Whiskey Slide Road over Jesus Maria Creek Bridge Replacement Project

Federal Aid Number BRLO 5930(064)

Initial Study/Mitigated Negative Declaration

Prepared for:

Calaveras County
Public Works Department
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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADI	Area of Direct Impact
amsl	above mean sea level
AP	Agricultural Preserve
APE	Area of Potential Effects
APN	Assessor Parcel Number
BMPs	best management practices
BSA	Biological Study Area
BTU	British Thermal Unit
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAPCD	Calaveras County Air Pollution Control District
CCIC	Central California Information Center
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGS	California Geologic Survey
CIA	Community Impact Assessment
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
CWA	Clean Water Act
ESA	environmentally sensitive area
°F	Fahrenheit
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FMMP	Farmland Mapping and Monitoring Program
FT	Federal Threatened
FYLF	Foothill yellow-legged frog
GHG	greenhouse gas
HELIX	HELIX Environmental Planning, Inc.
IS/MND	Initial Study/Mitigated Negative Declaration

ACRONYMS AND ABBREVIATIONS (cont.)

kWh	kilowatt hours
LHMP	Local Hazard Mitigation Plan
MBTA	Migratory Bird Treaty Act of 1918
MRA	Mineral Resource Area
MRZ	Mineral Resource Zones
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PES	Preliminary Environmental Study
PPV	peak particle velocity
quad	USGS 7.5-minute topographic quadrangle map
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SC	State Candidate
SR	State Route
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WL	Watch List

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1.0 INTRODUCTION

The County of Calaveras (County), in coordination with the California Department of Transportation (Caltrans) proposes to replace the existing bridge at Whiskey Slide Road over Jesus Maria Creek (Bridge No. 30C0062) in Calaveras County, California. The County proposes to use federal funds from the Federal Highway Administration (FHWA). The County Public Works Department is the local lead agency for California Environmental Quality Act (CEQA) compliance. Caltrans is the lead agency for National Environmental Policy Act (NEPA) compliance.

The County has determined that an Initial Study/Mitigated Negative Declaration (IS/MND) would ensure compliance with CEQA for the Whiskey Slide Road over Jesus Maria Creek Bridge Replacement Project (proposed project) in Calaveras County, California. The County has discretionary authority over the proposed project and would also construct and operate the proposed project. The intended use of this document is to determine the level of environmental analysis required to adequately prepare the project IS/MND and to provide the basis for input from public agencies, organizations, and interested members of the public. The mitigation measures prescribed in this IS/MND will be implemented in conjunction with the project, as required by CEQA. If the County approves this project, it will also adopt findings and a Mitigation Monitoring and Reporting Program in conjunction with approval of the project.

1.1 Purpose and Need

The bridge and roadway in the project area experience a low traffic volume and primarily serve local traffic, consisting primarily of local residents. The primary purpose of the project is to bring the bridge up to current geometrical and structural standards. In a routine bridge inspection report completed by Caltrans in 2010, the existing bridge was given a sufficiency rating of 35.1 out of 100 and a status of structurally deficient. A structurally deficient status is defined as a bridge that has one or more structural defects that require attention; however, it does not indicate the severity of the defect but rather that a defect is present. Structurally deficient can indicate the bridge needs repairs to prevent minor problems such as minor cracks, erosion, peeling paint, from becoming more serious.

The proposed project is needed to provide residents, motorists, pedestrians and emergency vehicles a safe, all-weather path of travel across Jesus Maria Creek. Without improvements, the bridge's structurally deficient condition is expected to deteriorate. The proposed project would ultimately create a safer bridge.

1.2 Project Location

The Whiskey Slide Road over Jesus Maria Creek bridge is located in unincorporated, central Calaveras County. The bridge is approximately 2.5 miles southeast of the intersection of Whiskey Slide Road with Jesus Maria Road, and approximately 3.5 miles northwest of the intersection of Whiskey Slide Road with Mountain Ranch Road in the town of Mountain Ranch, California. State Route (SR) 49 is approximately 7.3 miles west of the project site. The project is located in Section 30 of Township 5 North and Range 13 East and can be found on the U.S. Geological Survey (USGS) 7.5-minute "Rail Road Flat, CA" topographic quadrangle. See Figures 1 and 2 in Appendix A.

1.3 Project Setting and Surrounding Land Uses

The project site is located in a mountainous, rural area of Calaveras County on the western slope of the Sierra Nevada Range. Through the project site, Whiskey Slide Road is a rural local road with a 10- to 11-foot-wide paved roadway and narrow shoulder. The bridge over Jesus Maria Creek is a paved, single lane, single-span steel girder structure with a concrete deck built in 1936. The structure is supported on reinforced concrete abutments founded on spread footing with reinforced concrete wingwalls. The existing bridge is approximately 42 feet long and 14.4 feet wide. From the south, the existing roadway approaches Jesus Maria Creek from the southwest and then goes across the bridge at a slight skew from the creek. North of the bridge, the roadway turns northwestward in an approximately ninety-degree turn and continues to the northwest. This area experiences a low average daily traffic volume of approximately 93 vehicles, consisting primarily of local residents.

Jesus Maria Creek is a tributary to the North Fork Calaveras River and generally flows from east to west. Through the project site, Jesus Maria Creek flows from the southeast to the northwest under Whiskey Slide Road, thereafter it curves southward and flows to the southwest. The topography in the project site and surrounding area varies widely – the majority of the project site is characterized by gentle slopes and undulating topography with grades ranging from approximately 2 to 30 degrees. Steeper slopes occur in both the northern portion of the project site, north of Whiskey Slide Road, and south of Jesus Maria Creek, east of Whiskey Slide Road with slopes greater than 60 degrees in those areas. The creek banks in the project site are generally broad and slope gently to the creek. The south bank east of Whiskey Slide Road is slightly steeper due to a constructed driveway that follows the creek, and that gives way to steep slopes directly south of the driveway and east of Whiskey Slide Road south of the creek. Elevations in the project site range from approximately 1,695 feet above mean sea level (amsl) to 1,775 feet amsl, with elevations increasing to the north, south, and east.

Surrounding land uses in the project vicinity are undeveloped forested land and rural residential parcels with cleared pastures. The project site is located on land that passes through privately owned property with cleared pastures north of the creek and undeveloped, forested lands south of the creek. The pastures are frequently used for cattle grazing of approximately 10 cattle at a time (Pat Morales, pers. comm. on November 11, 2015). The cattle have access to the creek. Two homes are located on the residential property east of the project site and a driveway providing access to the homes intersects Whiskey Slide Road north of Jesus Maria Creek. Two additional driveways intersecting Whiskey Slide Road in the project site provide access to other areas of the property – one is located directly across from the driveway to the homes and provides access to a pasture west of the road, and another parallels the south bank of the creek and intersects Whiskey Slide Road from the east.

Portions of the project site were burned by the Butte Fire during September of 2015. The extent of the burn through the project site was observed during a site visit on November 11, 2015. While upland habitats south of the bridge and wooded upland habitats north of the bridge were substantially burned, the riparian habitat was not significantly altered. Within the burned areas, the trees, understory, and soils were burned, and soils were exposed.

1.4 General Plan Land Use Designation and Zoning

The Calaveras County General Plan Update was adopted by the Board of Supervisors on November 12, 2019 and designates the land in which the project site is located as “Resource Production” (RP; Calaveras County 2019a). RP lands may be used for a variety of production activities, and primarily

identify lands capable of and primarily used for agricultural operations, timber production, and/or mineral resource production (Calaveras County 2019a).

The parcel in which the project site is located is zoned as “Agricultural Preserve” (AP) on the Calaveras County Zoning Map (Calaveras County 2018). Lands zoned AP are intended to be protected and preserved for intensive agriculture and ranching production.

2.0 DESCRIPTION OF THE PROPOSED PROJECT

2.1 Project Design

The proposed project would involve removing the existing bridge over Jesus Maria Creek and constructing a new bridge approximately 30 feet west of the existing alignment. The road would be realigned and widened along the approaches to accommodate the new bridge. Refer to Figure 3 in Appendix A for the project design.

The new bridge would be an approximately 60-foot-long, 20 to 24-foot-wide cast-in-place prestressed single-span bridge. The bridge would feature a 20-foot-wide travel way between two traffic barriers. The vertical profile of the new bridge would be approximately 6 feet higher than the existing bridge deck. Reinforced concrete, seat-type abutments founded on spread footings would be constructed in each creek bank.

The approach improvements would extend approximately 220 feet from the bridge to the south along a generally tangent alignment and 350 feet from the bridge to the north along the curved alignment. Whiskey Slide Road would be raised, widened, and realigned along the bridge approaches to accommodate the new bridge. The vertical profile and horizontal alignment would gradually conform to the existing roadway at the project limits. The roadway width at the new approaches would transition from a 14-foot-wide to a 20-foot-wide travel way with guardrails along the edges of roadway. At the curves, the interior shoulder would increase an additional 3 feet for trailer off-tracking. Fill would be placed, and the slopes regraded to create stable embankments on both sides of the creek where the land currently slopes down to the creek, including at the existing abutment locations. The newly formed embankments and existing creek banks will be regraded from approximately 210 feet downstream (west) and 100 feet upstream (east) of the new crossing to achieve a maximum 1.5:1 to 2:1 slope. Exposed slopes below and adjacent to the new bridge will be protected by rock slope protection placed within the 100-year floodplain. A keyway (involving the placement of rock slope protection below grade) will be excavated in stable material at the base of each of the newly formed embankments to reinforce the toe of the slope. Additional seeding and other soil stabilization measures may be applied along the creek banks for up to 200 feet in either direction from the bridge to limit erosion. A short length of retaining wall or other earth retaining system would be constructed along the south-west bridge approach due to the steep channel banks and roadway realignment.

A design speed of 20 miles per hour along Whiskey Slide Road would be provided throughout the extents of the project limits. The existing road has an unposted speed limit. Existing driveways accessing the road from adjacent private properties would be restored to provide access to Whiskey Slide Road. As described below, traffic would be maintained through the project site during construction. Temporary shoring may be needed to keep fill outside of the traveled way. This may include a temporary wrapped-face embankment or other temporary support method.

2.2 Construction Phasing and Traffic Management

The project would be constructed over two construction seasons in multiple stages. To minimize environmental impacts to the creek, in-creek construction activities would occur during the dry season (i.e., approximately May 15 to October 15 of each year, depending on precipitation). During the first construction stage, the staging areas and footprint of the new bridge and approaches would be cleared, the segments of the existing Whiskey Slide Road at the proposed tie-ins would be constructed, and

temporary conforms to the existing road would be constructed. During the second construction stage, the new roadway embankments would be built up and a portion of the rock slope protection placed, the new bridge footings and abutments would be constructed, the new bridge superstructure constructed, and the approach roadway surfaces would be constructed. A tie-in to the existing driveway accessing Whiskey Slide Road from the west would also be constructed. During the third stage, the tie-in to the existing driveways accessing Whiskey Slide Road from the east would be constructed. In the final stage, the existing bridge and roadway approaches would be dismantled and removed, and the existing abutment locations would be regraded into stable embankments, and the remaining rock slope protection placed.

During the first two construction stages, traffic would be maintained on the existing bridge and roadway. Following construction of the new roadway and bridge, traffic would be shifted to the new bridge and the third stage new driveway tie-ins would then be constructed and the existing bridge and approaches would be removed. No detours would be required during project construction, and the roadway and bridge crossing would remain open throughout construction. Traffic disruptions through the project limits would be minimized by staging construction of the roadway approaches to maintain, at a minimum, a single lane of through traffic throughout the duration of construction.

2.3 Project Impact Area and Ground Disturbing Activities

The project site is approximately 3.92 acres, with approximately 1.87 acres of ground disturbance anticipated to occur. Ground disturbing activities include clearing and grubbing all work areas, grading and leveling of the staging areas, roadway excavation along the bridge approaches and driveway reconnections, placing fill into the channel along the regraded embankments, installing rock slope protection, and removal of the existing bridge. Deeper excavation associated with constructing the bridge abutments, the retaining wall, and rock slope protection keyway will occur at the site of the bridge crossing. The spread footings of the abutments, retaining wall foundations, and the rock slope protection keyway are assumed to be placed on competent rock material. The competent material elevation is uncertain, and additional excavation may be required during construction if competent materials is not found at the prescribed bottom of footings, foundations, and keyway. Excavation for these elements would not exceed 20 feet in depth.

The project would result in approximately 0.78 acre of permanently affected area associated with construction of the new bridge, and approximately 1.09 acres of temporary impact associated with ground disturbance during construction.

Construction activities within the ordinary high-water mark and over the creek channel include water diversion measures, bridge removal and debris containment, falsework and construction access, and construction activities as follows:

- Water diversion/dewatering will be required in Jesus Maria Creek for approximately 150 feet to allow construction of the new creek banks and bridge, and removal of the existing bridge. The extent and depth of the diversion measures will be dependent upon the seasonal fluctuation in the water surface elevation and may not be required during low flow or drought conditions. The work zone would likely be dewatered by installing a combination of physical barrier measures using temporary (k-rail) barriers, gravel sacks, bladders, or poly-plastic sheathing to achieve a water tight barrier, and by directing flows through the work area in a pipe. The use of sheet piling is not anticipated due to the near surface bedrock layers. Water trapped by the diversion

measures or percolated through the faces of excavation will be removed and treated by settlement tanks or other measures prior to discharge. Water diversion/dewatering measures will be removed at the completion of the project.

- Demolition and removal of the existing bridge will be completed from within the dewatered work zone in the creek and from the top of the channel banks. The existing bridge deck and steel girders will be cut free at the abutments and lifted out with a crane. An excavator equipped with a bucket or an excavator with a hammer will be used to break up and remove the abutments. The water diversion physical barriers will act to prevent construction debris from the channel banks from entering the water. Debris containment methods (e.g., barrier nets attached to the bottom of the existing bridge) will be utilized during removal of the old bridge span to prevent construction material or debris from entering the water or other identified sensitive habitats. The existing bridge span, concrete, rebar, and railings would be disposed of offsite at an appropriate disposal or re-use facility.
- Falsework, consisting of temporary towers and spans supporting the bridge concrete forms, will be erected at each toe of slope and would span the creek channel. Support towers and concrete forms will be erected within the dewatered areas, and no other support towers will be required in the channel. The bridge concrete forms supported on falsework beams will span between support towers and over the channel. Construction access ramps will be constructed from the existing roadway surfaces down to the creek. Ramps will likely be earthen fill graded to provide suitable access. Access for construction equipment and personnel across the creek channel will be provided by the existing bridge or a temporary access trestle. The ends or other support points for a temporary access trestle will be set within the water diversion area and would clear span the creek channel.
- Construction activities within the water diversion areas will include grading and placing of fill for roadway embankments, excavation for bridge abutments and rock slope protection, form-reinforce-pour activities for the bridge abutments, and placement of rock slope protection. Construction activities over the creek channel will be completed from the falsework span and include form-reinforce-pour activities for the bridge superstructure and barriers. Concrete forms are considered watertight to allow placement of wet concrete and to contain the concrete until hardened.

2.4 Right-of-Way Acquisition

The project site affects portions of Assessor Parcel Numbers (APNs) 021-001-045 and 021-001-046 which are privately owned (refer to Figure 2). The existing roadway and bridge pass through the parcels within an approximately 30-foot-wide implied dedicated easement. Approximately 0.5 acre of new right-of-way (ROW) is anticipated to accommodate the replacement bridge and its roadway approaches within a 60-foot-wide easement. Minimal easement widenings may be added as necessary to accommodate rock slope protection at the bridge abutments and limits of approach embankment. The ROW would be located within APN 021-001-046, in which the majority of the project site is located. Approximately 0.1 acre of the existing roadway easement would be removed from County maintenance and control and returned to the private landowner's control following project construction.

2.5 Utilities

Existing overhead Pacific Gas & Electricity and AT&T lines cross the project site and would be relocated.

