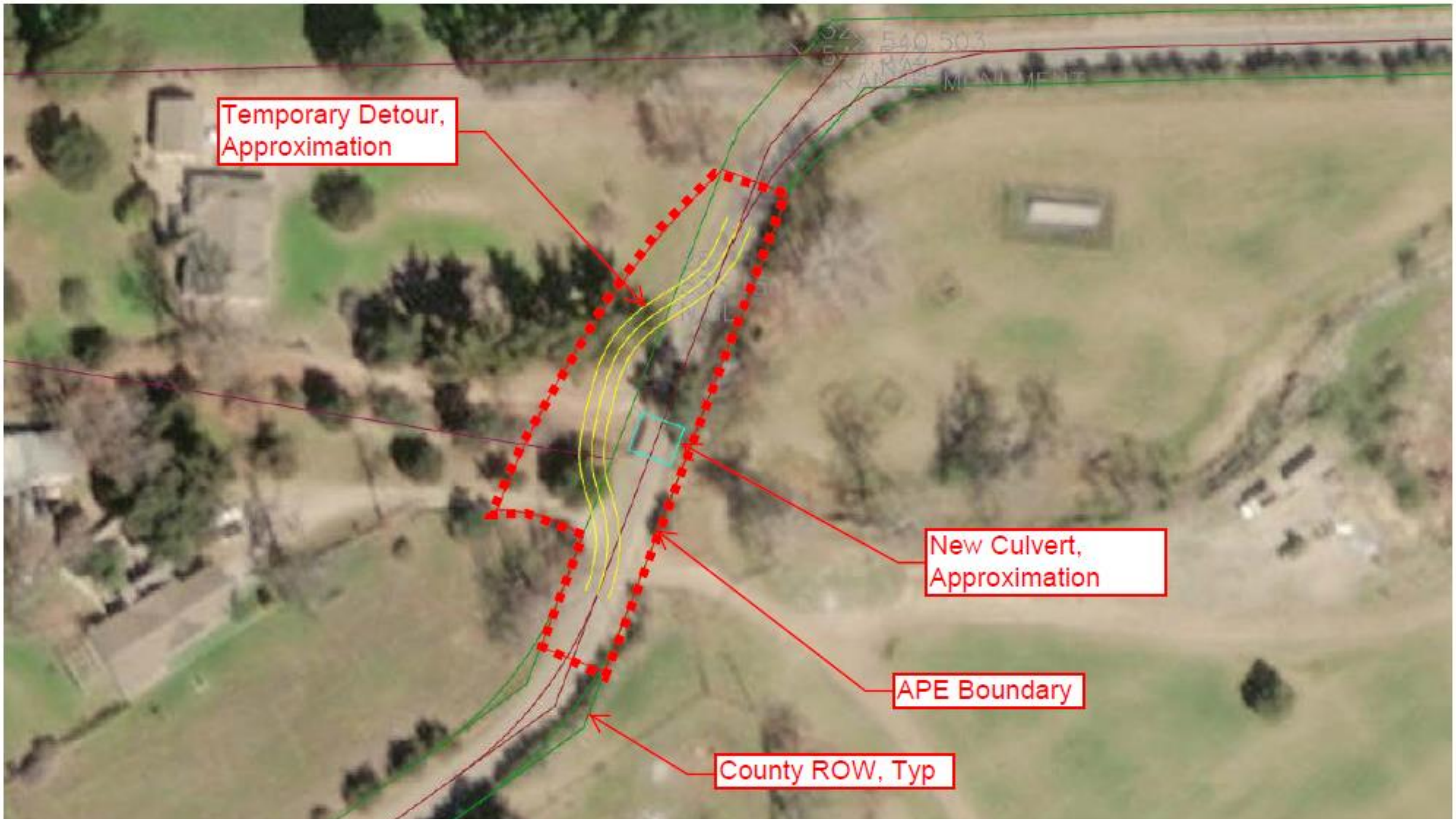


Figure 3a. Bridge 302

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 303
Area of Potential Effects Map

November 2, 2022
Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

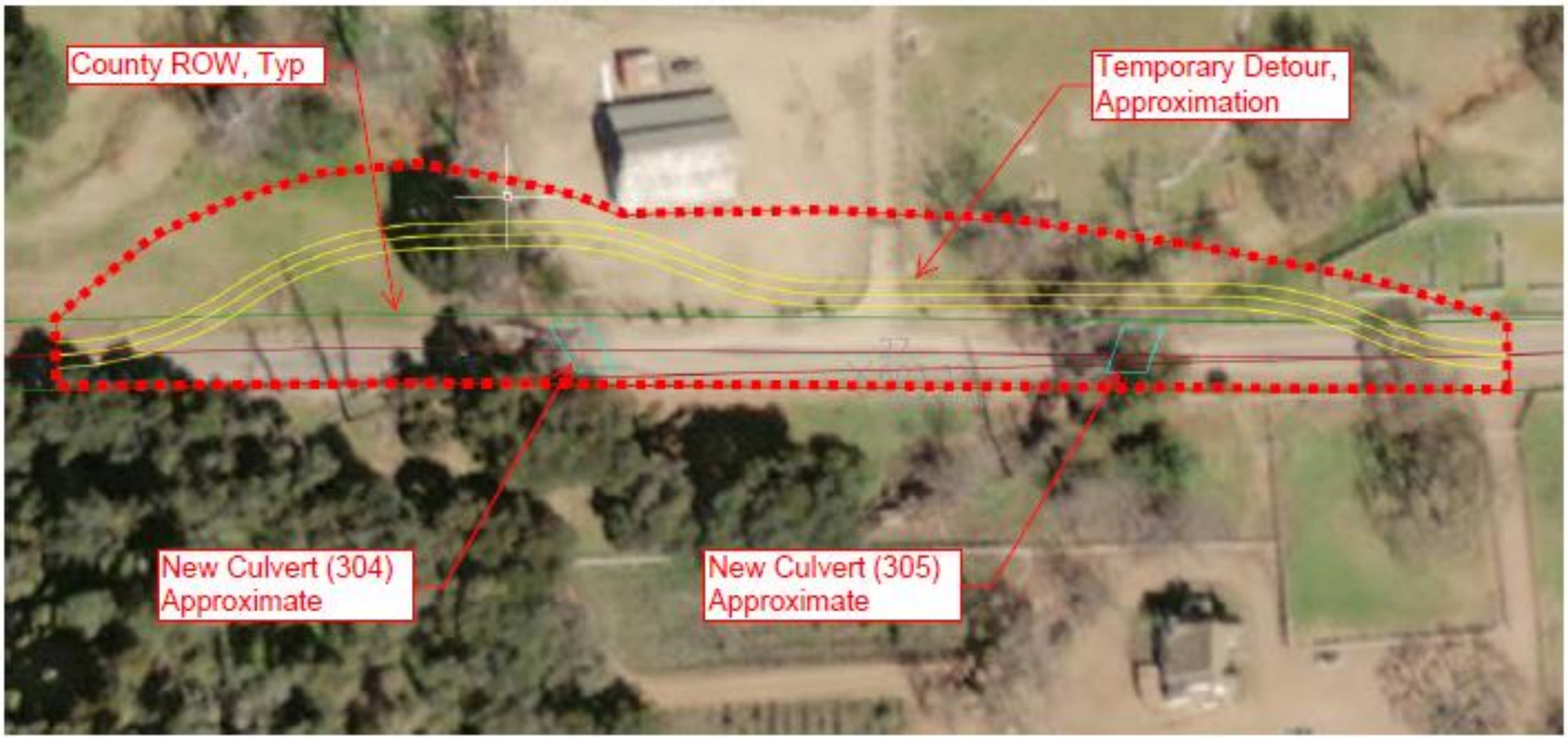


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Karen White, Chairperson
Xolon-Salinan Tribe
P. O. Box 7045
Spreckels, CA, 93962

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Karen White, Chairperson:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-4800
www.co.monterey.ca.us

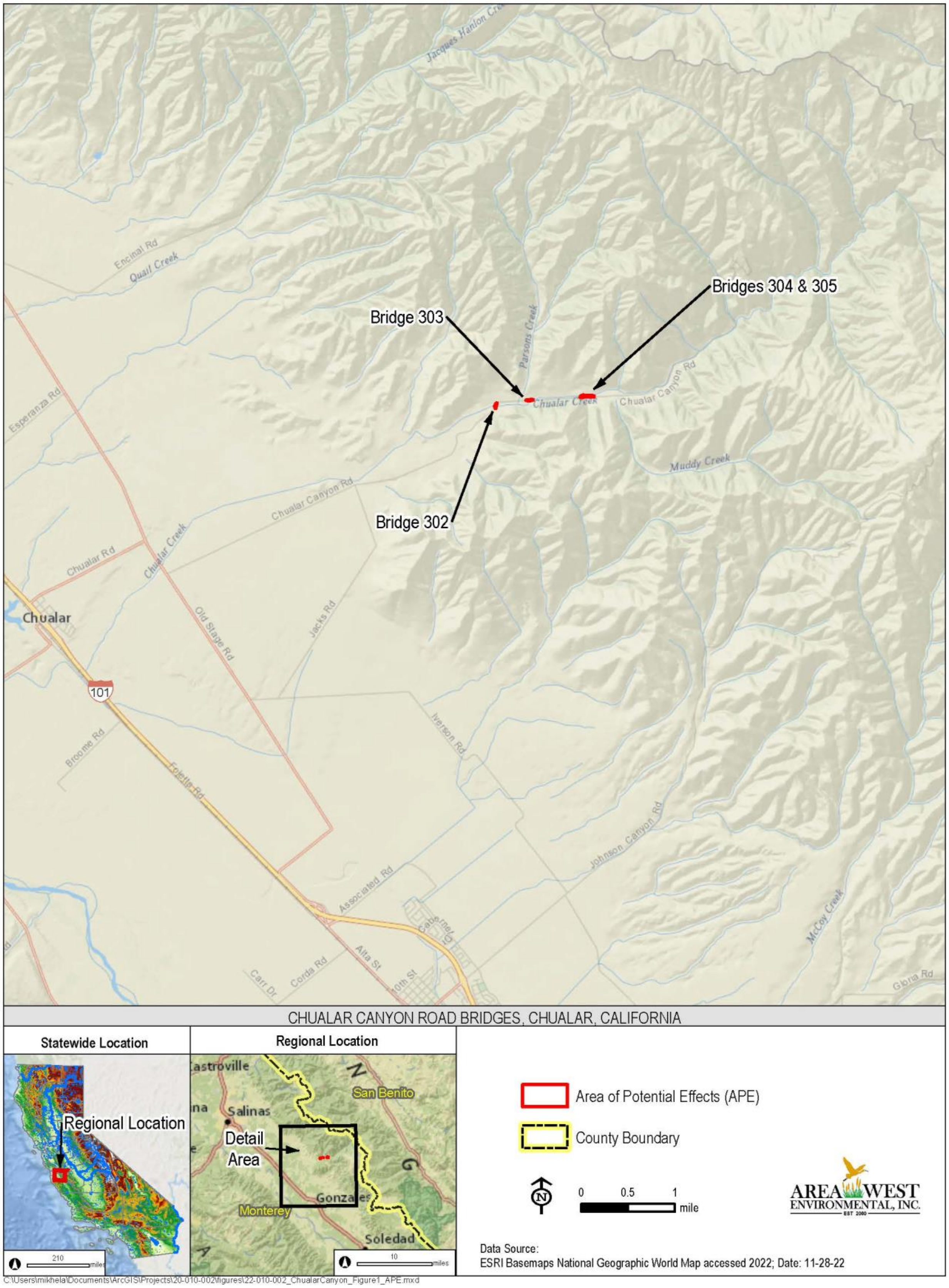
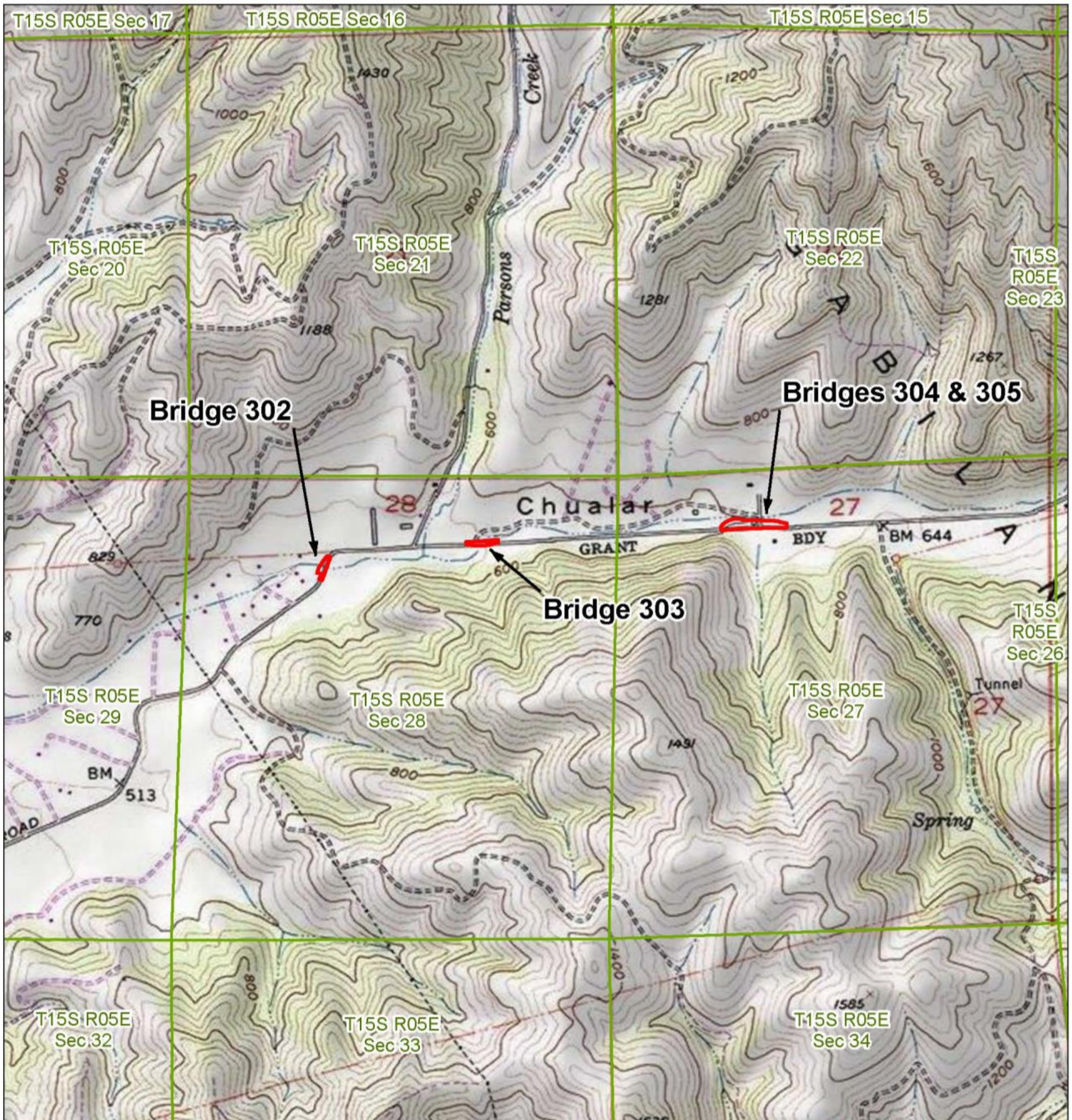


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us



CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)
Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

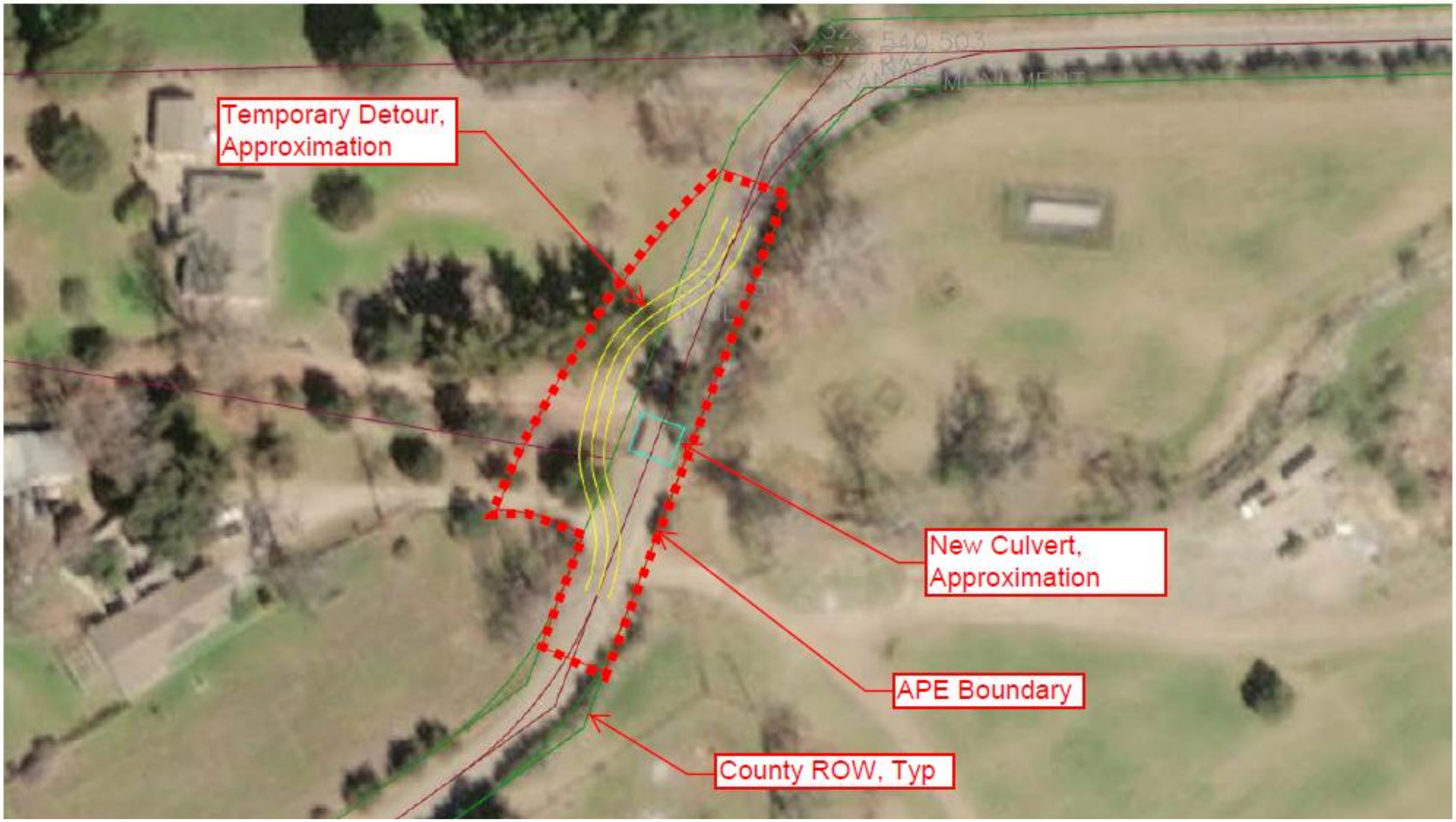


Figure 3a. Bridge 302

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 303
Area of Potential Effects Map

November 2, 2022
Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements Monterey County RMA	Bridges 304 and 305 Area of Potential Effects Map	November 11, 2022 Project No. 211199

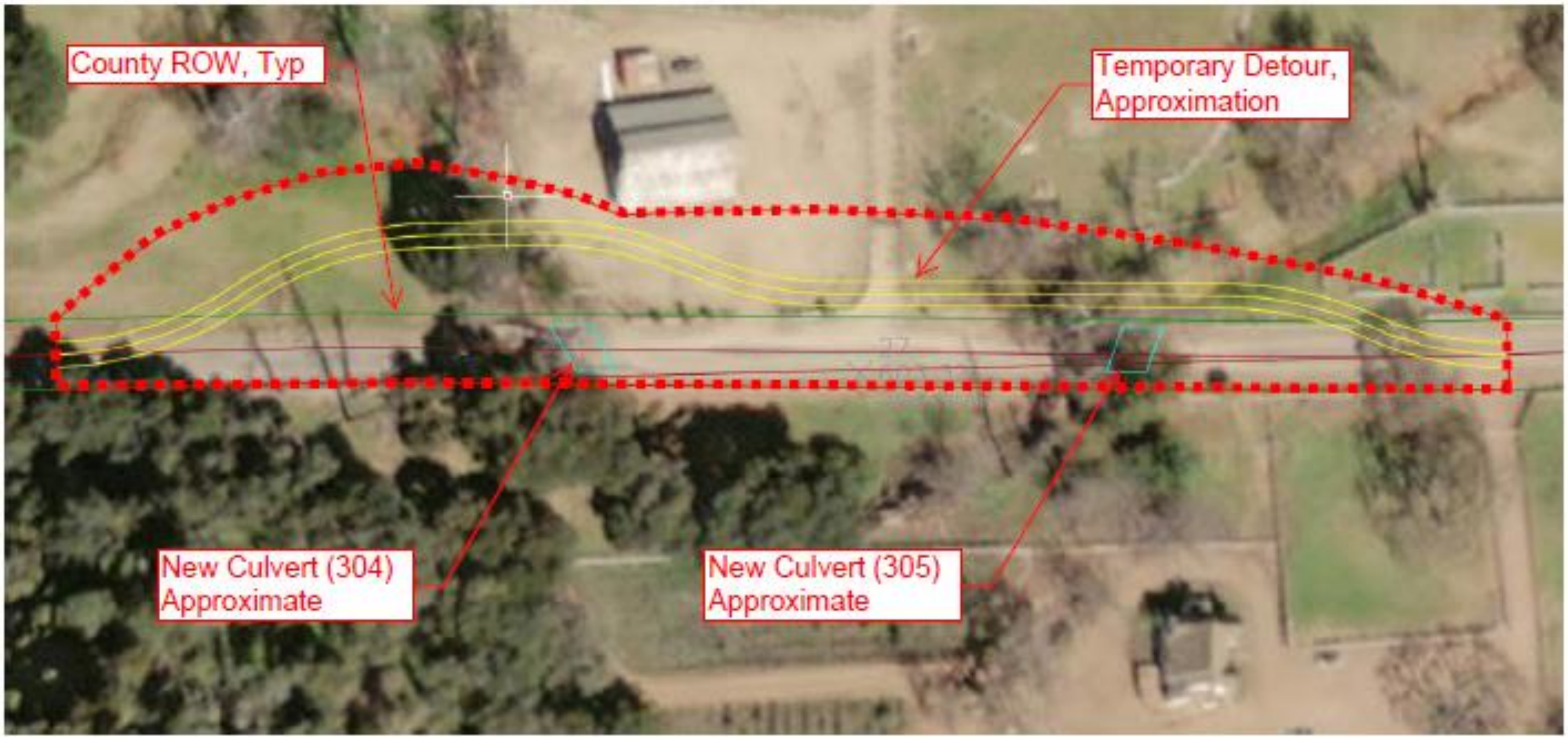


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Kenneth Woodrow, Chairperson
Wuksache Indian Tribe/Eshom Valley Band
1179 Rock Haven Ct.
Salinas, CA, 93906

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Isaac Kenneth Woodrow, Chairperson:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

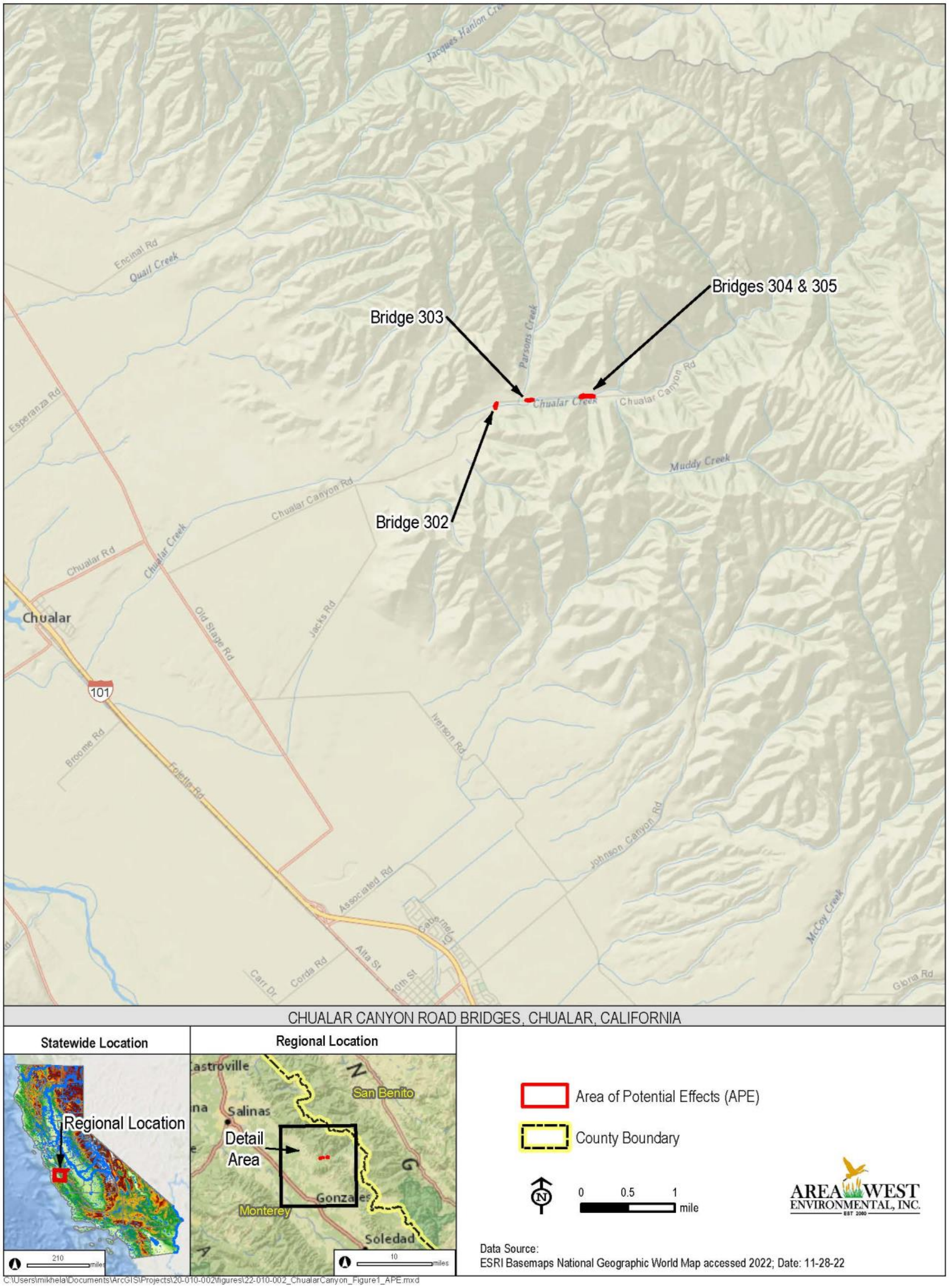
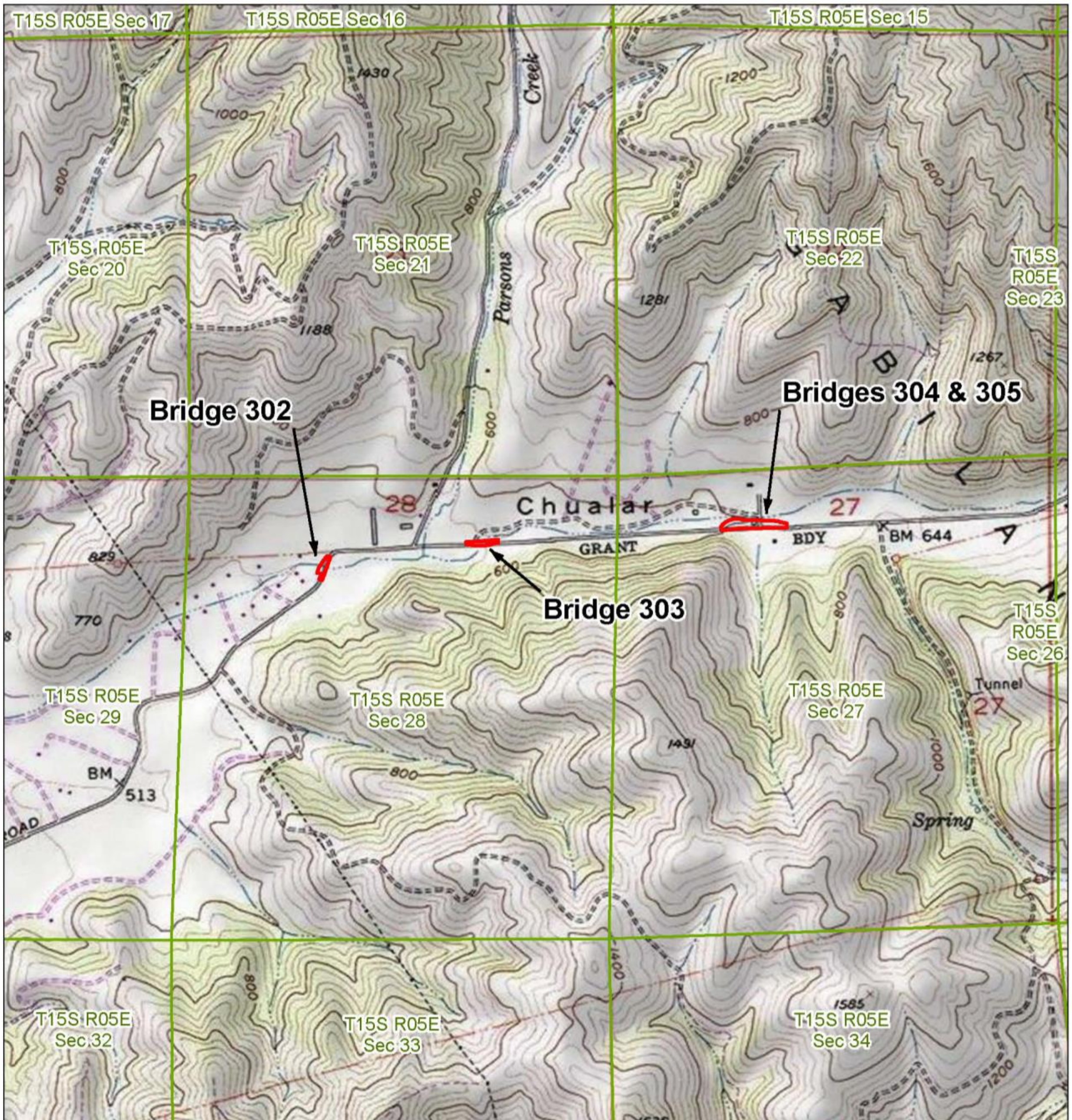


Figure 1. Project Vicinity

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us



CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)
Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

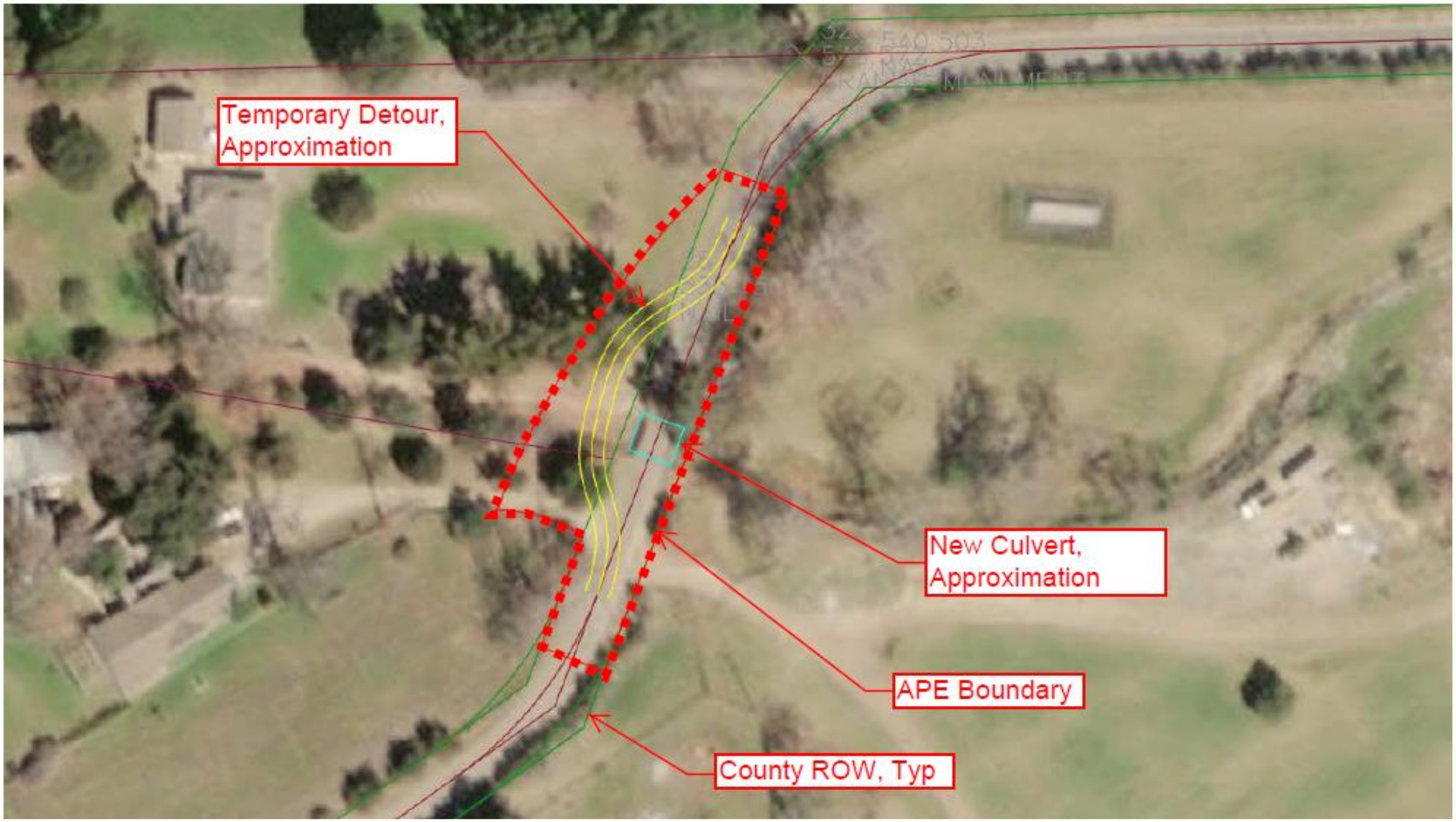


Figure 3a. Bridge 302

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 303
Area of Potential Effects Map