2.6 Construction Staging Area

Access points, materials storage, and staging areas have been identified within the project site. Two staging areas are proposed, and both would be located on APN 021-001-046. An approximately 0.07-acre staging area is proposed in the northeast portion of the project site. It would consist of a partially cleared area south of the existing driveway and would be accessed by the existing driveway. Another approximately 0.12-acre staging area is proposed east of Whiskey Slide Road, in a pasture/lawn. The existing fence between the pasture/lawn would be removed, and the staging area would be accessed directly from Whiskey Slide Road.

2.7 Project Schedule

Project construction is anticipated to begin in Spring 2023 and be completed by Fall 2024.

3.0 REQUIRED APPROVALS

3.1 Necessary Permits and Approvals

In order for the proposed project to be implemented, a series of actions and approvals are required from several agencies.

As the Lead Agency, the County will use this IS/MND to evaluate the potential environmental impacts of the project and to determine whether a Mitigated Negative Declaration is the appropriate CEQA compliance document. The County has the following discretionary powers related to the proposed project:

- Adoption of the IS/MND
- Approval of the Site Plan Review

The County is also responsible for regulatory agency coordination and/or approvals as described below:

- Obtain authorization under a Clean Water Act (CWA) Section 404 Nationwide Permit from the United States Army Corps of Engineers (USACE) to discharge dredged or fill material.
- Obtain a CWA Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB).
- Obtain a CWA Section 402 Construction General Permit (for ground disturbance greater than 1 acre).
- Obtain a Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement from California Department of Fish and Wildlife (CDFW).
- Pre- and post-construction coordination with CDFW for potential impacts and proposed avoidance of impacts to foothill yellow-legged frog (FYLF; *Rana boylii*), western pond turtle, and birds protected under the Migratory Bird Treaty Act (MBTA).

Caltrans will undergo consultation with the United States Fish and Wildlife Service (USFWS) pursuant to Section 7 of the Endangered Species Act to determine whether an incidental take permit for potential impacts to impacts to California red-legged frog (CRLF; *Rana draytonii*) will be necessary.

3.2 Intended Use of the Document

This IS/MND has been prepared to determine the appropriate level of detail and scope of analysis required for potential impacts to the environment from the proposed project. This document also serves as a basis for soliciting comments and input regarding the project from members of the public and

public agencies. This Draft IS/MND will be circulated for a minimum of 30 days, during which time comments concerning the analysis contained in the IS/MND should be sent to:

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4.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

5.0 DETERMINATION

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 revisions in the project have been made by or agreed to by the project proponent. 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" impact on the environment, but at least one effect I) 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. 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, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Printed Name	For

6.0 ENVIRONMENTAL INITIAL STUDY CHECKLIST

The lead agency has defined the column headings in the environmental checklist as follows:

A. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

B. "Less Than Significant with Mitigation Incorporated" applies where the inclusion of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." All mitigation measures are described, including a brief explanation of how the measures reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be cross-referenced.

C. "Less Than Significant Impact" applies where the project does not create an impact that exceeds a stated significance threshold.

D. "No Impact" applies where a project does not create an impact in that category. "No Impact" answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project specific screening analysis).

6.1 AESTHETICS

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
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 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 Visual Impact Assessment was prepared to assess the project impacts on the aesthetic quality of the project area and is included as Appendix B. The project scored a value of "9" which is defined "as no noticeable physical changes to the environment are proposed."

6.1.1 Environmental Setting

Calaveras County is an area of diverse visual character within the foothills of the western slope of the Sierra Nevada Mountains. Topography is variable in the foothills where rolling hills have been carved by streams and rivers flowing westward into the Central Valley.

The project is located in a rural area of Calaveras County characterized by varying topography ranging from steep hills to broad, level pastures. The regional area features undeveloped, forested land with parcels cleared for residential or agricultural (grazing) land uses. Through the project site, Whiskey Slide Road is paved and narrow and Jesus Maria Creek flows from the southeast to the northwest under Whiskey Slide Road, where it curves southward and flows to the southwest. The project site passes through a privately-owned parcel with residences located on the property that are approximately 400 feet east of the project site. The bridge approach from the north is relatively flat and largely cleared associated with the residential land uses. A narrow riparian corridor follows the creek and provides some overstory and cover to the bridge. The southern approach to the bridge is relatively steep and forested. Areas of the project site south of the creek burned in the Butte Fire of 2015.

6.1.2 Evaluation of Aesthetics

a) Have a substantial adverse effect on a scenic vista?

No impact. A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape (such as an area with remarkable scenery or a resource that is indigenous to the area) for the benefit of the general public. There are no features on the project site commonly associated with scenic vistas (peaks, overlooks, ridgelines, etc. (Caltrans 2018); however, the Calaveras County General Plan states that because the entire County consists of scenic features such as forests, streams, rivers, and reservoirs, no specific areas of outstanding scenic value are identified on a map. Because the project site is in a narrow area with a limited viewshed dominated by the existing roadway alignment, adjacent rural residential land uses, and vegetation modified by the recent fire and adjacent land uses, the project site would not be considered a scenic vista. No impact would occur.

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

No impact. The project site is not located on or near a state designated scenic highway. The highway included in the Caltrans Scenic Highway Mapping System nearest to the project site is SR 49, located approximately 7.3 miles west of the project site. This highway is included as an Eligible State Scenic Highway (Caltrans 2018). SR 49 is not visible from the project site; therefore, no impact would occur to scenic resources within a State Scenic Highway.

c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than significant impact. The project site is directly adjacent to a private property with two homes approximately 400 feet east of the existing bridge. While the daily average number of vehicles traveling through the project area is relatively low (less than 100 vehicles), the project site is highly visible from the nearby residential property. Due to intervening topography and vegetation, and because the project site is located within a large (approximately 187-acre) parcel, the footprint of the proposed bridge and approaches are not visible from other residences on the property or off-site roadways and properties. Sensitive viewers would be limited to motorists traveling through the area and individuals living in the two homes nearest to the bridge. Construction of the project would change the visual character of the area by replacing the existing bridge with a new structure, changing the roadway curvature and bridge approaches and removing existing trees and vegetation.

During construction, the approximately 0.07-acre staging area in the northeast portion of the project site would be cleared, as needed. Another staging area is proposed directly in front of the homes on the private property. This area is currently used as a pasture/lawn with a horse corral. The horse corral and existing fence between the private property and Whiskey Slide Road would be removed to use the area for staging. The staging area locations were chosen because they have been predominantly cleared and are on relatively level areas. Construction of the project would involve the removal of existing trees and other vegetation in the footprint of the project, and reconstruction of the existing creek banks to support the realigned roadway and new bridge. The visual impacts from project construction would be short-term and temporary.

Following construction, the site would be revegetated according to the Planting and Erosion Control/Revegetation Plans prepared for the project, and temporarily disturbed areas would return to a natural habitat. The County is coordinating with the property owner and agrees to replace the removed fencing and return the staging areas to a state acceptable by the property owner. Implementation of these plans would ensure the project would not significantly change the existing visual setting and would not introduce visual elements that are uncommon in the area. While the project involves replacing an existing structure with a new structure, the new bridge and approaches would be consistent with the existing visual character of the area and would not substantially alter the visual character or quality of Whiskey Slide Road.

Because the visual characteristics of the project site would be substantially similar to pre-existing visual characteristics, impacts to visual character would be less than significant, and no mitigation would be necessary.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

No impact. Currently, the only source of substantial light or glare in the project site are the relatively few vehicles traveling along Whiskey Slide Road and lighting associated with the nearby residences. Because the proposed project is not increasing capacity based on existing or anticipated regional travel demands, the proposed project would not result in an increase in traffic volumes along Whiskey Slide Road; therefore, an increase in light and glare from additional vehicles traveling through the area is not expected. The project does not include the installation of any light sources, and the materials used to construct the bridge do not include reflective materials that may introduce additional glare to the environment (the bridge would be constructed of concrete, the roadway approaches would be treated with asphalt, and rock slope protection and revegetation would be used for slope protection). The proposed project would not create a new source of substantial light or glare. No impact would occur.

6.2 AGRICULTURE AND FORESTRY RESOURCES

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b)	Conflict with existing 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 l 2220(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 Community Impact Assessment (CIA) was prepared for the proposed project and is included as Appendix C (HELIX 2017a). The CIA addresses project impacts to farmland and grazing in the project site, and the results of the assessment are incorporated into the following analysis.

6.2.1 Environmental Setting

As mentioned in Section 1.4, the Calaveras County General Plan Update designates the area in which the project site is located as "RP" (Land Use Element; Calaveras County 2019a). RP lands may be used for a variety of production activities, and primarily identify lands capable of and primarily used for agricultural operations, timber production, and/or mineral resource production (Land Use Element; Calaveras County 2019a). The parcel in which the project site is located is zoned as AP in the Calaveras County Zoning Map (Calaveras County 2018). Lands zoned AP are intended to be protected and preserved for intensive agriculture and ranching production.

Based upon a review of maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency, there is no data available for Calaveras County identifying "Prime Farmland," "Unique Farmland," or "Farmland of Statewide Importance" (CDC 2018a). Prime farmland in the County has been identified under the Williamson Act program based on the agricultural crop produced. The full extent of prime or unique farmlands is unknown (Resource Production Element; Calaveras County 2019a).

As a means of agricultural land preservation, the State Legislature enacted the California Land Conservation Act of 1965, commonly called the "Williamson Act." Under the Act, property owners may enter into contracts with the County to keep their lands in agricultural production for a minimum of 10 years, in exchange for property tax relief. Lands covered by Williamson Act contracts are assessed based on their agricultural value instead of their potential market value under non-agricultural uses and are known as "Agricultural Preserves." AP zoning in Calaveras County applies to lands for which a Williamson Act contract has been executed, which includes the proposed project site. The project site is associated with existing transportation uses, and no timber management occur on the project site. The current landowner frequently uses portions of the private property, including areas proposed to be acquired as ROW, for cattle grazing of up to ten cows. No other agricultural activities occur in the vicinity.

6.2.2 Evaluation of Agriculture and Forestry Services

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?

No impact. The FMMP does not include data available for Calaveras County, but the Calaveras County General Plan Update indicates that prime farmland in the County has been identified under the Williamson Act program and the full extent of prime or unique farmlands is unknown (Resource Production Element, Calaveras County 2019a). However, the proposed project would not convert lands actively used for agricultural production, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. No impact would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Less than significant with mitigation incorporated. The project site and immediately surrounding areas are zoned as AP and are under a Williamson Act contract. The project would convert approximately 0.5 acre of land from APN 021-001-046 that is currently zoned AP to transportation land uses under establishment of new ROW within an easement necessary for project construction. The proposed project would not require the conversion of land zoned as AP to transportation land uses for APN 021-001-045. The land to be converted within APN 021-001-046 would consist primarily of the existing dedicated easement for the existing roadway alignment which is in transportation land uses and would include a portion of the cleared pasture north of the creek and forested land south of the creek. The conversion to transportation land uses would conflict with the AP zoning, which would be a potentially significant impact. The County proposes to return approximately 0.1 acre of existing ROW in an implied dedication easement to the property owner's control following construction, which would be incorporated into the existing Williamson Act contract and would partially offset the impacts of the land conversion. The Department of Conservation Division of Land Resource Protection requires notification whenever land within a Williamson Act contract may be required by a public agency for a public use. The following mitigation would be implemented to reduce the potentially significant impact to less than significant:

MM AG-1: Notify California Department of Conservation of Williamson Act land conversion

Pursuant to Government Code Section 51291(b - e), the County shall notify the California Department of Conservation of the conversion of contracted land zoned as AP that is proposed for acquisition by the

Calaveras County Department of Transportation, prior to the decision to acquire the property located in the AP. The County shall provide separate notification to the Director of Conservation within 10 working days upon completion of the acquisition. Should there be any significant changes to the acquisition, or should the County decide to not acquire the property, the County shall provide separate notification to the Director of Conservation.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section l 2220(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?

No impact. The area immediately surrounding the project site is zoned AP and does not contain forest land, timberland, or timberland zoned Timberland Production. No impact would occur.

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?

Less than significant with mitigation incorporated. As described under question b), above, the proposed project involves establishing 0.5 acre of new ROW that is currently zoned as AP in an implied dedication easement and converting it to transportation land uses. Approximately 0.1 acre of existing ROW would be removed from the County maintenance rolls and returned to the private landowner's control following construction, which would be incorporated into the existing AP contract, and would partially offset the impacts of the land conversion. Regardless, the conversion of the current zoning of AP to transportation land uses would conflict with the AP zoning, which would be a potentially significant impact. Implementation of MM AG-1, as described above, would reduce the potentially significant impact to less than significant.

6.3 AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
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 affecting a substantial number of people?	☐	☐	■	☐

6.3.1 Environmental Setting

The proposed project site is located within the boundaries of the Calaveras County Air Pollution Control District (CCAPCD), which is within the Mountain Counties Air Basin. The County is in nonattainment of the state and federal ozone standard, and the particulate matter (10 microns and less diameter; PM_{10}) standard. The County is in attainment or unclassified for all other pollutants. Table 1 presents the federal and state attainment status for monitored pollutants.

Table 1
CALAVERAS COUNTY ATTAINMENT STATUS

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone	Non-attainment	Non-attainment
Suspended Particulate Matter (PM_{10})	Non-attainment	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Unclassified	Attainment/Unclassified
Carbon Monoxide	Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment	Attainment/Unclassified
Lead	Attainment	Attainment/Unclassified
Sulfur Dioxide	Attainment	Unclassified
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

Source: CARB 2017.

A Preliminary Environmental Study (PES), completed by Caltrans in March 2013, determined that the proposed project is exempt from the air quality conformity determination under 40 CFR 93.126, Table 2: Safety, reconstructing bridges (no additional travel lanes).

6.3.2 Evaluation of Air Quality

a) Conflict with or obstruct implementation of the applicable air quality plan?

No impact. The proposed project would result in the replacement of an existing bridge. The project would not result in population growth; it would instead serve the existing population and accommodate future growth. As stated above, the project is exempt from the requirement of a conformity determination. Therefore, the proposed project would not conflict with the applicable air quality attainment plan, and no impacts would occur as a result of the project.

b) 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?

Less than significant impact.

Construction Emissions

Construction-related emissions are described as "short term" or temporary in duration and have the potential to represent a significant impact with respect to air quality due to emissions of precursors of ozone (ROG and NOx) and PM_{10}, both of which the County is currently in non-attainment. Emissions of ozone precursors and PM_{10} are primarily associated with off-road construction equipment exhaust. Worker commute trips and other construction-related activities (e.g., application of architectural coatings) also contribute to short-term increases in such emissions. Emissions of fugitive PM_{10}, dust, are associated primarily with ground disturbance activities during site preparation and grading activities and vary with soil silt content, soil moisture, wind speed, disturbance area, and vehicle miles traveled.

Because the proposed project was determined to be exempt, quantitative analysis was not performed. The project would, however, be required to comply with applicable CCAPCD emissions and fugitive dust measures. Additionally, as stated above, emissions would be temporary. Therefore, impacts related to construction emissions would be less than significant.

Operational Emissions

The proposed project would accommodate existing traffic and would not result in new sources of air pollutant emissions. Thus, operation of the proposed bridge would not violate applicable air quality standards or substantially contribute to an existing or projected air quality violation. No impacts would occur from project operations.

The County is in non-attainment for ozone (NOx and ROG) and PM_{10}. As discussed above, construction and operation of the project are expected to result in a less than significant impact and no impact, respectively, related to criteria pollutant emissions. Therefore, the project would not result in a cumulatively considerable net increase in criteria pollutants. A less than significant impact would result, and no mitigation would be necessary.

c) Expose sensitive receptors to substantial pollutant concentrations?

d) Result in other emissions such as those leading to odors affecting a substantial number of people?

Less than significant impact. Emissions of criteria air pollutants and potential odors associated with diesel construction equipment and vehicles during project construction would be temporary and localized within the immediate vicinity; additionally, no new air emissions or odors would be released during operation of the proposed bridge. Thus, overall air emissions would not expose sensitive receptors to substantial air pollutant concentrations or create objectionable odors. This would be a less than significant impact for questions c) and d), and no mitigation would be necessary.

6.4 BIOLOGICAL RESOURCES

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
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, regulations, or by the California Department of Fish and Wildlife or US 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 Natural Environment Study (NES; HELIX 2018) and an Aquatic Resources Delineation Report (HELIX 2017) were prepared for the proposed project and are included in Appendix D. Biological surveys conducted for the proposed project included general biological surveys (which included habitat mapping), rare plant surveys, a CRLF habitat assessment according to USFWS protocol, a delineation of wetlands and other waters of the U.S. and State (documented in the Aquatic Resources Delineation Report), and an oak tree inventory. Refer to the NES and Aquatic Resources Delineation Report for detailed descriptions of the methods used and the regulatory framework related to biological resources. The following discussion is based on the technical reports.

6.4.1 Environmental Setting

The Biological Study Area (BSA; project site) occupies approximately 3.92 acres and is equivalent to the project site identified in this IS/MND. The project site includes all areas that would be permanently or temporarily impacted by the proposed project and is large enough to accommodate any changes to project limits and project design that may occur during project development.

The BSA is located in a mountainous, rural area of Calaveras County in the foothills on the western slope of the Sierra Nevada Range. Land use in the vicinity of the project site is undeveloped forested land and residential parcels with cleared pastures. The BSA is located within the Upper Calaveras watershed, approximately 5.7 miles upstream from the confluence of Jesus Maria Creek with the North Fork of the Calaveras River. Drainages in the Sierra Nevada provide corridors of riparian habitat that are essential to many plant and animal species occurring in those regions. These drainages are important tributaries to the hydrology of the waterways through the Central Valley and to the biological functions of deltas along the coast. The Calaveras River collects the flows of tributaries from the high mountains, and recharges New Hogan Lake located at the confluence of the north and south forks of the Calaveras River, west of San Andreas. The river continues through the San Joaquin Valley to the San Joaquin River west of Stockton.

Jesus Maria Creek is a tributary to the North Fork Calaveras River, and generally flows from the east to the west. Through the project site, Jesus Maria Creek flows from the southeast to the northwest, under Whiskey Slide Road, where it curves southward and flows to the southwest. The topography in the project site and surrounding area varies widely – east of Whiskey Slide Road, the creek channel is broad with shallow water. The south bank east of Whiskey Slide Road is generally steep with slopes greater than 60 degrees, while the north bank is broad and flat. West of Whiskey Slide Road, the banks are generally flat. The north bank is generally broad and flat, with undulating topography upland from the creek. The grades north of the creek range from approximately 2 to 30 degrees.

6.4.1.1 Biological Conditions

Vegetation Communities/Habitat Types

Vegetation communities/habitat types occurring in the project site include mixed conifer forest (*Pinus ponderosa – Calocedrus decurrens* Forest Alliance), annual brome grassland, white alder riparian forest (*Alnus rhombifolia* Forest Alliance), perennial riverine, and graded/paved. The area was burned by the Butte Fire in the summer of 2015, which modified the composition of the habitats present in the BSA. The effects of the fire on the habitat are discussed in the following sections, as appropriate. Refer to the NES in Appendix D for detailed descriptions of the habitat types. Refer to Figure 4 in Appendix A for locations of the habitat types in the project site. Table 2 summarizes the habitat types that are briefly described in the following paragraphs.

Table 2
HABITAT TYPES AND ACREAGE PRESENT IN THE BIOLOGICAL STUDY AREA

Habitat Type	Acres
Upland	
Mixed conifer forest (*Pinus ponderosa-Calocedrus decurrens* Forest Alliance)	2.37
Annual Brome Grassland (*Bromus* [*diandrus*, *hordeaceus*] – *Brachypodium distachyon*)	0.66
White alder riparian forest (*Alnus rhombifolia* Forest Alliance)	0.30
Graded/paved	0.36
Aquatic	
Upper perennial riverine, rock bottom (Jesus Maria Creek)	0.23
Total	**3.92**

[1] Total does not include 0.006 acre of existing bridge overlaying the perennial riverine habitat at Jesus Maria Creek.

The mixed conifer forest occurs throughout most of the project site and adjacent areas. Ponderosa pine (*Pinus ponderosa*), incense cedar (*C. decurrens*), and Oaks (*Quercus* sp.) are also commonly present in the tree canopy, with several occurring in the properties adjacent to Whiskey Slide Road north of the bridge. The mixed conifer forest south of the creek, both east and west of Whiskey Slide Road was substantially burned by the Butte Fire. Trees were burned, although the larger trees were not likely killed, and the understory was wiped out. The understory is expected to regenerate and would be more extensive due to the reduction of overstory.

Areas of the project site north of Jesus Maria Creek have been cleared of trees and shrubs for the adjacent private property and are now grassland. Annual brome grassland is adjacent to the riparian corridor north of Jesus Maria Creek. This herbaceous community in the project site is dominated by nonnative annual grasses and forbs including soft chess (*Bromus hordeaceus*), ripgut grass (*B. diandrus*), bristly dogtail grass (*Cynosurus echinatus*), vetch (*Vicia* sp.), and clover (*Trifolium* sp.). Native grasses and forbs do occur but do not dominate the community. Trees and shrubs are mostly absent from this community.

The white alder riparian forest in the project site and vicinity occurs as a relatively narrow band along Jesus Maria Creek. It occupies 0.3 acre of the project site. The tree canopy is dominated by white alder (*Alnus rhombifolia*) with lesser amounts of red willow (*Salix laevigata*). Prior to the fire, the shrub layer was patchy and, where present, was dominated by Himalayan blackberry, western poison oak (*Toxicodendron diyersilobum),* and snowberry (*Symphoricarpos sp)*. The herbaceous layer was very sparse where the shrub layer was present. Where the shrub layer was absent the herbaceous layer was similar in species composition to the annual brome grassland. Following the Butte Fire, the shrub layer south of the bridge was burned, and the Himalayan blackberry was largely lost. Additionally, portions of the white alder riparian forest adjacent to the private property east of the bridge was partially modified. Much of the riparian trees and shrubs were cleared for property maintenance.

The graded/paved habitat occur along Whiskey Slide Road where the road has been scraped and paved and at driveways intersecting the roadway from the east. This area is largely barren of vegetation, although some non-native grasses and forbs occur along the roadway margins.

The segment of Jesus Maria Creek in the project site is a natural perennial waterway with unimproved banks (e.g., no bank treatments), and a cobble, boulder, and bedrock bottom with some coarse sand and gravel substrate. The creek bottom is minimally vegetated with occasionally occurring emergent plants such as umbrella plant (*Darmera peltata)*. Depending on the precipitation of the year, Jesus Maria

Creek may provide a perennial water source in the area. While the flows recede substantially during the dry season, water persists in the pools within the channel.

No oak woodland habitat is mapped in the BSA; however, several mature oaks are present throughout the mixed conifer forest and white alder riparian forest habitats. To determine the location and status of native oaks present in relation to the impact area of the proposed project, an inventory of native oaks was conducted. The results of the inventory identified twelve individual native oaks 5 inches or more in diameter at breast height occurring within the project footprint. Of those, six have a diameter at breast height of 24 inches or greater (one valley oak has a diameter of 54 inches). Refer to the tree inventory report included as an attachment to the NES in Appendix D for a detailed list of the inventoried oaks and a map showing the locations of the oaks.

Invasive Species

Invasive plant species occur in the project site along Whiskey Slide Road and the intersecting driveways, as well as in the annual grassland. Invasive species are typically more numerous adjacent to roads and in ruderal/disturbed areas. This is most likely due to the existing disturbance from the cleared pasture and the adjacent Whiskey Slide Road and residential driveways which provide opportunities for the transport and spread of invasive species. The disturbed soils from the Butte Fire also provide opportunities for the spread of invasive species through the site.

A total of 22 invasive plant species occurring on the California Invasive Plant Council California Invasive Plant Inventory (Cal-IPC 2013) were identified in the project site. Of these species, there are two with an overall high rating, fourteen with a moderate rating, and six with a limited rating. Species with a high rating identified within the project site are Himalayan blackberry and yellow-star thistle (*Centaurea solstitialis*). Refer to the NES in Appendix D of this IS/MND for a list of plants in the project site and the invasive species rating.

Wildlife and Habitat Connectivity

Wildlife typically associated with mixed coniferous forest habitat and riparian corridor associated with Jesus Maria Creek supports a diversity of wildlife species commonly inhabiting mid-montane habitats in the Sierra Nevada. Wildlife typically associated with the mixed coniferous forest habitat in Calaveras County include a variety of raptors and passerines, California mule deer (*Odocoileus hemionus*), American black bear (*Ursus americanus*), and mountain lion (*Felis concolor*) (Monk & Associates 2013). Common wildlife associated with riparian corridors in the County include raccoons (*Procyon lotor*), mule deer, and opossums (*Didelphus virginiana*), as well as a variety of insect hunting birds and bats (Monk & Associates 2013). Other common species using the project site may include wild turkey (*Meleagris gallopavo*) and common gray fox (*Urocyon cinereoargenteus*).

Western toad (*Anaxyrus boreas*) tadpoles and minnows (fam. Cyprinidae) were observed in Jesus Maria Creek. Birds observed in the vicinity include black phoebes (*Sayornis nigricans*), spotted towhee (*Pipilo maculatus*), housefinch (*Carpodacus mexicanus*), turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura*), robin (*Turdus migratorius*), and lesser goldfinch (*Carduelis psaltria*). A great horned owl (*Bubo virginianus*) was heard but not visually observed. As previously mentioned, black phoebes were observed in the project site during the biological reconnaissance survey on May 23, 2013. Several inactive nests were observed on the underside of the bridge. A juvenile Sierran chorus frog (*Pseudacris sierra*) was observed near Jesus Maria Creek during the July 28, 2016 survey. The bridge was

investigated for use by bats, and it was determined the existing bridge does not provide roosting opportunities and is not suitable bat habitat.

The areas surrounding the project site are largely undeveloped or minimally developed for private residences on large properties, and no major barriers to wildlife movement such as major roadways are present in the project site or vicinity. Relatively unimpeded corridors associated with drainages such as Jesus Maria Creek provide important movement corridors, which allow dispersal and subsequent gene flow between wildlife populations in the region. During construction of the proposed project, wildlife movement through the project site would be temporarily affected. Impacts to aquatic and semi-aquatic species would be minimized by minimizing the amount of diversion to the extent practicable. Flows would be diverted within the creek channel. Construction fencing around the work area and work along the banks of the creek would temporarily prevent terrestrial wildlife from entering the work zone. Once construction is complete, the water diversion and construction fencing would be removed. No long-term impacts to the creek as a wildlife movement corridor are anticipated. The proposed project would not remove, degrade, or otherwise interfere substantially with the structure or function of the wildlife movement corridor in the long term.

6.4.1.2 Regionally Occurring Special Status Species

Sensitive biological resources are those that are afforded special protection through federal state, and/or local laws and ordinances due to a variety of factors. Plant and animal species are typically considered “sensitive” if they are determined to be rare or have a limited geographic range by the USFWS, National Marine Fisheries Service, CDFW, or other local agencies.

The following lists of special-status species known to occur and/or having the potential to occur in the project region were reviewed: USFWS list of federally protected species with the potential to be affected by the project; California Native Plant Society (CNPS) list of special-status plants with reported occurrences on the “Rail Road Flat, CA” quad and the eight surrounding quads; California Natural Diversity Database (CNDDB) list of special-status species with reported occurrences in the “Rail Road Flat, CA” quad and the eight surrounding quads maintained by the CDFW. Refer to the NES in Appendix D for the species lists.

The database search identified 25 regionally-occurring special-status species with the potential to occur in the project site or otherwise be impacted. Of those species, four have the potential to occur in the project site and are listed below. Species determined to have no potential to occur in the project site or be otherwise impacted were excluded from further evaluation. Refer to Table 3 of the NES in Appendix D for the 25 species reviewed, a general habitat description for each species, and rationale for likeliness to occur.

Table 3 summarizes the species with the potential to occur, listing status, general habitat description, and the rationale. Refer to the NES in Appendix D for a detailed life history and habitat description for each species.

Table 3
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE BIOLOGICAL STUDY AREA

Common Name/ Scientific Name	Federal/ State/CNPS Status/other	General Habitat Description	Habitat Present/ Absent	Rationale
Amphibians				
California red-legged frog/ *Rana draytonii*	FT/--/--/-- with Critical Habitat	Ponds and streams with deep (greater than 2 feet deep) still or slow moving water. Elevation ranges from sea level to 4,000 feet above mean sea level.	Present No Critical Habitat within or downstream of the project site.	Breeding habitat is not present in the project site. Jesus Maria Creek and upland habitats in the project site provide potential dispersal habitat, if the project site is located within one mile of suitable breeding habitat.
Foothill yellow-legged frog/ *Rana boylii*	--/SC/--/--	Creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. Usually found near riffles with rocks and sunny banks nearby.	Present	Jesus Maria Creek provides suitable habitat for this species.
Reptiles				
Western pond turtle/ *Emys marmorata*	--/SSC/--/--	Permanent and intermittent waters, including marshes, streams, rivers, ponds and lakes with muddy or rocky bottom and that support aquatic vegetation and emergent logs or boulders for basking. Nest sites are typically located in an open upland area with gentle slopes (<15%), and sandy or hardpan soils that face southward.	Present	Jesus Maria Creek and adjacent uplands provide suitable habitat.
Plants				
Dubious pea/ *Lathyrus sulphureus var. argillaceus*	--/--/3/--	Cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest. Elevation: 150 to 930 meters (492 to 3,051 feet) Blooms: April to May	Present	Suitable habitat is present in the mixed coniferous forest in the project site; however, this species was not observed in the project site during a botanical inventory on May 23, 2013.

Source: Table 3 in HELIX 2018; Appendix D

Notes:

CNDDB = California Natural Diversity Database; Present = Suitable habitat is or may be present in the project site; therefore, the species may be present. *Listing Status:* FT = Federal Threatened; SC = State Candidate; SSC = Species of Special Concern; WL = Watch List; 3 = More information is needed to determine status; -- = no listing status

6.4.1.3 Habitats and Natural Communities of Special Concern

Natural communities of special concern are habitats that have been determined by natural resource agencies to be sensitive or rare. Habitats are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distribution; and/or (3) the habitat requirements of special-status plants or animals occurring on site.

Natural communities of special concern occurring in the project site include Jesus Maria Creek and the white alder riparian forest along the creek. Jesus Maria Creek is a potential waters of the U.S. and State. The white alder riparian forest (state ranking of S4) is not listed by CDFW as a natural community of special concern (state ranking of S1-S3), however, activities affecting a waterbody and its associated habitats that may substantially adversely affect existing fish or wildlife resources are regulated by CDFW through the Lake and Streambed Alteration program (Fish and Game Code Section 1602). Such activities may include substantially diverting or obstructing the natural flow of any river, stream or lake (including dewatering activities), changing the use or material from the bed, channel or bank or any river, stream or lake; or depositing debris, waste, or other materials that could pass into any river, stream, or lake. Jesus Maria Creek and the associated white alder riparian forest are subject to CDFW jurisdiction and activities affecting those habitats would require notification to CDFW.

The mixed conifer forest, annual grassland, and graded/paved habitats are not considered to be natural communities of special concern and, therefore, will not be discussed further except in the context of habitat for special-status species. No CNPS communities of concern, Critical Habitat, or other natural communities of special concern occur in the project site. No watercourses considered habitat for special-status fish species occur in the project site or downstream of the project site.