November 2, 2022
Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

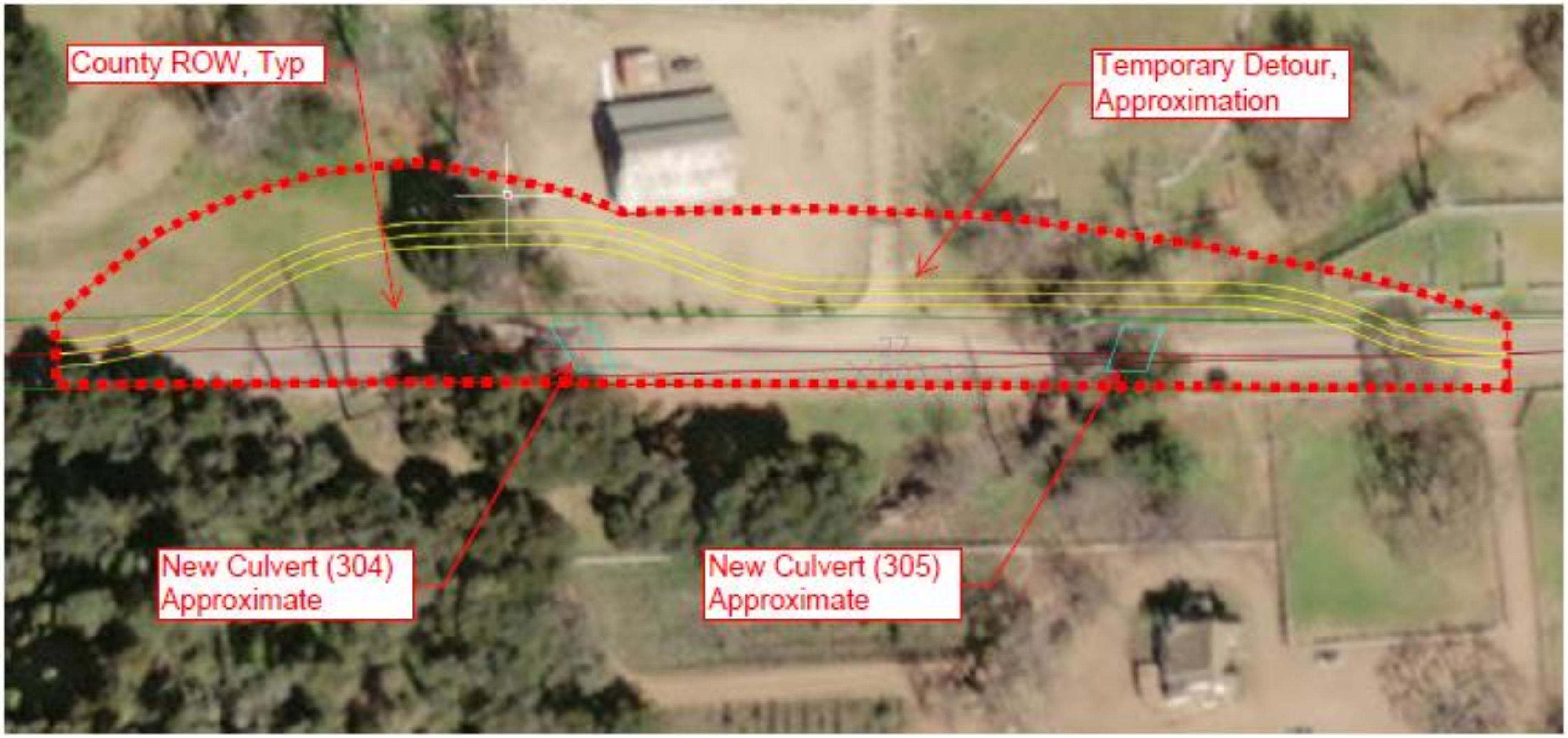


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Louise Miranda-Ramirez, Chairperson
Ohlone/Costanoan-Esselen Nation
P.O. Box 1301
Monterey, CA, 93942

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Louise Miranda-Ramirez, Chairperson:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

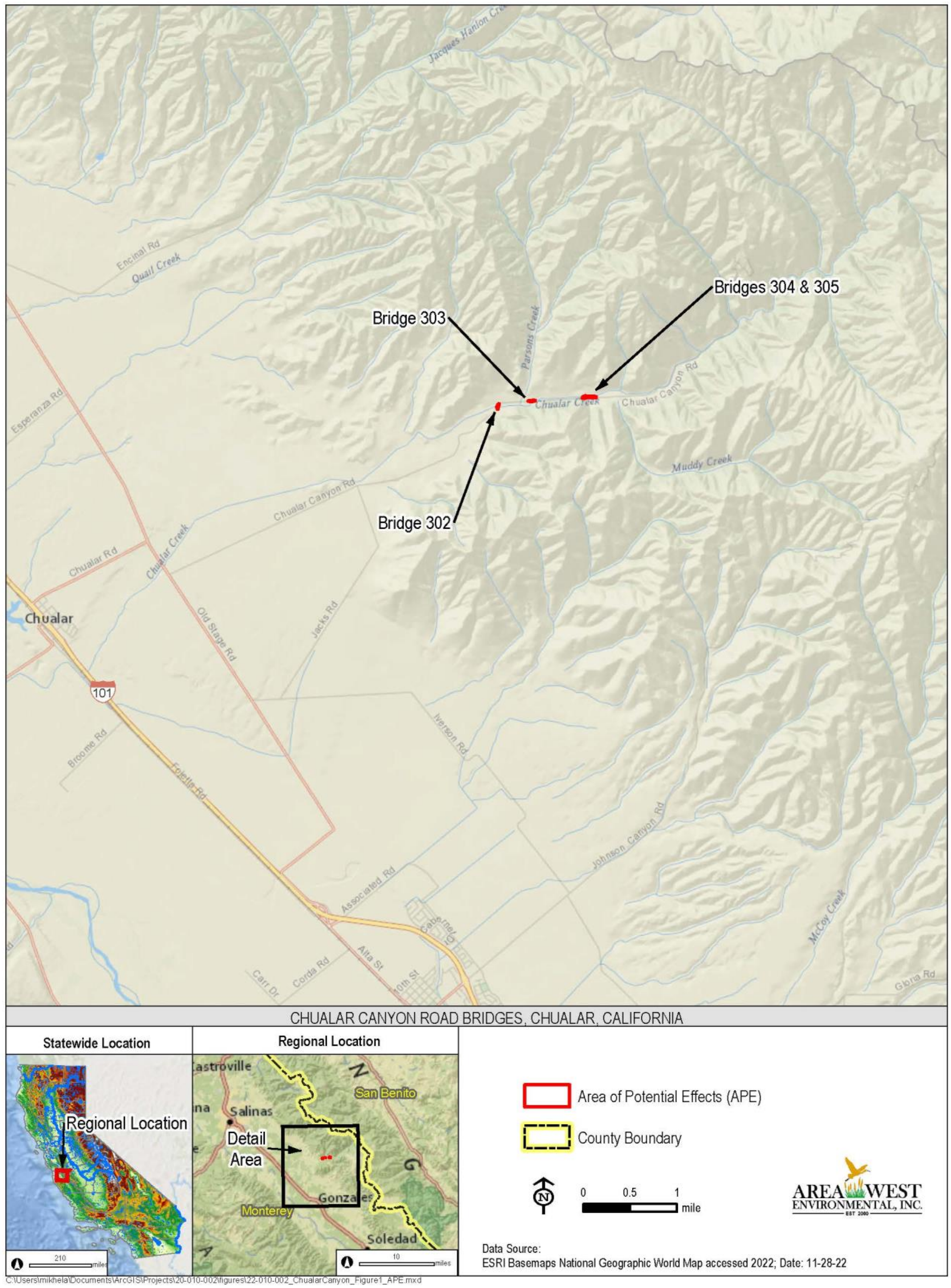


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)

Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

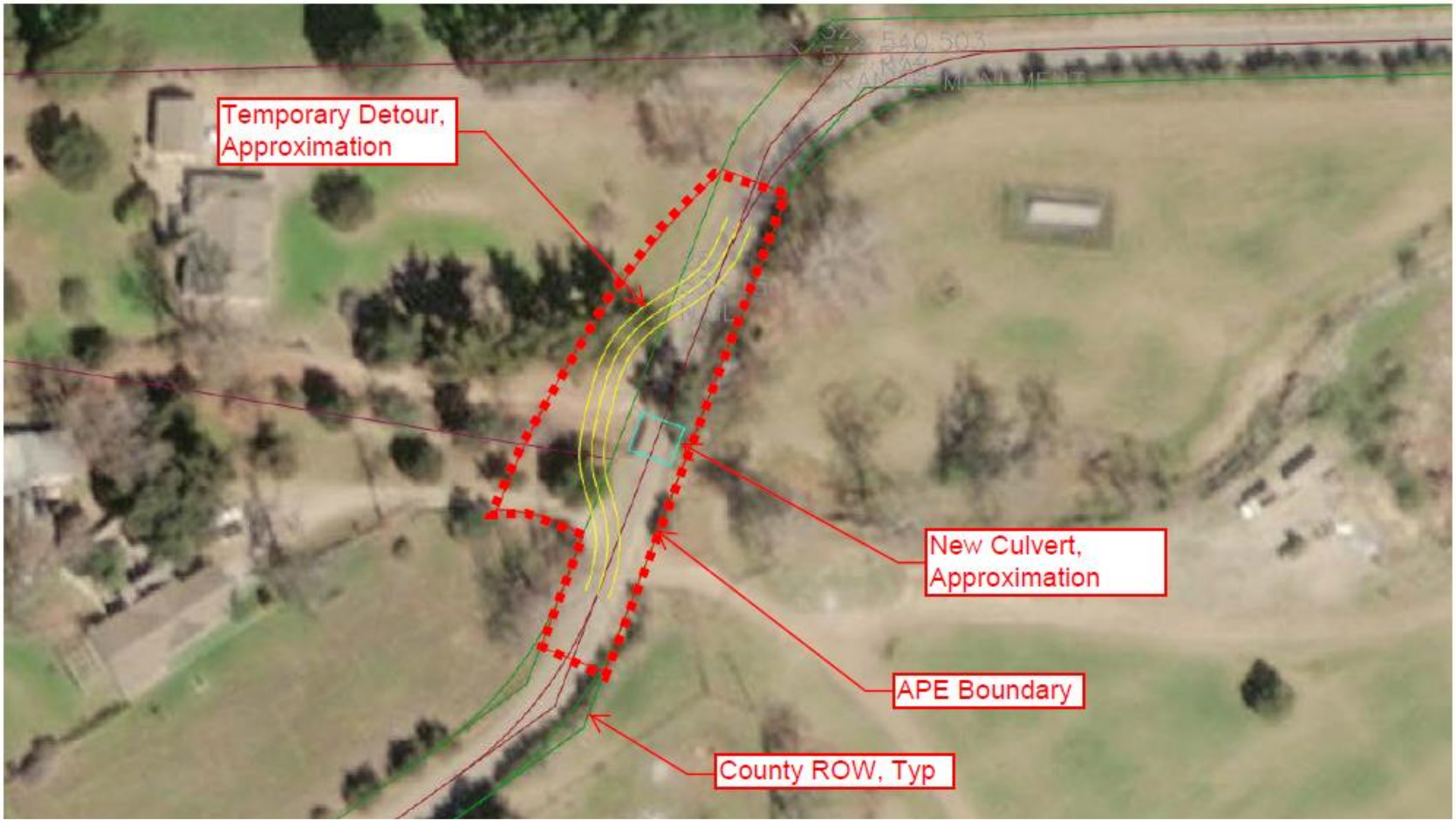


Figure 3a. Bridge 302

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements	Bridge 303	November 2, 2022
Monterey County RMA	Area of Potential Effects Map	Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements	Bridges 304 and 305	November 11, 2022
Monterey County RMA	Area of Potential Effects Map	Project No. 211199

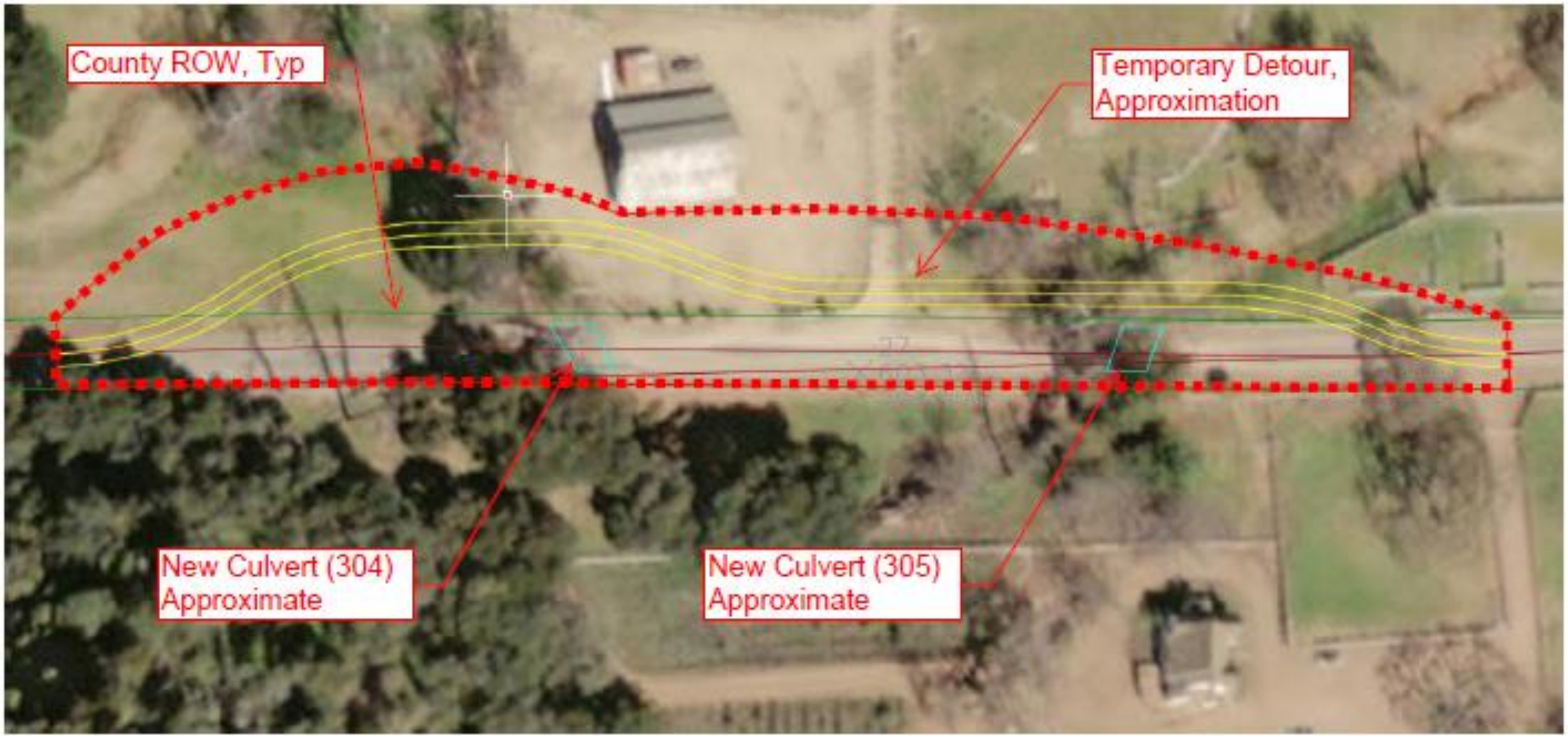


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Patti Dunton, Tribal Administrator
Salinan Tribe of Monterey, San Luis Obispo Counties
7070 Morro Road, Suite A
Atascadero, CA, 93422

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Patti Dunton, Tribal Administrator:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-4800
www.co.monterey.ca.us

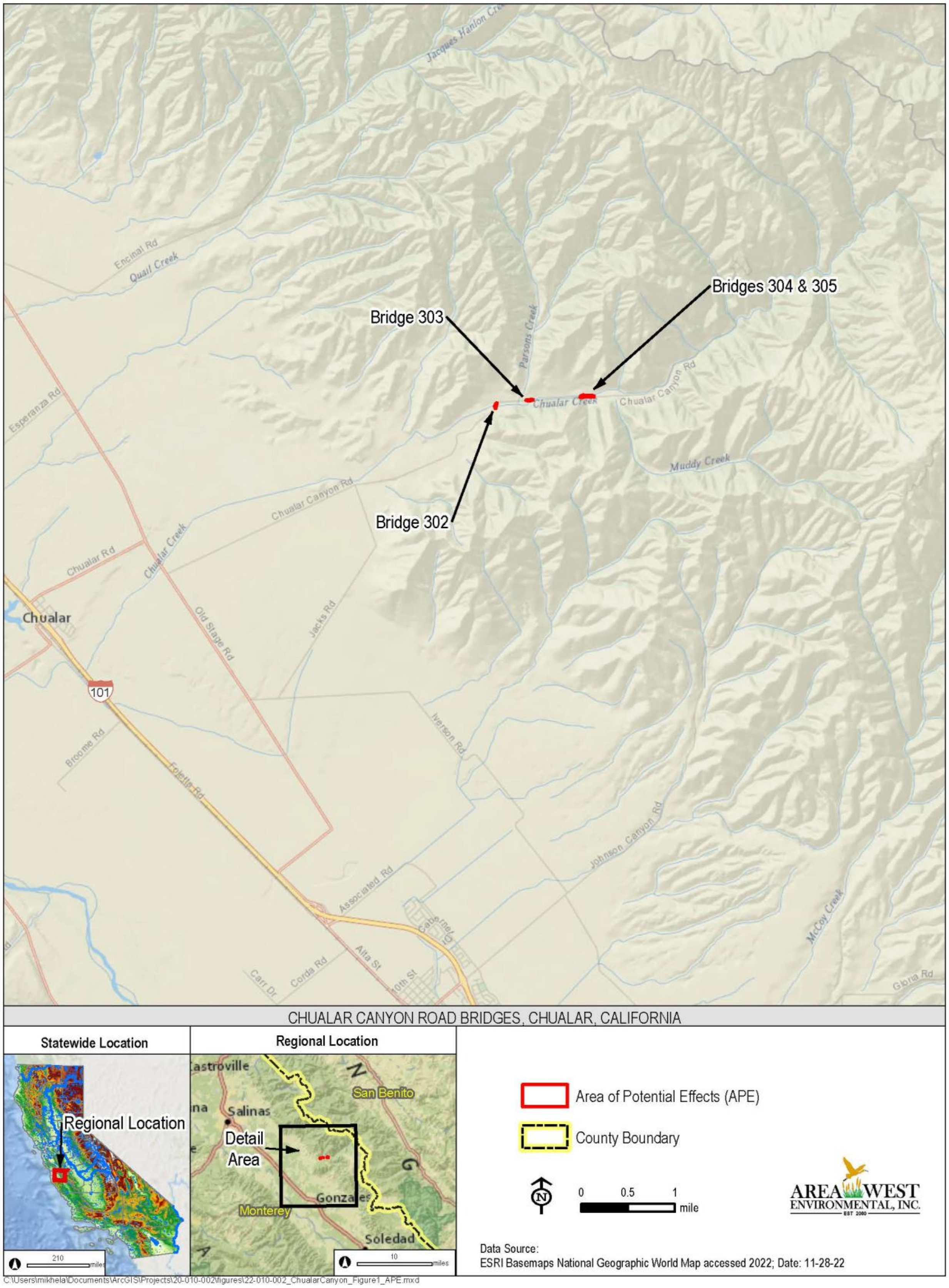


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)
Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

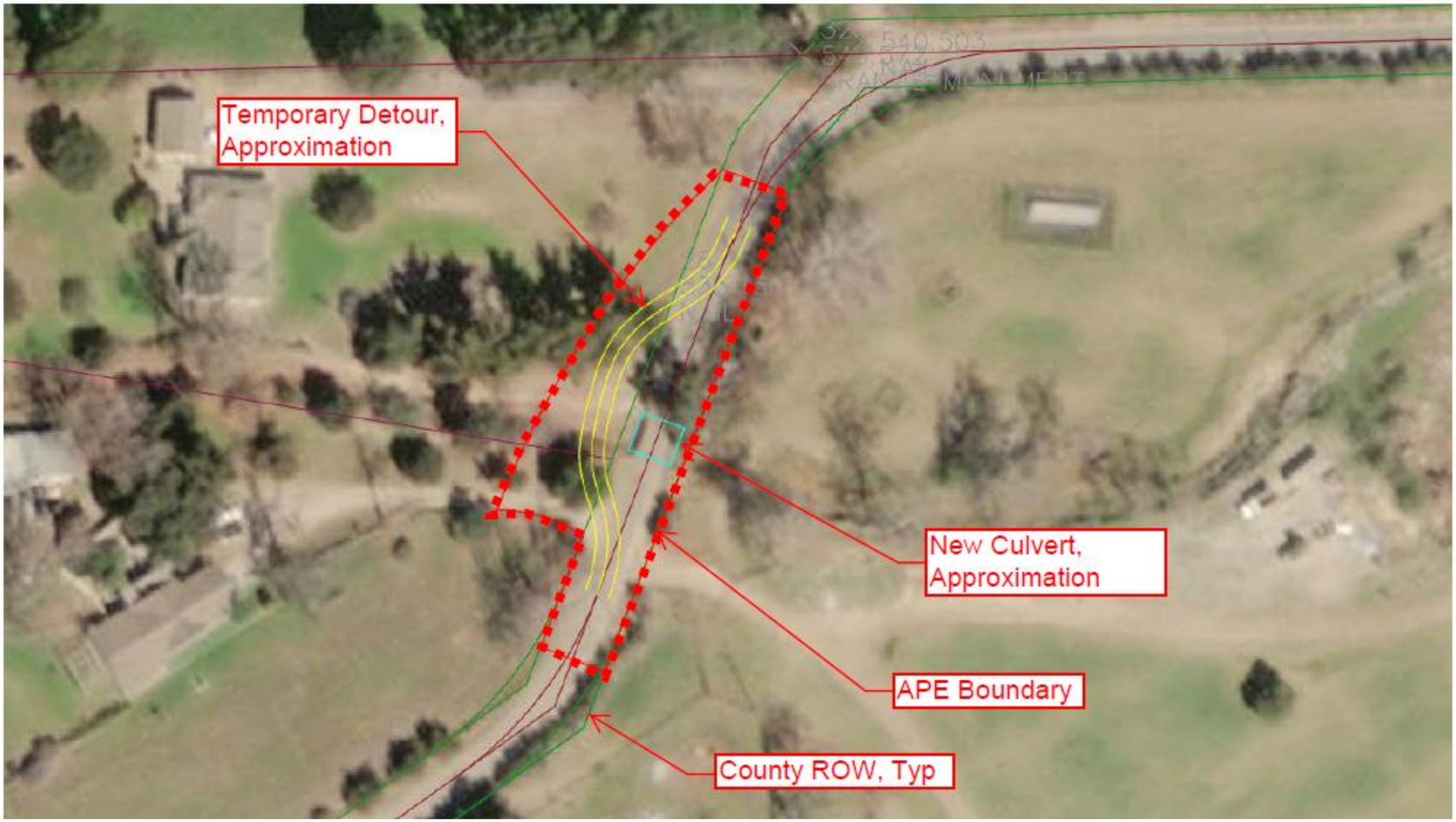


Figure 3a. Bridge 302

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 303
Area of Potential Effects Map

November 2, 2022
Project No. 211199

Figure 3b. Bridge 303

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

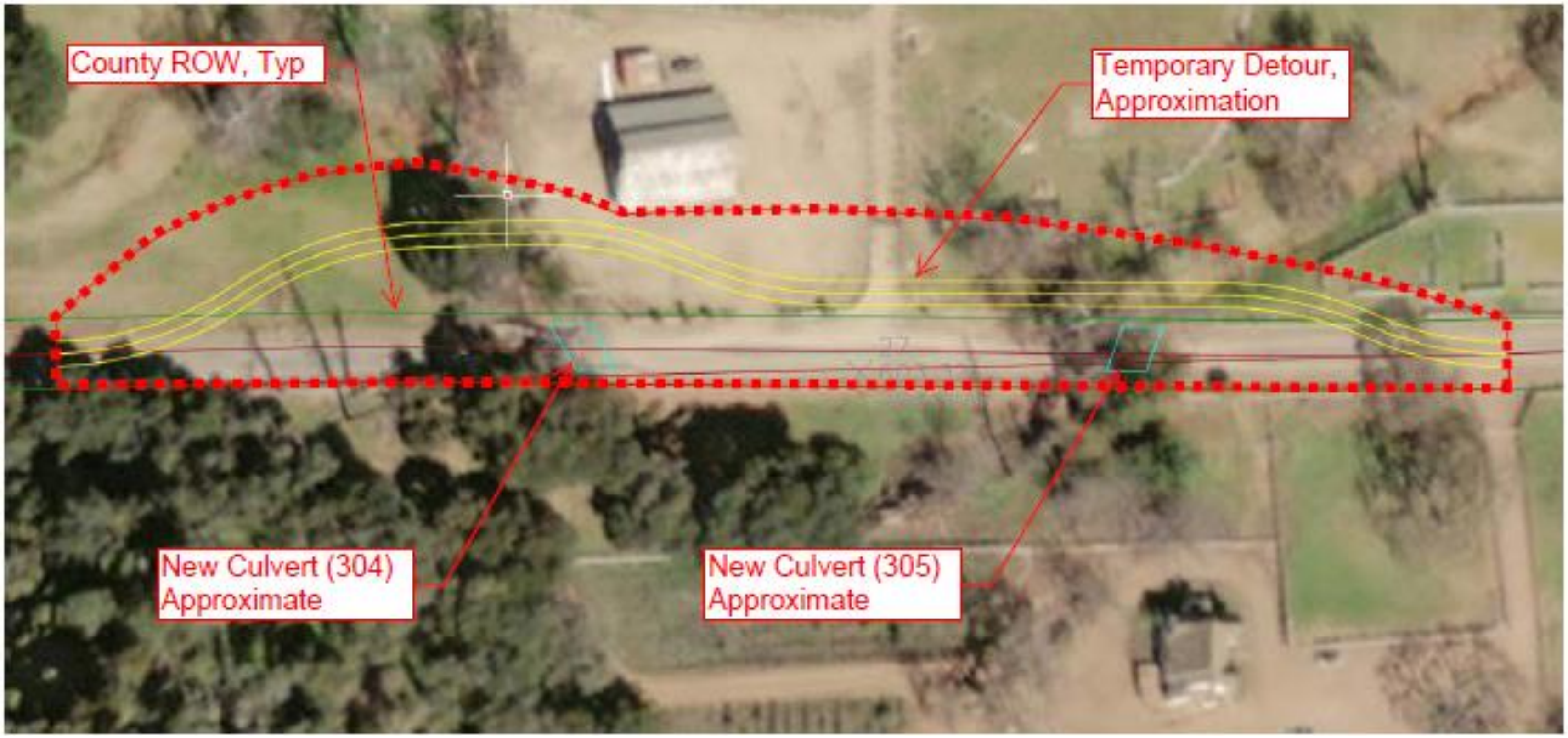


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Susan Morley, Cultural Resources
Esselen Tribe of Monterey County
3059 Bostick Avenue
Marina, CA, 93933

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Susan Morley, Cultural Resources:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

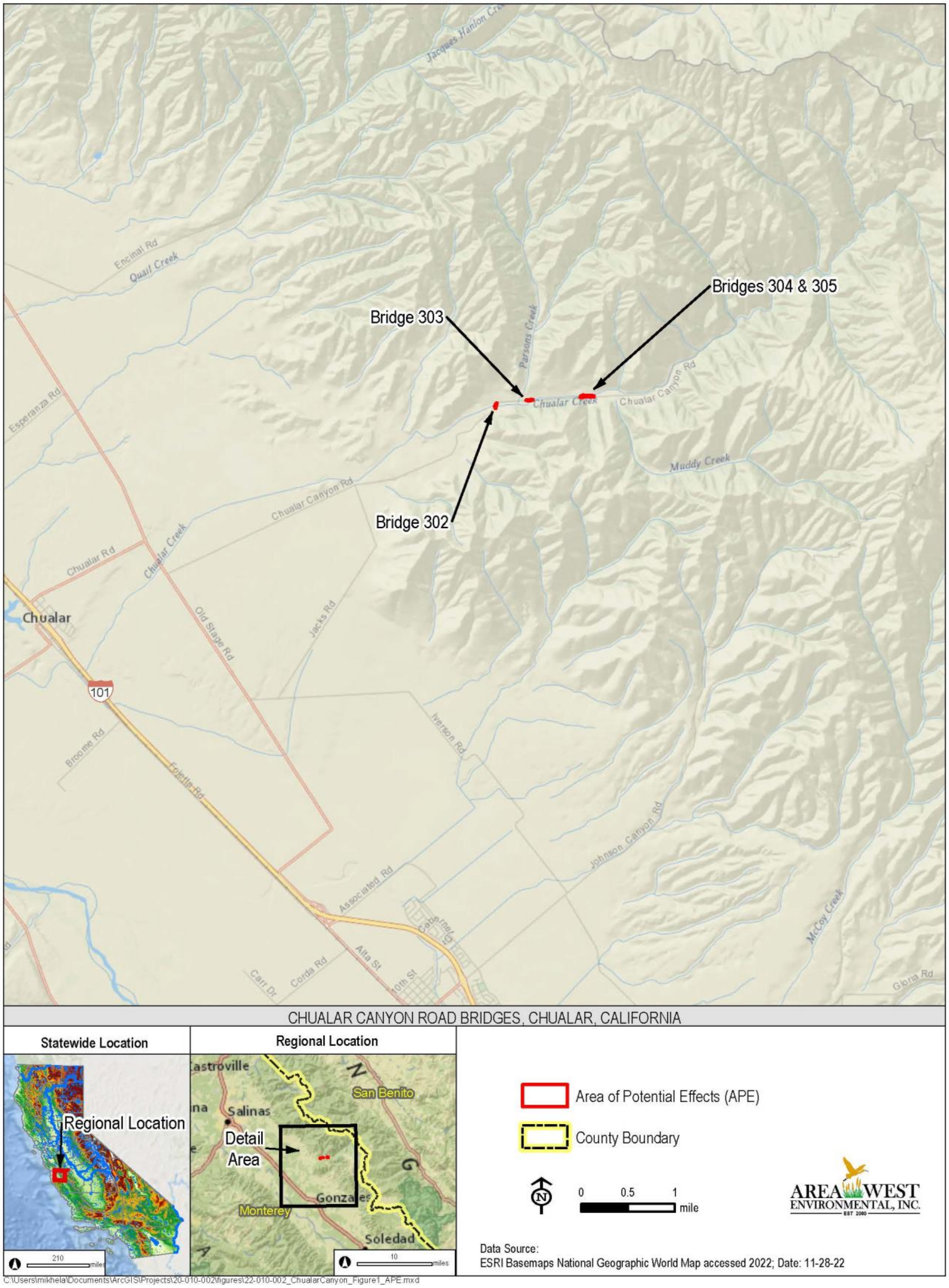
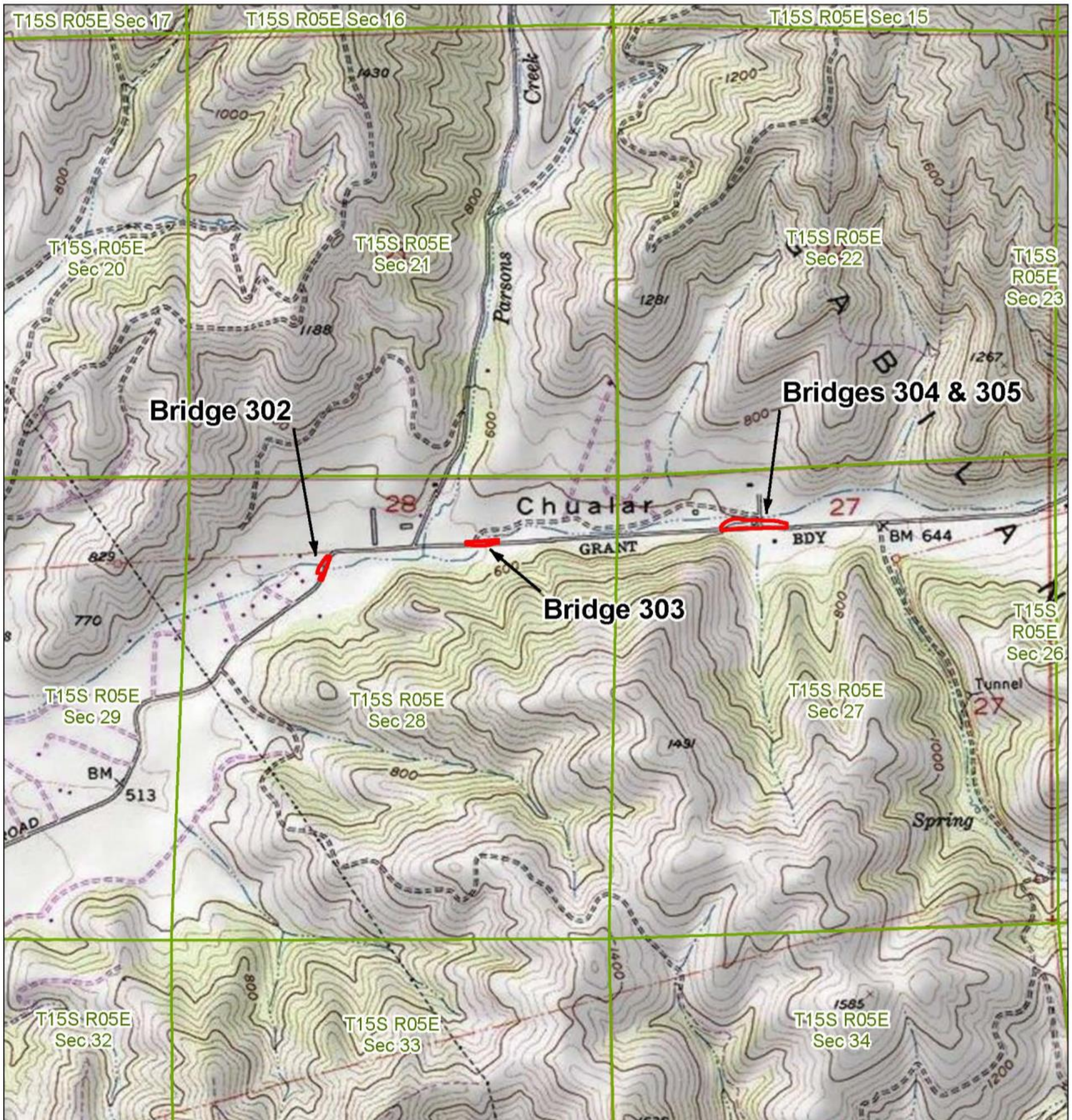


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us



CHUALAR CANYON ROAD BRIDGES, CHUALAR, CALIFORNIA

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)

Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements	Bridge 302	November 11, 2022
Monterey County RMA	Area of Potential Effects Map	Project No. 211199