6.4.1.4 Jurisdictional Waters

A delineation of potential waters of the U.S. was conducted for the proposed project to document potential wetlands and waters of the U.S. and State subject to USACE and RWQCB jurisdiction under Sections 404 and 401 of the CWA and waters subject to CDFW jurisdiction under Section 1602 of the California Fish and Game Code. The delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008). All areas of the project site were reviewed to the level required to determine the presence or absence of potential waters of the U.S. and State.

Jesus Maria Creek has a bed and banks, with a clearly defined channel, and is considered non-wetland waters of the U.S. The creek bottom is generally devoid of vegetation, with occasionally occurring emergent vegetation such as umbrella plant. The water depth varies depending on precipitation from higher elevations, but the depth of the ordinary high water mark is approximately 1 to 3 feet. Jurisdictional characteristics include a change in vegetation and soils, a clear natural line impressed on the bank, shelving, and the presence of litter and debris. Jesus Maria Creek is subject to USACE jurisdiction under Section 404 of the CWA (waters of the U.S.) and is subject to Regional Water Quality Control Board jurisdiction under Section 401 of the CWA (waters of the State). Jesus Maria Creek is also subject to CDFW jurisdiction under Section 1602 of the Fish and Game Code.

6.4.1.5 Raptors and Other Migratory Birds

Many bird species are migratory and fall under the jurisdiction of MBTA. Some raptor species and other migratory birds, such as great horned owl (*Bubo virginianus*) and black phoebes, are not considered special-status species because they are not rare or protected under the Federal Endangered Species Act or California Endangered Species Act; however, the MBTA and California Fish and Game Code Sections 3503 and 3800 prohibit the possession, incidental take, or needless destruction of birds, their nests, and eggs.

The trees in and adjacent to the project site provide potential roosting or nesting habitat for various birds, including raptors. As previously mentioned, a pair of black phoebes was observed foraging over the creek, and several phoebe nests were observed under the bridge. A great horned owl was heard during the May 2013 biological reconnaissance survey. All other birds observed in the project site are also protected while nesting. These birds include: spotted towhee, house finch, turkey vulture, mourning dove, robin, and lesser goldfinch.

6.4.2 Evaluation of Biological Resources

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?

Less than significant with mitigation incorporated.

Special Status Wildlife

Three wildlife species have the potential to occur or be affected by the proposed project. These species include CRLF, FYLF, and western pond turtle. Additionally, raptors and other birds protected by the MBTA (including great horned owl and black phoebe) have the potential to occur and be impacted by the proposed project. Impacts to these species are discussed individually below.

<u>California Red-Legged Frog</u>

To determine the potential for CRLF to occur in the project site and vicinity, a site assessment in accordance with the USFWS *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USFWS 2005) was conducted on November 16, 2014 (Appendix D of the NES). Based on the results of the habitat assessment, the project site does not provide potential breeding habitat for CRLF, and no suitable breeding habitat was identified at any of the accessible sites within one mile of the project site; however, the project site may provide dispersal habitat for CRLF if undetected breeding populations are present in the vicinity. The nearest known record of CRLF was documented over 11 miles west of the site (Occurrence No 671, CDFW 2018).

In the unlikely event CRLF use the project site for dispersal, the entire project site provides potential dispersal habitat depending on the season — dispersal during the wet season may occur over the uplands or along Jesus Maria Creek, while dispersal through the project site during the dry season would be limited to along Jesus Maria Creek. In the low likelihood that undiscovered suitable CRLF habitat is present within one mile of the project site, CRLF would not be expected to remain in the project site for an extended period due to the lack of suitable aquatic habitat combined with the lack of upland refugia.

Dispersing individuals would be juveniles or adults moving between suitable habitats located outside of the project site.

Caltrans will initiate Federal Endangered Species Act (FESA) Section 7 consultation with USFWS with regards to potential effects on CRLF (refer to the NES in Appendix D), and a draft biological assessment has been prepared in support of the consultation.

Impacts

Adverse Contact

CRLF are not expected to occur in the project site or be impacted by the proposed project. In the unlikely event that CRLF were to disperse through the project site during construction, the potential exists for individuals to be harassed, injured, or killed if they come in direct contact with workers, equipment operated in the creek or materials being placed in the creek (such as for construction of the embankments), or other construction materials. CRLF undertake the greatest overland movements — for distances furthest from aquatic habitat — during the wet season and during dry periods, CRLF are rarely encountered far from water. Consistent with best management practices (BMPs), project activities would be limited to the dry season (approximately May 15 - October 15, depending on the precipitation year); therefore, if present in the project site during construction, CRLF would be expected to remain in Jesus Maria Creek and would not be affected by construction activities in the upland areas. As such, construction activities with the potential to impact dispersing CRLF include those immediately adjacent to and within the creek, including clearing and grubbing along the creek banks, grading the creek banks, placement of fill within the creek banks and creek for construction of the new bridge approaches, placement of rock slope protection along the new creek banks, diversion and dewatering activities, constructing falsework and permanent structures over the creek. Removing the existing bridge and abutments and restoring the location of the existing bridge would also require access to the creek and may affect the frog in the unlikely event they are dispersing through the BSA during the dry season. CRLF dispersing through the project site during the wet season would avoid potential direct adverse contact with workers and equipment because the construction site would be idle.

The potential for direct contact is extremely low, even in the unlikely event CRLF are present in Jesus Maria Creek in the project site during construction, because the project site is small and all work in the creek would occur within the dewatered work zone. Should CRLF disperse along the creek they would remain in the wetted portion of the creek and would avoid direct contact with workers, equipment, or placed materials. Construction activities would be limited to daylight hours which would further minimize the potential for direct interaction with dispersing CRLF (which are primarily active at night). With implementation of the proposed mitigation measures (MM BIO-1), the potential for encountering or impacting transient, dispersing individuals would be reduced or avoided.

Deep holes, trenches, and placement of erosion control and water quality BMPs have the potential to trap or entangle CRLF. If entrapped, CRLF may be harmed or killed from starvation, exposure, or predation. Avoidance and minimization measures include prohibiting the use of monofilament netting and covering holes to avoid trapping CRLF dispersing through the area.

Construction over and near water results in increased opportunities for materials (including hazards and hazardous materials, construction materials, and litter generated by construction personnel) to enter Jesus Maria Creek or other aquatic habitats. Accidental spills of hazardous materials and chemicals in the form of gasoline, engine oil, lubricants, or other fluids used during construction could affect aquatic

habitat in Jesus Maria Creek. Hazardous materials that enter Jesus Maria Creek due to seepage or accidental spills, could also affect water quality in the immediate vicinity and downstream of the construction area. The contractor would be responsible for implementing BMPs during construction; therefore, the potential for a hazardous material or chemical spill to occur is unlikely. Further, avoidance and minimization measures would be implemented to prevent material or debris from entering the creek or other sensitive habitats during removal of the existing bridge.

Removal of the existing bridge may result in materials entering the creek. Avoidance and minimization measures regarding debris containment methods would be implemented to prevent material or debris from entering the creek or other sensitive habitats.

The project site is relatively small, and work in the creek would be confined to the minimal area necessary to construct the project. The likelihood of CRLF being present in the work area during work activities is extremely low. Should individuals disperse through the project site in Jesus Maria Creek, they would remain in the wetted portion of the creek and would not be expected to remain the project site for an extended period of time. The individuals that may occur would be dispersing juveniles or adults, who are highly mobile and would be able capable of avoiding the area. Avoidance and minimization measures (MM BIO-1) would be implemented to as a precautionary measure to avoid any potential adverse effects on CRLF resulting from the proposed project. With implementation of the avoidance and minimization measures, the potential for adverse impacts to dispersing CRLF would be reduced to a level of less than significant.

Potential Dispersal Habitat Alterations

The proposed project would result in permanent impacts to 0.78 acre and temporary impacts to 1.09 acre of potential CRLF dispersal habitat. Because the proposed project is replacing an existing structure with a similar structure, the proposed project would not alter or degrade the project site in such a way to preclude CRLF from using the project site. The realigned roadway, bridge, and revised creek banks would not introduce a barrier to dispersing CRLF moving through the project site to or from breeding habitat. While fill would be placed in the creek to achieve bank stability, the new bridge would span the entire creek and the majority of its banks, thereby avoiding direct, permanent impacts to the creek from the placement of structures. In addition, the existing bridge and rock slope protection would be removed and areas outside of the proposed rock slope protection would be recontoured and graded to a stable slope and seeded with native species consistent with the Erosion Control/Revegetation Plan which would partially offset the permanent impacts of the new bridge in the creek.

Because the project site provides limited habitat value that would only be used for dispersal, construction activities resulting in a temporary loss of vegetation, increase in erosion, sedimentation, and turbidity or other impacts to water quality would not result in adverse effects to CRLF. The removal of trees and other vegetation that shade the creek would not affect CRLF use of the area for dispersal, and because temporarily impacted areas would be reseeded according to the Erosion Control/Revegetation Plan for the project, the vegetative cover would regenerate. In addition, construction activities would be required to follow standard engineering practices that reduce impacts to water quality in Jesus Maria Creek and other aquatic habitats. These practices include reduction of sediment loading and sediment disturbance as well as other standard BMPs for maintaining water quality in the project area. With BMPs incorporated into construction activities, no impacts to water quality and habitats in Jesus Maria Creek are anticipated during or post-construction. Refer to the avoidance and minimization efforts for aquatic resources (MM BIO-9). In addition, proposed mitigation

measure MM BIO-1 would be implemented to avoid and minimize impacts to CRLF and the habitat in the project site. Potential impacts to CRLF would be reduced to a level of less than significant.

MM BIO-1 Avoid and Minimize Impacts to California Red-Legged Frog

- Activities conducted within the banks of Jesus Maria Creek will be limited to a period outside of the active season for CRLF (approximately May 15 to October 15, depending on the precipitation year). This construction window is during the dry season in which creek levels are lower to dry, providing limited dispersal habitat for CRLF. The dry season is defined generally as that time between April 15th and the first qualifying rain event on or after October 15th defined as precipitation of more than one half of an inch for 24 hours. Any extension of the work window outside of the May 15 to October 15 timeframe due to abnormally dry conditions would require coordination with the USFWS.

- Prior to commencing site disturbance, including vegetation and/or ground disturbance, a USFWS-approved biologist(s) will be identified to monitor implementation of biological mitigation measures. The USFWS-approved biologist will be present for all initial ground disturbing activities.

- Construction activities within the banks of the creek will be restricted to daylight hours to avoid CRLF that may be present in the project site during the time they are most active – dusk and dawn. Construction activities will cease one half hour before sunset and will not begin prior to one half hour before sunrise.

- Clearing within the project site will be confined to the minimum area necessary to facilitate construction activities. To ensure that construction equipment and personnel do not affect sensitive habitat outside of the project site, orange barrier fencing will be erected to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact to CRLF habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable. The location of the fencing will be established in consultation with the USFWS-approved biologist. This will delineate the ESA on the project. The integrity and effectiveness of ESA fencing will be inspected on a daily basis. Corrective actions and repairs shall be carried out immediately for fence breaches.

- To prevent CRLF from moving through the project site during construction, temporary exclusion fencing will be placed adjacent to the ESA fencing, at least two days prior to the start of construction activities. The fence will be installed along the riparian corridor to prevent potential dispersing CRLF from entering terrestrial work areas. The fence will be made of a material that does not allow CRLF to pass through, with one-way exit holes, and the bottom will be buried to a depth of two inches so that frogs cannot crawl under the fence. To avoid entanglement of CRLF, the use of plastic monofilament netting is prohibited.

- A USFWS-approved biologist shall survey the project site immediately prior to installation of temporary exclusion fencing to ensure that this species is not actively using the project site as a dispersal corridor. Once the temporary exclusion fencing is installed, the work area within the exclusion fence shall be surveyed again immediately prior to the onset of construction activities. The approved biologist shall be present during initial ground disturbing activities. If CRLF is

found in the project site during pre-construction surveys or initial ground disturbing activities, construction activities shall be suspended until the frog has left the area on its own. The approved biologist shall notify the County project manager and USFWS within 24 hours to reinitiate consultation. Handling of CRLF without a take permit pursuant to the FESA is not allowed.

- Before any construction activities begin, a USFWS-approved biologist shall conduct a worker awareness environmental training session for all construction personnel. At a minimum, the training shall include a description of the CRLF and its habitat, the importance of the CRLF and its habitat, the avoidance and minimization measures that are being implemented to conserve the CRLF as they relate to the project, and the boundaries within which work may occur. Personnel will also be instructed on the penalties for not complying with avoidance and minimization measures. If new construction personnel are added to the project, the contractor will ensure that the new personnel received the mandatory training before starting work.

- If CRLF are found during construction, work will immediately stop, the CRLF will be allowed to move out of harm's way on its own accord, and the USFWS will be contacted within 24 hours to reinitiate consultation. Handling of CRLF without a take permit pursuant to the FESA is not allowed.

- To ensure that diseases are not conveyed between work sites by the USFWS-approved biologist or biological monitor, the fieldwork code of practice developed by the Declining Amphibian Population Task Force will be followed at all times.

- If dewatering is required, the contractor will prepare a creek dewatering plan that complies with any applicable permit conditions. Water diversion activities will be conducted under the supervision of a USFWS-approved biologist. The approved biologist will survey the area to be dewatered immediately after installation of the dewatering device and prior to the continuation of dewatering activities. If CRLF are observed, dewatering activities shall be suspended until the frog has left the area on its own. The approved biologist shall notify the County project manager and USFWS within 24 hours to reinitiate consultation. Handling or capture of CRLF without a take permit pursuant to the FESA is not allowed. The approved biologist will use a net to capture other trapped fish, reptiles, amphibians and crayfish present in the area to be dewatered. Captured native organisms will be released into Jesus Maria Creek downstream of the construction zone.

- If dewatering the work area in the creek is necessary, and it will be dewatered by pumping, then intakes shall be completely screened with wire mesh not larger than five millimeters to prevent CRLF (and other animals) from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Should in-water work extend over multiple construction seasons, then the water diversion shall be removed between construction years/seasons so that the creek flows normally. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the creek substrate. Alteration of the stream bed will be minimized to the maximum extent possible; any imported material will be removed from the temporarily impacted areas of the stream bed upon completion of the project. The water diversion will be removed between construction years/seasons so that the creek flows normally.

- Dense vegetation scheduled for removal in the white alder riparian forest and Jesus Maria Creek will be trimmed back by hand to allow the biological monitor to inspect the ground below for CRLF. If no CRLF are observed, then the brush may be removed with mechanized equipment.

- During project activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

- To prevent inadvertent entrapment of animals during construction, all excavated, steep walled holes or trenches more than one foot deep shall be covered at the close of each working day with plywood or other suitable material or provided with one or more escape ramps constructed of earth fill or wooden planks. At the beginning of each working day and before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the USFWS-approved biologist, or an on-site designee identified by the USFWS-approved biologist, will immediately place escape ramps or other appropriate structures to allow the animal to escape, or USFWS will be contacted within 24 hours for further guidance and to reinitiate consultation. All holes and trenches more than one foot deep shall be filled or securely covered prior to October 15.

- The County/contractor shall take measures to prevent the introduction of invasive weeds at the construction site. All equipment shall be cleaned before bringing it onsite. Only certified weed-free erosion control materials shall be used for erosion control.

- All temporarily disturbed areas shall be returned to pre-project conditions upon completion of construction, including habitat contours. These areas will be property protected from washout and erosion using appropriate erosion control devising including coir netting, hydroseeding, and revegetation.

Foothill Yellow-Legged Frog

The status of FYLF was updated from a Species of Special Concern to candidate for listing as threatened under the California Endangered Species Act on July 7, 2017 (Regulatory Notice No. 27-Z). Jesus Maria Creek provides suitable habitat for FYLF and this species is potentially present in the Creek. The CNDDB records indicated the nearest documented occurrence of this species is along Jesus Maria Creek, approximately 1 mile downstream from the project site where one adult and six subadults were observed in August 2002 (Occurrence No. 638; CDFW 2016a in HELIX 2016a; Appendix C). This species has not been observed in the project site.