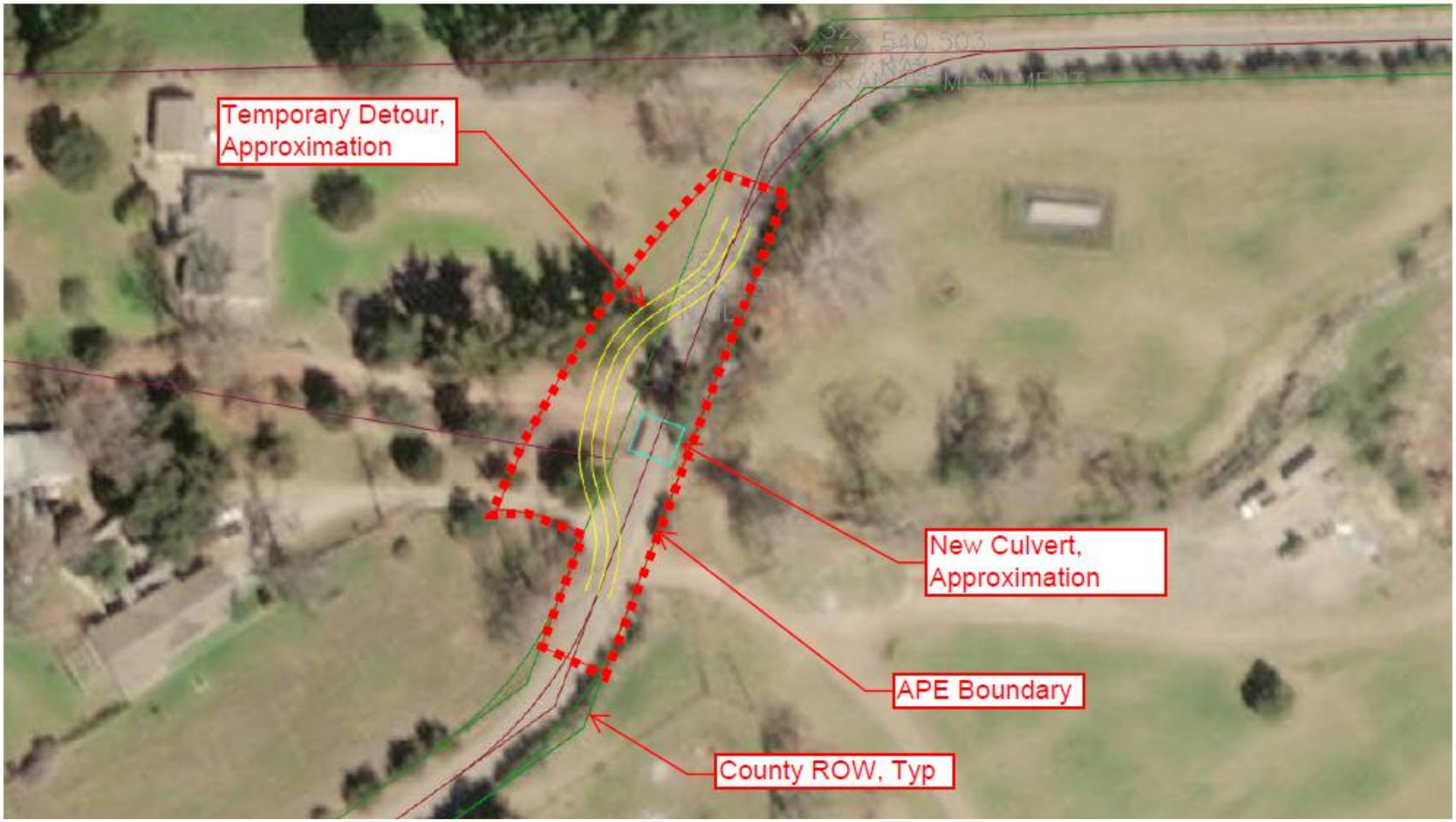


Figure 3a. Bridge 302

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements	Bridge 303	November 2, 2022
Monterey County RMA	Area of Potential Effects Map	Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

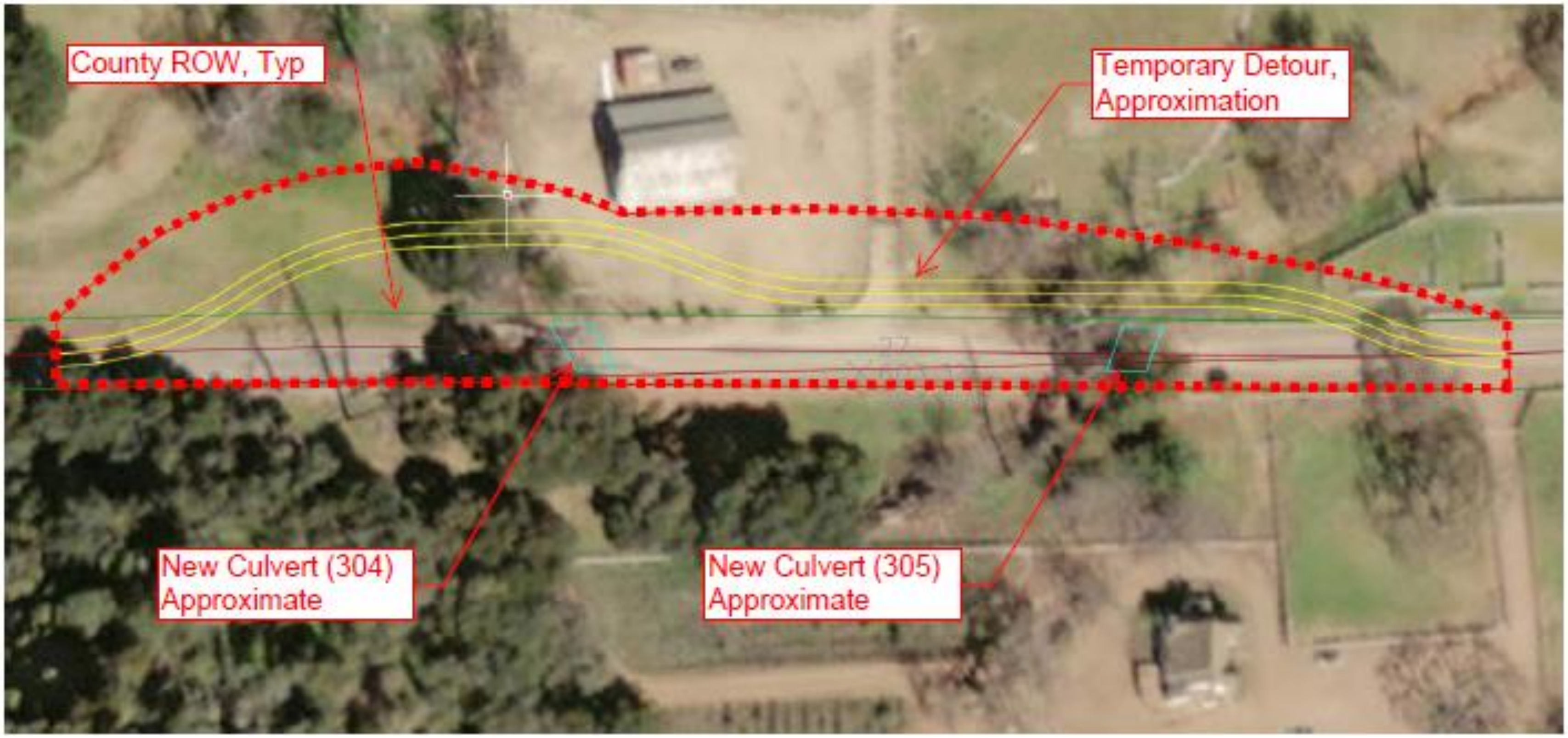


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Tom Little Bear Nason, Chairman
Esselen Tribe of Monterey County
P. O. Box 95
Carmel Valley, CA, 93924

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Tom Little Bear Nason, Chairman:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

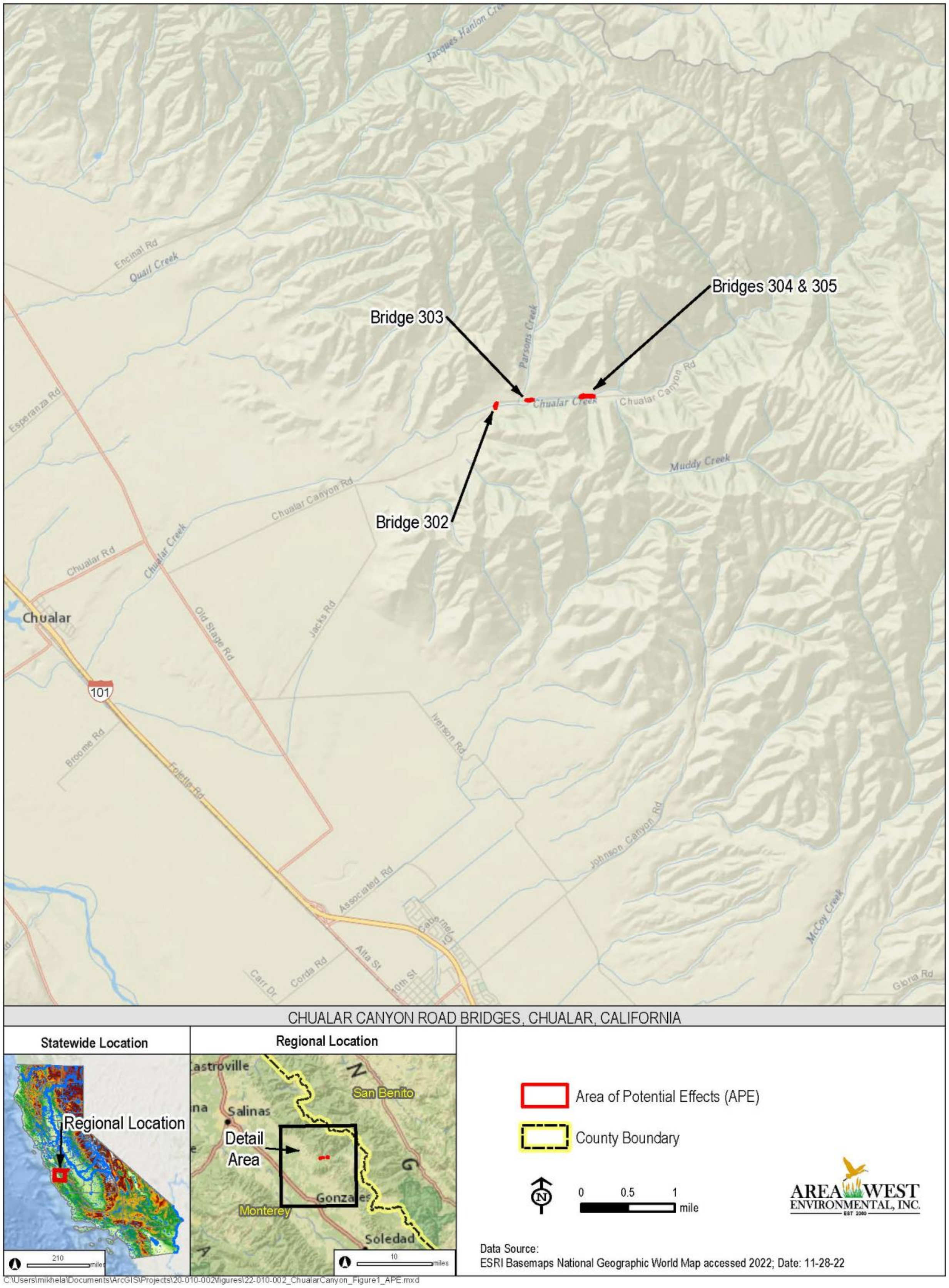


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)
Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

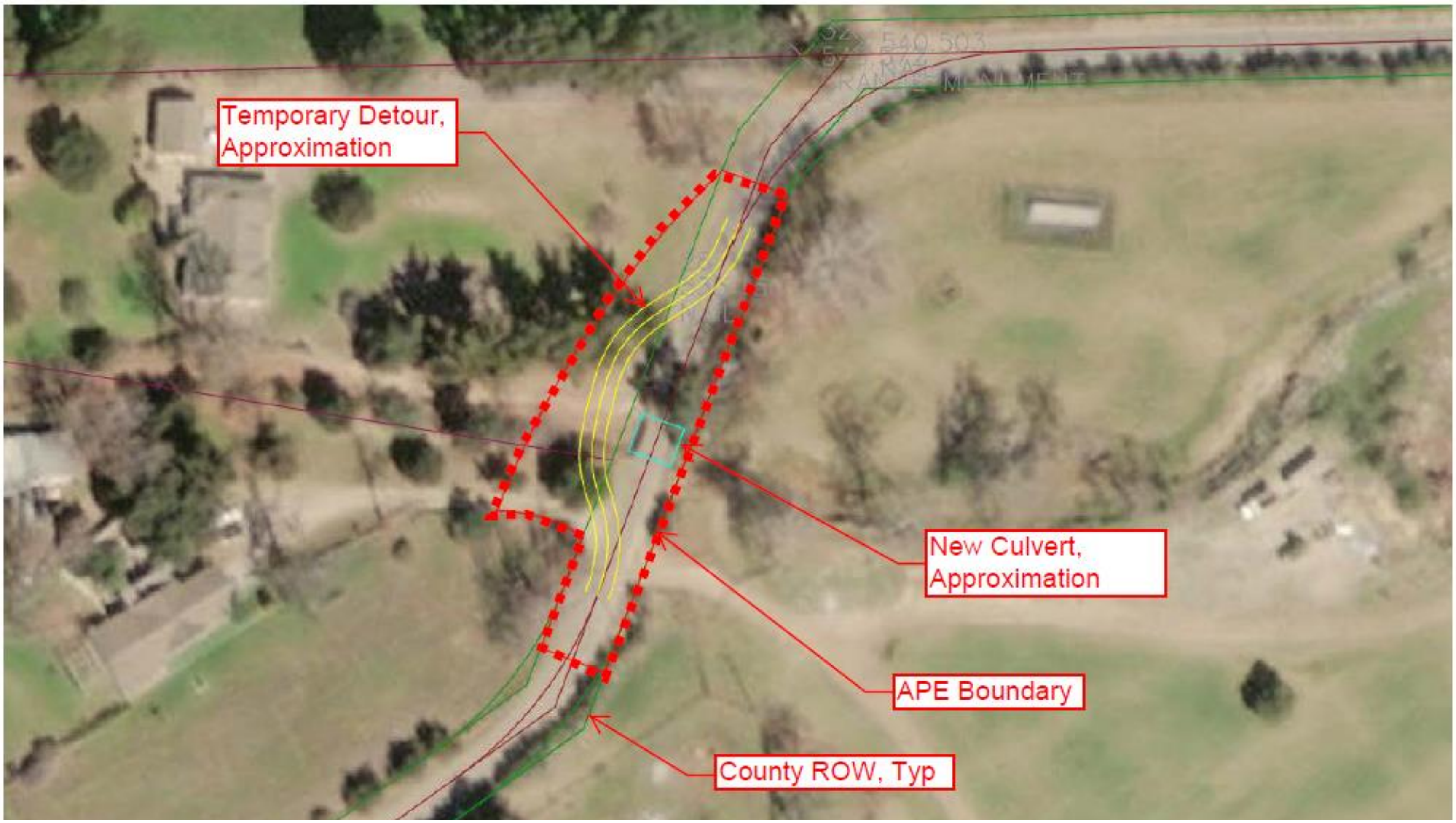


Figure 3a. Bridge 302

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 303
Area of Potential Effects Map

November 2, 2022
Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

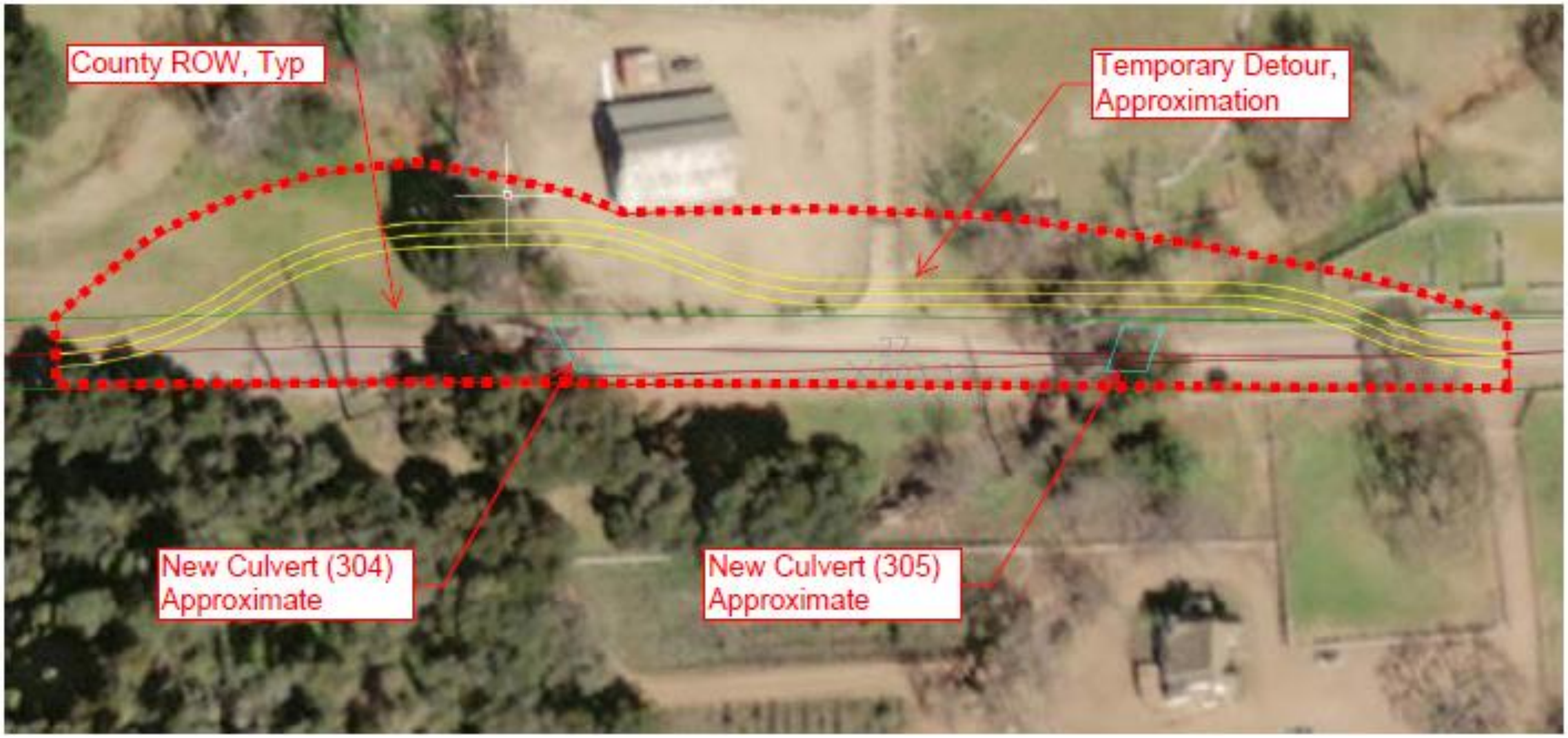


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Tony Cerda, Chairperson
Costanoan Rumsen Carmel Tribe
244 E. 1st Street
Pomona, CA, 91766

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Tony Cerda, Chairperson:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

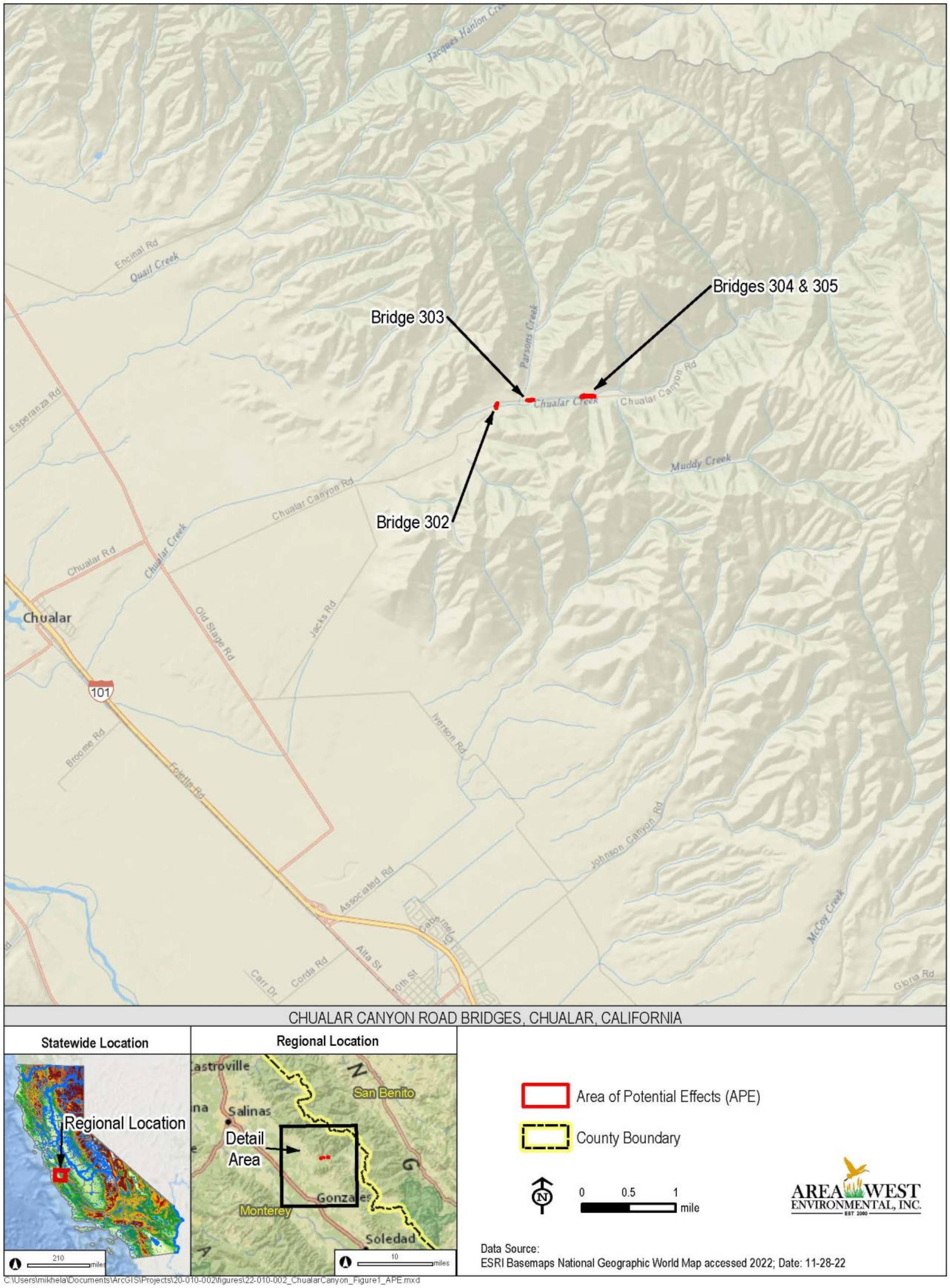


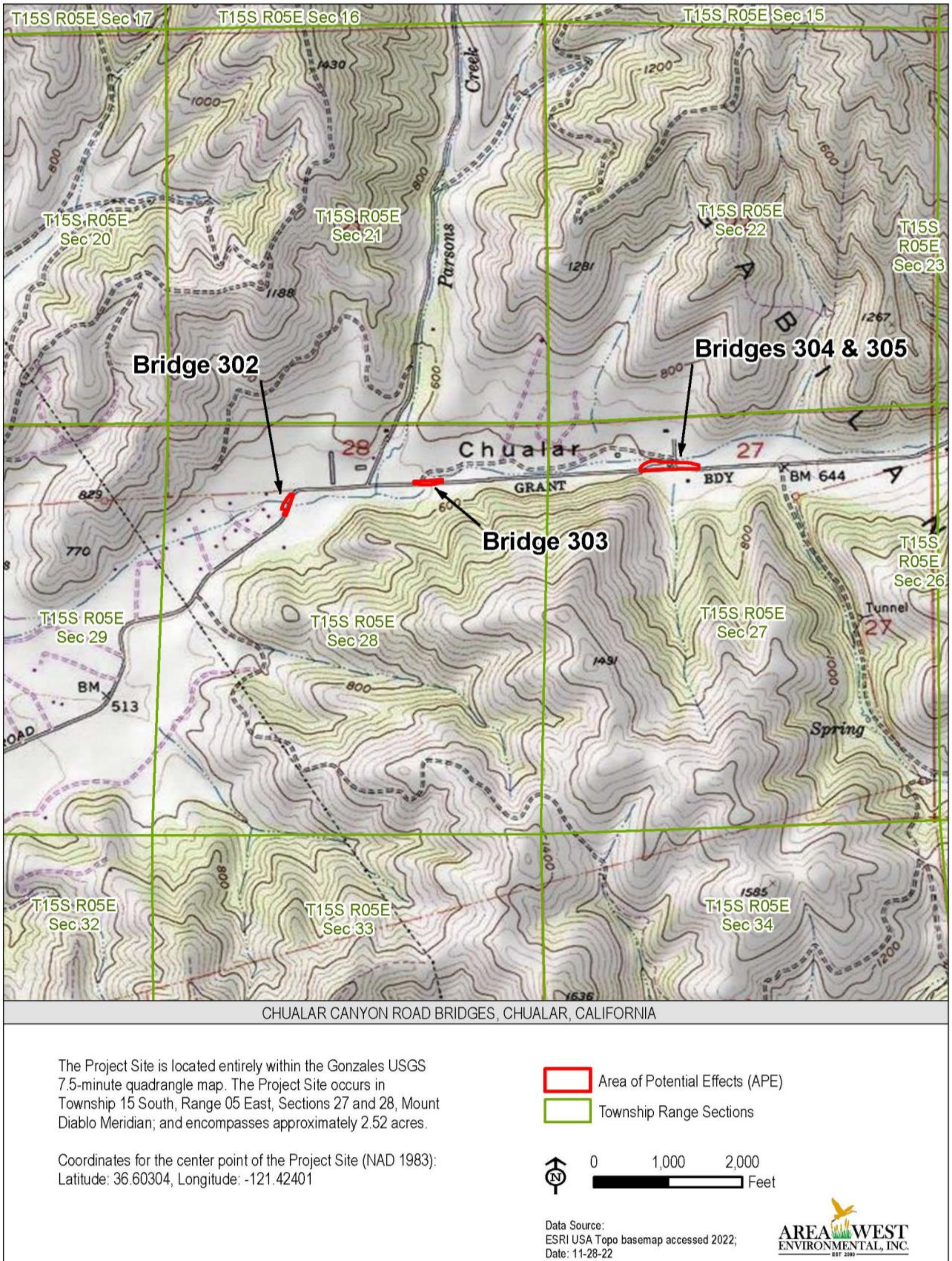
Figure 1. Project Vicinity

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us



Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 302
Area of Potential Effects Map

November 11, 2022
Project No. 211199

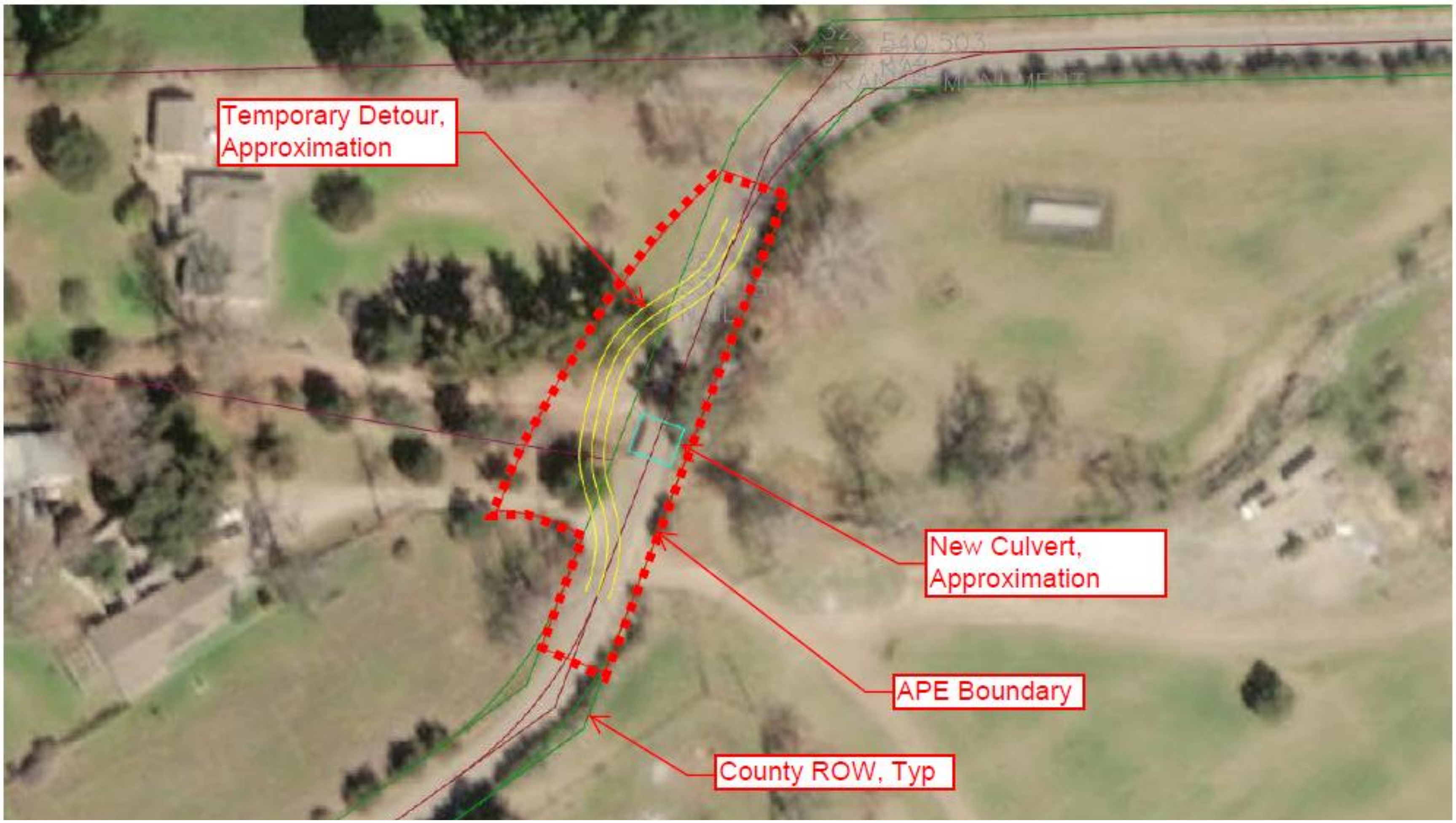


Figure 3a. Bridge 302

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS
Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements	Bridge 303	November 2, 2022
Monterey County RMA	Area of Potential Effects Map	Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

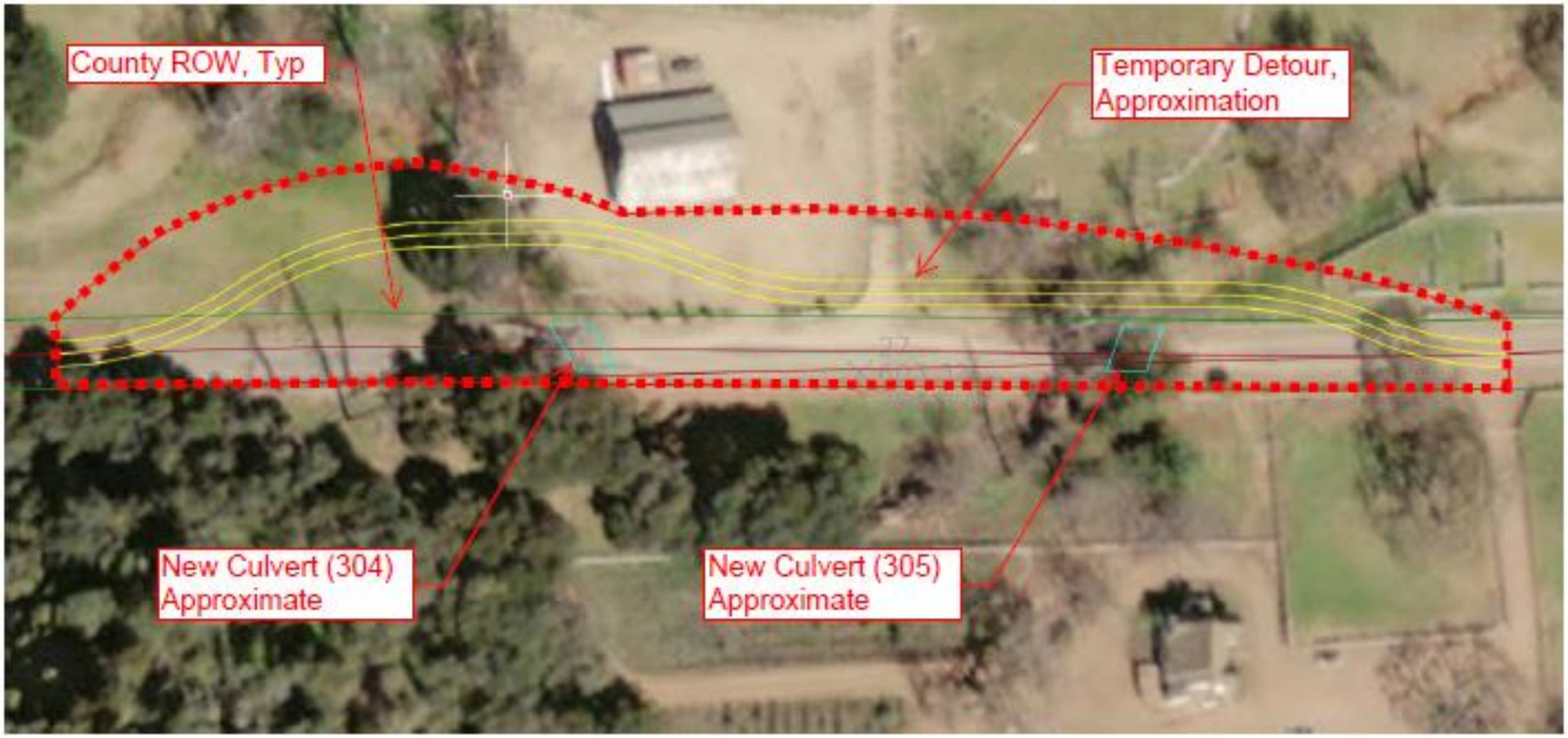


Figure 3a. Bridges 304 and 305

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

January 6, 2023
Valentin Lopez, Chairperson
Amah Mutsun Tribal Band
P.O. Box 5272
Galt, CA, 95632

SUBJECT: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Valentin Lopez, Chairperson:

The County of Monterey (County) is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road approximately 1.8 mile, 2.1 mile, 2.7 mile, and 2.8 miles east of the Chualar Canyon and Old Stage Road intersection (project) (Figures 1 and 2). The proposed project will allow the bridges to carry legal loads including emergency response equipment.

The proposed Project will include a Section 404 permit from the U.S. Army Corps of Engineers (USACE) and therefore requires compliance with Section 106 of the National Historic Preservation Act of 1966 (regulations Title 36 Code of Federal Regulations, Part 800). Monterey County will also evaluate the projects under the California Environmental Quality Act (CEQA). As such the public agencies involved must identify, evaluate, and consider the effects of this project on historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), as well as Tribal Cultural Resources, as defined by CEQA (Assembly Bill [AB] 52).

This letter serves as an invitation for consultation for Section 106 and CEQA (AB 52). Pursuant to Section 21080.3.1 of the Public Resources Code, you have 30 days from the receipt of this notice to request consultation. The request must be submitted to the County of Monterey and must identify a lead contact person. The County will begin the consultation process within 30 days of receiving the tribe's request for consultation. Please use the following contact information when submitting a request for consultation:

Monterey County Department of Public Works, Facilities, and Parks
1441 Schilling Place, South 2nd Floor
Salinas, CA 93901
ATTN: Douglas Poochigian, P.E.
Ph: (831) 755-4800
Email: poochigiand@co.monterey.ca.us

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor (831) 755-4800

Salinas, California 93901-4527 www.co.monterey.ca.us

If you have information concerning cultural resources in the project area, or if you have any questions, concerns or need additional information, please submit this information to our representative, Area West Environmental, Inc. who will be your contact for questions related to this project other than to initiate consultation. Contact information is:

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Thank you for your attention to this matter.

Respectfully,

X Douglas Poochigian P.E.

Douglas Poochigian, P.E.
Civil Engineer

Douglas Poochigian
Monterey County

Enclosures: Maps

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

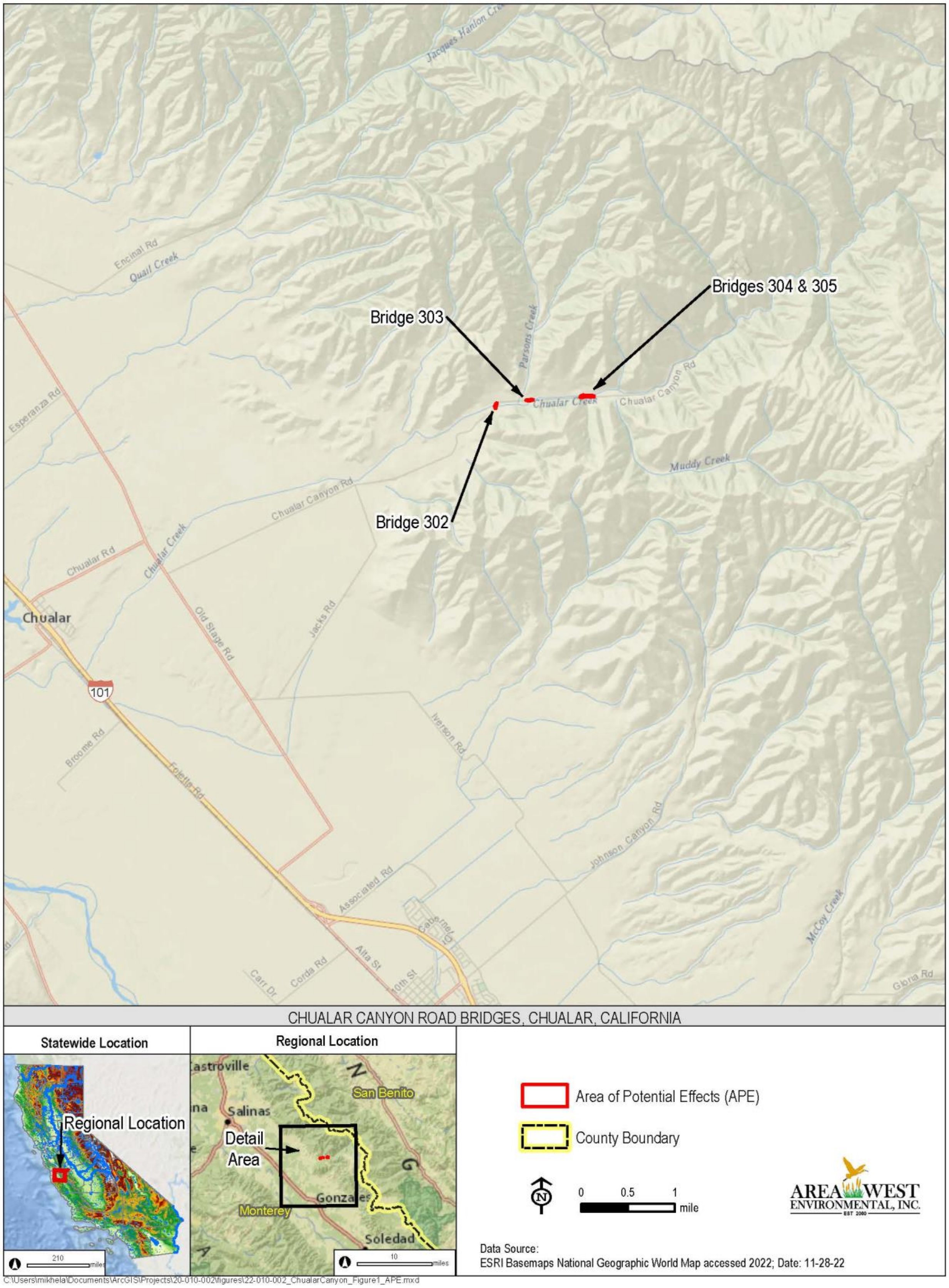


Figure 1. Project Vicinity

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

The Project Site is located entirely within the Gonzales USGS 7.5-minute quadrangle map. The Project Site occurs in Township 15 South, Range 05 East, Sections 27 and 28, Mount Diablo Meridian; and encompasses approximately 2.52 acres.

Coordinates for the center point of the Project Site (NAD 1983): Latitude: 36.60304, Longitude: -121.42401

Area of Potential Effects (APE)
Township Range Sections

0 1,000 2,000 Feet

Data Source:
ESRI USA Topo basemap accessed 2022;
Date: 11-28-22

AREA WEST ENVIRONMENTAL, INC.

Document Path: C:\Users\mikhela\Documents\ArcGIS\Projects\20-010-002\figures\22-010-002_ChualarCanyon_Figure2_APE.mxd

Figure 2. Project Location

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements	Bridge 302	November 11, 2022
Monterey County RMA	Area of Potential Effects Map	Project No. 211199

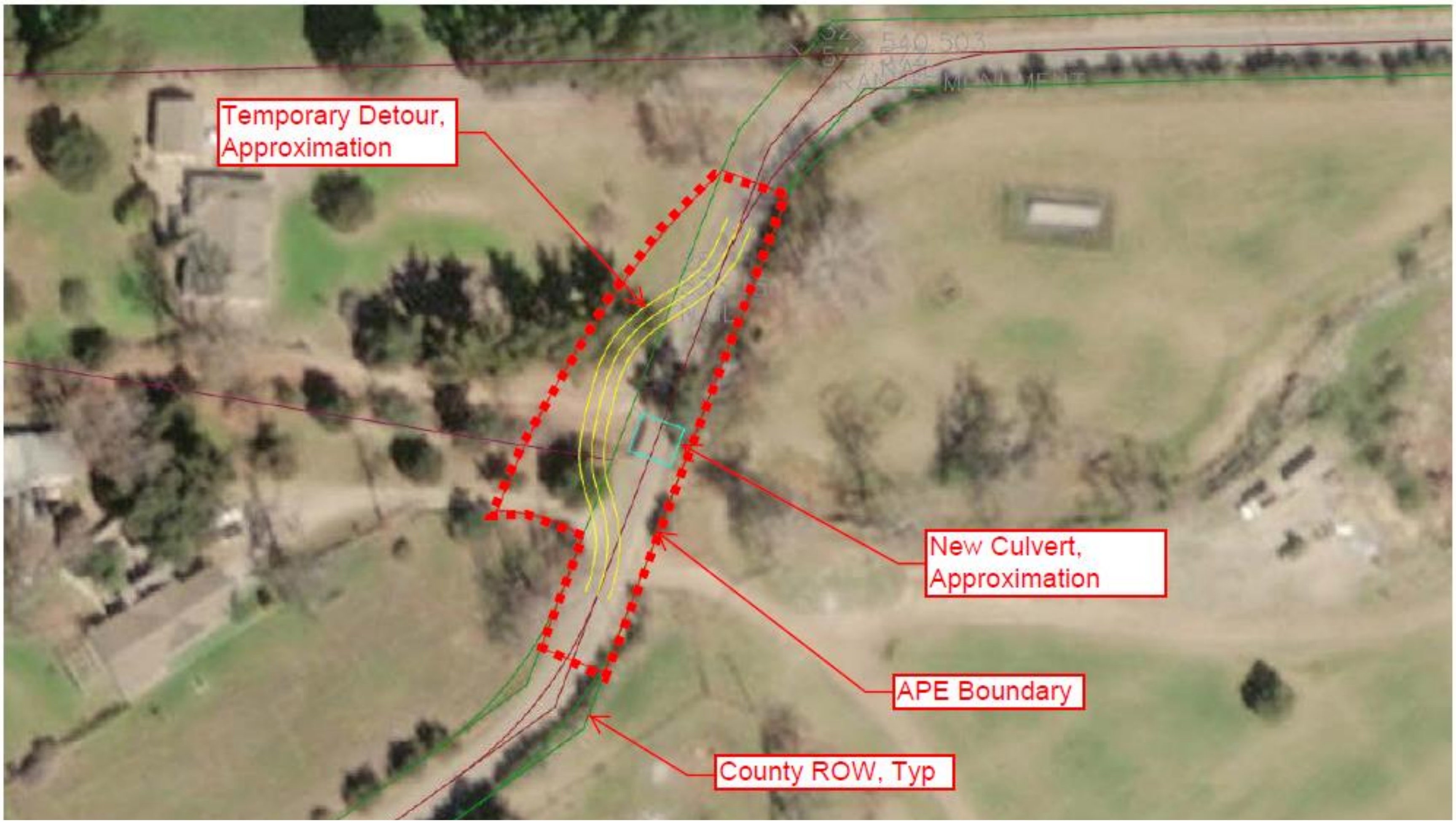


Figure 3a. Bridge 302

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridge 303
Area of Potential Effects Map

November 2, 2022
Project No. 211199

Figure 3b. Bridge 303

MONTEREY COUNTY
PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director
1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527

(831) 755-4800
www.co.monterey.ca.us

Chualar Canyon Road Bridge Replacements
Monterey County RMA

Bridges 304 and 305
Area of Potential Effects Map

November 11, 2022
Project No. 211199

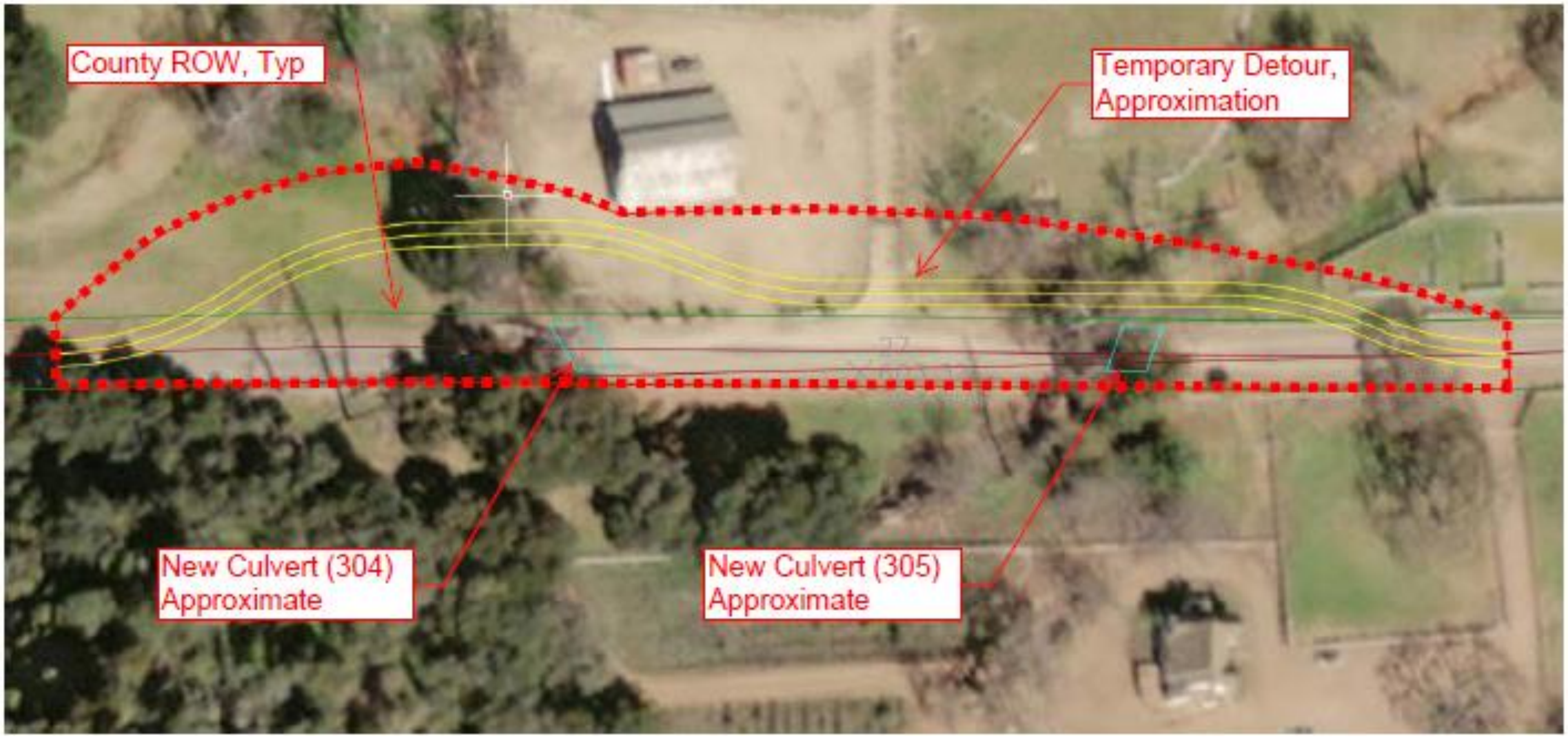


Figure 3a. Bridges 304 and 305

From:	Susan Morley
To:	kpitkin@areawest.net
Cc:	becky@areawest.net; soslick@moffattnichol.com; holson@moffattnichol.com; poochigiand@co.monterey.ca.us; gdekker@moffattnichol.com; Tom Nason; Brenna Wheelis; Jana Nason; Cari Herthel
Subject:	Re: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day-response-requested)
Date:	Monday, January 9, 2023 1:49:51 PM
Attachments:	Chualar Canyon Road Bridges Sec 106 response letter jan, 6 2023.pdf

The Esselen Tribe of Monterey County has received your email and letter regarding the bridge replacement on Chualar Canyon Road. Here is the response from Tribal Chairman, Tom Little Bear Nason.

Thank you,

Kind regards,

Susan Morley
Cultural Resources Committee Chairperson
Esselen Tribe of Monterey County
cultural-resources@esselentribe.org
(831) 262-2300

On Jan 6, 2023, at 4:27 PM, kpitkin@areawest.net wrote:

Esselen Tribe of Monterey County
P.O. Box 95. Carmel Valley, Ca. 93924
Direct: 831-214-5345 - Fax: 831-659-0111
Tribalchair@Esselentribe.org
A California Native American 501-C-3 Non-Profit Organization

January 6, 2023

Area West Environmental, Inc.
6248 Main Avenue
Orangevale, CA 95662
ATTN: Becky Rozumowicz-Kodsuntie, Project Manager
Ph: (916) 987-3362
Email: becky@areawest.net

Re: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Dear Ms Rozumowicz-Kodsuntie,

Thank you for your correspondence dated January 6, 2023 requesting Section 106 and AB 52 Consultation (Consultation) for the proposed project to repair four bridges along Chualar Canyon Road. We are responding to confirm our engagement in Consultation with the County of Monterey, the delegated lead agency, for the duration of this Undertaking. I, Tom Little Bear Nason, am the designated lead contact for all Consultation efforts for this Undertaking. Please consider this response the beginning of our Consultation.

We have reviewed the Undertaking's area of potential effects (APE) and conclude the APE lies within the Esselen Tribe of Monterey County's cultural and ancestral territory. The APE overlays our Esselen and Rumsen village landscapes of Ensen, Chulares, and Buena Vista. Our village landscapes extend for miles throughout the Salinas Valley and are especially concentrated near fresh water sources, such as marshes, creeks, and rivers. However, climate change and channelized agricultural diversions have depleted or eliminated many historic marshes and drainages. Furthermore, California environmental laws provide exemptions for agricultural industries operating within our traditional sites leading to site desecration and destruction. These factors obscure the vastness of our village landscapes and cultural sphere, particularly within Salinas Valley, and have resulted in understudied and undiscovered resource potential within the Undertaking's APE.

We therefore request the following to help the Undertaking mitigate potential impacts

- All Undertaking related ground disturbances shall be monitored by Esselen Tribe of Monterey County's trained cultural monitors.
- All construction crews shall receive cultural sensitivity training by an ETMC monitor

Additionally, we request digital copies of the professional reports including soil assessments, biological assessments, cultural assessments, and site records.

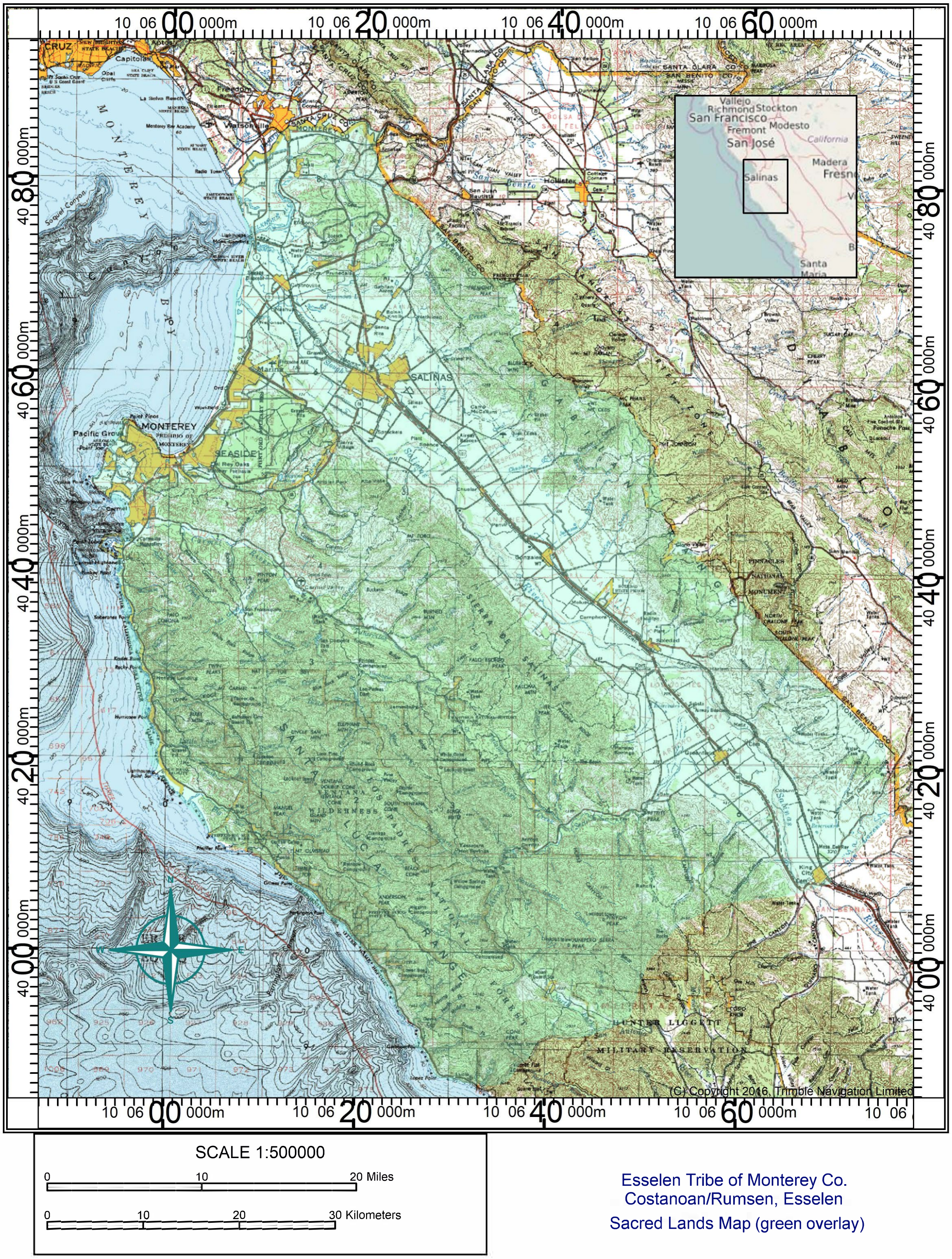
Finally, we wish to acknowledge our support of this Undertaking and commend the Applicant's efforts. We look forward to continued Consultation for this Undertaking.

With kind regards,

Tom Little Bear Nason

Tribal Chairperson
Esselen Tribe of Monterey County
tribalchair@esselentribe.org
(831)-214-5345

Attachment: Maps of the Esselen Tribe of Monterey County's Cultural and Ancestral Territory



Esselen Tribe of Monterey Co.
Costanoan/Rumsen, Esselen
Sacred Lands Map (green overlay)

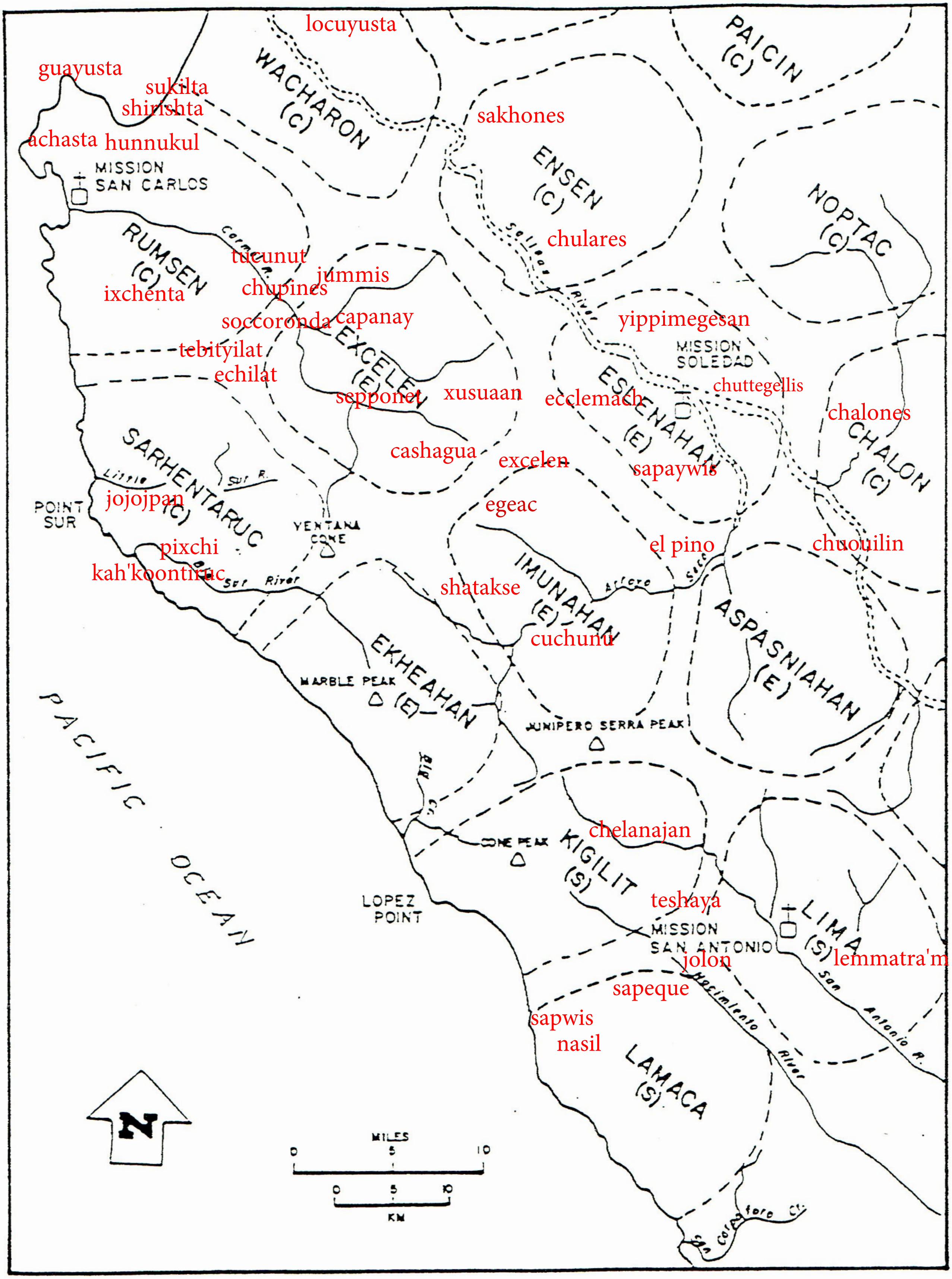


Fig. 1. Approximate locations of contact period districts in the Big Sur area and contiguous regions. (S = Salinan; E = Esselen; C = Costanoan)

From:	info@salinantribe.com
To:	kpitkin@areawest.net; becky@areawest.net
Subject:	Re: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day-response-requested)
Date:	Thursday, January 12, 2023 1:35:51 PM

Greetings Katheryn and Becky, we have reviewed the proposed project and was wondering if a phase I was done yet. If so, can we get a copy. If not, we are requesting that one be done. Chualar is a recorded Salinan village site. There may be unknown cultural resources that may be impacted by the development. We are requesting that all ground disturbing activities be monitored by a cultural resource specialist from out tribe.

On 2023-01-06 16:17, kpitkin@areawest.net wrote:
> Hello Patti Dunton, Tribal Administrator:
>
> The County of Monterey (County) is proposing to rehabilitate or
> replace four small bridges on Chualar Canyon Road. The attached letter
> serves as an invitation for consultation for Section 106 and CEQA (AB
> 52). A letter will also be sent in the mail tomorrow January 7th ,
> 2023. Since Covid, we understand that many of us are not in the office
> and are sending this email in addition to a mailed letter.
>
> Thank you,
>
> Katheryn Pitkin

Ohlone/Costanoan-Esselen Nation

Previously acknowledged as
The San Carlos Band of Mission Indians
The Monterey Band
And known as
O.C.E.N. or Esselen Nation
P.O. Box 1301
Monterey, CA 93942

www.ohlonecostanoanesselennation.org.

February 2, 2023

Douglas Poochigian, P.E.
Monterey County Dept. of Public Works, Facilities and Parks

Re: Chualar Canyon Road Bridges Rehabilitation or Replacement Project, Monterey County, California (30-day response requested)

Saleki Atsa,

The Ohlone/Costanoan-Esselen Nation is a historically documented previously recognized tribe. OCEN is the legal tribal government representative for over 600 enrolled members of Esselen, Carmeleno, Monterey Band, Rumsen, Chalon, Soledad Mission, San Carlos Mission and/or Costanoan Mission Indian descent of Monterey County. Included with this letter please find a territorial map by Taylor 1856; Levy 1973; and Milliken 1990, identifying Tribal areas.

OCEN TRIBAL GOVERNMENT REQUEST CEQA AB52/SB18/SECTION106 CONSULTATION WITH THE LEAD AGENCIES.

Sincerely and Respectfully Yours,

Louise J. Miranda Ramirez

Louise J. Miranda Ramirez
Tribal Chairwoman
Ohlone/Costanoan-Esselen Nation
(408) 629-5189

Cc: OCEN Tribal Council

Attachment 1. Historic Evaluation of Bridges 302, 303, 304, and 305, Chualar Canyon Road, Monterey County, California

LETTER REPORT

January 13, 2023

TO: Becky Rozumowicz
Area West Environmental, Inc.
6248 Main Avenue, Suite C
Orangevale, CA 95662

FROM: Christopher McMorris, Principal / Architectural Historian
Cheryl Brookshear, Architectural Historian
2850 Spafford Street
Davis, CA 95618

SUBJECT: Historic evaluation of Bridges 302, 303, 304, and 305, Chualar Canyon Road, Monterey County, California

---

Project Description

The County of Monterey (County) is planning to retrofit or replace the four concrete slab bridges that are located along a one and a quarter mile stretch of Chualar Canyon Road east of Chualar (County Bridges 302, 303, 304, and 305). Engineering studies have been conducted for the bridges and alternatives for retrofit or replacement are currently being designed and assessed. The resulting project design will be informed by ongoing environmental studies.

The project has the potential to affect the waters of the United States, therefore, the County must meet requirements of Section 404 of the Clean Water Act and will seek authorization from the US Army Corps of Engineers. This requirement makes the project a federal undertaking and subject to compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation in Title 36 Code of Federal Regulations Part 800 (36 CFR 800). The permit is the only federal involvement and the US Army Corps of Engineers will be the lead agency for compliance with Section 106. The County, which is funding and proposing the project, will be the lead agency for the purposes of the California Environmental Quality Act (CEQA).

The project's Area of Potential Effect (APE) is in three segments that contain the road right of way for the subject bridges and approaches, along with adjacent land to the north or south of each bridge to accommodate temporary road detours.

Summary of Findings

As part of the project's Section 106 and CEQA compliance, JRP Historical Consulting, LLC (JRP) conducted a historic evaluation of the subject bridges. This study concludes that the four concrete slab bridges on Chualar Road do not meet the criteria for listing in the National Register of Historic Places (NRHP). This conclusion is in accordance with NHPA Section 106 and 36 CFR Part 800.4. Furthermore, the four bridges do not meet the criteria for listing in the California Register of Historical Resources (CRHR) and are not historical resources under CEQA, as per CEQA Guidelines Section 15064.5(a). Please refer to the attached set of California Department of Parks and Recreation (DPR) 523 Forms in Attachment 1 for a full NRHP eligibility analysis, historic context, physical description of the resources, and photographs.

Fieldwork and Research Methodology

JRP reviewed the Information Center records search results (NWIC File 22-0788, 12/12/2022) conducted for this project and the California Office of Historic Preservation's Built Environment Resource Directory for Monterey County that lists previously recorded or identified historic resources in the project vicinity. The subject bridges do not appear to have been previously studied and the above-referenced sources do not list other historic resources in the vicinity of the subject bridges.

JRP identified potential interested parties for this project: Monterey County Historic Advisory Commission, Monterey County Chief of Planning, Monterey County Historical Society, Monterey County Free Libraries- Gonzales Branch, and the Salinas Public Library. Letters were sent to these organizations on December 14, 2022 and follow up communication via telephone or e-mail was conducted January 3, 2023. Responses did not provide any information regarding historic resources or present issues regarding the project. Please see the letter to interested parties, follow-up communications, and communications log in Attachment 2.

JRP Architectural Historian Cheryl Brookshear and Research Assistant Andrew Young conducted the field survey on December 20, 2022, and prepared a description of the subject bridges on a set of DPR 523 Forms, including photographs and maps of the structure. Survey included the superstructure and above ground substructure of each bridge; no ground disturbing methods were employed.

JRP conducted research in primary and secondary sources online, including county property records, newspaper articles, historic aerial photographs, historic maps, bridge inspection reports, bridge as-built drawings, and published histories. This background research was used to establish the appropriate historic context and bridge-specific development history of the road and the design and construction history of the bridges. The historic context and bridges' history, along with the evaluation, are presented on the set of DPR 523 forms in Attachment 1.

Preparers' Qualifications

This study was conducted under the general direction of Christopher D. McMorris (M.S., Historic Preservation, Columbia University, New York), a Principal at JRP with more than 24 years of experience conducting these types of studies. Mr. McMorris provided overall project direction and guidance, and reviewed and edited this report (and the attached set of DPR 523 forms). Based on his level of experience and education, Mr. McMorris meets the Secretary of the Interior's Professional Qualification Standards under History and Architectural History (as defined in 36 CFR Part 61).

JRP Historical Consulting, LLC

JRP Architectural Historian Cheryl Brookshear (M.S., Historic Preservation, University of Pennsylvania) has 15 years of experience as a historian/architectural historian working on a variety of research and cultural resource management projects throughout California. Ms. Brookshear conducted research and authored the DPR 523 form. Ms. Brookshear meets the Secretary of the Interior's Professional Qualification Standards under History and Architectural History (as defined in 36 CFR Part 61).

JRP Research Assistant Andrew Young (M.A. History / Public History, California State University, Sacramento, In Progress) assisted Ms. Brookshear with research and fieldwork.

Attachment 1:
DPR 523 Forms

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # ____
HRI # ____
Trinomial ____
NRHP Status Code 6Z

Other Listings ____
Review Code ____ Reviewer ____ Date ____

 ***Resource Name or #** (Assigned by recorder) Monterey County Bridges 302, 303, 304, 305

P1. Other Identifier: Chualar Canyon Road Bridges

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** Monterey

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Gonzales **Date** 1984 **T** 15S; **R** 5E; N ½ **of Sec** 27 and 28; M.D. **B.M.**

c. Address Chualar Canyon Road City Chualar (vic) Zip 93925

d. UTM: (give more than one for large and/or linear resources) Zone ____; ____mE/ ____mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

These four bridges are located on Chualar Canyon Road. The road begins at Old Stage Road east of the community of Chualar and continues along Chualar creek into the Gabilan Range. The bridges are along a 1.5 mile stretch of straight road in an east west direction beginning just east of a T intersection with a road from the north and Parsons Creek.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Monterey County Bridges 302, 303, 304, and 305 are located on Chualar Canyon Road in the Gabilan Range that form the eastern side of the Salinas Valley. The local county road winds up the canyon from the Old Stage Road near the Salinas River before ending near the range's ridge four miles east. The four county bridges cross Chualar Creek and its tributaries in a mile and a half road segment from where Parsons Creek meets Chualar Creek and continuing east. The road lies in a narrow canyon between mountains through an area that is lightly settled in either large lot rural residential or agricultural use (**Photograph 1**). The four bridges are similar in their construction. They have board formed concrete abutments with associated wingwalls. Each bridge is approximately 18 feet wide intended to convey a single lane in each direction. The bridge span is composed of pre-cast concrete slabs set upon the abutments. (See Continuation Sheet.)

***P3b. Resource Attributes:** (List attributes and codes) HP 19 - Bridges

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) **Photograph 1:** Bridge 305 with Bridge 304 in the background; camera facing west; December 19, 2022.

***P6. Date Constructed/Age and Sources:**
☒ Historic ☐ Prehistoric ☐ Both

c. 1901-1936 *Salinas Californian*; deck and span structure replaced 1940 and 1948.

***P7. Owner and Address:**
Monterey County
168 West Alisal Street
Salinas, CA 93901

***P8. Recorded by:** (Name, affiliation, address)
C. Brookshear and A. Young
JRP Historical Consulting, LLC
2850 Spafford Street
Davis, CA 95618

***P9. Date Recorded:** December 19, 2022

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") JRP Historical Consulting, LLC, Letter Report for Monterey County Bridges 302, 303, 304, and 305 Replacement Project, prepared for Monterey County Public Works, Facilities, and Parks, 2023.