Impacts

Direct effects to FYLF using the site and habitat impacts from erosion, sedimentation, and potential spills would be similar to those described for CRLF. Permanent loss of potential habitat from construction of the proposed project would be associated with permanent impacts to Jesus Maria Creek, and immediately adjacent areas within the banks of the creek. Indirect effects would be similar to those described for CRLF. Because FYLF use of the project site during construction would be limited to the creek, the potential for impacts to individuals from construction activities along the creek bank and upland areas would be minimal. The proposed activities within the creek would be limited to an

approximately 150-foot-long stretch of the creek and would be primarily temporary (construction of the abutments and the falsework).

Species listed as candidate under California Endangered Species Act (CESA) are afforded the same protection as those listed as threatened or endangered. As such, projects that would result in take of the species would require an incidental take permit under Section 2081 of the California Fish and Game Code. Because the project is not planned to begin construction until 2020 to 2023, there is the potential for the species to become either delisted or listed as threatened. The County is in coordination with CDFW regarding the project's potential effects to the species, and if necessary, will obtain an incidental take permit from CDFW prior to construction, and will provide the compensatory mitigation as required by CDFW.

All BMPs and mitigation measures described for CRLF would apply to FYLF and would minimize impacts to the species, if present. Additional species-specific mitigation measures (MM BIO-2) would reduce potential impacts to a level of less than significant.

MM BIO-2 Avoid and Minimize Impacts to Foothill Yellow-Legged Frog

- The County shall coordinate with CDFW regarding FYLF. If, through coordination, it is determined that an incidental take permit under Section 2081 of the Fish and Game Code is required, then the County shall obtain the necessary permit and shall provide appropriate compensatory mitigation for impacts to FYLF habitat as agreed upon with CDFW. This process may involve presence/absence surveys in the year prior to construction (at a minimum) to determine the status of the frog at the site. There are no standard CDFW-approved survey protocols for FYLF; therefore, if presence/absence surveys are conducted, the proposed protocols shall be provided to CDFW for review and approval prior to conducting the surveys.

- A qualified biologist shall survey the work site prior to the initiation of construction activities to ensure that FYLF is not present. If, at the time of construction FYLF is candidate for listing as threatened or listed as threatened under CESA, then handling of FYLF without a take permit pursuant to the CESA is not allowed. If FYLF is found in the project site during preconstruction surveys, construction activities shall not start until the frog has been either relocated by the qualified biologist to a suitable location up or downstream of the construction zone or allowed to leave the area on its own (if the County has not obtained a take permit pursuant to CESA). The approved biologist shall notify the County project manager and CDFW within 24 hours if FYLF is found, and if any individuals have been relocated, and shall reinitiate consultation with CDFW, if necessary.

- The preconstruction worker awareness training shall include a description of the FYLF and its habitat, the importance of the FYLF and its habitat, the avoidance and minimization measures that are being implemented to conserve the FYLF as they relate to the project, and the boundaries within which work may occur. Personnel will also be instructed on the penalties for not complying with avoidance and minimization measures. If new construction personnel are added to the project, the contractor will ensure that the new personnel received the mandatory training before starting work.

- The biological monitor's inspections and monitoring will involve monitoring for FYLF. If, at the time of construction FYLF is candidate for listing as threatened or listed as threatened under

CESA, then handling of FYLF without a take permit pursuant to the CESA is not allowed. If FYLF are present during construction, construction activities within 50 feet of the frog shall cease until either the biological monitor is able to relocate the frog to a suitable location up or downstream of the construction zone, or the frog is allowed to leave the area on its own (if the County has not obtained a take permit pursuant to CESA). The biological monitor shall notify the County project manager and CDFW within 24 hours if FYLF is found and shall notify of any individuals that have been relocated, and shall reinitiate consultation with CDFW, if necessary.

Western Pond Turtle

Jesus Maria Creek provides potential dispersal habitat for western pond turtle. No suitable breeding habitat occurs. It would be very unlikely for individuals using the project site to occur in upland habitat; however, there is the potential for individuals to bask in accessible sunny areas adjacent to the creek. Potentially suitable habitat in the project site for this species would include Jesus Maria Creek and the immediately adjacent uplands. The CNDDB records indicate the nearest documented occurrence of this species is from along the North Fork of the Mokelumne River, approximately 10 miles north of the project site (Occurrence No. 443; CDFW 2016a in HELIX 2016a; Appendix C). The observation was from 1988. A more recent occurrence is from 2002 in which approximately 30 individuals were observed in a freshwater pond approximately 11.4 miles northwest of the project site (Occurrence No. 564; CDFW 2016a in HELIX 2016a; Appendix C). Additional occurrences are in the vicinity of the 2002 record.

Impacts

If present in the BSA during construction, western pond turtle would be expected to be limited to the creek and immediately adjacent areas during the dry season and may also use the annual grassland habitat within approximately 820 feet of the creek for hibernation from October through April.

Construction activities would take place during the dry season during which time adult and juvenile western pond turtle would be most active and would not be expected to be present in terrestrial habitat. If nests are present within the area of ground disturbance, they would be impacted by activities during the dry season. Construction activities with the potential to impact western pond turtle and their habitat include ground disturbing activities in the annual grassland habitat within approximately 820 feet of the creek, and activities immediately adjacent to and within the creek, including clearing and grubbing along the creek banks, grading the creek banks, placement of fill within the creek banks and creek for construction of the new bridge approaches, placement of rock slope protection along the new creek banks, diversion and dewatering activities, constructing falsework and permanent structures over the creek. Removing the existing bridge and abutments and restoring the location of the existing bridge will also require access to the creek and may impact the turtle.

Direct effects to western pond turtle using the site and habitat impacts from erosion, sedimentation, and potential spills would be similar to those described for CRLF. Permanent loss of potential habitat from construction of the proposed project would be associated with permanent impacts to Jesus Maria Creek, the riparian corridor, and annual grassland habitat within 820 feet of the creek. Indirect effects would be similar to those described for CRLF. All BMPs and mitigation measures described for CRLF would apply to western pond turtle and would minimize impacts to the species, if present. Additional species-specific mitigation measures (MM BIO-3) would reduce potential impacts to a level of less than significant.

MM BIO-3 Avoid and Minimize Impacts to Western Pond Turtle

- A qualified biologist shall survey the project site prior to the initiation of construction activities to ensure that western pond turtle is not present within the project site. If western pond turtle is found in the project site during preconstruction surveys, construction activities shall not start until the turtle has been relocated by the qualified biologist to a suitable location up or downstream of the construction zone, or until the turtle leaves the work area on its own. If an active burrow is located and construction will occur during the hibernation period (October through April), a buffer area of approximately 300 feet shall be established to protect the nest and direct access to the creek. The buffer shall remain in place until the biological monitor determines that the turtle has dispersed, or until the end of the hibernation season. The approved biologist shall notify the County project manager and CDFW within 24 hours if western pond turtle and/or an active burrow is found and shall notify of any individuals that have been relocated.

- The preconstruction worker awareness training shall include a description of the western pond turtle and its habitat, the importance of the western pond turtle and its habitat, the avoidance and minimization measures that are being implemented to conserve the western pond turtle as they relate to the project, and the boundaries within which work may occur. Personnel will also be instructed on the penalties for not complying with avoidance and minimization measures. If new construction personnel are added to the project, the contractor will ensure that the new personnel received the mandatory training before starting work.

- The biological monitor's inspections and monitoring will involve monitoring for western pond turtle. If western pond turtles are present during construction, construction activities within 50 feet of the turtle shall cease until the biological monitor is able to relocate the turtle to a suitable location up or downstream of the construction zone, or until the turtle leaves the work area on its own. The biological monitor shall notify the County project manager and CDFW within 24 hours if western pond turtle is found and shall notify of any individuals that have been relocated.

<u>Raptors and Other Migratory Birds</u>

The trees and shrubs in and adjacent to the project site provide potential roosting or nesting habitat for various birds, including raptors. As previously mentioned, a pair of black phoebes was observed foraging over the creek, and several phoebe nests were observed under the bridge. A great horned owl was heard during the May 2013 biological reconnaissance survey. All other birds observed in the project site are also protected while nesting. These birds include: spotted towhee, house finch, turkey vulture, mourning dove, robin, and lesser goldfinch.

If construction of the proposed project commences during the nesting period, then construction activities and construction-related disturbance (e.g., noise, vibration, increased human activity) could adversely impact these species if they were to nest in the project site or in suitable habitat adjacent to the project site. Impacts to nesting birds would be prevented through avoidance and minimization measures involving preconstruction nesting surveys and applying a suitable non-disturbance buffer around nesting birds, if present.

Construction of the new approaches and the bridge would require the removal of several trees and would construct new road for bridge approaches where there is currently none. These impacts would result in the loss of potential nesting and foraging habitat for raptors and tree-nesting passerines. Depending on the species present, the new roadway alignment may not negatively impact raptors foraging in the area. The road features low traffic, and the newly cleared area may provide expanded foraging habitat for species hunting on the ground or requiring less densely vegetated habitat for aerial hunting. The conversion of habitat to construct the new approaches would be offset by the conversion of the existing bridge approaches to natural habitat. The existing bridge approaches would no longer be part of the traveled through way and could be used by birds using open areas for forage. Furthermore, raptor foraging and nesting habitat is abundant in the vicinity of the project site. The conversion of potential raptor foraging habitat to a rural, paved roadway, and the loss of several trees within the project footprint is not expected to adversely impact these species.

Black phoebes or other passerines protected under the MBTA nesting on the bridge or in vegetation in the project site or immediate vicinity could be adversely impacted by the construction-related activity through nest disturbance, nest abandonment, or direct injury or death. Exclusionary measures would be installed to prevent the phoebes from using the project site for nesting, thereby avoiding direct impacts to the nest and/or individuals. Despite these avoidance and minimization measures, the displaced birds would be at greater risk of nesting failure for the season if they are unable to locate and establish an alternative nesting location. These impacts would be temporary and would be for the duration of construction. Following construction, the birds would be able to return to the site and use the area for nesting. While the nests on the existing bridge would be lost from removal of the bridge, construction of the proposed longer and wider bridge would provide an increase in potential nesting habitat for black phoebes and other birds with similar nesting habits. With the proposed avoidance and minimization measures, the proposed project would not adversely impact raptors and other migratory birds.

MM BIO-4 Avoid and Minimize Impacts to Nesting Raptors and other Nesting Migratory Birds

The following avoidance and minimization measures are general provisions in accordance with the MBTA. These measures shall be implemented when work occurs on or in the vicinity of structures or natural areas that may be subject to nesting by migratory birds that may be adversely impacted, injured, or killed during construction activities.

- The contractor shall protect migratory birds, their occupied nests, and their eggs as specified in these special provisions. Nesting is typically February 15 to September 1, or as determined appropriate in consultation with the Caltrans District Biologist and CDFW.

- The removal of trees shall be limited to only those necessary to construct the proposed project. Trees to be removed or trimmed shall be removed and/or trimmed outside of the nesting season (between September 2 and February 14), if possible.

- The existing bridge shall be removed outside of the nesting season (between September 2 and February 14), if possible. If the bridge must be removed during the breeding/nesting season for black phoebes and other bridge nesting birds (typically February 15 to September 1), then the following measures shall be taken:

    - The bridge shall be surveyed by a qualified biologist no more than three days prior to removal of the bridge. If no active bird nests (containing eggs or young) are observed on

the bridge during the survey, then bridge removal may commence (note that it is very likely that black phoebes will nest on the bridge). Any inactive bird nests or nests not containing eggs or young shall be removed from the bridge by the qualified biologist or under their direct supervision.

- If active nests are observed on the bridge during the survey, bridge removal shall be delayed until it is determined by a qualified biologist that the young have fledged (that is, left the nest) and have attained sufficient mobility to avoid project construction zones.

- To avoid establishment of active nests, beginning prior to February 15 and continuing into the nesting season (or as long as black phoebes or other birds attempt to nest on the bridge, as determined by a qualified biologist), a qualified biologist shall inspect the bridge regularly for bird nesting activity and remove all nests prior to egg laying to ensure that no active nests become established on the bridge.

- If construction activities, including vegetation clearing and tree removal, will occur during the breeding/nesting season for migratory birds (typically February 15 to September 1), then a qualified biologist shall conduct preconstruction surveys for migratory birds within the project site and all areas within 500 feet of the project site (where accessible), no earlier than three days prior to the start of ground disturbing activities. The nesting survey shall include examination of the existing bridge and all trees and shrubs on or within 500 feet of the project site, not just trees slated for removal, since ground vibrations and noise from construction can disturb nesting birds and potentially result in nest abandonment. Areas within 500 feet of the project site shall be surveyed on foot if accessible or from within the project site or publicly accessible areas by scanning the surrounding land with the aid of binoculars. If no nesting activity is observed during the surveys or within 500 feet of the tree or vegetation to be removed or trimmed, then the activity may commence.

- If nesting raptors or other nesting migratory birds are identified during the surveys, then a 500-foot buffer shall be established for nesting raptors, a 100-foot buffer shall be established for nesting passerines, and a 50-foot buffer shall be established for nesting black phoebes. Temporary exclusionary fencing with signs describing the sensitivity of the area shall be installed to establish the no-disturbance buffer around the nest.

    - No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified biologist that the young have fledged (that is, left the nest) and have attained sufficient mobility to avoid project construction zones. This typically occurs by September 1. This date may be earlier or later and shall be determined by a qualified biologist. If a qualified biologist is not hired to monitor the nesting birds, then the full buffer shall be maintained in place from February 15 until September 1. The buffer may be removed and work may proceed as otherwise planned within the buffer on September 2.

    - The size of the non-disturbance buffer may be altered if a qualified biologist conducts behavioral observations and determines the nesting raptors or other migratory birds are well acclimated to the disturbance. If this occurs, the biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to nesting

birds. If the buffer is reduced, the qualified biologist shall remain on site to monitor the birds' behavior during heavy construction. The biologist shall have the authority to stop work if it is determined the project is adversely impacting nesting activities.

Special Status Plants

One species of rare plant has the potential to occur in the project site and be impacted by the proposed project: dubious pea. Dubious pea may occur on the slopes in the mixed coniferous forest habitat adjacent to Whiskey Slide Road north and south of the creek. This species has not been identified in the project site during botanical surveys conducted during the blooming period for the species; however, individuals may colonize suitable habitat in the project site prior to construction. In particular, the Butte Fire burned the overstory and shrub layer of the mixed conifer forest habitat south of Jesus Maria Creek. Such habitat modifications may offer opportunities for previously inconspicuous plant species within a site to germinate, if the seeds are present in the soils. Therefore, while this species has not been observed in the project site, there is the potential for the species to occupy suitable habitat in the project site prior to construction.

The proposed project would impact existing slopes in the mixed conifer forest north and south of the bridge. If the species is present in suitable habitat during construction, individuals would be permanently impacted from cut and fill activities. Indirect effects may occur as a result of increased levels of fugitive dust during construction activities. Avoided individuals may be harmed from excessive amounts of fugitive dust if they occur in the vicinity of construction activities. Further, ground disturbing and construction activities may result in the introduction and spread of invasive species which may degrade the habitat for the native plant and compete with native species for resources. With implementation of the proposed mitigation (MM BIO-5), potential impacts would be reduced to a level of less than significant.

MM BIO-5 Avoid and Minimize Impacts to Special Status Plants

- Rare plant surveys for special status plants shall be conducted by a qualified botanist in appropriate habitats prior to ground-disturbing activities. The survey shall be conducted during the blooming season for the dubious pea (April through May), and in compliance with all CDFW and CNPS published survey guidelines. Project construction shall not be initiated until all special-status plant surveys are completed and subsequent mitigation, if necessary, is implemented.