***Attachments:** ☐ None ☐ Location Map ☒ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (list) ____

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) Monterey County Bridges 302, 303, 304, 305

B1. Historic Name: Chualar Canyon Road Bridges
B2. Common Name: Monterey County Bridges 302, 303, 304, and 305
B3. Original Use: Bridge B4. Present Use: Bridge
***B5. Architectural Style:** Utilitarian
***B6. Construction History:** (Construction date, alteration, and date of alterations) Road extant by 1884, County ownership of road in 1901, road paving in 1936, likely original bridge construction (extant abutments) c.1901-1936, bridge deck of 302 replaced in 1940, abutments widened and decks replaced on bridges 303, 304, and 305 in 1948.
***B7. Moved?** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** ______ **Original Location:** ______
***B8. Related Features:** Chualar Canyon Road
B9. Architect: Unknown; H.F. Cozzens b. Builder: Monterey County
***B10. Significance: Theme** Transportation **Area** Monterey County
Period of Significance n/a **Property Type** Bridge **Applicable Criteria** n/a
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The four bridges on Chualar Canyon Road in the Gabilan Range do not meet the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), nor do they appear to be historical resources for the purposes of the California Environmental Quality Act (CEQA). These structures have been evaluated in accordance with Section 106 of the National Historic Preservation Act of 1966 as amended and Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code.

Historic Context

Chualar Canyon Road is the sole vehicle road to Chualar Canyon and the surrounding Gabilan Range. The road dates to the nineteenth century, and Monterey County adopted the road in the early twentieth century, initially paving it in the 1930s. The dead-end road served local ranches, but in the past 50 years many of the parcels flanking the road have developed into large parcel rural residential properties. The four bridges cross Chualar Creek, a seasonal waterway that meanders along the bottom of the canyon. (See Continuation Sheet.)

B11. Additional Resource Attributes: (List attributes and codes) ______

***B12. References:** Augusta Fink, *Monterey County: The Dramatic Story of its Past* (Santa Cruz, CA: Western Tanager Press, 1982); *The Salinas Californian;* PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," for Monterey County Parks Department, 2011; General Land Office, Land Patents; Parsons Brinckerhoff and Engineering and Industrial Heritage, "A Context for Common Historic Bridge Types," NCHRP Project 25-25 Task 15, for National Cooperative Highway Research Program, Transportation Research Council, National Research Council, October 2005; Office of County Surveyor, "Chualar Canyon Bridge District No. 3, [302 Bridge]" October 1940; and see B10 footnotes.

B13. Remarks:

***B14. Evaluator:** Cheryl Brookshear

***Date of Evaluation:** December 2022

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

See Continuation Sheet.

P3a. Description (continued):

The reinforced slabs are topped with asphalt. Concrete wheel curbs are located on each side of the deck along with railings. Individual bridges are discussed below, and their general statistics are presented in **Table 1**.[1]

Table 1. Bridge statistics summary

Bridge	Length	Width	Skew	Alterations
302	16 feet	18 feet	5 degrees	Bridge span and deck replaced in 1940
303	15 feet	18.5 feet	0 degrees	Bridge span and deck replaced in 1948
304	15 feet	18.5 feet	32 degrees	Bridge span and deck replaced; bridge widened approximately 6 feet 1948
305	11.75	18.5 feet	20 degrees	Bridge span and deck replaced 1948; wing walls reinforced with metal and metal frame added below bridge possibly 1998.

Bridge 302 is the westernmost of the four bridges (**Photograph 2**). The upper faces of the wingwalls have been shorn up and supported with slump concrete above the board formed concrete that constitutes the abutment and wingwall structure (**Photograph 3**). The eastern wing walls are similarly supported with a rock filled wire basket providing additional protection on the south side (**Photograph 4**). The abutment seat has been partially filled with concrete to keep the concrete slab at grade. The bridge span is composed of five, reinforced concrete slabs; three four-foot-wide slabs and two three-foot slabs on the sides. Asphalt consistent with the road covers the deck (**Photograph 5**). Atop the concrete slab are one-foot-wide wheel guards flanking the roadway. The solid concrete guards rise about ten inches above the deck and have curved ends at the bridge approaches. The guards sit flat with the outer edge of the deck. Bolted to the exterior of the span are wooden guard-rails. Square wood posts rise about three feet above the deck. A single wood rail runs between the posts along the deck and two rails are used to connect the deck rail with an additional post at the approach.

Bridge 303 is the second westernmost bridge (**Photograph 6**). The board formed concrete abutments have concrete wingwalls on the north face, and are unprotected on the south side. The abutment seat has been partially filled with concrete to keep the concrete slab at grade (**Photograph 7**). A displaced piece of wing wall is at the northwest corner. The deck is constructed of three six-foot wide slabs. Asphalt consistent with the road covers the deck. Atop the concrete slab are one-foot-wide wheel guards that flank the roadway (**Photograph 8**). These guards are bolted to the deck. A solid base rises up six inches and the top four inches overhangs the base about four inches. The end of the guard is curved where it meets the bridge approach. Three pieces of angle iron are bolted to each side of the deck rising about three feet above the deck. Metal beam guard rail connects these posts.

Bridge 304 is near the eastern end of the section of road with the subject bridges (**Photograph 9**). The structure's board formed concrete abutments are only 15-feet wide and make up the southern part of the abutments and wing walls. The northern six feet of abutment is an angled iron cap atop the concrete abutment extending south (**Photograph 10**). The deck span is bolted to the cap. Steel sheets form the remaining abutment wall and south wingwalls. The abutment seat has been partially filled. The deck is constructed of three six-foot wide slabs (**Photograph 11**). Asphalt consistent with the road covers the deck. Atop the concrete slab are one-foot-wide wheel guards flanking the roadway. These guards are bolted to the deck. A solid base rises up six inches and the top four inches overhangs the base about four inches. The end of the guard is curved where it meets the bridge approach. Three metal angles are bolted to each side of the deck rising about three feet above the deck. Metal beam guard rail connects the posts.

[1] The four bridges recorded herein do not have bridge numbers assigned by the California Department of Transportation (Caltrans). This is likely because the structures have spans that are less than twenty feet and are not subject to Caltrans' bridge inspection program that include bridges owned by the state and local agencies.

Bridge 305 is the easternmost bridge and most altered (**Photograph 12**). The abutments are supported with an angle iron frame and perforated metal plates line the walls. Grouted stone wing walls at the sides indicate walls behind the metal substructure (**Photograph 13**). The abutments are wider than the associated roadway. A metal frame beneath the slab provides additional support (**Photograph 14**). Angled supports come up from the base of the abutment to a stringer across the roadway. The stringers are connected longitudinally with additional angled metal beams. Three six-foot wide concrete slabs sit atop the framework forming the span and deck. Asphalt consistent with the road covers the deck. Atop the concrete slab are one-foot-wide wheel guards flanking the roadway (**Photograph 15**). These guards are bolted to the deck. The wheel guards are cast in a single piece with three support posts spaced along the back side. The upper four inches forms an overhanging rail with curved ends. Three posts are bolted to each side of the bridge rising about three feet above the bridge deck. The end posts are wood and the central post is angle iron. Metal beam guard rail connects the posts.

B10. Significance (continued):

Chualar Canyon is located on the east side of the northern Salinas Valley. The Salinas River flows through Salinas Valley's rich agricultural land, some of the most productive in the world, fed by creeks like Chualar Creek flowing out of the surrounding hills. Europeans began to arrive in the area in 1769 and settled at Monterey in 1770. The Spanish introduced free roaming cattle and a variety of small-scale crops including fruit, olives, grapes, wheat, and corn. European settlement expanded under Mexican rule extending down the Salinas Valley in a series of ranchos. Among the ranchos the Mexican government granted in 1839 was *Rancho Santa Rosa de Chualar* consisting of 8,890 acres that crossed a swath of the Salinas Valley and up the Chualar Canyon granted to Juan Malarin. Grants were given to the north and south of *Rancho Chualar* around the same time. By the end of the Mexican period most of the Salinas Valley had been divided into large rancho tracts, but was lightly settled with the agriculture centered around free range cattle and subsistence crops. The few transportation routes included El Camino Real, which connected the coastal Missions and the Salinas River. The river provided transportation for the few trade goods in the valley.[2]

When the United States took control of California in the late 1840s, it unleashed a period of change upon the cluster of Mexican ranchos. The population of Monterey County, just like that of California increased rapidly with the discovery of gold in the state. After trying mining, many new residents decided to pursue agriculture as a more stable endeavor, and this created demand for desirable rancho lands. The Treaty of Guadalupe Hildago in 1848 that ceded California to the United States guaranteed that rancho owners could retain their property. The process was intended to integrate the Spanish and Mexican grants into the American legal system; however, many owners lost their property during the following decades. Juan Malarin had trained as a lawyer within the Spanish system, but was unable to prevail in the English-based American system. In multiple rounds of litigation over *Rancho Chualar* and several of his father's properties, he was forced to mortgage *Rancho Chualar* to pay legal fees. When drought struck the area in 1863-1864, Malarin, like many local rancho owners, lost much of the stock on his lands. Malarin was unable to profit from traditional hide and tallow sales, and mortgage holder David Jacks foreclosed on the property and became the new owner.[3]

The transfer and subdivision of ranchos under pressure from American settlers brought change to Salinas Valley agriculture. Like many of the Anglo settlers, Jacks introduced grains and cereals as large-scale crops in the valley. During this period wheat was grown both in the valley and the surrounding hills. Land holders with large tracts divided them into smaller farms which were leased out. Wagons and boats transported crops to Pajaro Landing, Brennan's Landing, and Moss Landing on Monterey Bay.[4]

---

[2] PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," for Monterey County Parks Department, 2011, 28-30, 33-34, 36, 38, 45-46; Augusta Fink, *Monterey County: The Dramatic Story of its Past* (Santa Cruz, CA: Western Tanager Press, 1982) 78.
[3] PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," 46-48, 56; Fink, *Monterey County: The Dramatic Story of its Past,* 137, 140.
[4] PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," 46-47, 53, 56, 66-70; E.S. Harrison, *Monterey County Illustrated: Resources, History, Biography* (Salinas, CA: Salinas Board of Trade, 1890c.) 27.

The arrival of the railroad and new financing methods introduced a period of rapid change in the 1870s. The Southern Pacific Railroad (SPRR) began constructing a branch south from Gilroy in 1871 reaching Pajaro Junction that year. The line opened to Salinas in 1872. Jacks grasped the potential benefits and offered the railroad right of way across *Chualar* and guaranteed shipping traffic to the railroad. On his part he platted a community along the route with substantial warehouses and shipping facilities. Across the Salinas Valley agricultural contracts facilitated development of intensive agriculture. Crop contracts provided an incentive for farmers to grow specific crops. Companies and marketing groups offered set contract prices at the beginning of the growing season, allowing the farmer greater certainty in final prices. The farmers were thereby encouraged to invest in their crops with increasing use of fertilizers and pesticides. Apples and sugar beets were the most commonly contracted crops in the area.[5]

Jacks continued to encourage the cultivation of wheat and other grains upon *Chualar,* but in Chualar Canyon diversification took hold. The southern half of the canyon was part of the rancho, but the northern half and eastern end were available for homesteading. Three families established homesteads in the canyon in the 1870s and 1880s: William Old, John Watson, and William Burrows (**Plate 1**).

Plate 1. General Land Office Survey from 1884 showing the beginning of settlement in Chualar Canyon. The red line is the rancho boundary, and the early road in green (annotated by JRP) followed its edge passing houses belonging to Burrows, Watson, and Old in order left to right. This map includes the road segment where the four bridges recorded herein are located.[6]

The settlers developed a pattern of diverse agriculture by the 1890s. While grains and alfalfa for Jacks' growing number of leased dairies were the main crops, the families also grew vegetables, established orchards, and raised small stock including

---

[5] PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," 71-72, 79, 95-96; Fink, *Monterey County: The Dramatic Story of its Past,* 143.
[6] General Land Office, Plat Map Township 15 South Range 5 East, 1884, Home - BLM GLO Records accessed November 2022. Annotated by JRP.

goats. Further up the canyon in the Gabilan Range the land continued to be used for grazing and stock operations. Also, far up the canyon was a small gold mining operation. These properties were reached by an unofficial dirt road by the 1880s.[7]

Through the early twentieth century the Salinas Valley continued diverse agricultural development. Wheat began to decline in the 1890s although was still grown into the early twentieth century. Jacks encouraged the development of dairies upon *Chualar* by constructing standard dairy buildings and residences on his leased properties. Cooled railcars were developed in the 1860s, but became much more dependable in the 1920s. This innovation facilitated diversification as crops traditionally grown as truck crops for local consumption were grown for mass shipment across the country. The variety of crops resulted in the Salinas Valley becoming known as "America's Salad Bowl." The climatic zones created by the valley floor and surrounding hills allowed for cultivation of a variety of vegetables, strawberries, grapes, and nursey stock.[8]

Agricultural development in the Salinas Valley necessitated and supported infrastructure such as roads. A road across privately owned land into the Chualar Canyon had been developed by 1884, but likely initiated as Old, Watson, and Burrows homesteaded in the canyon in the late 1870s. Monterey County formalized the road in 1901, purchasing a 40-foot right of way from the farmers for the road. From the valley, the road followed Chualar Creek, and as it entered the foothills the road took a straight path crossing the wandering creek and its tributaries. It is unclear when the four small bridges recorded herein (Bridges 302-305) were added to the road. Demand for these small bridges was likely not strong because of the seasonal and intermittent nature of the creek and limited local traffic. The county's $2 million bonds for county-wide road improvements in 1928, for example, did not include any work on Chualar Canyon Road. At this time Monterey County was still doing basic road improvements with gravel.[9]

It is possible that the bridges were not constructed until 1936 when the road was first paved. The board formed concrete abutments are indicative of an early to mid-twentieth century construction date. While the original span and decking material is unknown, they were single span bridges and the abutment shelf that the superstructure sat upon indicates a thicker span which would be consistent with a timber beam or stringer bridge. This type of bridge was constructed with thick timber beams spanning the distance between abutments or piers and a wooden deck above that. This type of construction is among the earliest of bridge types and constituted a common standardized plan among several states and was popular for short spans in lightly trafficked areas throughout the early twentieth century through the 1950s. The abutment seats on Chualar Canyon Road had to be built up for the existing concrete slabs to be at grade with the road (**Plate 2**). This indicates the previous span had a more substantial substructure like that necessary for a timber beam bridge. Increasing vehicle weight necessitated stronger timbers or alternate materials.[10]

The county began to make improvements to the recorded bridges in 1940, beginning with Bridge 302. The existing span was removed and replaced with the extant pre-cast reinforced concrete span. Modern construction began to utilize concrete for bridges in the early twentieth century, and short, pre-cast, reinforced slabs were utilized since the first decade of the century. The bridge was simple with the five reinforced slabs laid next to one another acting as both the substructure and deck. Bridge

---

[7] "Chualar Canyon Items," *The Salinas Californian,* October 2, 1898; PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," 53; General Land Office, Plat Map Township 15 South Range 5 East, 1884, Home - BLM GLO Records accessed November 2022; General Land Office, Land Patent William Burrows April 30, 1883, Home - BLM GLO Records accessed November 2022; General Land Office, Land Patent John R Watson, April 30, 1883, Home - BLM GLO Records accessed November 2022; General Land Office, Land Patent William R Old, June 1, 1898, Home - BLM GLO Records accessed November 2022; "Chualar Canyon's Gold," *The Salinas Californian,* February 15, 1909, 1.

[8] PAST Consultants, LLC, "Agricultural Resources Evaluation Handbook, Monterey County, California," 32, 39, 41.

[9] "Legal Notice Superior Court of California County of Monterey Case No. P29706 Notice of Sale of Real Property," *The Salinas Californian,* August 27, 1993, 16; "Supervisors Put in Busy Afternoon," *The Salinas Californian*, December 10, 1909; "Chualar Group is Present at Grange Meet," *The Salinas Californian,* July 15, 1936; "Chualar," *The Salinas Californian,* October 18, 1928; "County to Spend $177,099 for Road Work Next Season," *The Salinas Californian,* August 10, 1928; "Harmony Reigns in Highway Parley," *The Salinas Californian,* September 4, 1928.

[10] Parsons Brinckerhoff and Engineering and Industrial Heritage, "A Context for Common Historic Bridge Types," NCHRP Project 25-25 Task 15, for National Cooperative Highway Research Program, Transportation Research Council, National Research Council, October 2005, 3-80 – 3-80; Moffatt & Nichol, "Bridge Inspection Report Bridge 302 Chualar Canyon Road," For Monterey County Resource Management Agency, 2020; .

302 is one of a multitude of such bridges constructed across the country before and after World War II. The remaining three bridges, Bridge 303, 304, and 305 did not receive similar updates until after World War II likely because of wartime material shortages, and improvements to small bridges on secondary roads were not a priority during the war. While the abutments are similar to that of Bridge 302, the updated bridge substructure and deck show less attention to design and construction. They appear to have been assembled based upon available materials to meet increasing needs. The plans for the updates were signed by County Engineer Howard F. Cozzens, who began his county career in 1914 when he became the County Surveyor. As the surveyor he developed road and bridge plans across the county. When the state called for counties to establish centralized road construction and maintenance divisions in 1919, Cozzens was appointed to that position. Cozzens continued the development of Monterey County's roads and bridges until his retirement in 1954. His work included development of the 24-foot wide Monterey-Salinas Road, the cut for the Monterey-Carmel Road, and sizable bridges in Nacimiento, King City, and Watsonville. His small-scale bridges following World War II were noted for their use of dock landing ship decking purchased as war surplus. The bridges on Chualar Canyon Road do not appear to be among the bridges employing surplus decking.[11]

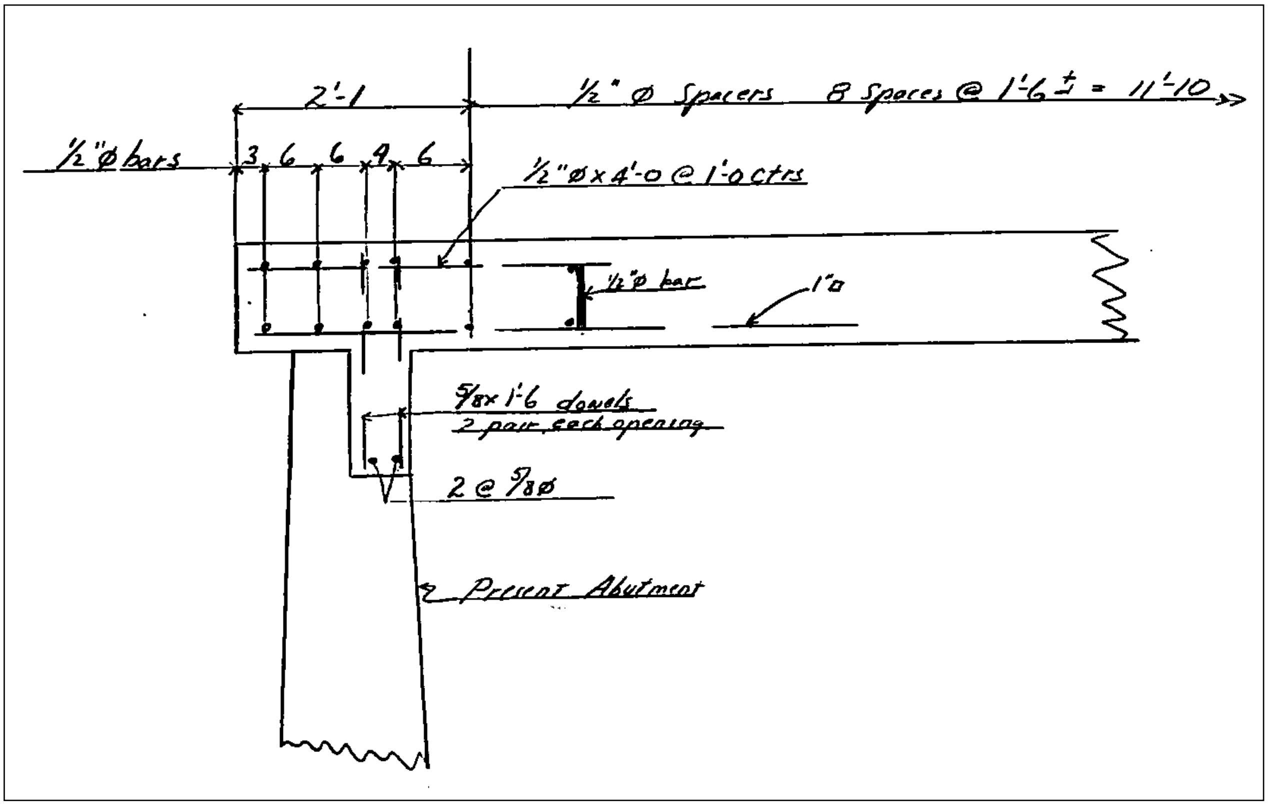


Plate 2. Cross section of abutment in 1940 rehabilitation plan. Notice a footing extending down from the slab to meet the existing abutment seat.[12]

The county improved the three eastern bridges in 1948. Slabs for these structures are wider than those of Bridge 302, with only three necessary to span the width rather than the five used at Bridge 302. Bridge 303 was a simple retrofit with the abutment seat built up to support the concrete slab. Bridges 304 and 305 were widened approximately six feet as well as having their spans replaced. The abutments were widened with the addition of a metal cap that extended the abutment seat. New wing walls for the abutments were created with metal panels. While Bridge 305 is not significantly larger than any of the others it has a steel substructure beneath the reinforced slabs. No rationale was recorded in any of the sources for this additional structure. The bridges have remained largely unchanged since the 1948 improvements. The bridges appear to have been resurfaced along with the road, and asphalt added atop the concrete deck. Erosion has affected some of the wing walls and

[11] "Howard Cozzens Retires as Road Commissioner," *Salinas Californian,* January 2, 1954, 9A.
[12] Office of County Surveyor, "Chualar Canyon Bridge District No. 3, [302 Bridge]" October 1940, from Monterey County Public Works.

they have been shored up with slump concrete. Newspaper accounts of flooding in 1998 indicate that at least one bridge in the area was fortified by firefighters as an emergency measure. This may correspond with the metal framework under Bridge 305.[13]

Evaluation

Under NRHP Criterion A or CRHR Criterion 1, these bridges do not have significant associations with important historic events or trends. Chualar Canyon is one of several small offshoots from Salinas Valley. While agriculturally diverse and productive, it does not share the uniquely high production of the valley or have associations with important Salinas Valley crop types such as sugar beets or dairies. The bridges serve a secondary county road that provides access to local traffic and does not represent an important transportation route.

These bridges do not have an association with the life of an individual important to history (NRHP Criterion B / CRHR Criterion 2). It does not appear that the bridges are associated with any specific individual. They were built by the county to serve the various residences in Chualar Canyon.

Under NRHP Criterion C / CRHR Criterion 3 these bridges are not significant as important examples of a type, period, or method of construction. These bridges are common, simple bridge types found across the nation. Slab bridges can be found throughout the world beginning in the pre-common era, re-introduced for modern roadways in the early twentieth century. The addition of reinforced concrete slabs to these bridges in the 1940s was well after reinforced concrete had been introduced and used widely in California. The original design of the bridges is unknown, but was likely a similar common bridge type like timber beam. Furthermore, the bridges are not the work of a master architect or builder, and their utilitarian designs do not possess high artistic value.

Under NRHP Criterion D / CRHR Criterion 4, these bridges are not a significant or likely source of important historical information. The structures do not appear to have any likelihood of yielding important information about historic construction materials or technologies. Also, the association of the roadway and the bridges is typical of the period and does not provide important information within the broader economic, social, and cultural setting of the area. This evaluation does not address non-built environment resources or pre-historic resources.

The bridges have been altered since their original construction likely between 1901 and 1936. This has significantly altered the original design as the original bridge type is unknown. Those alterations also resulted in the loss of materials, and workmanship. Since the bridges were updated in 1940 and 1948, they have remained largely unaltered, although Bridge 305 appears to have substructure added. The bridges retain their original location, feeling, setting, and association, but are not significant within their historical context.

[13] Parsons Brinckerhoff and Engineering and Industrial Heritage, "A Context for Common Historic Bridge Types," NCHRP Project 25-25 Task 15, for National Cooperative Highway Research Program, Transportation Research Council, National Research Council, October 2005, 3-82 – 3-85, 3-99; Yomi S. Wronge, "Tornado Gives Hollister a Little Love Tap," *The Salinas Californian,* March 26, 1998, 1; Moffatt & Nichol, "Bridge Inspection Report Bridge 302 Chualar Canyon Road," For Monterey County Resource Management Agency, 2020; Moffatt & Nichol, "Bridge Inspection Report Bridge 303 Chualar Canyon Road," For Monterey County Resource Management Agency, 2020; Moffatt & Nichol, "Bridge Inspection Report Bridge 304 Chualar Canyon Road," For Monterey County Resource Management Agency, 2020; Moffatt & Nichol, "Bridge Inspection Report Bridge 305 Chualar Canyon Road," For Monterey County Resource Management Agency, 2020.

Photographs (continued):

Photograph 2: Bridge 302; camera facing southwest; December 19, 2022.

Photograph 3: Bridge 302, showing the east side abutment where slump concrete sits atop the original board formed concrete; camera facing east; December 19, 2022.

Photograph 4: Bridge 302, showing the rock filled wire basket supporting its southwestern wing wall; camera facing south; December 19, 2022.

Photograph 5: Bridge 302; camera facing south; December 19, 2022.

Photograph 6: Bridge 303; camera facing west; December 19, 2022.

Photograph 7: Bridge 303; camera facing south; December 19, 2022.

Photograph 8: Bridge 303, showing its south side wheel guard and how the guard rail blots into the deck; camera facing northwest; December 19, 2022.

Photograph 9: Bridge 304; camera facing northwest; December 19, 2022.

Photograph 10: Bridge 304, showing where the northern edge of the east abutment has been extended; camera facing south; December 19, 2022.

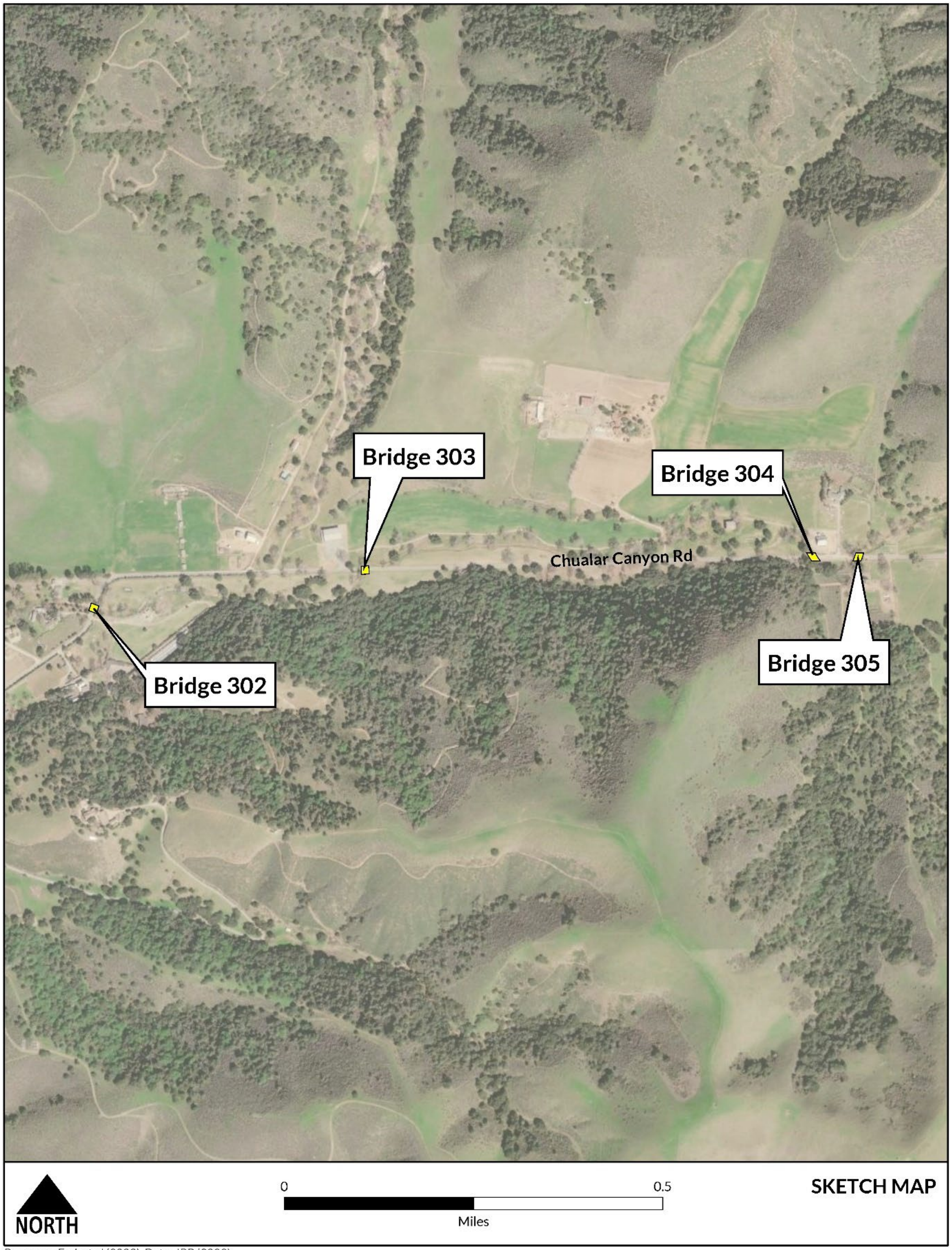
Photograph 11: Bridge 304; camera facing northwest; December 19, 2022.

Photograph 12: Bridge 305; camera facing northeast; December 19, 2022.

Photograph 13: Bridge 305, showing stone walls partially covered with metal substructure; camera facing north; December 19, 2022.

Photograph 14: Bridge 305, showing the metal frame beneath the deck; camera facing north; December 19, 2022.

Photograph 15: Bridge 305, showing the wheel guard and guard rail; camera facing southeast; December 19, 2022.



Base map: Esri, et al (2022). Data: JRP (2022).

Attachment 2:
Outreach to Potential Interested Parties

Communication Log

JRP Historical Consulting LLC

2850 Spafford Street, Davis, CA 95618
(530) 757.2521 | jrphistorical.com

Project	Chualar Canyon Road Bridge Rehabilitations, Monterey County, California.
Subject	Contacting interested parties re: historic resources
Project Proponent	County of Monterey
Notes Prepared By	Cheryl Brookshear, Staff Architectural Historian, JRP Historical Consulting, LLC

Notes:

Participants	Contact Time	Notes
Phil Angelo Historic Advisory Commission County of Monterey South 2nd Floor 1441 Schilling Place Salinas, CA 93901 831-755-5025 (dept) 831-784-5731 (direct) angelop@co.monterey.ca.us	12/14/2022	Letter sent via standard US Postal Service.
	1/3/2023	Follow up e-mail sent. Mr. Angelo replied that there were no known resources in the project vicinity. If any were identified information should be forwarded to him for county action.
Craig Spencer Chief of Planning County of Monterey South 2nd Floor 1441 Schilling Place Salinas, CA 93901 831-755-5233 spencerc@co.monterey.ca.us	12/14/2022	Letter sent via standard US Postal Service.
	1/3/2023	Follow up email sent. No response received.
James Perry Monterey County Historical Society PO Box 3576 Salinas, CA 93912 831-757-8085 (office) 831-747-0385 (cell) mchs@redshift.com	12/14/2022	Letter sent via standard US Postal Service.
	1/3/2023	Follow up email sent. No response received.
Christopher Gallegos Gonzales Branch Monterey County Free Libraries 851 Fifth Street Gonzales, CA 93926 (831) 386-6871 No published e-mail County librarian: TheyerHA@co.monterey.ca.us	12/14/2022	Letter sent via standard US Postal Service.
	1/3/2023	Follow up email sent to county librarian. No response received.

JRP Historical Consulting LLC
2850 Spafford Street, Davis, CA 95618
(530) 757.2521 | jrphistorical.com

Communication Log

Participants	**Contact Time**	**Notes**
Salinas Public Library 350 Lincoln Avenue Salinas, CA 93901 831-758-7311 No published e-mail Web portal e-mail	12/14/2022	Letter sent via standard US Postal Service.
	1/3/2023	Follow up sent via web portal regarding reference & local history. No response received.

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES, & PARKS

Randell Ishii, MS, PE, TE, PTOE, Director

1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-4800
www.co.monterey.ca.us

December 12, 2022

James Perry
Historic Advisory Commission
County of Monterey
South 2nd Floor
1441 Schilling Place
Salinas, CA 93901

Craig Spencer
Chief of Planning
County of Monterey
South 2nd Floor
1441 Schilling Place
Salinas, CA 93901

Monterey County Historical Society
PO Box 3576
Salinas, CA 93912

Salinas Public Library
350 Lincoln Avenue
Salinas, CA 93901

Christopher Gallegos
Gonzales Branch
Monterey County Free Libraries
851 Fifth Street
Gonzales, CA 93926

Re: Chualar Canyon Road Bridges Rehabilitation or Replacement Project

Dear Friends of History:

The County of Monterey is proposing to rehabilitate or replace four small bridges on Chualar Canyon Road at and east of Parsons Creek to eliminate current bridge deficiencies (see enclosed map). The proposed project will allow the bridges to carry legal loads including emergency response equipment. Several alternatives are currently being investigated.

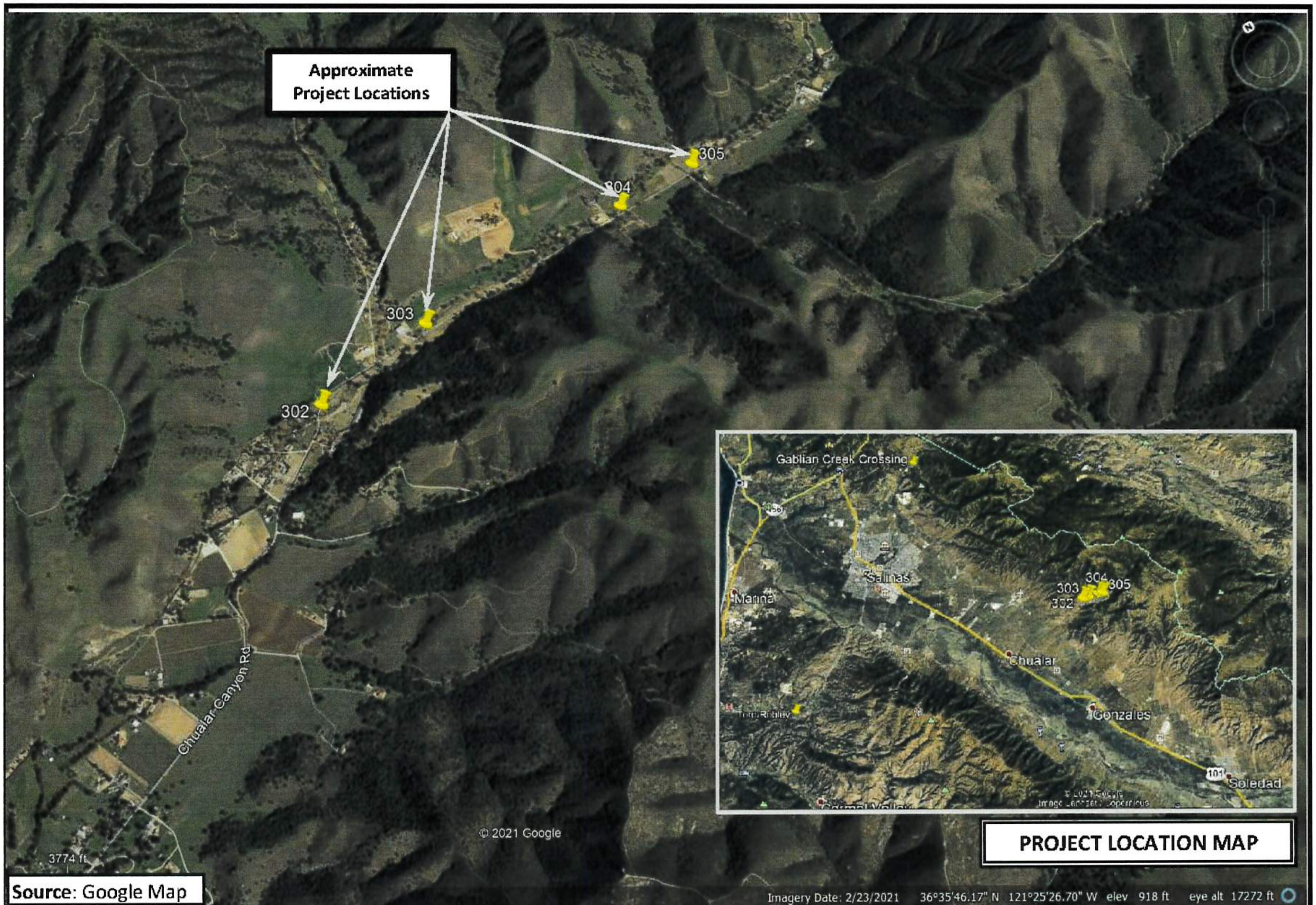
JRP Historical Consulting, LLC (JRP) has been retained to conduct an inventory and evaluation of potential historic properties that may be affected by the project. JRP is determining whether such properties are eligible for listing in the National Register of Historic Places (NRHP) and/or the California Register of Historical Resources (CRHR). JRP's work is part of the environmental studies process for the proposed project and is being conducted for compliance with Section 106 of the National Historic Preservation Act and the California Environmental Quality Act. JRP will be visiting a variety of repositories as a part of our research and any associated research requests will come under a separate inquiry.