- If special-status plants are identified within the project site, those individuals or populations shall be avoided to the maximum degree possible. Fencing and signage will be placed around any avoided special-status plant(s) to identify the plant location(s) as an environmentally sensitive area that must be protected during construction. Appropriate BMPs will be implemented to protect the avoided plants from fugitive dust, sedimentation, harmful substances, or contaminated runoff from the construction area that could harm the plants. If a special-status plant is found within the construction limits and/or cannot be avoided, CDFW will be consulted regarding the appropriate mitigation measures. Mitigation measures could include transplanting of individuals or seed to designated areas outside of the construction limits, or via the purchase of qualified mitigation credits or the preservation of off-site habitat. Any mitigation plan developed in consultation with CDFW shall be implemented prior to the initiation of grading.

- A CNDDB form shall be filled out and submitted to CDFW for any special-status plant species identified within the project site.

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

Less than significant with mitigation incorporated. Natural communities of special concern are habitats that have been determined by natural resource agencies to be sensitive or rare. The aquatic habitat in the project site (Jesus Maria Creek) contains potential waters of the U.S. and State which are regulated by the USACE and RWQCB. Jesus Maria Creek is also subject to CDFW jurisdiction under Section 1602 of the Fish and Game Code. The white alder riparian forest habitat in the project site is regulated by the CDFW under the Streambed Alteration Agreement (SAA) program. These habitats are discussed in the following sections. Mixed conifer forest, annual brome grassland, and graded/paved habitat are not considered to be natural communities of special concern: however, these habitats are included in the table because USFWS considers the project site to provide potential dispersal habitat for CRLF. Discussion of impacts to these habitats is incorporated into the discussion of impacts to CRLF under Question A.

Table 4 presents the temporary and permanent impacts to all habitats and natural communities in the project site. The areas of impact are depicted on Figure 5 in Appendix A.

Table 4
TEMPORARY AND PERMANENT IMPACTS TO BIOLOGICAL HABITATS

Habitat Type	Total (Acres)	Impact		Avoided
		Permanent	Temporary	
Upland				
Mixed conifer forest (*Pinus ponderosa-Calocedrus decurrens* Forest Alliance)	2.37	0.49	0.63	1.25
Annual brome grassland (*Bromus* [*diandrus, hordaceus*] – *Brachypodium distachyon* Semi-natural Herbaceous Stands)	0.66	0.08	0.22	0.36
White alder riparian forest (*Alnus rhombifolia* Forest Alliance)[2]	0.30	0.14	0.11	0.06
Graded/paved[1]	0.36	--	--	--
Subtotal	*3.69*	*0.71*	*0.96*	*1.67*
Aquatic				
Jesus Maria Creek[2]	0.23	0.07	0.13	0.03
Subtotal	*0.23*	*0.07*	*0.13*	*0.03*
Total	**3.92**	**0.78**	**1.09**	**1.70**

[1] The graded/paved habitat through the project site is areas graded for the existing roadway and the existing bridge. These are existing impact areas so no new impacts were calculated.

[2] A natural community of special concern.

As presented in Table 4, the proposed project would directly impact white alder riparian forest and Jesus Maria Creek which are both considered natural habitats of concern. Jesus Maria Creek is a potential water of the U.S. and State and impacts to the habitat are discussed under Question C.

The proposed project would result in permanent loss of 0.14 acre of white alder riparian forest located within the project footprint, and approximately 0.11 acre of white alder riparian forest would be temporarily impacted. Impacts to a riparian habitat would be a potentially significant impact. The proposed mitigation (MM BIO-7 and 8) includes measures to avoid and minimize potential impacts to riparian habitat and requires that an SAA be obtained from CDFW and a Revegetation Plan would be developed to restore temporarily impacted areas to natural habitat. With the proposed mitigation, potential impacts would be reduced to a level of less than significant.

MM BIO-6 Obtain a Lake and Streambed Alteration Agreement

The County shall obtain an SAA from CDFW for impacts to habitats regulated by CDFW pursuant to Section 1600 et seq. of the California Fish and Game Code. Measures required by the SAA shall be implemented as a condition of project approval, and prior to ground disturbance affecting Jesus Maria Creek and the white alder riparian forest regulated by CDFW.

Mitigation for permanent impacts to white alder riparian forest, if required, shall be determined at the discretion of CDFW.

MM BIO-7 Avoid and Minimize Impacts to Riparian Habitat

The following avoidance and minimization efforts and protection measures shall be incorporated into the project construction methods:

- Temporary staging areas will be located on existing roadways or other disturbed areas identified in the project layout (plan) sheets where they will not affect sensitive resources.

- Construction activities will be confined to the minimal area necessary to safely conduct proposed project activities to the extent possible.

- An Erosion Control/Revegetation Plan shall be prepared for restoration of temporary work areas and areas within the limits of cut and fill not being treated with rock slope protection or road material. The topography shall be blended with the surrounding area. Topsoil shall be salvaged from the permanently impacted areas to be placed over the restored area, which shall then be revegetated with native species.

- Riparian habitat will be avoided or preserved to the maximum extent practicable. Emergent (rising out of water) and submergent (covered by water) vegetation will be retained where feasible. A qualified biologist will be present during clearing and grubbing activities within the riparian habitat.

- To ensure construction equipment and personnel do not affect avoided riparian habitat in and adjacent to the project site, the boundary of riparian habitats to be avoided will be clearly marked with brightly colored fencing and identified as an environmentally sensitive area (ESA). Riparian trees in the BSA that are not to be removed will be clearly marked in the site plans and a buffer zone will be established around the trees situated adjacent to and within the work areas. These buffer areas will be identified with ESA fencing prior to construction within the riparian habitat, and will be of sufficient size to eliminate potential disturbance from the proposed activities. The integrity and effectiveness of ESA fencing and erosion control measures

will be inspected on a daily basis. Corrective actions and repairs shall be carried out immediately for fence breaches and ineffective BMPs.

- Worker education and awareness training regarding sensitive habitats (e.g., aquatic and riparian habitats) and special-status species will be conducted for all construction personnel. The contractor will ensure that all new personnel will receive the mandatory training before starting work.

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

Less than significant with mitigation incorporated. A total of 0.23 acre of potential waters of the U.S. and State occur in the project site. Impacts to waters of the U.S. and State would result from the placement of fill into Jesus Maria Creek, and from temporarily disturbed and exposed soils associated with construction that could result in erosion, sedimentation, turbidity, and decreased water quality, as well as hazardous materials and chemical spills during construction activities that could enter the waterway and degrade water quality. Refer to Table 5 for permanent and temporary impacts to potential waters of the U.S. and State.

Table 5
IMPACTS TO POTENTIAL WATERS OF THE U.S. AND STATE

Aquatic Resource Name	Total (acre)	Impact (acre)		Avoided (acre)
		Permanent	Temporary	
Jesus Maria Creek	0.23	0.07	0.13	0.03
Total	**0.23**	**0.07**	**0.13**	**0.03**

Construction of the new bridge would result in permanent impacts to waters of the U.S. and State from the placement of permanent slope protection (rip-rap or other armoring). A total of 0.07 acre of waters of the U.S. and State in Jesus Maria Creek would be permanently impacted from the placement of fill associated with the new bridge features.

A total of 0.13 acre of potential waters of the U.S. and State are located within the disturbance footprint and could be temporarily impacted from during construction activities. Activities in the creek may include access to construct the new embankments and bridge, removal of the existing bridge, temporary installation of falsework associated with construction of the new bridge. Approximately 150 feet of the creek channel through the project site would need to be dewatered during construction activities. Depending on the seasonal water surface levels, water diversion may not be necessary during low flow or drought conditions. If necessary, the work zone would be dewatered by installing a combination of physical barriers, including temporary (k-rail) barriers, gravel sacks, bladders, or poly-plastic sheathing to achieve a water tight barrier, and by directing flows through the work area in a pipe. The creek bottom currently consists of cobble, boulder, and bedrock with some coarse sand and gravel substrate and is generally devoid of vegetation. The temporary dewatering of the segment of the creek through the work zone, and the temporary installation of falsework, and construction access would result in minimal effects on plant life in the creek. Following construction, the falsework, water barriers, and pipe would be removed, and the creek would be allowed to return to a natural state within the re-contoured banks of the channel segment. Permanent and temporary impacts to potential waters of the U.S. and State would be a significant impact.

Construction activities would involve vegetation removal and ground disturbance which may result in increased erosion and sediment transfer to water channels. Construction activities also result in the potential for hazard material spills which could enter the creek and degrade water quality. Impacts to water quality would be a potentially significant impact. Construction activities would be required to follow standard engineering practices that reduce impacts to water quality, especially where watercourses may be affected. As outlined in the proposed mitigation, these practices include reduction of sediment loading and sediment disturbance, as well as other BMPs for maintaining water quality in the project area. With BMPs incorporated into construction activities, no impacts to water quality are anticipated during or post-construction.

Due to the minimal permanent impacts to potential waters of the U.S. and State (0.07 acre), compensatory mitigation may not be required. Proposed mitigation to reduce potential impacts to potential waters of the U.S. and State to less than significant level includes avoidance and minimization measures and requires coordination with the USACE and RWQCB to obtain the appropriate permits and to provide any compensatory mitigation determined at the discretion of USACE and RWQCB. With implementation of the proposed mitigation, impacts would be reduced to a level of less than significant.

MM BIO-8 Obtain Clean Water Act Permits and Provide Compensatory Mitigation

The County shall obtain a Section 404 CWA Nationwide Permit from the USACE for impacts to waters of the U.S. This shall include complying with the State's National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Permit) issued by the RWQCB. The County shall also obtain a Section 401 Water Quality Certification from the RWQCB.

Mitigation for permanent impacts to waters of the U.S. and State in Jesus Maria Creek, if required, shall be determined at the discretion of USACE and RWQCB.

MM BIO-9 Avoid and Minimize Impacts to Water Quality

The following avoidance and minimization efforts shall be implemented to reduce impacts to aquatic resources in the project site:

- Standard construction BMPs shall be implemented to minimize potential effects to water quality. An Erosion Control/Revegetation Plan shall be prepared with specific measures to avoid discharge into aquatic features.

- Activities conducted in or near Jesus Maria Creek will be limited to within the dry season, approximately May 15 to October 15, depending on the precipitation year. The dry season is defined generally as that time between April 15 and the first qualifying rain event on or after October 15 (defined as precipitation of more than one half of an inch for 24 hours). The May 15 timing coincides with seasonal restrictions required for special-status species. Any extension of the work window outside of the May 15 to October 15 timeframe due to abnormally dry conditions would require coordination with the appropriate agency(ies), which may include CDFW, USFWS, USACE and/or the RWQCB.

- Worker education and awareness training regarding sensitive habitats (e.g., aquatic and riparian habitats) and special-status species will be conducted for all construction personnel. The

contractor will ensure that all new personnel will receive the mandatory training before starting work.

- No equipment will be operated in the wetted portion of Jesus Maria Creek. If work in the wetted portion of Jesus Maria Creek is unavoidable, then the work area will be dewatered and the flow diverted around the work area once the construction of the diversion is completed.

- Staging areas will be located on existing roadways or other disturbed areas identified in the project layout (plan) sheets where they will not affect sensitive resources.

- Construction activities will be confined to the minimal area necessary to safely conduct proposed project activities to the extent possible.

- Demolition of the existing bridge will be performed in accordance with the Caltrans Standard Specifications. The construction contractor will prepare a bridge demolition plan for approval by the County. The demolition plan will specify measures to avoid impacts to Jesus Maria Creek and debris containment methods.

- Clearing within the project site will be confined to the minimal area necessary to facilitate construction activities. To ensure that construction equipment and personnel do not affect sensitive aquatic habitat outside of the project site, orange barrier fencing will be erected to clearly define the habitat to be avoided. This will delineate the ESA on the project. The integrity and effectiveness of ESA fencing will be inspected on a daily basis by the resident engineer. Corrective actions and repairs shall be carried out immediately for fence breaches.

- Standard construction BMPs will be implemented throughout construction, in order to avoid and minimize adverse effects to the water quality within the project site. Appropriate erosion control measures will be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from the project site. The integrity and effectiveness of the BMPs will be inspected on a daily basis by the resident engineer. Corrective actions and repairs shall be carried out immediately.

- Construction by-products and pollutants such as petroleum products, chemicals, or other deleterious materials should not be allowed to enter into streams or other waters. A plan for the emergency clean-up of any spills of fuel or other materials should be available when construction equipment is in use.

- Equipment shall be re-fueled, washed, and serviced at the designated construction staging area or off-site. All construction and fill materials will be stored and contained in a designated area that is located away from Jesus Maria Creek to prevent transport of materials into the aquatic habitats. In addition, a silt fence will be installed around the staging and materials storage areas to collect any discharge, and adequate materials should be available for spill clean-up and during storm events.

- No litter, debris, or sidecast shall be dumped or permitted to enter the creek. Trash and debris shall be removed from the site regularly. Following construction, all trash and construction debris shall be removed from work areas.

- Vehicles and equipment shall be driven only within designated areas.

- Construction vehicles and equipment will be maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Leaking vehicles and equipment shall be removed from the site.

- Building materials storage areas containing hazardous or potentially toxic materials such as herbicides and petroleum products will be located outside of the 100-year flood zone, have an impermeable membrane between the ground and the hazardous material, and will be bermed to prevent the discharge of pollutants to ground water and runoff water.

- All disturbed soils will undergo erosion control treatment prior to the rainy season (generally October 15 to April 30, depending on the precipitation year) and/ or immediately after construction is terminated in compliance with the Calaveras County Grading Ordinance. Appropriate erosion control measures will be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from project sites. Erosion control blankets will be installed on any disturbed soils on a 2:1 slope or steeper.

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?

Less than significant impact. The project site does not support native resident or migratory fish species. Relatively unimpeded corridors associated with drainages such as Jesus Maria Creek provide important wildlife movement corridors, which allow dispersal and subsequent gene flow between wildlife populations in the region. During construction of the proposed project, wildlife movement through the project site could be temporarily affected. Impacts to aquatic and semi-aquatic species would be reduced by minimizing the amount of diversion to the extent practicable. Flows would be diverted within the creek channel. Construction fencing around the work area and work along the banks of the creek would temporarily prevent terrestrial wildlife moving through the area from entering the work zone. Once construction is complete, the water diversion and construction fencing would be removed. No long-term impacts to the creek as a wildlife movement corridor are anticipated. The proposed project would not remove, degrade, or otherwise interfere substantially with the structure or function of the wildlife movement corridor associated with Jesus Maria Creek in the project site once construction is complete. The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native residents or migratory wildlife corridors or impede the use of native wildlife nursery sites. Impacts would be less than significant, and no mitigation would be necessary.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No impact. The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. A total of 13 native oak trees are located in the project footprint and may be affected by the proposed project. However, the County does not currently have an oak tree ordinance or management plan. PRC Section 21083.4 provides the County authority to develop mitigation to offset impacts from the conversion of oak trees in oak woodland

habitat as defined in the Code. No oak woodland occurs in the project site or would be affected by the proposed project. The proposed project would result in no impacts to local policies or ordinances protecting biological resources.

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?

No impact. No Habitat Conservation Plan, Natural Community Conservation Plan, or other local, regional, or state habitat conservation plan has been approved for Calaveras County. Therefore, no impacts to an existing adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan would occur.

6.5 CULTURAL RESOURCES

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
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?	☐	■	☐	☐

Cultural documents prepared for the proposed project include an Archaeological Survey Report (Francis 2016) and a Phase II Archaeological Evaluation Report (Garcia and Associates 2018). Information contained in these reports are summarized in the following sections.

6.5.1 Environmental Setting

Calaveras County is one of California's original 27 counties, established in 1850 when California was admitted to the Union. The county seat was first established at Pleasant Valley (currently known as Double Springs), later moved to Jackson, Mokelumne Hill, and settled in San Andreas in 1866. The gold discovery precipitated a worldwide rush of peoples to the Sierra Nevada foothills. By 1849 California's population had grown by over 10,000 and largely populated with gold-seekers from the Atlantic seaboard, the Midwest, Mexico, Central and South America, Europe, and Asia.