This letter is to solicit feedback from you and the community, and to invite you and your organization to participate in the environmental process as it relates to historic resources for this project. Please let us know if you, your organization, or other members of the public have concerns related to known historic resources in the area, or wish to continue to receive information about historic resource investigations related to the project by responding via email to JRP Vice President, Christopher McMorris at cmcmorris@jrphistorical.com within the next 30 days. Thank you.

Sincerely,

Douglas Poochigian, P.E.

Douglas Poochigian, P.E.
Civil Engineer,
Monterey County Department of Public Works,
Facilities and Parks



PARIKH
Practicing in the Geosciences

CUALAR CANYON ROAD BRIDGES
MONTEREY COUNTY, CALIFORNIA

JOB NO.: 2021-126-GEO | **PLATE NO. 1**

Chualar Canyon Road Bridges

Cheryl Brookshear <CBrookshear@jrphistorical.com>

Tue 1/3/2023 9:27 AM

To: angelop@co.monterey.ca.us <angelop@co.monterey.ca.us>;spencerc@co.monterey.ca.us <spencerc@co.monterey.ca.us>;mchs@redshift.com <mchs@redshift.com>;TheyerHA@co.monterey.ca.us <TheyerHA@co.monterey.ca.us>

1 attachments (736 KB)

Letter to Interested Parties (History) - Chualar Canyon Road Bridges.pdf;

Hello,

In December JRP sent you a letter on behalf of Monterey County Public Works regarding proposed replacement or improvement of four small bridges along Chualar Canyon Road (See attached). JRP is conducting research to determine if there are historical resources within the project area. Public organizations and individuals are encouraged to bring forward any concerns about potential historic resources in the project vicinity. Our study is ending soon, so please contact us immediately with any concerns.

Thank you,
Cheryl

JRP Historical Consulting LLC
Cheryl Brookshear M.S. | Historian/Architectural Historian
(530) 757-2521 ext. 113 office | 530-383-5708 cell cbrookshear@jrphistorical.com

I am currently working remotely. The best way to reach me is via e-mail or leave a message at the extension listed above.

Select Language ▼

Your message has been sent! We will reply to your question at the email address you provided within 48 hours.

Thank you,

Salinas Public Library

Go back to the form

RE: Chualar Canyon Road Bridges

Angelo, Philip <AngeloP@co.monterey.ca.us>
Tue 1/3/2023 10:00 AM
To: Cheryl Brookshear <CBrookshear@jrphistorical.com>
Cc: Spencer, Craig <SpencerC@co.monterey.ca.us>
Hello Cheryl,

Thank you for reaching out, I took a look at our GIS information and wasn't able to identify any known historical resources in the project vicinity.

If your investigation identifies any of the bridges are historical, we'd like to coordinate with public works to ensure that the project is referred to the Historic Resources Review Board (HRRB) for review and a recommendation in accordance with 2010 General Plan Public Services Element Policies 12.5 and 12.14.

Best,

Phil Angelo
Associate Planner
Monterey County - Housing & Community Development
1441 Schilling Place, South 2nd Floor
Direct: (831) 784-5731
AngeloP@co.monterey.ca.us

From: Cheryl Brookshear <CBrookshear@jrphistorical.com>
Sent: Tuesday, January 3, 2023 9:27 AM
To: Angelo, Philip <AngeloP@co.monterey.ca.us>; Spencer, Craig <SpencerC@co.monterey.ca.us>; mchs@redshift.com; Theyer, Hillary A. <TheyerHA@co.monterey.ca.us>
Subject: Chualar Canyon Road Bridges

Hello,

In December JRP sent you a letter on behalf of Monterey County Public Works regarding proposed replacement or improvement of four small bridges along Chualar Canyon Road (See attached). JRP is conducting research to determine if there are historical resources within the project area. Public organizations and individuals are encouraged to bring forward any concerns about potential historic resources in the project vicinity. Our study is ending soon, so please contact us immediately with any concerns.

Thank you,
Cheryl

JRP Historical Consulting LLC
Cheryl Brookshear M.S. | Historian/Architectural Historian
(530) 757-2521 ext. 113 office | 530-383-5708 cell
cbrookshear@jrphistorical.com

Appendix F
Bridge Design Hydraulics Study Memorandum

Draft Memorandum

Date:	Friday, August 25, 2023
Project:	Chualar Canyon Road Bridges
To:	Garrett Dekker, Moffatt and Nichol
From:	Chris Sewell and Alejandra Rodriguez, HDR
Subject:	**Bridge Design Hydraulics Study Memorandum**

1. Introduction

The County of Monterey Resources Agency, Public Works Division (County) is proposing to replace four bridges on Chualar Canyon Road at Chualar Creek, located in the unincorporated area in the County of Monterey. The bridge numbers and location of the four bridges are listed below in Table 1. See Figure 1 and Figure 2 for the Project location map and Project vicinity map, respectively.

Table 1. Summary of four Bridges

Road	County Bridge No.	Location
Chualar Canyon Road	302	6.0 Miles East of Chualar, California
	303	6.4 Miles East of Chualar, California
	304	7.0 Miles East of Chualar, California
	305	7.1 Miles East of Chualar, California

Source: HDR, 2023

The purpose of this Memorandum is to provide the hydrologic analyses of the tributary watersheds and hydraulic analyses for the existing and proposed structures on Chualar Canyon Road (Bridge No. 302, 303, 304, and 305).

Chualar Canyon Road Bridges Project (Project) is proposing to replace four bridges located between approximately 6.0 miles east and 7.1 miles east of Chualar, California.

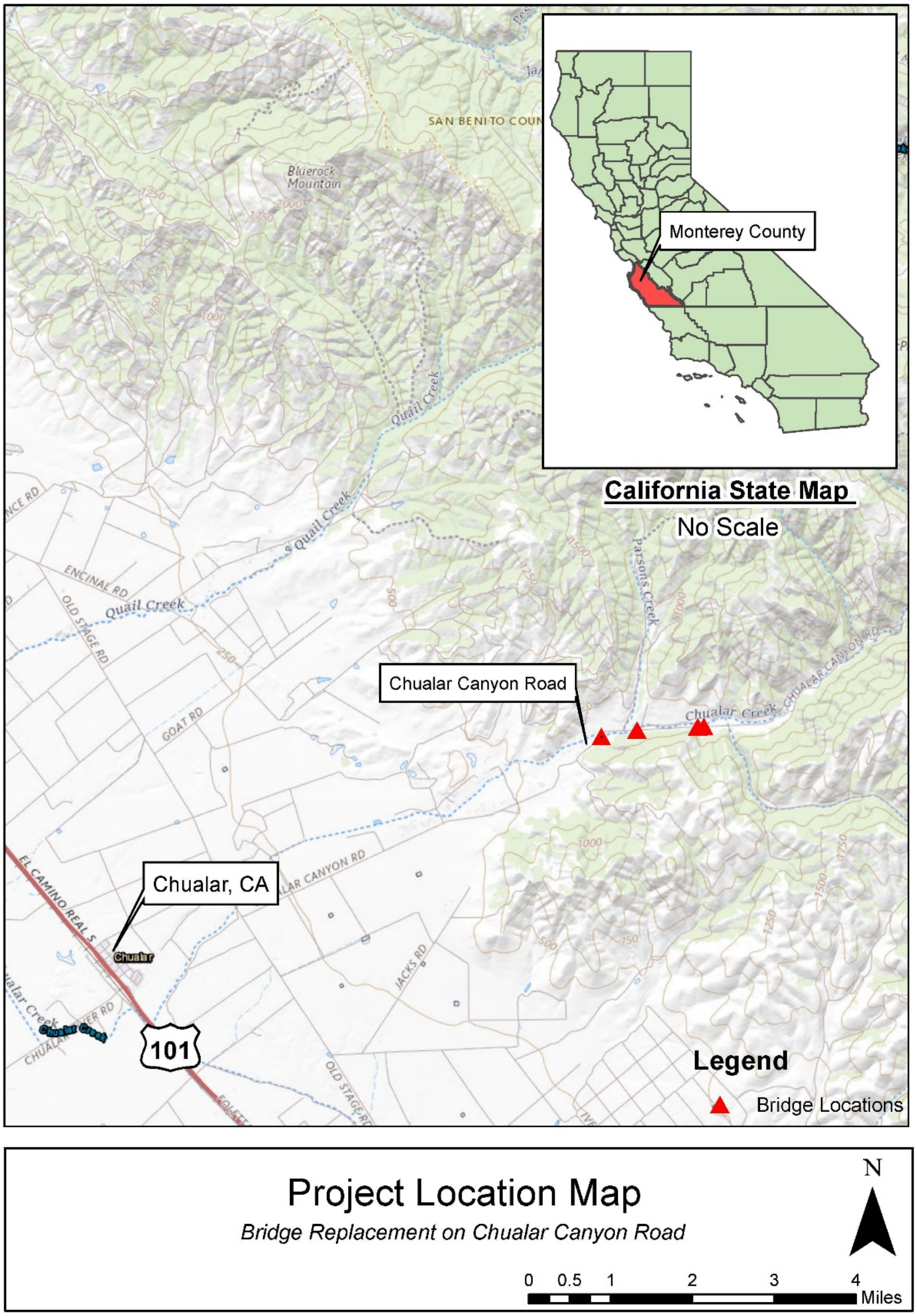
In the Monterey County Resource Management Agency (MCRMA) Bridge Inspection Report (BIR), Bridge 302 was modified in 1940 and has five precast reinforced concrete slab panels. The precast slab is supported by concrete abutments on spread footings. Wingwalls consist of unreinforced concrete ledges with sacked concrete piled on top. The original structure was built prior to 1940. The record drawings from 1940 indicate that the abutments were existing or "present" when the slabs were constructed. The bridge length is approximately 16 ft and the bridge width is 16 ft (MCRMA, 2020). The proposed bridge structures are dual 10 ft wide by 5 ft high box culverts that are embedded with excavated material to create a natural bottom culvert.

Bridge 303 was modified in 1948 and has three precast reinforced concrete slab panels that are 6.17 ft wide. The precast slab is supported by concrete abutments on spread footings, and the wingwalls are located on the north side of the bridge. The original structure was built prior to 1948. The record drawings from 1948 indicate that the abutments were existing or "present" when the slabs were constructed. Like County Bridge 302, a portion of the original abutment seat was removed on both abutments. New concrete with reinforcement was cast after the precast panels were set on top of the abutment. The bridge length is approximately 15 ft, and the bridge width is 15.84 ft (Monterey County Resource Management Agency, 2020). The proposed bridge structures are dual 10 ft wide by 5 ft high box culverts that are embedded with excavated material to create a natural bottom culvert.

Bridge 304 was modified in 1948 and has three precast reinforced concrete slab panels that are 6.17 ft wide. The precast slab is supported by a combination of concrete abutments on spread footings and steel cap beam partially supported on the original concrete abutment and partially founded on double angle pile (angles for a “Z” shape). Wingwalls on the north side are made of steel sheets with rail piles. Wingwalls on the south side are concrete. The original structure was built prior to 1948. The record drawings from 1948 indicate that the abutments were existing or "present" when the slabs were constructed. Like County Bridges 302 and 303, a portion of the original abutment seat was removed on both abutments. New concrete with reinforcement was cast after the precast panels were set on top of the abutment. Unlike the other two bridges, the 1948 construction extended the length of the abutment by approximately 6.25 ft using a built-up steel U-shape for the cap beam supported by a built-up steel Z-shape pile. Both the cap beam and piles are made from welded angles. The modifications allowed the bridge to be widened toward the north utilizing the existing abutment. The bridge length is approximately 15 ft, and the bridge width is 15.84 ft (Monterey County Resource Management Agency, 2020). The proposed bridge structures are dual 10 ft wide by 5 ft high box culverts that are embedded with excavated material to create a natural bottom culvert.

Bridge 305 was modified in 1948 has three precast reinforced concrete slab panels that are 6.17 ft wide. The precast slab is supported by steel bent type abutments on steel angle piles. The bridge is supported by three A-frame type braces, which appear to connect back to the abutment piles. The wingwalls are a combination of pierced steel plate lagging with piles and grouted rock gravity wall. The original structure was built prior to 1948. The record drawings from 1948 indicate that the abutments were existing or "present" when the slabs were constructed. The bridge length is approximately 11.75 ft, and the bridge width is 15.84 ft (Monterey County Resource Management Agency, 2020). The proposed bridge structures are dual 10 ft wide by 5 ft high box culverts that are embedded with excavated material to create a natural bottom culvert.

Figure 1. Project Location Map



Source: Environmental Systems Research Institute (ESRI), 2021

Figure 2. Project Vicinity Map

N

Project Vicinity Map

Bridge Replacement on Chualar Canyon Road

0 0.1 0.2 0.4 0.6 0.8 Miles

Source: ESRI, 2021

2. Hydrologic Analysis

The hydrology at the Project site is based on the U.S. Geological Survey (USGS) Streamflow Statistics and Spatial Analysis Tools for Water-Resources Applications (StreamStats). See Attachment A for StreamStats Report Summary. Federal Emergency Management Agency's (FEMA) Flood Insurance Study (FIS) does not have a detailed study at the bridge sites. The FEMA Flood Insurance Rate Map (FIRM) is shown in Attachment B. The channel capacity is controlled by the bridge openings and is on the order of approximately 178 cfs, which is estimated to be between a 2-year and 5-year storm event. The summary of watershed areas, capacity design flow, and 100-year storm event for each respective bridge are listed in Table 2. The watershed map for each bridge location is show on Figure 3.

Table 2. Summary of Watershed Area and Design Flow

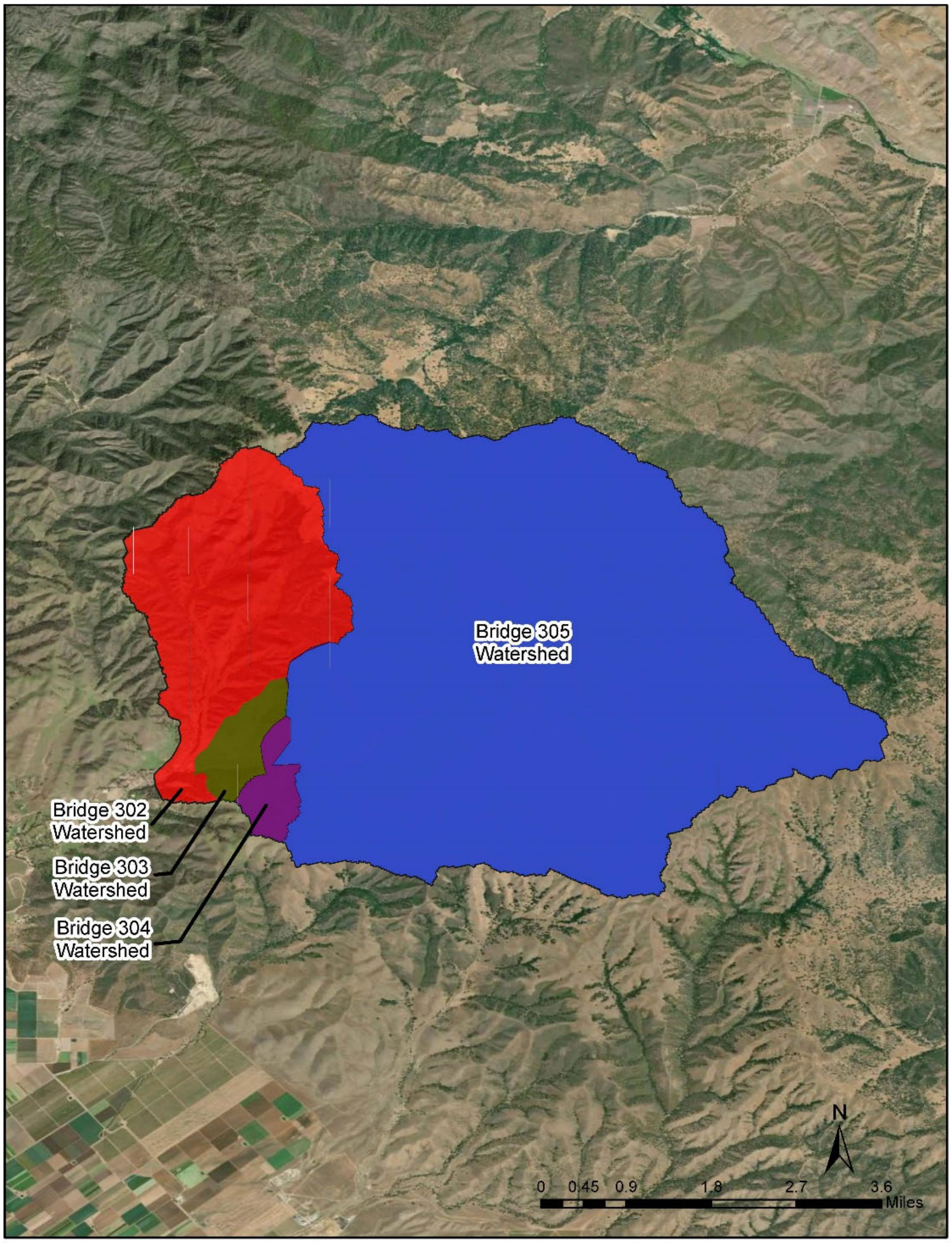
Flow Source	Watershed Area (sqmi)[a]	Capacity Design Flow (cfs)[b]	100-Year Design Flow (cfs)[b]
Upstream/East of Chualar Canyon Road Bridge 302	22.5	178	2560
Upstream/North of Chualar Canyon Road Bridge 303	18.5		2520
Upstream/South of Chualar Canyon Road Bridge 304	18.0		2130
Upstream/North of Chualar Canyon Road Bridge 305	17.6		2090

Source: HDR (2023) and USGS StreamStats (2022)

[a] sqmi: square mile

[b] cfs: cubic feet per second

Figure 3. Project Watershed Map



Source: ESRI, 2023

3. Design Criteria

Hydraulic Design Criteria

No local hydraulic design criteria were identified for Monterey County Water Resources Agency (MCWRA). According to the Monterey County Code of Ordinances Section 19.10.050: improvements shall be designed to meet Monterey County Resources Agency Design Criteria and improvement plans shall be submitted to the Monterey County Water Resources Agency for review and approval. "Drainage improvements for runoff from impervious surfaces shall be engineered to minimize erosion through the use of rocked culvert inlets and outfalls, energy reducers and location of culverts. Design features shall include reseeding exposed slopes as well as minimizing the use of artificial slopes." (Monterey County, 2023). Guidance outlined in Chapter 820 of the Caltrans Highway Design Manual (HDM) (2020) is also referenced for hydraulic design criteria.

HYDRAULIC DESIGN OF CULVERTS

From Chapter 820 of the Caltrans' HDM, the criterion for the hydraulic design of culverts includes that they be designed to pass 1% probability flood (100-year) with-out headwaters rising above an elevation that would cause objectionable backwater depths or outlet velocities. The term “headwater” refers to the depth of the upstream water surface measured from the invert of the culvert entrance. Any culvert which constricts the natural stream flow will cause a rise in the upstream water surface.

SCOUR DESIGN CRITERIA

No local scour design criteria were identified for the County of Monterey scour design criteria. The guidance outlined in Federal Highway Administration's (FHWA) Hydraulic Engineering Circular No. 14 (HEC-14), “Hydraulic Design of Energy Dissipators for Culverts and Channels” (2006) are referenced for estimating scour at culvert design criteria for this Project. The evaluation of potential scour was based on hydraulic characteristics of the 100-year design discharge. The total scour will be estimated based upon the effects of the scour hole geometry, time of scour, drop height and slope.

ROCK SLOPE PROTECTION DESIGN CRITERIA

Three procedures for determining rock slope protection (RSP) design were considered for the proposed structures: the FHWA's Hydraulic Engineering Circular No. 14 (HEC-14), “Hydraulic Design of Energy Dissipators for Culverts and Channels” (2006) and Caltrans' NSSP “Generic Energy Dissipator at Culvert Outlet” (2019). The final selection considers these procedures and is based on engineering judgment.

VERTICAL DATUM

The Project references the North American Vertical Datum of 1988 (NAVD 88).

4. Hydraulic Analysis

The following sections discuss the development of the hydraulic models and summarize the results for the existing and proposed conditions. The water surface profile plots, hydraulic summary tables, and channel cross sections are included in the section below.

Study Tool

The hydraulic analyses were performed for the existing and proposed conditions using the USACE's Hydrologic Engineering Center's River Analysis System (HEC-RAS) modeling software, Version 6.4.1.

Hydraulic Model Input

CROSS SECTION DATA

The channel geometry for the hydraulic model was developed using topographic data provided by Moffatt and Nichol (2022) and 1/3-meter Digital Elevation Model data produced for Central Coast of California (USGS, 2020) for the areas outside the Project's limits.

MODEL HYDRAULIC STRUCTURES

The geometry of the existing bridge in the hydraulic model is based on information from the survey data provided by Moffatt and Nichol in 2022. The existing bridge deck elevations were based on the survey data. To account for the cattle gates located on the upstream and downstream faces of the bridges, while also assuming the property owners are unlikely to remove the gates during a storm event, it was assumed that 25% of the culverts area would be reduced due to debris and sediment accumulation. This was obtained by holding the soffit elevation and restricting the hydraulic clearance. The proposed bridge structures were modeled as dual 7.5 ft wide by 5 ft high box culverts that are embedded with excavated material to create a natural bottom culvert.

MODEL BOUNDARY CONDITION

The effective FEMA FIS for Monterey County, California and incorporated Areas, dated April 2, 2009 (FEMA, 2009), does not contain detailed hydrologic or hydraulic information for Chualar Creek. Because flood profiles and WSEs were not available in the Project vicinity, a normal depth slope was used as the downstream reach boundary condition. A slope of 0.0011ft/ft was estimated based on the thalweg elevations from the Project's topographic survey of Chualar Creek (M&N, 2022).

MANNING'S ROUGHNESS COEFFICIENTS

Manning's roughness coefficients were used in the hydraulic model to estimate energy losses in the flow due to friction. A roughness coefficient of 0.035 was used to describe the project area. This value was selected based on the aerial images and site photos (see Attachment C for Project Photos).

EXPANSION AND CONTRACTION COEFFICIENTS

Expansion and contraction coefficients were used in the hydraulic model to represent energy losses in the channel. The expansion and contraction coefficients used in the vicinity of the bridges were 0.5 and 0.3, respectively. These values represent the flow interference caused by the structures.

5. Hydraulic Model Results

The results of the hydraulic modeling are discussed in this section.

Water Surface Elevation

Hydraulic data summary table for the existing and proposed conditions are shown in Table 3. The structures centerline cross section for the existing and proposed bridges are shown in Figure 4, Figure 5, Figure 6, and Figure 7 for Locations 302, 303, 304, and 305 respectively. The existing water surface elevation during Chualar Creeks capacity design flow is shown in Figure 8. The proposed water surface elevation during Chualar Creeks capacity design flow is shown in Figure 9.

Table 1. Hydraulic Data Summary Table

Location	Flow	Upstream Deck Elevation	Soffit Elevation	Existing WSE[a]	Proposed WSE[a]	WSE Difference
		(ft)[a]	*(ft) (NAVD 88)*			*(ft)*
302	178cfs	535.35	533.0	534.1	533.9	-0.2
303		559.19	557.1	559.5	558.6	-0.9
304		601.86	599.3	598.3	598.3	-0.0
305		606.59	604.4	605.2	604.1	-1.1

Source: HDR (2023)

[a] ft – feet

[b] WSE – Water Surface Elevation

Figure 4. Cross Section Comparison at Bridge 302

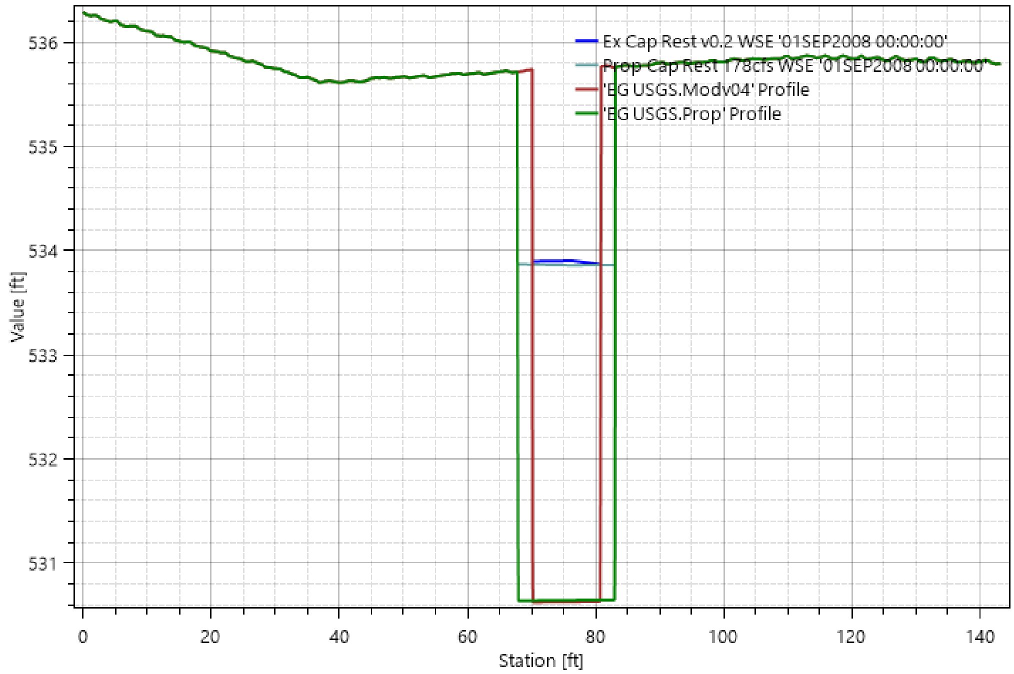


Figure 5. Cross Section Comparison at Bridge 303

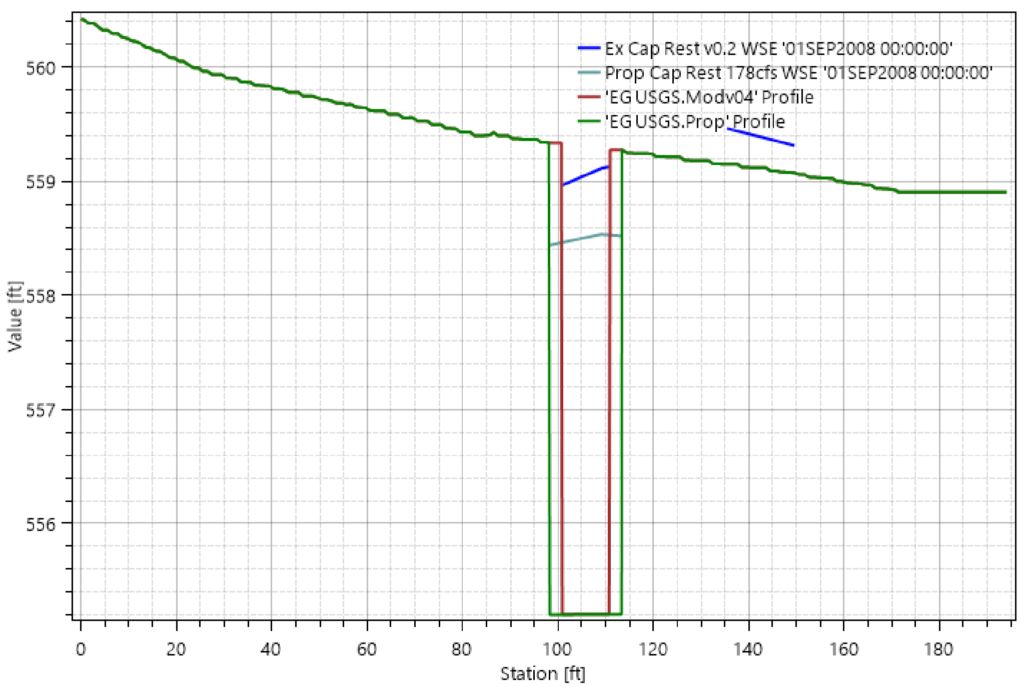


Figure 6. Cross Section Comparison at Bridge 304

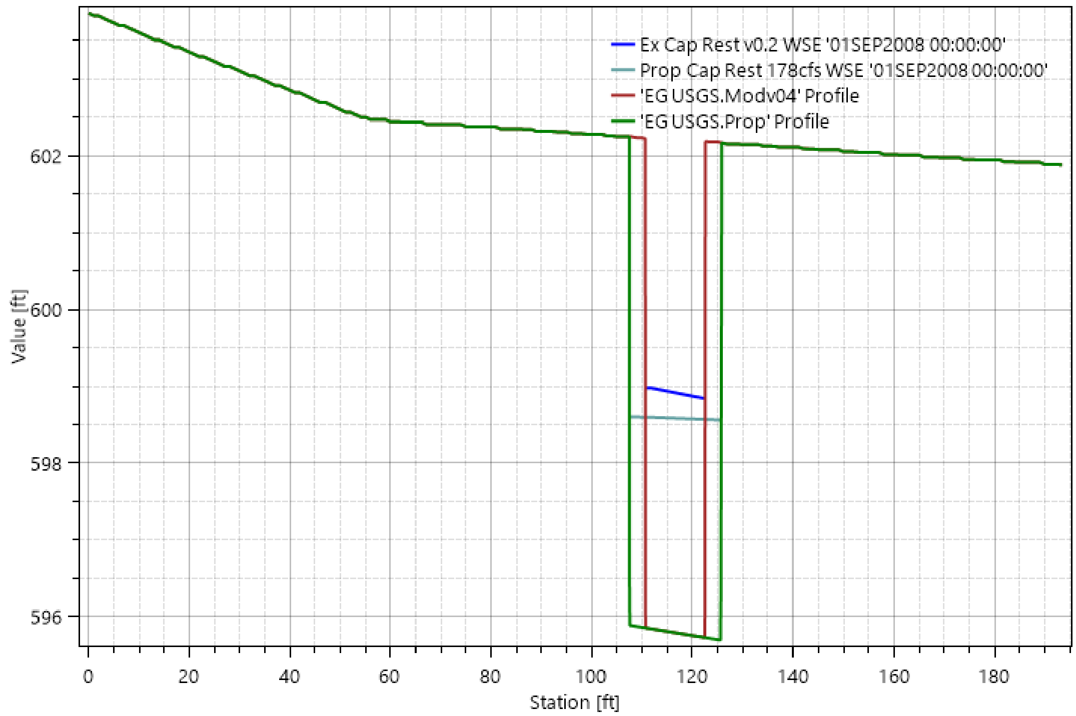


Figure 7. Cross Section Comparison at Bridge 305

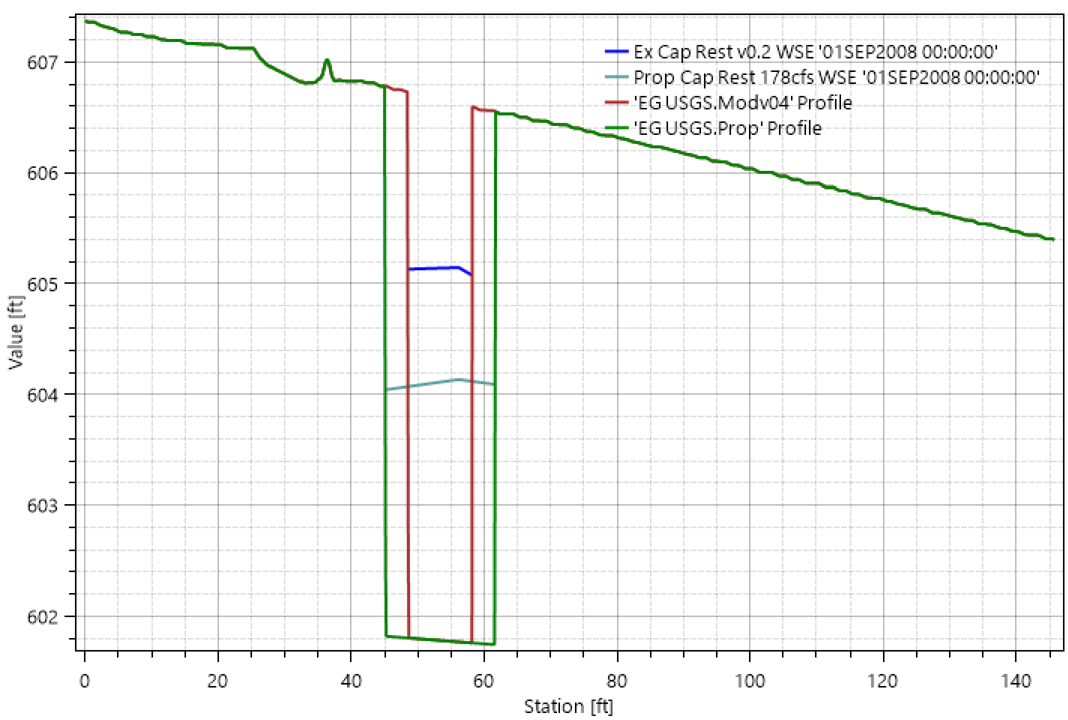


Figure 8. Existing Plan View Water Surface Elevation

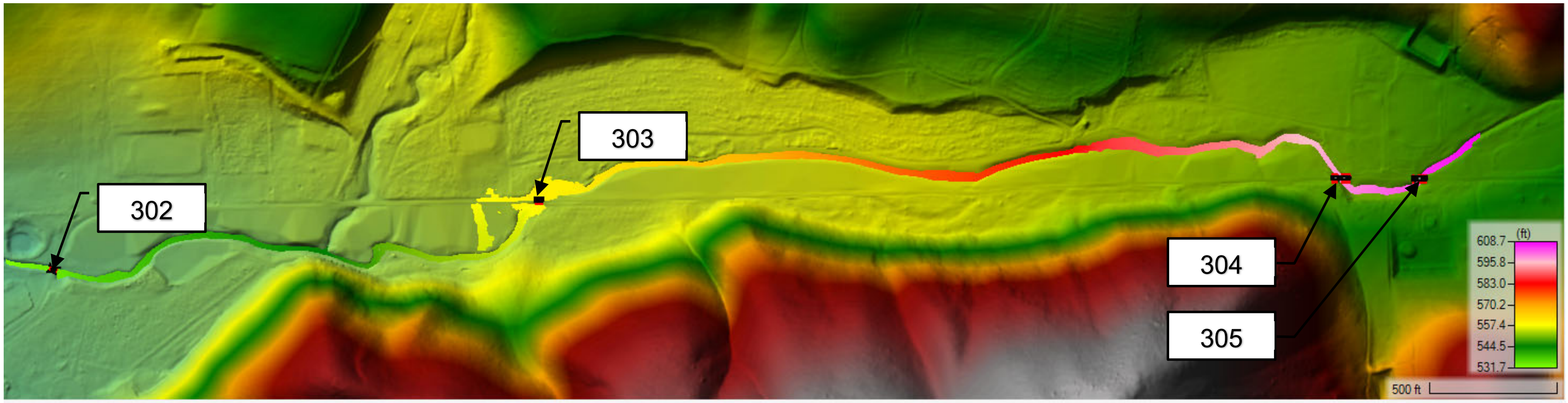
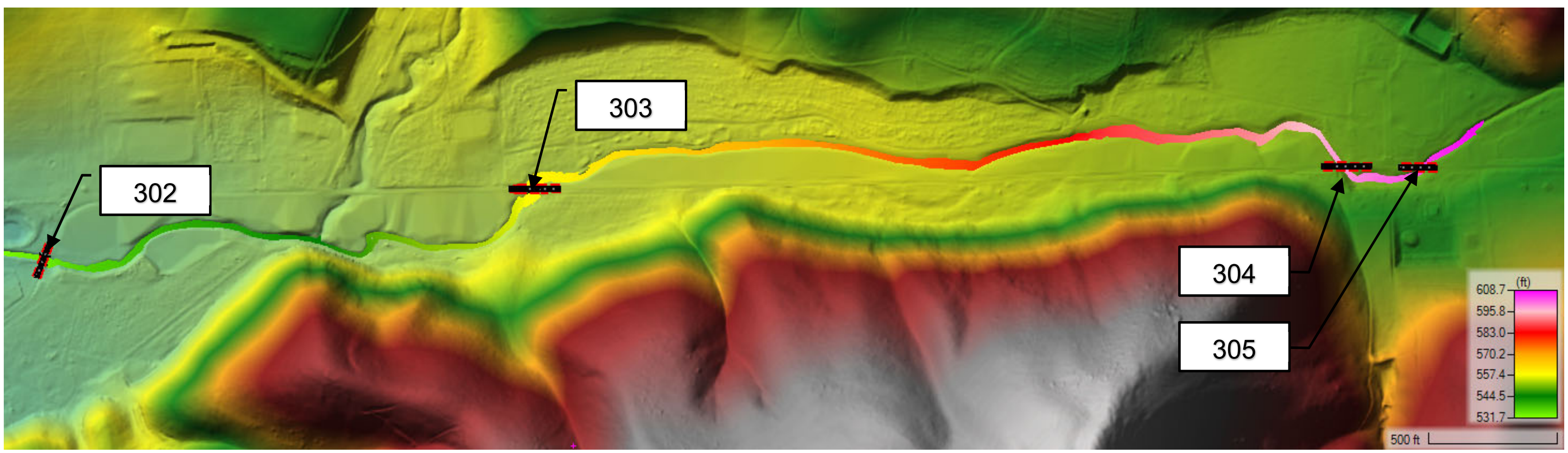


Figure 9. Proposed Plan View Water Surface Elevation



Freeboard

No local freeboard design criteria were identified. The freeboard guidance from Chapter 820 of the Caltrans' HDM recommends culverts be designed to pass 1% probability flood (100-year) with-out headwaters rising above an elevation that would cause objectionable backwater depths or outlet velocities. Based on the results of the hydraulic analyses, Chualar Creek's channel capacity is estimated to be between a 2-to-5-year storm event. Both the existing and proposed bridges do not meet Caltrans' design criteria for freeboard. On August 7, 2023, Monterey County concurred to design for the Chualar Creek's channel capacity with the flow contained within the banks and does not overtop the road.