The project is located within what was recorded ethnographically as traditionally associated with the Northern Sierra Miwok speakers (Callaghan 1997 in Francis 2016). The northern group occupied the foothills and mountains of the Calaveras and Mokelumne river drainages and the site appears to be on the edge of Northern Sierra Miwok territory from the 1900s and earlier. Today, the area is most clearly associated with the state-recognized Calaveras Band of Mi-Wuk Indians (Garcia and Associates 2018).

Area of Potential Effects

For this project, the Area of Potential Effects (APE) measures approximately 36.8 acres and encompasses all project-related elements, which include ground disturbance, staging, access, repaving, vegetation removal, and construction. In addition, the APE encompasses the currently recorded boundary of CA-CAL-1067/H, a multi-component habitation site with prehistoric and historic period components. Vertically, the APE varies depending on the proposed construction activity. The maximum vertical extent is approximately five feet (1.5 meters) at new V-ditch and hillside cuts and 20 feet (6.1 meters) at the abutment footings. The remainder of the ADI includes areas where new culverts and transitional grading are proposed at a depth of one to two feet (30 to 60 centimeters). The APE was established as per stipulations of Section 106 and 36 CFR 800.16 (d) in consultation with Calaveras County and Caltrans.

Area of Direct Impact

The Area of Direct Impact (ADI) encompasses all of the areas proposed for direct project-related ground disturbance and a 25-foot buffer around those areas. Located entirely within the APE, the ADI measures approximately 2.7 acres, or seven percent of the overall APE, and includes the footprint for the bridge, footings, retaining walls, culverts, hillside cuts, and grading. The vertical extent of the ADI varies depending on the proposed construction activity (Garcia and Associates 2018).

Study Area

A cultural resources Study Area (SA) for the project was established in consultation with Caltrans for the records search and initial pedestrian surveys. Corresponding roughly to the ADI, the SA is an approximately 3.9-acre curved corridor that encompasses the existing bridge and roadway north and south of the bridge plus the corridor on both sides of the road and is located entirely within the APE. The width of the SA varies from approximately 210 feet at the existing bridge to 160 feet at the south end.

Previously Recorded Cultural Resources Present in the Study Area

Numerous sources were consulted for information about the SA. The records search was completed by staff of the Central California Information Center (CCIC) at California State University, Stanislaus on June 13, 2013. The records search addressed an area that included the SA and a one-quarter mile radius around the SA. The following resources were examined during the records search:

- National Register of Historic Places (NRHP) – Listed Properties and Determined Eligible Properties (1988, computer listings as updated)
- California Register of Historical Resources (CRHR)
- California Inventory of Historic Resources (1976)
- California Historical Landmarks (1996)
- California Points of Historical Interest listing (May 1992 and updates)
- Directory of Properties in the Historic Property Data File for Calaveras County
- Archaeological Determination of Eligibility (Office of Historic Preservation current computer lists dated 4/5/2012)
- GLO Plat (Sheet 41 437, section lines surveyed in 1873)
- 1897 *Jackson, Calif.* USGS Topographic Map
- Calaveras County Historical Society 2/29/2016 (reply suggested Foothill Resources, Ltd be contacted for information, no other information was provided)

The records search determined that one previously documented cultural resource is located within the SA, and four previously documented resources are located within the 0.25-mile search radius. These resources are described in Table 6.

Table 6
CCIC RESULTS: PREHISTORIC OR HISTORIC RESOURCES WITHIN A ONE-QUARTER MILE RADIUS OF THE SA

Primary #	Trinomial	Resource Attributes	Within SA?
P-05-001383	CA-CAL-1067/H	Milling features, lithic scatter, habitation debris, cabin	Yes
P-05-000267	None	Habitation debris (midden)	No
P-05-000268	None	Mining activity, stone fireplace/cabin remains	No
P-05-001466	CA-CAL-1151	Milling feature, lithic scatter	No
P-05-002481	None	Osborne Ditch	Yes

The CCIC results indicated three reports that have been prepared within the search radius of the project. Two of those studies (listed below) include the SA, while one of the studies (not listed below) is outside of the SA.

- Silva (1987): This study was the Sliding S Ranch student report (Report No. CA-357) on test excavation at P-05-001383 (CA-CAL-1067/H) and P-05-001466 (CA-CAL-1151). The former is in the study area. The P-05-1383 portion of the report is included in Appendix B. The report lacks a map so, in June 2013, Mr. Silva, a professional archaeologist, provided a map showing the approximate location of the test excavation (not within the study area).

- Tate (2001b): This study was the Sharp Timber Harvesting Plan, which covered the northern portion of the study area.

CCIC review of the Historic Property Data File (includes National Register, California Register, State Points of Historical Interest, and California Historic Landmarks) and Archaeological Determination of Eligibility yielded negative results.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted by written request for a Sacred Lands File search on June 21, 2013 and a response was received on June 26, 2013. The NAHC sacred lands file search did not identify the presence of Native American cultural resources but provided the names and addresses of fourteen individuals representing groups affiliated with various Miwok entities who were then contacted by letter dated September 15, 2014. Additional consultation follow-up attempts were made by telephone on September 22-23 and October 3, 2014. A representative of the California Valley Miwok Tribe replied on October 9, 2014 requesting that the tribe be notified if Miwok artifacts and/or human remains are discovered. The Buena Vista Rancheria stated that they defer to tribes in Calaveras County for this project and did not have any specific comments. The Ione Band of Miwok Indians replied by email on September 22, 2014 requesting copies of cultural and environmental reports. Documentation related to Native American consultation is provided in Francis (2016).

Throughout the consultation process the Calaveras Band of Mi-Wuk Indians (Tribe) expressed a high level of concern about the proposed project. The Tribe monitored geotechnical borings and the subsequent archaeological fieldwork, including the Phase I surveys and Phase II archaeological excavations. Debra Grimes, Cultural Resources Specialist of the Tribe, provided knowledge and interpretation of local history, Native American use, artifacts recovered, and living resources present at the site. Additional members of the Tribe that were consulted include Tribal Chair Gloria Grimes, Adam Lewis, Ronald Grimes, and Leonard Grimes.

Initial Pedestrian Surveys

Intensive pedestrian surveys of the SA were conducted on June 20, 2013 and February 11, 2016, by Charla Francis of Francis Heritage, LLC. The entire SA was surveyed with meandering transects. The surveys identified two cultural resources within the study area. The resources are depicted below in Table 7.

Table 7
KNOWN CULTURAL RESOURCES WITHIN THE STUDY AREA

Site Name	Trinomial	Primary Number
None	CA-CAL-1067/H	P-05-001383
Osborne Ditch	None	P-05-002481
Whiskey Slide Road Bridge 30C0062	None	None

- CA-CAL-1067/H (P-05-001383): CA-CAL-1067 was initially recorded by Napton and Greathouse (1986). A large site boundary is depicted in the site record; however, the site is described as consisting of an occupation area upstream about 200 feet from the Whiskey Slide Road Bridge and two bedrock milling features downstream of the bridge. A third outcrop containing a bedrock mortar was found and recorded in 2015 after the Butte Fire (Daus 2015 in Francis 2016). The historic-era Madonna Cabin is also a component of the site. The cabin is located within the APE, but outside of the ADI.

- Osborne Ditch (P-05-002481): The historic Osborne Ditch was built in the 1860s to power the Osborne and Hill Sawmill in the Project vicinity. A segment was recorded in 2001 that ended on the eastern side of the APE, outside of the current ADI. Field efforts for the proposed project resulted in the identification of an unrecorded 260-foot-long segment that terminates inside the northwestern corner of the ADI. The segment retains little integrity, however – it measures approximately four feet wide and varies between zero and two feet in depth, likely due to grading or slumping.

- Whiskey Slide Road Bridge: This bridge was built in 1936 and is rated Category 5 (not eligible to the NRHP) on the Caltrans Historic Bridge Inventory for Local Agency Bridges dated July 2018. The bridge will be removed after the new bridge is completed.

Archaeological Evaluation of Resources within the ADI

CA-CAL-1067/H (P-05-001383)

Through consultation with Caltrans it was recommended that CA-CAL-1067/H, corresponding to the entire APE, be considered eligible for listing in the NRHP (and, as such, is eligible for listing in the CRHR) under Criterion A, its association with events that made a significant contribution to the broad patterns of our history, and Criterion D, its ability to yield information important in prehistory or history.

A Phase II archeological evaluation of CA-CAL-1067/H, located within the APE, was conducted by Garcia and Associates over nine days between October 2-10, 2017. Field efforts included site mapping, recording, and documenting surface artifacts. In addition, the crew and Tribal representatives conducted a survey of the entire APE (with permission from the landowner) to obtain and document information regarding the broader site context. The archaeological survey was conducted by Garcia and

Associates Principal Investigator B. Siskin and Field Director M. Lenzi with collaboration from the Calaveras Band of Mi-Wuk Cultural Preservation Specialist D. Grimes and other Tribal representatives.

The ADI was divided into six archaeological management areas (A-F) based on topography and anticipated archaeological sensitivity. These management areas were established during a field meeting on November 14, 2016 in consultation with the Tribe, Calaveras County, TY Lin, Caltrans, and Garcia and Associates. Area-specific excavation methods were designed to assess each management area's ability to yield archaeological data, as well as to address proposed project-related ground disturbances for each management area (Garcia and Associates 2018).

Excavations within the ADI were intended to obtain sufficient data to support a recommendation regarding the site's NRHP eligibility based on its potential to yield information important to the understanding of regional prehistory. Excavation methods included shovel test units (STU), surface scrapes (SS), control units (CU), and hand auger holes (AG).

Research and Native American consultation conducted during the Phase II investigation determined that the portion of the site within the ADI is associated with events that have made a significant contribution to the broad patterns of tribal history, retains meaning as a place to gather medicine, and otherwise conveys a sense of place and history of tribal events, per Criterion A. As such, the portion of the resource within the ADI was recommended as a contributing, eligible component of CA-CAL-1067/H under NRHP Criterion A.

However, the Phase II investigation determined that the portion of the site within the ADI does not contribute to the NRHP eligibility of the site under Criterion D. During the Phase II investigation a total of 12.41 cubic meters of soil matrix were excavated within the ADI, resulting in the recovery of 341 items. Of these, 308 were identified as historic-era artifacts, 29 were Native American artifacts, and four were tribally identified artifacts. This is a limited assemblage with little integrity, and it was concluded that the artifacts recovered from the ADI do not display the abundance or diversity of materials and data to address chronology, settlement, subsistence, trade or other important research domains. It was recommended that the portion of CA-CAL-1067/H evaluated within the ADI does not contribute to the eligibility of the site under Criterion D due to its limited ability to yield information important to the history and/or prehistory of the region (Garcia and Associates 2018).

Osborne Ditch (P-05-002481):

The segment of the Osborne Ditch within the ADI was recommended as ineligible for the NRHP and CRHR under all criteria. The ditch was built in the 1860s to power the Osborne and Hill Sawmill in the Project vicinity. It was noted in a 1909 water rights description issued to James Madonna as being "three feet wide on top, two feet wide on the bottom, and two feet deep," and likely was in use until the mid-1930s.

The segment of the Osborne Ditch is not significant to the broad patterns and events of history as a ubiquitous example a water conveyance feature (CRHR Criterion 1). While interesting and contributing to familial history of the region, the ditch is not associated with individuals important to local, state, or national history (Criterion 2). The Osborne and Jose families made no significant contributions to the development of Calaveras County, nor did they make significant contributions connected to the resources documented in the ADI. The segment of the Osborne Ditch within the ADI is a typical example of a common resource type found along many rivers, creeks, streams, and drainages in the Mother Lode region of California. It does not display unique design or construction techniques and is a fairly

unremarkable example of a water conveyance system (Criterion 3). The segment of the ditch within the ADI is a short defunct section with no associated features or artifacts. It exhibits no potential to yield additional data (Criterion 4), and the information potential of the ditch has been exhausted through its research and recordation for this project. Further, the ditch segment has sloughed in, been truncated on its eastern end, and no longer retains any integrity to its period of significance (1860 to approximately 1935).

The segment of the Osborne Ditch within the ADI has been documented and its information potential thereby preserved; it does not require additional study or preservation.

Whiskey Slide Road Bridge: This bridge is rated Category 5 (not eligible to the NRHP) on the Caltrans Historic Bridge Inventory for Local Agency Bridges dated July 2018. The bridge does not require additional study or preservation and will be removed after the new bridge is completed.

Section 106 Consultation

As the lead federal agency, Caltrans completed the evaluation and consultation requirements regarding potential effects to eligible resources pursuant to Section 106 of the National Historic Preservation Act of 1966 with a finding of No Adverse Effect without Standard Conditions - Environmentally Sensitive Area.

6.5.2 Evaluation of Cultural Resources

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Less than significant with mitigation incorporated. As described above, site CA-CAL-1067/H meets the criteria of a historical resource, but the portion of the site analyzed within the ADI exhibits no potential to yield additional data. The other resources located within the ADI, including a segment of the Osborne Ditch and Whiskey Slide Road Bridge, do not qualify as historical resources under CEQA.

Ground disturbing activities, such as trenching and grading, could inadvertently damage or destroy the significant portions of CA-CAL-1067/H if they occur outside of the ADI boundaries. This is considered a potentially significant impact and an ESA Action Plan has been prepared. Proposed mitigation includes implementation of the action plan to protect CA-CAL-1067/H from any potential effects through establishment of an ESA. With implementation of the proposed mitigation (MM CUL-1), potential impacts would be reduced to a level of less than significant.

MM CUL-1 Implement the ESA Action Plan to Avoid Impacts to CA-CAL-1067/H

An ESA Action Plan is required to ensure no damage will occur to CA-CAL-1067/H during construction activities related to the bridge project.

- The Contractor shall comply with the protective measures contained in the ESA Action Plan to avoid adverse effects to CA-CAL-1067/H which includes fencing, access restrictions, and specific contractual language.

- Prior to construction activities, three-foot-high orange temporary construction fencing will be installed around the ESA as defined in the ESA Action Plan. A qualified archaeologist will oversee

the installation of the fencing. Due to the potential for special status species to occur, the use of plastic monofilament netting is prohibited.

- Before any construction activities begin, a qualified archaeologist shall conduct a worker awareness environmental training session for all construction personnel. The training shall make all workers aware of the areas to be avoided and the boundaries within which work may occur as it relates to cultural resources. Personnel will also be instructed on the penalties for not complying with avoidance and minimization measures. If new construction personnel are added to the project, the contractor will ensure that the new personnel received the mandatory training before starting work.

Subsurface construction activities such as trenching and grading associated with the project could potentially damage or destroy previously undiscovered, buried historical resources. This is considered a potentially significant impact. With implementation of the proposed mitigation (MM CUL-2), potential impacts to previously undiscovered historic resources would be reduced to a level of less than significant.

MM CUL-2 Avoid and Minimize Impacts to Previously Undiscovered Historical and Unique Archaeological Resources

- If a potentially significant historical or archaeological resource is encountered during construction, then construction operations shall stop within a 100-foot-radius of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The County shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement.

- If, after the qualified archaeologist conducts appropriate analysis and the item is determined to be significant under CEQA, then the archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resources, including but not limited to, excavation and evaluation of the finds in accordance with Section 15064.5 of the State CEQA Guidelines. Any previously undiscovered resources found during construction within the project area shall be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and evaluated for significance in terms of CEQA criteria.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less than significant with mitigation incorporated. Given that CA-CAL-1067/H encompasses the entire APE and qualifies as a historical resource under CEQA (by virtue of meeting NRHP criteria), there are no known cultural resources within the APE that potentially meet the criteria of a unique archaeological resource (PRC 21083.2[g]).