6. Scour Analysis

No local scour design criteria were identified for the County of Monterey. The guidance outlined in Federal Highway Administration's (FHWA) Hydraulic Engineering Circular No. 14 are referenced as the design criteria. The sieve analysis was conducted on January 3, 2023 by Parikh Consultants, Inc which classified the four bridge creek bed material as cohesionless soil. Using FHWA HEC-14 Chapter 5, cohesionless soils equation 5.1, for scouring which considers the hydraulic radius, flow, and sediment particle size distribution. The equation for determining scour depth in a cohesionless soil at the culvert outlet is as follows:

$$h_s = C_s C_h \left(\frac{\alpha}{\sigma^{1/3}}\right)\left(\frac{Q}{\sqrt{g}(R_c^{2.5})}\right)^{\beta}\left(\frac{t}{316}\right)^{\theta}$$

Where:
h_s = depth of scour, (ft)
W_s = width of scour, (ft)
R_c = hydraulic radius at the end of the culvert (assuming full flow)
Q = effective discharge (assuming full flow), (ft3/s)
g = acceleration of gravity, (32.2 ft /s2)
t = time in minutes
σ = $(D84/D16)^{0.5}$, material standard deviation
α, β, θ are coefficients, (see FHWA Chapter 5 Table 5.1)
Cs = slope correction coefficient, (see FHWA Table 5.2)
Ch = drop height adjustment coefficient, (see FHWA Table 5.3)

It is noted no guidance is available for a dual box culvert, the equivalent area opening was assumed for the proposed diameter size. The expected depth of scour is summarized in Table 4. Detailed scour calculations are shown in Attachment D.

Table 4. Summary of Depth of Scour

Location	Effective 100-Year Flow (cfs)[a]	Depth of Scour (ft)[b]
Bridge 302	119.1	3.8
Bridge 303	102.5	2.7
Bridge 304	295.5	6.2
Bridge 305	248.5	5.1

Source: HDR (2023)
[a] cfs – cubic feet per second
[b] ft – feet

Bridge Inspection Reports

Available BIRs were reviewed for relevant historical scour information. The BIR reported hydraulic issues at the bridge and included a history of the site. It is noted historical stream measurements were not included in the BIRs. Scour measurements were not included in the BIRs at any of the four bridge locations. A summary of BIR notes are included in Table 5.

Table 5. Bridge Inspection Report Summary

Inspection Location	Substructure Information
Bridge 302 (January 2020)	North end of channel is lower than the south. Maximum vertical clearance is 3.75 ft under the north end of the bridge and 2.67 ft under the south. Depth of footing for the abutments is unknown. Per the record drawings, a portion of the original abutment seat was removed on both abutments. New concrete with reinforcement was cast after the precast panels were set on top of the abutment. See record drawings. In general, multiple patches in the newer concrete were observed along the north abutment. See Photo 12. The original concrete shows signs of abrasion and deterioration along the abutment face. Where spalling was observed in the original abutment, no reinforcement was exposed which indicates that the abutments are unreinforced. Of note, two spalls with exposed and corroded rebar were observed in the north abutment newer concrete at the west side of the bridge. There is a large spall in the original concrete at the west corner of the south abutment. Furthermore, there is also spalling at the east corner of the north abutment. Original concrete wingwalls support sacked concrete bags. The original concrete wingwalls are cracked, most likely due to a lack of reinforcement. It appears during periods of high-water that piping is occurring behind the north and south abutments. It is more noticeable behind the south abutment.
Bridge 303 (January 2020)	West side of the channel is lower than the east. Vertical clearance from the channel invert to the soffit is approximately 3 ft on the west and 2 ft on the east. Depth of footing for the abutments is unknown. Like County Bridge 302, a portion of the original abutment seat was removed on both abutments. New concrete with reinforcement was cast after the precast panels were set on top of the abutment. See record drawings. In general, the original concrete on both abutments shows signs of abrasion and deterioration. In addition, efflorescence was noted on the face of both abutments. Spalls were noted in the original concrete at the abutment corners. Where spalling was observed in the original abutment, no reinforcement was exposed which indicates that the abutments are unreinforced. Exposed rebar was observed protruding from the south end of the west abutment. It appears the rebar was cast into the concrete like this at the time of construction. Longitudinal cracking was noted on the face of the west abutment. Most of the cracking occurs near the interface of the new and original concrete. In general, the east abutment appeared to be in better condition than the west abutment. The low point of the channel runs along the face of the west abutment which makes it more susceptible to abrasion from flowing debris. A chunk of concrete and asphalt is dislodged from the top of the northwest wingwall.

Inspection Location	Substructure Information
Bridge 304 (January 2020)	Like County Bridge 302 and 303, a portion of the original abutment seat was removed. New concrete with reinforcement was cast after the precast panels were set on top of the abutment. Unlike the other two bridges, the 1948 construction extended the length of the abutment by approximately 6.25 ft using a built-up steel U-shape for the cap beam supported by a built-up steel Z-shape pile. Both the cap beam and piles are made from welded angles. The modifications allowed the bridge to be widened toward the north utilizing the existing abutment. In general, both original concrete abutments are in poor condition. Major spalling, cracking, and abrasion was observed in the abutment and wingwall concrete. The concrete was sounded using a hammer and found to be very soft and wet toward the south side of the bridge. Large chunks of concrete could be easily removed with a hammer. Generally, the compromised concrete looks wet with green algae growth. Where spalling was observed in the original abutment, no reinforcement was exposed which indicates that the abutments are unreinforced. The newer concrete appears to be in better condition than the original abutment concrete. However, there was some cracking noted in the west abutment face. In addition, there is a spall in the south corner of the west abutment newer concrete. The steel abutment extensions to the north side of the bridge are corroded. The steel does not appear to have been coated with paint when originally installed. Section loss is evident in both steel piles at the mudline. It is estimated that there is 15 to 25 percent of section loss in the steel piles at the mudline.
Bridge 305 (January 2020)	Corrosion was observed in the pierced steel panel lagging, abutment cap beam, piles, and A-frame supports. More severe corrosion was observed at Mudline. See Photo 9. At mudline, flakes can be seen separating from the steel indicating the start of some section loss. It is estimated that there is approximately 10-20% section loss in some steel members at mudline. Steel angles brace the wingwalls both upstream and downstream of the bridge. The steel angle on the north side of the bridge is warped.

Source: Monterey County Bridge Inspection Reports (2020)

Scour Countermeasure Consideration

The information in this section presents practices and ideas that minimize scour at bridges. Rock slope protection (RSP) generally consists of rocks on channel and structure boundaries to limit the effects of erosion. It is the most common type of scour countermeasure due to its general availability, ease of installation, and relatively low cost. RSP sizing calculations were performed to estimate a minimum recommended rock class to protect the proposed culvert from scour and erosion.

RSP calculations estimate a minimum recommended rock size/class to protect the culvert from scour and erosion. Three procedures were considered to determine the RSP size for the proposed bridge: HEC-14 (FHWA, 2006) and Caltrans' NSSP "Generic Energy Dissipator at Culvert Outlet" (2019).The summary of proposed RSP sizing is summarized in Table 6. Supporting calculations are shown in Attachment E.

Table 6. Rock Slope Protection Recommended Class Size

Method	Bridge 302	Bridge 303	Bridge 304	Bridge 305
HEC-14 Fletcher & Grace (1972)	I	I	I	I
Caltrans' NSSP N.K. Berry (1948)	I	I	I	I
Caltrans' NSSP Brown and Clyde (1989)	I	I	III	II
Recommended	IV	IV	IV	IV

A minimum size of Class IV RSP (300 lb median particle weight, 15 inches median particle diameter) is recommended to protect the proposed culvert. The RSP should extend horizontally 6 ft from upstream and downstream faces of the bridge. The RSP should be placed with a minimum thickness of the RSP layer or the scour depth, found in Table 5, using Method B. Method B dumps rock near its planned location and working the rock to its final position with machinery. A Class 8 RSP geotextile filter fabric should be placed on the bank as the initial filter separator material between the layer of RSP and the channel bank.

References

California Department of Transportation

2020 *Highway Design Manual*. Seventh Edition.

2019 *Nonstandard Special Provision Generic Energy Dissipator at Culvert Outlet.* (January 2019)

Federal Emergency Management Agency

2009 *Flood Insurance Rate Map, Monterey County (and Incorporated Areas), California Panel 425 of 2050.* (Map Number 06053C0425G). April 2, 2009.

Federal Highway Administration

2006 Hydraulic Engineering Circular No. 14. *Hydraulic Design of Energy Dissipators for Culverts and Channels. (July 2006)*

2000 *California Bank and Shore Rock Slope Protection Design Practitioner's Guide and Field Evaluations of Riprap Methods Manual* (FHWA-CA-TL-95-10).

Moffatt and Nichol

2022 Topographic Data. AutoCAD Civil 3D 2022. October 2022.

Monterey County Resources Management Agency

2023 Code of Ordinances Section 19.10.050. eLaws.us.<http://montereycounty-ca.elaws.us/code/coor_title19_ch19.10_sec19.10.050> (Last accessed: August 2023)

2020a Bridge Inspection Report prepared by Moffatt and Nichol. Structure Name: 302. Facility Carried: Chualar Canyon Road. April 19, 2021.

2020b Bridge Inspection Report prepared by Moffatt and Nichol. Structure Name: 303. Facility Carried: Chualar Canyon Road. April 19, 2021.

2020c Bridge Inspection Report prepared by Moffatt and Nichol. Structure Name: 304. Facility Carried: Chualar Canyon Road. April 19, 2021.

2020d Bridge Inspection Report prepared by Moffatt and Nichol. Structure Name: 305. Facility Carried: Chualar Canyon Road. April 19, 2021.

Parikh Consultants, Inc

2023 *Sieve Analysis ASTM C117 and C136, D422 or CAL*. Date tested: January 03, 2023.

United States Army Corps of Engineers

2023 Hydrologic Engineering Center. (2023). River Analysis System. HEC-RAS. (Version 6.4.1) [Computer software]. June 2023. Available from: <https://www.hec.usace.army.mil/software/hec-ras/download.aspx.>

United States Geological Survey

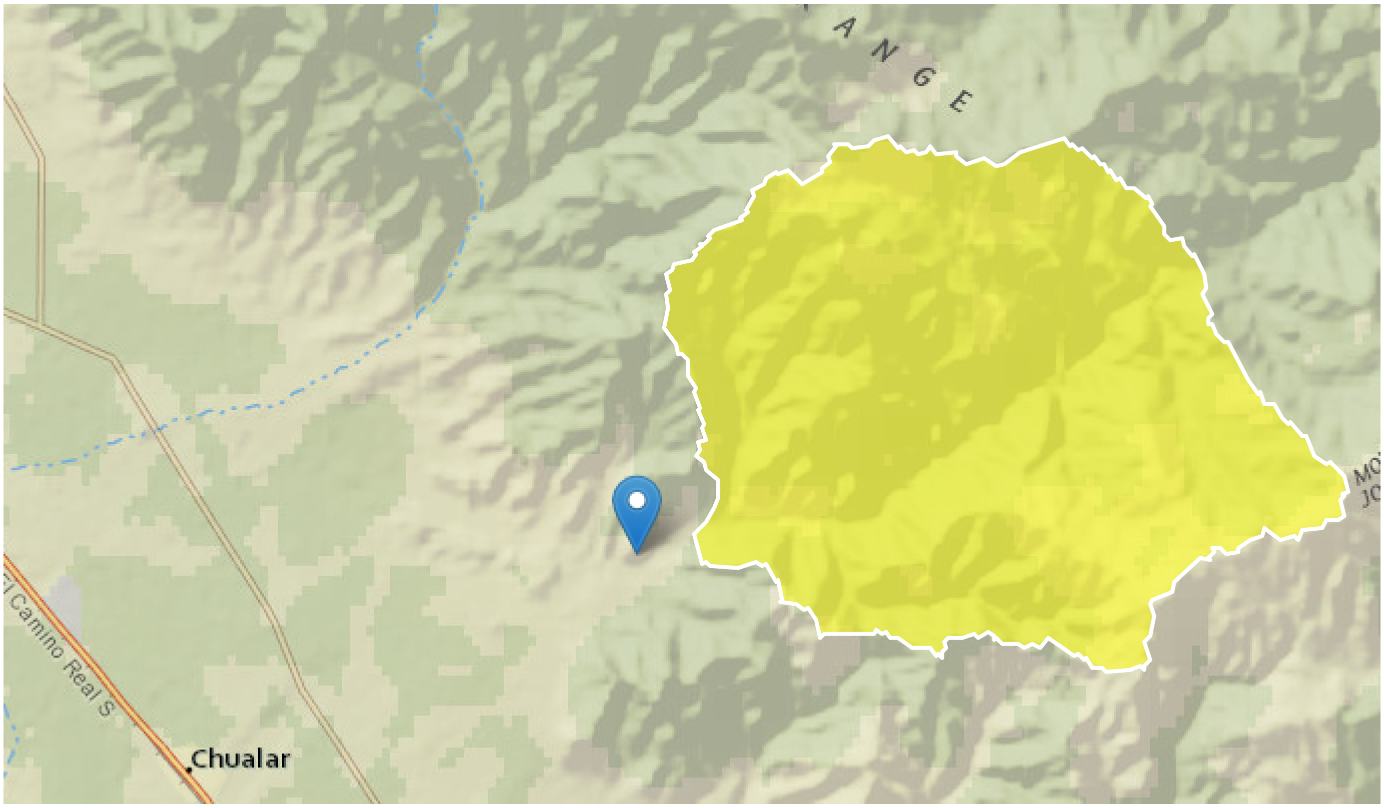
2022a *California Seamless U.S.G.S. Topographic Maps.* CDROM, Version 2.6.8, 2001, Part Number: 113-100-004. National Geographic Holdings, Incorporated.

2022b StreamStats Application Version 4.11.1 Version 1.2.22. https://streamstats.usgs.gov/ss/ (Last accessed: November 2022).

Attachment A: United States Geological Survey StreamStats Report

StreamStats Report 302

Region ID: CA
Workspace ID: CA20221123002116409000
Clicked Point (Latitude, Longitude): 36.59927, -121.44060
Time: 2022-11-22 16:21:35 -0800



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	22.5	square miles
LFPLENGTH	Length of longest flow path	9	miles
PRECIP	Mean Annual Precipitation	17.1	inches
RELIEF	Maximum - minimum elevation	2890	feet

General Disclaimers

This watershed has been edited, computed flows and basin characteristics may not apply. For more information, submit a support request from the 'Help' button in the upper-right of the screen, attach a pdf of this report and request assistance from your local streamstats regional representative.

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2012 5113 Region 4 Central Coast]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	22.5	square miles	0.11	4600
PRECIP	Mean Annual Precipitation	17.1	inches	7	46

Peak-Flow Statistics Flow Report [2012 5113 Region 4 Central Coast]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	PIu	ASEp
50-percent AEP flood	100	ft^3/s	15.4	648	162
20-percent AEP flood	375	ft^3/s	97.5	1440	97
10-percent AEP flood	714	ft^3/s	225	2260	79.4
4-percent AEP flood	1320	ft^3/s	463	3760	69.9
2-percent AEP flood	1900	ft^3/s	705	5120	66.2
1-percent AEP flood	2530	ft^3/s	935	6850	66.9
0.5-percent AEP flood	3230	ft^3/s	1190	8780	67.6
0.2-percent AEP flood	4250	ft^3/s	1460	12300	71.5

Peak-Flow Statistics Citations

Gotvald, A.J., Barth, N.A., Veilleux, A.G., and Parrett, Charles,2012, Methods for determining magnitude and frequency of floods in California, based on data through water year 2006: U.S. Geological Survey Scientific Investigations Report 2012–5113, 38 p., 1 pl. (http://pubs.usgs.gov/sir/2012/5113/)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

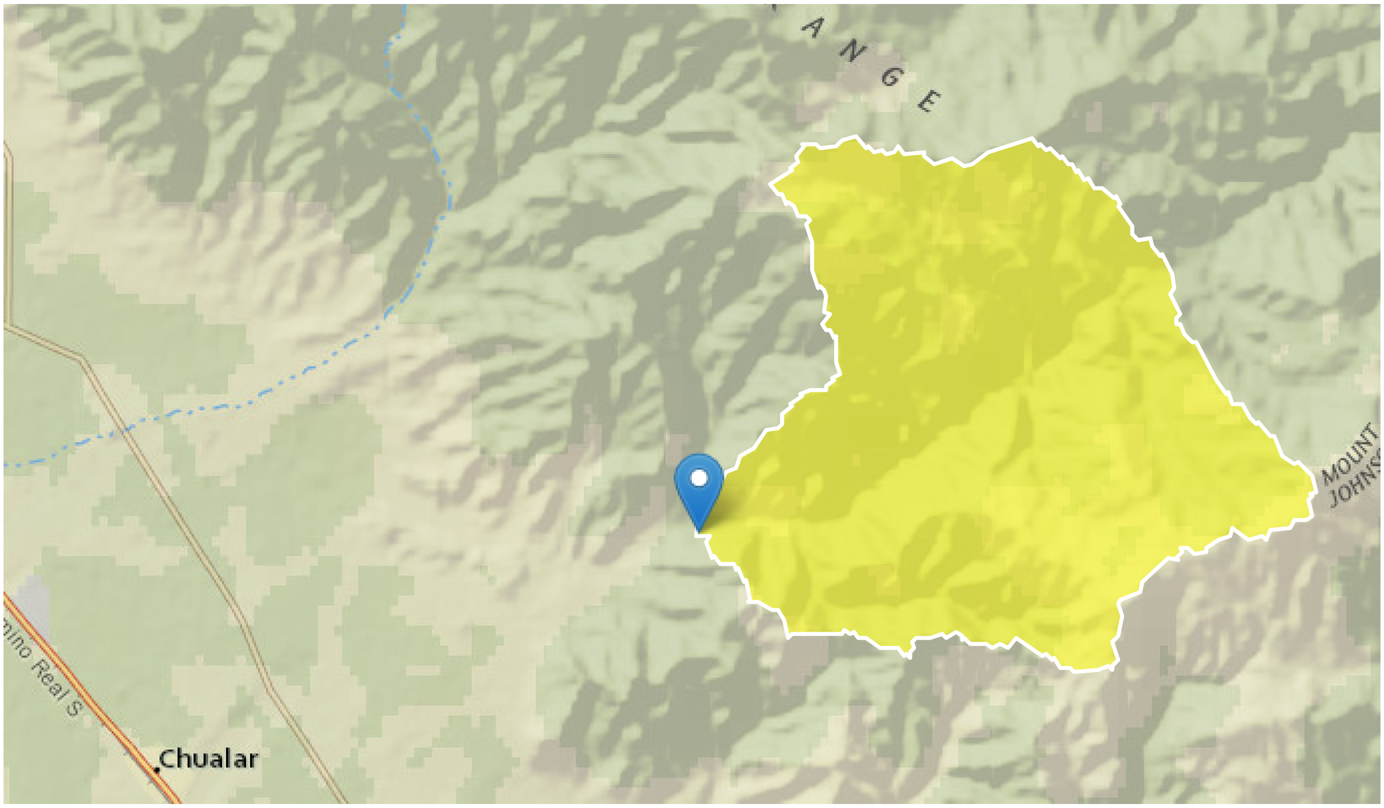
USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.11.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

303 StreamStats Report

Region ID: CA
Workspace ID: CA20221122235909356000
Clicked Point (Latitude, Longitude): 36.60232, -121.42446
Time: 2022-11-22 15:59:51 -0800



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	18.5	square miles
LFPLENGTH	Length of longest flow path	8	miles
PRECIP	Mean Annual Precipitation	17.3	inches
RELIEF	Maximum - minimum elevation	2862	feet

General Disclaimers

This watershed has been edited, computed flows and basin characteristics may not apply. For more information, submit a support request from the 'Help' button in the upper-right of the screen, attach a pdf of this report and request assistance from your local streamstats regional representative.

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2012 5113 Region 4 Central Coast]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	18.5	square miles	0.11	4600
PRECIP	Mean Annual Precipitation	17.3	inches	7	46

Peak-Flow Statistics Flow Report [2012 5113 Region 4 Central Coast]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PIl	PIu	ASEp
50-percent AEP flood	87.2	ft^3/s	13.5	565	162
20-percent AEP flood	325	ft^3/s	84.5	1250	97
10-percent AEP flood	617	ft^3/s	195	1960	79.4
4-percent AEP flood	1130	ft^3/s	397	3220	69.9
2-percent AEP flood	1640	ft^3/s	609	4420	66.2
1-percent AEP flood	2170	ft^3/s	801	5880	66.9
0.5-percent AEP flood	2770	ft^3/s	1020	7540	67.6
0.2-percent AEP flood	3640	ft^3/s	1250	10600	71.5

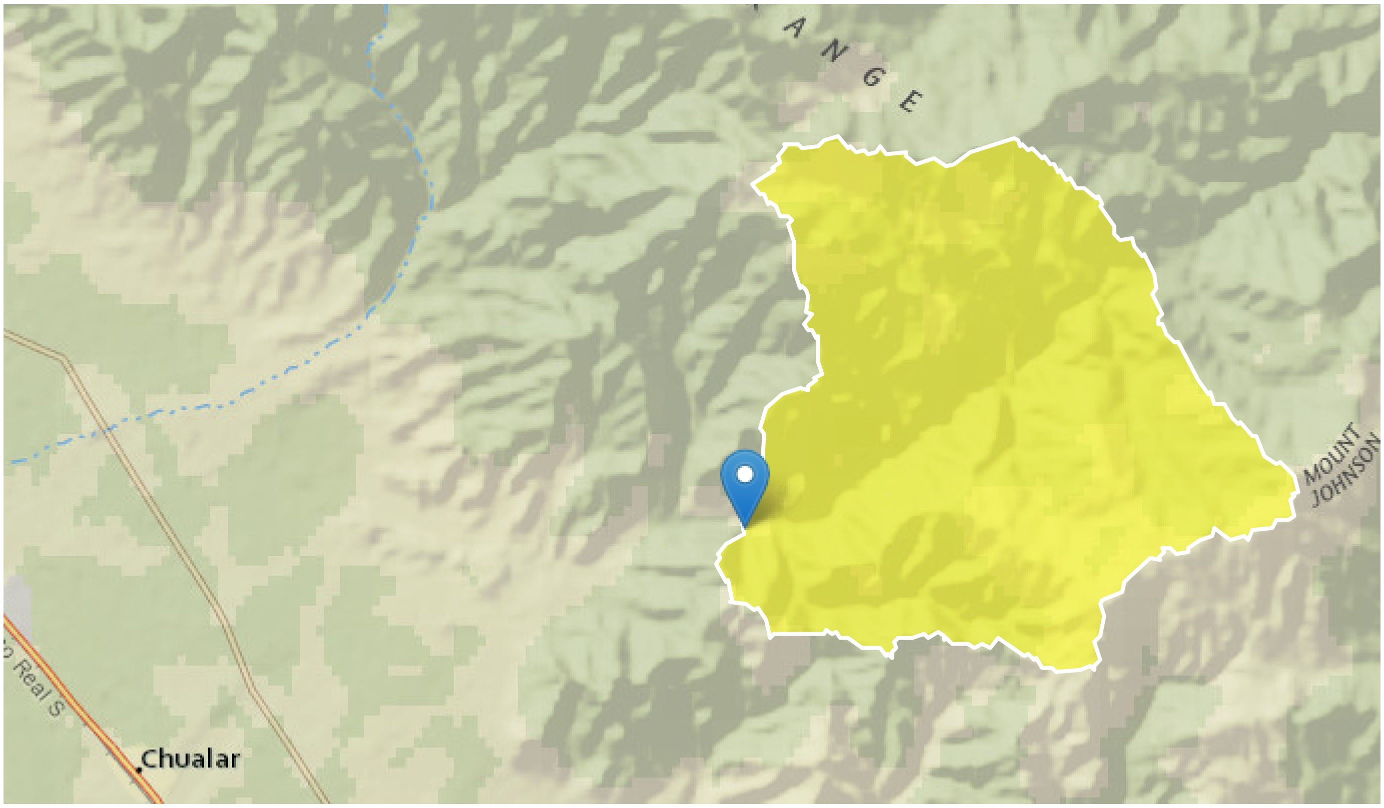
Peak-Flow Statistics Citations

Gotvald, A.J., Barth, N.A., Veilleux, A.G., and Parrett, Charles,2012, Methods for determining magnitude and frequency of floods in California, based on data through water year 2006: U.S. Geological Survey Scientific Investigations Report 2012–5113, 38 p., 1 pl. (http://pubs.usgs.gov/sir/2012/5113/)

Application Version: 4.11.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

304 StreamStats Report

Region ID: CA
Workspace ID: CA20221122234842089000
Clicked Point (Latitude, Longitude): 36.60296, -121.41348
Time: 2022-11-22 15:49:24 -0800



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	18	square miles
LFPLENGTH	Length of longest flow path	8	miles
PRECIP	Mean Annual Precipitation	17.4	inches
RELIEF	Maximum - minimum elevation	2822	feet

General Disclaimers

This watershed has been edited, computed flows and basin characteristics may not apply. For more information, submit a support request from the 'Help' button in the upper-right of the screen, attach a pdf of this report and request assistance from your local streamstats regional representative.

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2012 5113 Region 4 Central Coast]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	18	square miles	0.11	4600
PRECIP	Mean Annual Precipitation	17.4	inches	7	46

Peak-Flow Statistics Flow Report [2012 5113 Region 4 Central Coast]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	ASEp
50-percent AEP flood	86.5	ft^3/s	13.4	560	162
20-percent AEP flood	321	ft^3/s	83.4	1230	97
10-percent AEP flood	608	ft^3/s	192	1930	79.4
4-percent AEP flood	1120	ft^3/s	393	3190	69.9
2-percent AEP flood	1610	ft^3/s	598	4340	66.2
1-percent AEP flood	2130	ft^3/s	787	5770	66.9
0.5-percent AEP flood	2720	ft^3/s	1000	7400	67.6
0.2-percent AEP flood	3570	ft^3/s	1230	10400	71.5

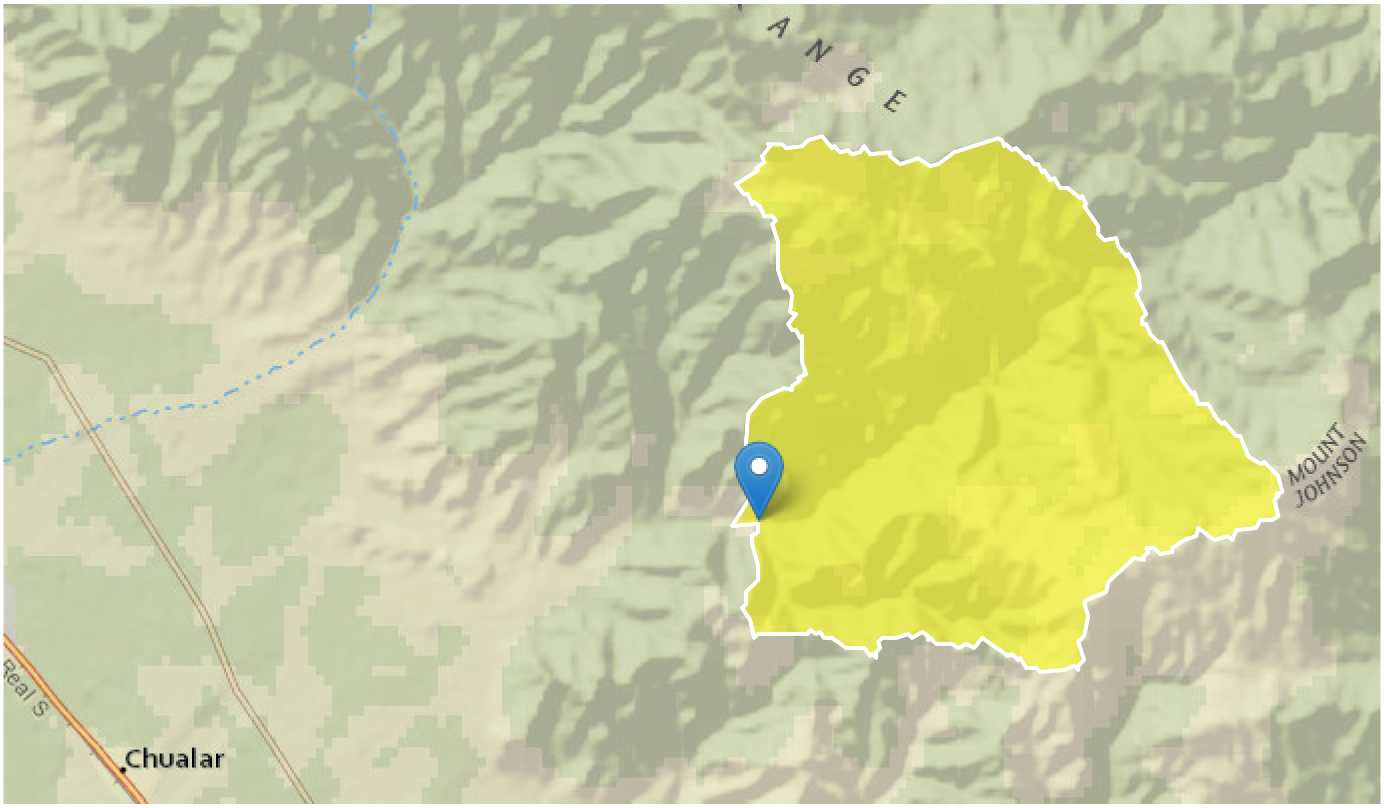
Peak-Flow Statistics Citations

Gotvald, A.J., Barth, N.A., Veilleux, A.G., and Parrett, Charles,2012, Methods for determining magnitude and frequency of floods in California, based on data through water year 2006: U.S. Geological Survey Scientific Investigations Report 2012–5113, 38 p., 1 pl. (http://pubs.usgs.gov/sir/2012/5113/)

Application Version: 4.11.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

305 StreamStats Report

Region ID: CA
Workspace ID: CA20221122232612730000
Clicked Point (Latitude, Longitude): 36.60385, -121.40813
Time: 2022-11-22 15:26:54 -0800



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	17.6	square miles
PRECIP	Mean Annual Precipitation	17.4	inches

General Disclaimers

This watershed has been edited, computed flows and basin characteristics may not apply. For more information, submit a support request from the 'Help' button in the upper-right of the screen, attach a pdf of this report and request assistance from your local streamstats regional representative.

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2012 5113 Region 4 Central Coast]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	17.6	square miles	0.11	4600
PRECIP	Mean Annual Precipitation	17.4	inches	7	46

Peak-Flow Statistics Flow Report [2012 5113 Region 4 Central Coast]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PIl	PIu	ASEp
50-percent AEP flood	84.8	ft^3/s	13.1	549	162
20-percent AEP flood	315	ft^3/s	81.9	1210	97
10-percent AEP flood	597	ft^3/s	188	1890	79.4
4-percent AEP flood	1100	ft^3/s	386	3130	69.9
2-percent AEP flood	1580	ft^3/s	586	4260	66.2
1-percent AEP flood	2090	ft^3/s	772	5660	66.9
0.5-percent AEP flood	2670	ft^3/s	982	7260	67.6
0.2-percent AEP flood	3500	ft^3/s	1200	10200	71.5

Peak-Flow Statistics Citations

Gotvald, A.J., Barth, N.A., Veilleux, A.G., and Parrett, Charles,2012, Methods for determining magnitude and frequency of floods in California, based on data through water year 2006: U.S. Geological Survey Scientific Investigations Report 2012–5113, 38 p., 1 pl. (http://pubs.usgs.gov/sir/2012/5113/)

expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.11.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment B: Federal Emergency Management Agency Flood Insurance Map

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 10. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1987 or later.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

~~ 513 ~~~	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

(A)———(A)	Cross section line
(23)- - - - - -(23)	Transect line
87°07'45", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
$^{24}76^{000m}$N	1000-meter Universal Transverse Mercator grid values, zone 10
600000 FT	5000-foot grid ticks: California State Plane coordinate system, zone IV (FIPSZONE 0404), Lambert Conformal Conic projection
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
● M1.5	River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
April 2, 2009

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'

1000 0 2000 4000 FEET

600 0 600 1200 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0425G

FIRM
FLOOD INSURANCE RATE MAP

MONTEREY COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 425 OF 2050

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MONTEREY COUNTY	060195	0425	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06053C0425G

EFFECTIVE DATE
APRIL 2, 2009

Federal Emergency Management Agency

Attachment C: Bridge Field Photos

Photo 1. Bridge 302 Looking Downstream

Photo 2. Bridge 302 Looking Upstream

Photo 3. Bridge 303 Looking Downstream

Photo 4. Bridge 303 Looking Upstream

Photo 5. Bridge 304 Looking Downstream

Photo 6. Bridge 304 Looking Upstream

Photo 7. Bridge 305 Looking Downstream

Photo 8. Bridge 305 Looking Upstream

Attachment D: Scour Calculations

Chualar Canyon Road Bridges
Monterey County
Estimating Scour at Culvert Outlets
Calculation guideline from FHWA HEC-14 3rd Edition Chapter 5 (Page 5-1/54 of 287)
100-Year Flow

Scour for cohesionless soils

D	Culvert diameter (circular)	10.0	ft
D_{84}	Channel bed particle size	8.0	mm
D_{16}	Channel bed particle size	0.3	mm
σ*	Material standard deviation	5.2	
Q	Discharge	119.0	cfs
g	Acceleration of gravity	32.2	ft/s^2
Rc	Hydraulic radius at the end of the culvert (assuming full flow)	2.5	ft
t**	Time of scour	30.0	minute
Hd	Culvert invert height above the bed ratio for slopes > 0%	0.0	ft
S	Culvert slope	0.0	%
Ch	Drop height adjustment coefficient (Table 5.3)	1.00	
Cs	Slope correction coefficient (Table 5.2)	1.00	
α	Culvert outlet scour coefficient (Table 5.1)	2.27	
β	Culvert outlet scour coefficient (Table 5.1)	0.39	
θ	Culvert outlet scour coefficient (Table 5.1)	0.06	
hs	Depth of scour	**3.8**	ft

Chualar Canyon Road Bridges
Monterey County
Estimating Scour at Culvert Outlets
Calculation guideline from FHWA HEC-14 3rd Edition Chapter 5 (Page 5-1/54 of 287)
100-Year Flow

Scour for cohesionless soils

D	Culvert diameter (circular)	10.0	ft
D_{84}	Channel bed particle size	15.0	mm
D_{16}	Channel bed particle size	0.1	mm
σ*	Material standard deviation	11.9	
Q	Discharge	102.5	cfs
g	Acceleration of gravity	32.2	ft/s^2
Rc	Hydraulic radius at the end of the culvert (assuming full flow)	2.5	ft
t**	Time of scour	30.0	minute
Hd	Culvert invert height above the bed ratio for slopes > 0%	0.0	ft
S	Culvert slope	0.0	%
Ch	Drop height adjustment coefficient (Table 5.3)	1.00	
Cs	Slope correction coefficient (Table 5.2)	1.00	
α	Culvert outlet scour coefficient (Table 5.1)	2.27	
β	Culvert outlet scour coefficient (Table 5.1)	0.39	
θ	Culvert outlet scour coefficient (Table 5.1)	0.06	
hs	Depth of scour	**2.7**	ft

Chualar Canyon Road Bridges
Monterey County
Estimating Scour at Culvert Outlets
Calculation guideline from FHWA HEC-14 3rd Edition Chapter 5 (Page 5-1/54 of 287)
100-Year Flow

Scour for cohesionless soils

D	Culvert diameter (circular)	10.0	ft
D_{84}	Channel bed particle size	3.1	mm
D_{16}	Channel bed particle size	0.2	mm
σ*	Material standard deviation	3.9	
Q	Discharge	295.5	cfs
g	Acceleration of gravity	32.2	ft/s^2
Rc	Hydraulic radius at the end of the culvert (assuming full flow)	2.5	ft
t**	Time of scour	30.0	minute
Hd	Culvert invert height above the bed ratio for slopes > 0%	0.0	ft
S	Culvert slope	2.0	%
Ch	Drop height adjustment coefficient (Table 5.3)	1.00	
Cs	Slope correction coefficient (Table 5.2)	1.03	
α	Culvert outlet scour coefficient (Table 5.1)	2.27	
β	Culvert outlet scour coefficient (Table 5.1)	0.39	
θ	Culvert outlet scour coefficient (Table 5.1)	0.06	
hs	Depth of scour	**6.2**	ft

Chualar Canyon Road Bridges
Monterey County
Estimating Scour at Culvert Outlets
Calculation guideline from FHWA HEC-14 3rd Edition Chapter 5 (Page 5-1/54 of 287)
100-Year Flow

Scour for cohesionless soils

D	Culvert diameter (circular)	10.0	ft
D_{84}	Channel bed particle size	3.0	mm
D_{16}	Channel bed particle size	0.1	mm
σ*	Material standard deviation	5.6	
Q	Discharge	248.5	cfs
g	Acceleration of gravity	32.2	ft/s^2
Rc	Hydraulic radius at the end of the culvert (assuming full flow)	2.5	ft
t**	Time of scour	30.0	minute
Hd	Culvert invert height above the bed ratio for slopes > 0%	0.0	ft
S	Culvert slope	2.0	%
Ch	Drop height adjustment coefficient (Table 5.3)	1.00	
Cs	Slope correction coefficient (Table 5.2)	1.03	
α	Culvert outlet scour coefficient (Table 5.1)	2.27	
β	Culvert outlet scour coefficient (Table 5.1)	0.39	
θ	Culvert outlet scour coefficient (Table 5.1)	0.06	
hs	Depth of scour	**5.1**	ft

Attachment E: Rock Slope Protection Calculations

3003 Oak Road, Suite 500
Walnut Creek, CA 94595
Phone: 925.974.2500
www.hdrinc.com

P21034 Chualar Canyon Road Bridges
Monterey County, CA
Rock Slope Protection Calculation for Bridge 302
HEC-14
For Proposed Culvert
100-Year

Method	D50 (inches)	Calculated RSP Class	Recommended RSP Class	Calculated Depth (inches)	Recommended Depth (ft)
Fletcher & Grace (1972)	1.6	I	IV	18	3.8
Berry (1948) & Peterka (1978)	5.9	I	IV	18	3.8
Brown & Clyde (1989)	3.1	I	IV	18	3.8

Fletcher & Grace (1972)

Descrption		Unit	
D	10.0	ft	
Q100	119	ft^3/s	
g	32.2	ft/s^2	
TW	4.00	ft	
Adjusted TW	4.00	ft	
Checks 0.4D<TW<1.0D:			
TW>=0.4D?	YES		
TW<=1.0D?	YES		
D50	0.1	ft	
D50	1.6	inches	
RSP Class	I		Class per table 873.3A
RSP Depth	17.5	inches	

Berry (1948) & Peterka (1978)

Descrption		Unit	
alpha	0.0126		
V100	6.26	ft/s	
D50	0.49	ft	
D50	5.93	inches	Class per table 873.3A
RSP Class	I		Class per table 873.3A
RSP Depth	17.5	inches	

Brown & Clyde (1989)

Descrption		Unit	
S	2.65		Riprap Specific Gravity recommended from HEC-:
g	32.2	ft/s^2	
V100	6.26	ft/s	
D50	0.26	ft	
D50	3.06	inches	
RSP Class	I		Class I per table 873.3A
RSP Depth	17.5	inches	

3003 Oak Road, Suite 500
Walnut Creek, CA 94595
Phone: 925.974.2500
www.hdrinc.com

P21034 Chualar Canyon Road Bridges

Monterey County, CA

Rock Slope Protection Calculation for Bridge 303

HEC-14
For Proposed Culvert
100-Year

Method	D50 (inches)	Calculated RSP Class	Recommended RSP Class	Calculated Depth (inches)	Recommended Depth (ft)
Fletcher & Grace (1972)	1.3	I	IV	18	2.7
Berry (1948) & Peterka (1978)	4.9	I	IV	18	2.7
Brown & Clyde (1989)	2.5	I	IV	18	2.7

Fletcher & Grace (1972)

Descrption		**Unit**	
D	10.0	ft	
Q100	102.5	ft^3/s	
g	32.2	ft/s^2	
TW	4.00	ft	
Adjusted TW	4.00	ft	
Checks 0.4D<TW<1.0D:			
TW>=0.4D?	YES		
TW<=1.0D?	YES		
D50	0.1	ft	
D50	1.3	inches	
RSP Class	I		Class per table 873.3A
RSP Depth	17.5	inches	

Berry (1948) & Peterka (1978)

Descrption		**Unit**	
alpha	0.0126		
V100	5.69	ft/s	
D50	0.41	ft	
D50	4.90	inches	Class per table 873.3A
RSP Class	I		Class per table 873.3A
RSP Depth	17.5	inches	

Brown & Clyde (1989)

Descrption		**Unit**	
S	2.65		Riprap Specific Gravity recommended from HEC-11
g	32.2	ft/s^2	
V100	5.69	ft/s	
D50	0.21	ft	
D50	2.53	inches	Class per table 873.3A
RSP Class	I		Class I per table 873.3A
RSP Depth	17.5	inches	

3003 Oak Road, Suite 500
Walnut Creek, CA 94595
Phone: 925.974.2500
www.hdrinc.com

P21034 Chualar Canyon Road Bridges
Monterey County, CA
Rock Slope Protection Calculation for Bridge 304
HEC-14
For Proposed Culvert
100-Year

Method	D50 (inches)	Calculated RSP Class	Recommended RSP Class	Calculated Depth (inches)	Recommended Depth (ft)
Fletcher & Grace (1972)	5.4	I	IV	18	6.2
Berry (1948) & Peterka (1978)	13.0	III	IV	24	6.2
Brown & Clyde (1989)	6.7	I	IV	18	6.2

Fletcher & Grace (1972)

Descrption		**Unit**	
D	10.0	ft	
Q100	295.5	ft^3/s	
g	32.2	ft/s^2	
TW	4.00	ft	
Adjusted TW	4.00	ft	
Checks 0.4D<TW<1.0D:			
TW>=0.4D?	YES		
TW<=1.0D?	YES		
D50	0.5	ft	
D50	5.4	inches	
RSP Class	I		Class I per table 873.3A
RSP Depth	17.5	inches	

Berry (1948) & Peterka (1978)

Descrption		**Unit**	
alpha	0.0126		
V100	9.26	ft/s	
D50	1.08	ft	
D50	12.97	inches	Class I per table 873.3A
RSP Class	III		Class I per table 873.3A
RSP Depth	24.0	inches	

Brown & Clyde (1989)

Descrption		**Unit**	
S	2.65		Riprap Specific Gravity recommended from HEC-1
g	32.2	ft/s^2	
V100	9.26	ft/s	
D50	0.56	ft	
D50	6.70	inches	Class I per table 873.3A
RSP Class	I		Class I per table 873.3A
RSP Depth	17.5	inches	

3003 Oak Road, Suite 500
Walnut Creek, CA 94595
Phone: 925.974.2500
www.hdrinc.com

P21034 Chualar Canyon Road Bridges
Monterey County, CA
Rock Slope Protection Calculation for Bridge 305

HEC-14
For Proposed Culvert
100-Year

Method	D50 (inches)	Calculates RSP Class	Recommended RSP Class	Calculated Depth (inches)	Recommended Depth (ft)
Fletcher & Grace (1972)	4.3	I	IV	18	5.1
Berry (1948) & Peterka (1978)	9.7	II	IV	20	5.1
Brown & Clyde (1989)	5.0	I	IV	18	5.1

Fletcher & Grace (1972)

Descrption		Unit	
D	10.0	ft	
Q100	248.5	ft^3/s	
g	32.2	ft/s^2	
TW	4.00	ft	
Adjusted TW	4.00	ft	
Checks 0.4D<TW<1.0D:			
TW>=0.4D?	YES		
TW<=1.0D?	YES		
D50	0.4	ft	
D50	4.3	inches	
RSP Class	I		Class I per table 873.3A
RSP Depth	17.5	inches	

Berry (1948) & Peterka (1978)

Descrption		Unit	
alpha	0.0126		
V100	8.02	ft/s	
D50	0.81	ft	
D50	9.73	inches	Class I per table 873.3A
RSP Class	II		Class I per table 873.3A
RSP Depth	19.8	inches	

Brown & Clyde (1989)

Descrption		Unit	
S	2.65		Riprap Specific Gravity recommended from HEC-11
g	32.2	ft/s^2	
V100	8.02	ft/s	
D50	0.42	ft	
D50	5.03	inches	Class I per table 873.3A
RSP Class	I		Class I per table 873.3A
RSP Depth	17.5	inches	

Appendix G
Chualar Canyon Road Bridges Replacement Project Water Quality Report

Chualar Canyon Road Bridge Replacements Project

Water Quality Report

September 2023

Prepared For:
Monterey County Resource Management Agency
1441 Schilling Pl, South 2nd Floor
Salinas, CA 93901

Prepared by:
moffatt & nichol
2185 N. California Blvd. Suite 500
Walnut Creek, CA 94596
Contact: Stephanie Oslick, AICP, ENV SP

List of Acronyms and Abbreviations

BMP	Best Management Practice
CWA	Clean Water Act
NPDES	National Pollutant Discharge Elimination System
OHWM	Ordinary High Water Mark
Project	Chualar Canyon Road Bridges Project
RSP	Rock Slope Protection
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers

1 INTRODUCTION

1.1 Approach to Water Quality Report

This Water Quality Report for the Chualar Canyon Road Bridges Replacement Project (Project) includes discussion of the general environmental setting / existing conditions of the project area, proposed project and the regulatory framework with respect to water quality.

This report describes environmental conditions within the Project area, including existing water resources, potential project impacts on water resources, and identify best management practices that are proposed for this project.

1.2 Existing Conditions

The Project was subdivided into three Project sites: Bridge 302 (0.45 acres), Bridge 303 (0.49 acres), and Bridges 304 & 305 (1.76 acres), totaling approximately 2.70 acres (Table 1). Bridge 302 is located within Rural Grazing land use and, Bridge 303, 304/305 are Farmlands land use in an Agricultural zone of Central Salinas Valley, Monterey County. Flows from Chualar Creek drain generally flows from east to west into the Salinas River, approximately 9 miles downstream from the Project area. The Salinas River is considered a Traditional Navigable Water and drains into the Pacific Ocean. No water was observed at any of the bridges during December 2022 field surveys (Area West, 2023).

Table 1. Summary of Four Bridges

Road	County Bridge No.	Location
Chualar Canyon Road	302	6.0 Miles East of Chualar, California
	303	6.4 Miles East of Chualar, California
	304	7.0 Miles East of Chualar, California
	305	7.1 Miles East of Chualar, California

Source: HDR, 2023

Chualar Canyon Road is a rural section of Monterey County, California. Bridges 302, 303, 304, and 305 are each at an elevation of 115 feet above sea level. Chualar is located in northeastern Monterey County. U.S. Route 101 runs along the southwest side of the community, leading northwest to Salinas and southeast 16 miles (26 km) to Soledad.

Chualar Creek is an ephemeral stream. At Bridge 302, the creek channel below the Ordinary High Water Mark (OHWM) was largely devoid of vegetation. A thick leaf litter layer was present. At the Bridge 303, 304 and 305, the Chualar Creek channel below the OHWM was largely obscured by the thick leaf litter layer (Area West, 2023).

Chualar Creek's current channel capacity is estimated to be between a 2-to-5-year storm event. The project will be designed for that channel capacity with the flow contained within the banks and does not overtop the road.

1.2.1 Watershed and Basin Plan

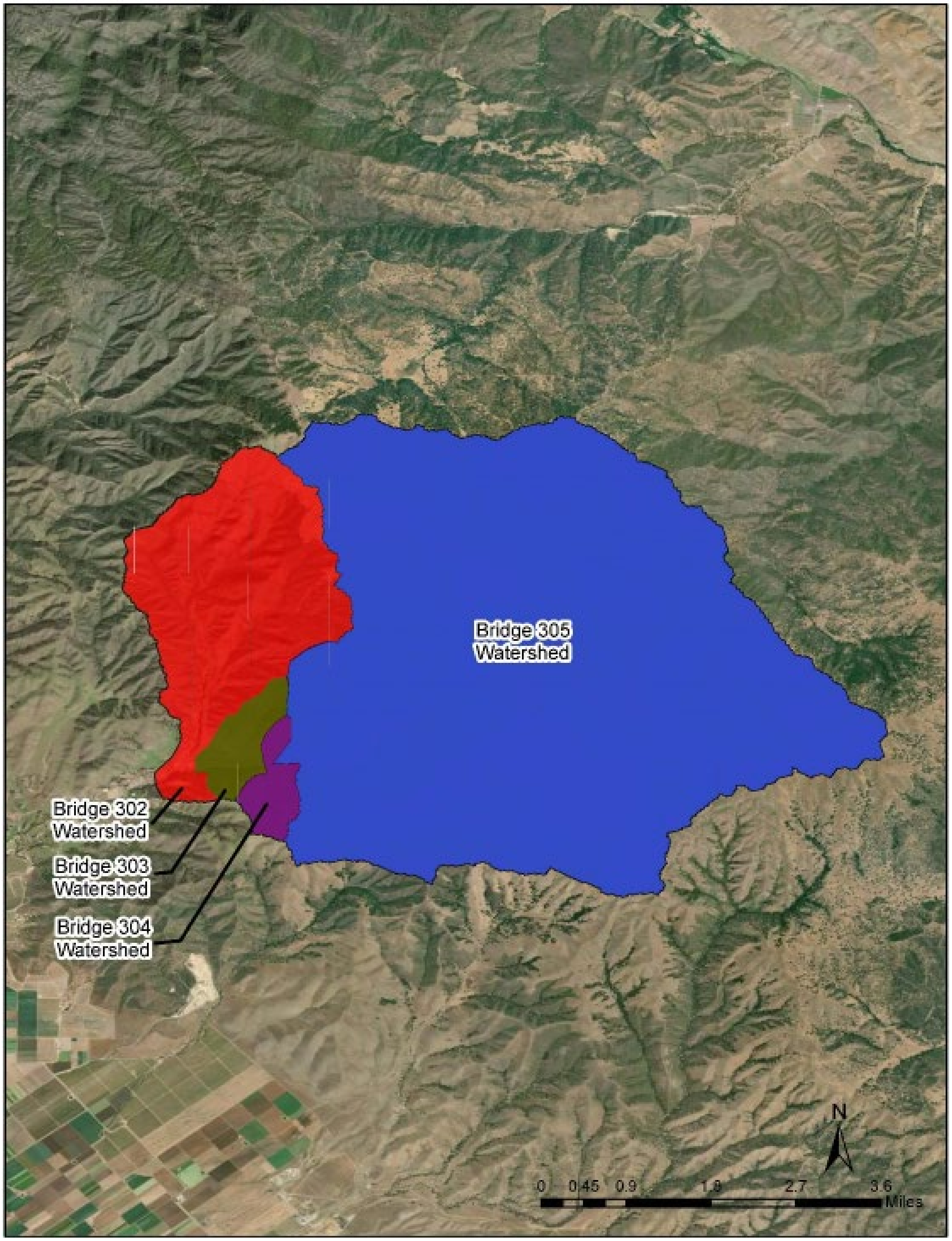
The Project is located within the Salinas Hydraulic Unit 309 (RWQCB, 2019). Per the Bridge Design Hydraulics Study Memorandum (HDR, 2023), the channel capacity is controlled by the bridge openings and is on the order of approximately 178 cubic feet per second (cfs), which is estimated to be between a 2-year and 5-year storm event. The summary of watershed areas, capacity design flow, and 100-year storm event for each respective bridge are listed in Table 2. The watershed map for each bridge location is shown in Figure 1.

Table 2. Summary of Watershed Area and Design Flow

Flow Source	Watershed Area (sqmi)[a]	Capacity Design Flow (cfs)[b]	100-Year Design Flow (cfs)[b]
Upstream/East of Chualar Canyon Road Bridge 302	22.5	178	2560
Upstream/North of Chualar Canyon Road Bridge 303	18.5		2520
Upstream/South of Chualar Canyon Road Bridge 304	18.0		2130
Upstream/North of Chualar Canyon Road Bridge 305	17.6		2090

Source: HDR (2023)
[a] sqmi: square mile
[b] cfs: cubic feet per second

Figure 1. Project Watershed Map



Source: HDR (2023)

moffatt & nichol

Per the Water Quality Control Plan for the Central Coastal Basin (Regional Water Quality Control Board, 2019), the following beneficial uses have been identified within the watershed:

- Municipal and Domestic Supply (MUN)
- Agricultural Supply (AGR)
- Industrial Process Supply (PROC)
- Industrial Service Supply IND
- Groundwater Recharge (GWR)
- Water Contact Recreation (REC1)
- Non-Contact Water Contact Recreation (REC2)
- Wildlife Habitat (WILD)
- Cold Fresh Water Habitat (COLD)
- Warm Fresh Water Habitat (WARM)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Rare, Threatened, or Endangered Species (RARE)
- Commercial and Sport Fishing (COMM)

Although a number of beneficial uses have been identified within the watershed, it is not anticipated that any will be adversely impacted as a result of this project.

1.3 Project Description

The Project proposes to replace four bridges (Bridge Numbers 302, 303, 304, and 305) over Chualar Canyon Creek on Chualar Canyon Road.

1.3.1 No Project Alternative

It is essential to repair and refurbish the bridges to maintain the structural integrity. The No Project Alternative would provide no additional improvements to the four bridges on Chualar Canyon Road. The project area would continue to operate with no additional improvements and would not achieve the project's stated purpose and need.

1.4 Project Purpose

The purpose of the project is to replace the existing bridges to re-establish legal load posting.

1.5 Project Schedule

A five-month construction period is anticipated to begin in June 2024 and be completed by October 2024.

2 REGULATORY SETTING

2.1 Federal Laws and Requirements

2.1.1 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 from any point source unlawful unless the discharge is in compliance with a NPDES permit. Known today as the Clean Water Act (CWA), Congress has amended it several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the NPDES permit program. Important CWA sections are:

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

- Section 401 requires an applicant for a federal license or permit to conduct any activity, which 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. (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. The Federal Environmental Protection Agency delegated to the California State Water Resources Control Board (SWRCB) the implementation and administration of the NPDES program in California. The SWRCB established nine Regional Water Quality Control Boards (RWQCBs). The SWRCB enacts and enforces the Federal NPDES program and all water quality programs and regulations that cross Regional boundaries. The nine RWQCBs enact, administer and enforce all programs, including NPDES permitting, within their jurisdictional boundaries. Section 402(p) requires permits for discharges of stormwater 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, including wetlands. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

2.2 State Laws and Requirements

2.2.1 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 regulates discharges to waters of the State. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements.

2.2.2 State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB and RWQCBs are responsible for establishing the water quality standards as required by the CWA and regulating discharges to protect beneficial uses of water bodies. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions, and then set standards necessary to protect these uses. Consequently, the water quality standards developed for particular water body segments are based on the designated use and vary depending on such use.

If a Regional Board determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-source point controls (NPDES permits or Waste Discharge Requirements), 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.

The SWRCB adjudicates 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.

2.3 Regional and Local Requirements

2.3.1 Monterey County Code of Ordinances

According to the Monterey County Code of Ordinances Section 19.10.050: improvements shall be designed to meet Monterey County Resources Agency Design Criteria and improvement plans shall be submitted to the Monterey County Water Resources Agency for review and approval. "Drainage improvements for runoff from impervious surfaces shall be engineered to minimize erosion through the use of rocked culvert inlets and outfalls, energy reducers and location of culverts. Design features shall include reseeding exposed slopes as well as minimizing the use of artificial slopes." (HDR, 2023)

3 ENVIRONMENTAL CONSEQUENCES

3.1 IMPACT CRITERIA

Construction and operational impacts to water resources were assessed regarding potential degradation of water quality and changes in surface water flow. Effects on future water quality were estimated based on runoff potential of both the Project Alternatives and the No-Project Alternative.

No significant or adverse impacts to water resources, either during construction or operation, would occur assuming the following:

1. No violation of any water quality standards or waste discharge requirements;
2. Does not substantially degrade water quality;
3. Does not substantially interfere with groundwater supplies or recharge;
4. Does not substantially alter existing drainage patterns; or
5. No increase runoff that would exceed storm water drainage systems.

4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

4.1 Best Management Practices and Minimization Measures

The replacement of the four (4) bridges along Chualar Canyon Road are cumulatively less than 5 acres of disturbed area. This project will have negligible impact to water quality; however, any Best Management Practices (BMPs) identified during the regulatory permitting process will be implemented to reduce potential impacts to water quality.

Per the *Bridge Design Hydraulics Study Memorandum* (HDR, 2023), to minimize scour at bridges, rock slope protection (RSP) can be used to limit the impact of erosion from water flows on the bridge structure. RSP uses rocks to limit the effects of erosion on the channel and structure. It is currently the most common type of scour countermeasure.

WQ-1: Scour Countermeasure

To minimize scour at the new bridges, rock slope protection (RSP) generally consists of rocks on channel and structure boundaries to limit the effects of erosion. A minimum size of Class IV RSP is recommended in the *Bridge Design Hydraulics Study Memorandum* to protect the proposed culverts, and the RSP should extend horizontally 6 feet from both the upstream and downstream faces of the bridges (HDR, 2023). The final recommendation will be determined during final design.

5 REFERENCES

Area West. 2023. *Biological Resource Technical Memorandum for the Chualar Canyon Road Bridges Replacement Project on Chualar Canyon Road in Monterey County, California*. 138 pages.

HDR. 2023. *Bridge Design Hydraulics Study Memorandum*. 48 pages.

Regional Water Quality Control Board, Central Coast Region. 2019. *Water Quality Control Plan for the Central Coastal Basin*. Accessed at https://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/ on September 22, 2023.

Appendix H
Construction Noise Analysis, Chualar Canyon Road Bridge Project

moffatt & nichol

2185 N. California Blvd., Suite 500
Walnut Creek, CA 94596

(925 944-5411 Fax: (925) 944-4732
www.moffattnichol.com

MEMORANDUM

To:	Douglas Poochigian, Monterey County PWFP
From:	Stephanie Oslick, Melissa Edwards, Hanna Olson
Date:	December 5, 2023
Subject:	Construction Noise Analysis, Chualar Canyon Road Bridge Replacements Project
M&N Job No.:	211199

Introduction

The purpose of this memorandum is to discuss and evaluate noise concerns for the replacement of the four bridges along Chualar Canyon Road (Bridge Numbers 302, 303, 304, and 305) to alleviate legal load posting requirements. All bridges are approximately 15-foot-long single span reinforced concrete slabs and maintained by Monterey County Public Works, Facilities and Parks (County). Moffatt & Nichol (MN) staff identified deteriorating and "soft" concrete abutments while inspecting the bridges. Furthermore, the load rating analysis yielded insufficient structural capacity under legal loads, requiring the bridges to be posted. To resolve bridge posting, the County is interested in evaluating feasible replacement alternatives.

Pile Installation Methods

The proposed replacement activities have the potential to result in temporary elevated terrestrial noise levels, with the most substantial construction activity-related noise being those related to bridge removal and pile installation. The proposed Project will involve heavy construction equipment including excavators and a hydraulic impact breaker for demolition and machinery involved for pile installation. Table 1 shows the total duration and number of days for all four bridges.

Table 1. Bridge Demolition Methods for All Four Bridges

Equipment	Total Duration (hrs)	Total Project Days
Excavator	112	Up to 14
Hydraulic Impact Breaker/Hammer	64	Up to 8

Source: Moffatt & Nichol, 2023

Each Bridge will take up to approximately 6-8 weeks for construction. Bridge removal activities would likely occur for one to three weeks at each bridge. The recommended approach for pile installation is Cast-In-Drilled-Hole (CIDH), as this would minimize the noise impact to sensitive receptors compared with a driven pile (e.g., vibratory hammer or impact hammer). A drilling auger is the most common type of tool used for installing CIDH piles, and this type of auger is noted in Table 2 as having a lower peak Noise Level than a vibratory hammer by approximately 10 decibels (dB).

Anticipated Noise Levels

A desktop noise analysis was completed for each of the pile installation methods. Anticipated noise levels are provided in Table 2. In the case that noise data is not available for the proposed equipment, available data for similar types and/or sizes are referenced (FWHA, 2017). Sound control shall conform to the provisions in County of Monterey Section 10.60.030 (Operation of Noise-Producing Devices Restricted) stating that "at any time of day, it is prohibited within the unincorporated area of the County of Monterey to operate, assist in operating, allow, or cause to be operated any machine, mechanism, device, or contrivance which produces a noise level that exceeds eighty-five (85) dBA measured fifty (50) feet therefrom. The prohibition in this Section shall not apply to aircraft nor to any such machine, mechanism, device or contrivance that is operated in excess of two thousand five hundred (2,500) feet from any occupied dwelling unit."

Roadway Construction Noise Model estimates the noise level for both Lmax and also 250 feet in Table 2.

Table 2. Roadway Construction Noise Model (RCNM) Default Noise Emission Reference Levels

Equipment Description	Impact Device (y/n)	Lmax Noise level (dBA at 50 feet)	Expected dB Noise Level at 250 feet*
Auger Drill Rig	No	84	70
Backhoe	No	78	64
Concrete Pump Truck	No	81	67
Crane	No	81	67
Excavator	No	81	67
Hydraulic Impact Breaker/Hammer	Yes	90	76
Impact Pile Driver	Yes	101	87
Roller	No	80	66
Vibratory Pile Driver	No	101	87

Source: Federal Highway Administration (FWHA), Construction Noise Handbook Table 9.1, 2017. Lmax is based on measured noise levels for various types of equipment. *Expected dB Noise Level at 250 feet was calculated for this project using a noise distance calculator (https://www.omnicalculator.com/physics/distance-attenuation, accessed on 11/17/2023)

Estimated Zones of Influence, Sensitive Receptors

The nearest sensitive receptor is a residence approximately 250 feet from the construction site. At this distance, the noise will be audible; however, it is not anticipated to create a nuisance.

The distance that construction noise attenuates to ambient levels depends on several factors such as the type of construction equipment used, the distance from the source of the noise, and the surrounding environment. The noise levels from construction equipment attenuate at a rate of 6 dB per doubling of distance from point sources.

To comply with the County of Monterey Noise Ordinance, at any time of day, the noise level at 50 feet needs to be less than 85dBA. If the contractor uses an auger drill rig for the CIDH piles, it is anticipated that the noise level will be 84 dBA at 50 feet. If the contractor uses an impact or vibratory pile driver, the noise level will be 101 dBA at 50 feet. The use of mufflers for combustion engines (**NOI-1**) and other noise abatement measures (**NOI-2**) will reduce noise levels caused by the auger drill rig by up to 10 dB, which would not create a harassment level for residents along Chualar Canyon Road. CIDH pile drilling is preferred due to this difference in noise impacts; however, driven piles are allowed with compliance of **NOI-2** as long as the contractor can ensure that the sound levels at 50 feet comply with the County of Monterey Noise Ordinance.

While this project is located over Chualar Creek, this project is scheduled to be started and completed during the dry season; there should not be any fish in Chualar Creek at the time of construction or demolition. It is not anticipated that any protected, threatened, or endangered species in Chualar Creek or the surrounding area would be impacted by construction.

Avoidance and Minimization Measures

The following measures would be implemented to minimize or avoid noise impacts to sensitive receptors. Substantial impacts to biological species are not anticipated due the timeframe of construction for the project and given the small interim injury criteria threshold areas, and duration of human activity and noise, and are therefore not anticipated to exhibit substantial behavioral changes due to the proposed construction activities.

NOI-1: **Internal combustion engines** - Internal combustion engines shall be equipped with a muffler of a type recommended by the manufacturer.

NOI-2: **Noise abatement measures** - As directed by the County resident engineer, the contractor shall implement appropriate additional noise abatement measures including, but not limited to, siting the location of stationary construction equipment (e.g., generators, compressors) away from sensitive noise receptors to the greatest extent feasible, turning off idling equipment after no more than five minutes of inactivity, incorporating a sound blanket, and/or other ways to reduce noise levels. The contractor shall ensure that measures will be incorporated to comply with the County of Monterey Noise Ordinance (85dBA or below at 50 feet from the noise source).

References

Caltrans Foundation Manual Chapter 6, Cast-in-Drilled-Hole Piles 2015. Foundation Manual Chapter 6, Cast-in-Drilled-Hole Piles accessed at https://dot.ca.gov/-/media/dot-media/programs/engineering/documents/structureconstruction/foundation/sc-foundation-chapt6-a11y. Accessed November 8, 2023.

Federal Highway Administration (FWHA). 2017. Accessed at https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm on 11/16/2023.

Fisheries Hydroacoustic Working Group (FHWG.) 2008. Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities. Bio-fhwg-criteria-agree-a11y.pdf.

National Institute for Occupational Safety and Health (NIOSH). https://www.cdc.gov/niosh/topics/noise/default.html**.** Accessed August 24, 2023.

National Marine Fisheries Service (NMFS) Southeast Regional Office (SERO). 2021.Multi-species Pile Driving Calculator. https://www.fisheries.noaa.gov/southeast/consultations/section-7-consultation-guidance

Soderberg, P., Laughlin, J. 2016. Underwater Sound Level Report: Colman Dock Test Pile Project 2016.

Title 23: Highways - Part 772-Procedures for Abatement of Highway Traffic Noise and Construction Noise**.** Accessed August 24, 2023.

U.S. Navy. 2017. Criteria Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III).