However, subsurface construction activities such as trenching and grading associated with the project could potentially damage or destroy previously undiscovered archaeological resources. This is considered a potentially significant impact. With implementation of the proposed mitigation (MM CUL-2), potential impacts to previously undiscovered unique archaeological resources would be reduced to a level of less than significant.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than significant with mitigation incorporated. No human remains are known to exist within the project area nor were there any indications of human remains found during the field survey. However, there is always the possibility that subsurface construction activities associated with the proposed project, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is a potentially significant impact. With implementation of the proposed mitigation (MM CUL-3), potential impacts to human remains would be reduced to a level of less than significant.

MM CUL-3 Avoid and Minimize Impacts related to Accidental Discovery of Human Remains

In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Sections 5097.94 and 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance within a 100-foot radius of the potentially human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance:

    a. The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.

    b. The descendant identified fails to make a recommendation.

    c. The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

6.6 ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	■	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

6.6.1 Environmental Setting

This section provides an evaluation of existing energy production/consumption conditions, as well as potential energy use and related impacts from the proposed project. The following discussion is consistent with and fulfills the intent of Appendix G, Energy, from the State CEQA Guidelines.

The unit of energy used in this section are the British thermal units (BTU) and kilowatt hours (kWh). A BTU is the quantity of heat required to raise the temperature of one pound of water one-degree Fahrenheit (°F) at sea level. Because the other units of energy can all be converted into equivalent BTU, the BTU is used as the basis for comparing energy consumption associated with different resources. A kWh is a unit of electrical energy, and one kWh is equivalent to approximately 3,413 BTU, taking into account initial conversion losses (i.e., from one type of energy, such as chemical, to another type of energy, such as mechanical) and transmission losses. Natural gas consumption is described typically in terms of cubic feet or therms; one cubic foot of natural gas is equivalent to approximately 1,050 BTU, and one therm represents 100,000 BTU.

California Energy Overview

Electricity

California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, electric service providers and community choice aggregators. In 2017, the California power mix totaled 292,039 gigawatt hours (GWh), and in-state generation accounted for 206,336 GWh, or 71 percent, of the state's power mix. The remaining electricity came from out-of-state imports (CEC 2018). Table 8, *California Electricity Sources 2017,* provides a summary of California's electricity sources as of 2018.

Table 8
CALIFORNIA ELECTRICITY SOURCES 2017

Fuel Type	Percent of California Power
Coal	4.13%
Large Hydro	14.72%
Natural Gas	33.67%
Nuclear	9.08%
Oil	0.01%
Other (Petroleum Coke/Waste Heat)	0.14%
Renewables	29%

Source: CEC 2018

Natural Gas

Natural gas provides the largest portion of the total in-state capacity and electricity generation in California, with nearly 50 percent of the natural gas burned in California used for electricity generation in 2017. Much of the remainder was consumed in the residential, industrial, and commercial sectors for uses such as cooking, space heating, and as an alternative transportation fuel. In 2012, total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet per year (bcf/year), up from 2,196 bcf/year in 2010 (CEC 2017a).

Transportation Fuels

Transportation accounts for a major portion of California's energy budget. Automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (SUVs). In 2015, 15.1 billion gallons of gasoline were sold in California (CEC 2017b). Diesel fuel is the second most consumed fuel in California, used by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats, and farm and construction equipment. In 2015, 4.2 billion gallons of diesel were sold in California (CEC 2017c).

6.6.2 Regulatory Framework Relating to Energy

Energy Independence and Security Act of 2007

House of Representatives Bill 6 (HR 6), the federal Energy Independence and Security Act of 2007, established new standards for a few equipment types not already subjected to a standard, and updated some existing standards. Perhaps the most substantial new standard that HR 6 established is for general service lighting that is being deployed in two phases. First, phased in between 2012 through 2014, common light bulbs were required to use about 20 to 30 percent less energy than previous incandescent bulbs. Second, by 2020, light bulbs must consume 60 percent less energy than today's bulbs; this requirement would effectively phase out the incandescent light bulb.

Energy Improvement and Extension Act of 2007

The formerly entitled "Renewable Energy and Job Creation Act of 2008," or Division B of HR 1424, was signed into law by President Bush in October 2008. The signed bill contains $18 billion in incentives for clean and renewable energy technologies, as well as for energy efficiency improvements.

6.6.3 Evaluation of Energy

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

Less than significant impact. The proposed project would involve the demolition of an existing bridge over Jesus Maria Creek and construction of a new bridge approximately 30 feet west of the existing alignment. While construction activities would result in the temporary consumption of energy resources in the form of vehicle and equipment fuels (gasoline and diesel fuel) and electricity/natural gas (directly or indirectly), such consumption would be incidental and temporary and would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, impacts would be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No impact. See the discussion under question a) above. The proposed project would not result in a substantial new demand for energy resources nor have any direct or indirect effect on any state or local plan for renewable energy or energy efficiency. No impact would occur.

6.7 GEOLOGY AND SOILS

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

A geotechnical study was conducted for the proposed project and a geotechnical technical memorandum prepared (Group Delta 2016a). The results of the study are incorporated into the following analysis.

6.7.1 Environmental Setting

The Safety Element of the Calaveras County General Plan Update describes the geologic resources that occur within the County.

Soils

The project site lies with the Sierra Nevada Geomorphic Province of California, which is bounded by the California Great Valley to the west and the Basin and Range to the east. The native geology at the site consists of shallow alluvial soils over Metasedimentary bedrock (Calaveras Complex, Pzcc; Group Delta 2016a). The results of geologic testing indicated that the subsurface conditions of the site consist of approximately 3 - 6 feet of fill material over 3 feet of alluvial soils, over slightly weathered, un-fractured to very slightly fractured, and extremely hard metasedimentary bedrock (Group Delta 2016a).

Seismicity

The project site is also located within the Sierra Block, an area of historically low seismicity. Seismicity is defined as the geographic and historical distribution of earthquake activity. Seismic activity may result in geologic and seismic hazard including seismically induced fault displacement and rupture, ground shaking, liquefaction, landslides, and structural hazards. Though the County has felt ground shaking from earthquakes with epicenters located elsewhere, no major earthquakes have been recorded within the County. The closest known source of large earthquakes is the Sierra Frontal Fault System along the eastern margin of the Sierra Nevada, which includes Carson Valley Fault. This fault is located within a few miles of eastern portions of the County and has been evaluated as capable of generating earthquakes of up to the magnitude 7.0 range on the Mercalli Scale.

The closest fault system to the project site is the Melones-Bear Mountain Fault. The Melones-Bear Mountain Fault System (also known as the Sierra Foothills Fault System) crosses the western portion of Calaveras County approximately 7.3 miles west of the project site. This fault is capable of producing an earthquake with a maximum moment magnitude of 6.3 (Group Delta 2016a). The nearby faults have a low likelihood of generating seismic activity in Calaveras County, and the likelihood of future major earthquakes is unlikely (Safety Element; Calaveras County 2019a).

Ground Shaking

Ground shaking is the motion released during faulting and could result in damage or collapse of building and other structures, depending on the magnitude of the earthquake, location of epicenter, and characters and duration of ground motion. The potential for seismically induced ground shaking is lower in Calaveras County than in most of California. All of Calaveras County may be subject to shaking of intensity 4.0 to 5.0 on the Mercalli Scale. In the western portion of Calaveras County, a magnitude 6.0 earthquake could occur on the Melones Fault System; however, such an event is considered very unlikely. Other factors, such as underlying soil and rock, building materials used, and workmanship, also influence the amount of potential damage from strong seismic ground shaking.

A Probabilistic Seismic Hazard Assessment for California was completed by the CGS to describe the statewide distribution of estimated ground motion throughout the State. According to that assessment, the peak ground acceleration could reach or exceed 0.1 to 0.2g with a 0.21 percent chance of being exceeded each year. The Modified Mercalli scale is commonly used to measure earthquake intensity due to ground shaking, ranging from I to XII, where I denotes earthquake not felt and XII denotes nearly total damage. Using the Modified Mercalli scale, an average peak ground acceleration between 0.1 to 0.2g correlates to an intensity value I and is classified as “not felt except by a very few people under special conditions. Detected mostly by instruments.” (Calaveras County 2015).

Liquefaction

Liquefaction is a process by which water-saturated materials (including soil, sediment, and certain types of volcanic deposits) lose strength and may fail during strong ground shaking. Liquefaction is the transformation of uncemented granular material from a solid state into a liquefied state by the ground shaking of an earthquake. This only occurs in soils with very little or no clay. Factors determining the liquefaction potential are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater.

In Calaveras County, sites with liquefaction potential would be those on alluvial deposits having groundwater and sand or silt layers within about 30 feet of the surface. Because there is a historically low likelihood of seismic activity in Calaveras County, the County is not at risk from liquefaction hazards (Calaveras County 2016a).

Landslides

A landslide is defined as the downslope movement of soil and rock material under the influence of gravity. The formation of landslides under natural conditions depends on several factors such as steepness of slopes, structural properties of materials, water saturation, vegetation type, proximity to areas undergoing active erosion, and earthquake-generate ground shaking.

Expansive Soils

Expansive soils generally have high clay content. Minerals in certain clays swell with increased moisture content and then contract during dry periods. The volume changes associated with seasonal variations in moisture content can damage building foundations and pavement. On slopes, the continuous shrinking and swelling of expansive soils can cause the soil to migrate downslope, which can also disrupt foundation and bury utility lines. The onset of soil expansion tends to follow the season, with expansion occurring in the wetter months of the year and contraction over the summer. The 2010 Local Hazard Mitigation Plan (LHMP) reported that the geographic extent of this hazard in Calaveras County is small and are most likely to occur in the central part of the County, north of Mountain Ranch (Calaveras County 2010). The 2015 LHMP eliminated the discussion of expansive soils due to lack of past occurrences in the County (Calaveras County 2015).

6.7.2 Evaluation of Geology and Soils

a) Expose people or structures to 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. According to the Alquist-Priolo Earthquake Fault Zoning Map, the project site is not located within or near an Alquist-Priolo Earthquake Fault Zone. Accordingly, the project area is not likely to be affected by surface fault rupture. Therefore, the project would not expose people or structures to

potential substantial adverse effects involving the rupture of a known earthquake fault. No impact would occur.

ii. Strong seismic ground shaking?

Less than significant impact. The project site is not likely to be affected by strong seismic ground shaking. Based on the Probabilistic Seismic Hazard Assessment prepared by CGS, ground shaking in the project area is between 0.1 to 0.2g, which is described as "not felt except by a very few people under special conditions. Detected mostly by instruments." (Calaveras County 2015). The project would be constructed consistent with the requirements of the Caltrans Seismic Design Criteria, Caltrans Bridge Design Specification, and Structural Engineers of California Uniform Building Code, and the project would withstand any potential seismic events. Therefore, the project would not expose people or structures to potential substantial adverse effects related to seismic shaking. Impacts would be less than significant, and no mitigation would be necessary.

iii. Seismic-related ground failure, including liquefaction?

No impact. The County is not located in a seismic hazard zone and is not susceptible to strong ground shaking, which can contribute to liquefaction. The project area is not considered to be at risk from liquefaction hazards. The Caltrans Bridge Design Specifications require an assessment of the potential for liquefaction prior to selecting foundation type to ensure that the foundation would provide adequate support. Therefore, the project would not expose people or structures to potential substantial adverse effects related to liquefaction. No impact would occur.

iv. Landslides?

Less than significant impact. Calaveras County is not located in a seismic hazard zone; thus, the project site is not considered to be at risk from landslides as a result of active faulting. Areas with slopes greater than 20 percent have an elevated risk of landslide from erosion. The County's Local Hazard Mitigation Plan does not identify the project area as containing hazardous slopes (Calaveras County 2015). Areas of steep slopes occur along the roadway shoulders both north and south of the bridge. The risk of erosion in the project area has increased over normal circumstances due to the fire that burned portions of the site in 2015, resulting in exposed soils. Steep slopes along the southeastern portion of the site are completely burned and devoid of established vegetation, exposing loose soils on steep slopes. Construction activities would be conducted in accordance with the County's grading regulations, and BMPs would be implemented to minimize the potential for landslides associated with soil erosion. Therefore, the project would not expose people or structures to potential substantial adverse effects related to landslides. Impacts would be less than significant, and no mitigation would be necessary.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant impact. Construction activities associated with the project would involve excavation and other soil disturbing activities that have the potential to temporarily increase erosion and sedimentation rates above existing conditions. As previously mentioned, construction activities would be conducted in accordance with the County's grading regulations and BMPs including temporary erosion and runoff control measures would be implemented during construction to minimize the potential for erosion and stormwater runoff. A Stormwater Pollution Prevention Plan (SWPPP) would be prepared and implemented to address erosion, stormwater runoff, sedimentation, and other construction-related pollutants during construction of the proposed project. The SWPPP would comply

with the requirements of the County's grading and erosion control ordinance and the NPDES general construction activity stormwater permit. BMPs would be incorporated into the SWPPP to reduce the potential for erosion and sedimentation as a result of the construction activities. Implementation of the County's grading regulations, and with SWPPP with associated BMPs would reduce the potential for erosion or loss of topsoil associated with project activities to a less than significant level. Impacts would be less than significant, and no mitigation would be necessary.

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?

No impact. The project site is not located on a geologic unit or soil that is unstable or that would become unstable as a result of the project. The Caltrans Bridge Design Specifications require an assessment of the existing soils to ensure structures are not constructed on the proposed project would Project activities would follow recommendations in the Caltrans Design Manual and the current design parameters of the Structural Engineers of California Uniform Building Code as to prevent construction on unstable soils. No impact would occur.

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

Less than significant impact. The Caltrans Bridge Design Specifications require an assessment of the potential for soil swelling prior to selecting foundation type to ensure that the foundation would provide adequate support. Furthermore, the project would adhere to construction recommendation in the Caltrans Design manual and the current design parameters of the Structural Engineers of California Uniform Building Code to reduce any expansive soil risks. Impacts related to expansive soils would be less than significant, and no mitigation would be necessary.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No impact. The project does not include the construction, replacement, or disturbance of septic tanks or alternative wastewater disposal systems. No impact would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than significant with mitigation incorporated. None of the previous analyses of the area have identified the project site as sensitive for paleontological resources or other geologically sensitive resources, nor have testing or ground disturbing activities performed to date uncovered any paleontological resources or geologically sensitive resources. While the likelihood encountering paleontological resources and other geologically sensitive resources is considered low, project-related ground disturbing activities could affect the integrity of a previously unknown paleontological or other geologically sensitive resource, resulting in a substantial change in the significance of the resource. Therefore, the proposed project could result in potentially significant impacts to paleontological resources. Implementation of the proposed mitigation (MM GEO-1) would reduce potentially significant impacts to a level of less than significant.

MM GEO-1 Avoid and Minimize Impacts to Paleontological Resources

In the event a paleontological or other geologically sensitive resources (such as fossils or fossil formations) are identified during any phase of project development, all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at Calaveras County who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the County shall implement those measures which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code Section 21083.2.

6.8 GREENHOUSE GAS EMISSIONS

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
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?	☐	☐	■	☐

6.8.1 Environmental Setting

Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, which is an average increase in the temperature of the atmosphere near the Earth's surface; this has been attributed to an accumulation of greenhouse gas (GHG) emissions in the atmosphere. GHGs trap heat in the atmosphere which, in turn, increases the Earth's surface temperature. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through fossil fuel combustion in conjunction with other human activities appears to be closely associated with global warming.

Assembly Bill 32 - The California Global Warming Solutions Act of 2006

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, recognizes that California is a source of substantial amounts of GHG emissions. The statute states that:

Global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residence, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to help avert these potential consequences, AB 32 established a State goal of reducing GHG emissions to 1990 levels by the year 2020, which is a reduction of approximately 16 percent from forecasted emission levels, with further reductions to follow (CARB 2011).

6.8.2 Evaluation of Greenhouse Gas Emissions

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

Less than significant impact.

Construction

Construction GHG emissions are generated by vehicle engine exhaust from construction equipment, on-road hauling trucks, vendor trips, and worker commuting trips. These emissions would be temporary and would not result in a significant source of GHG. The PES prepared for the project by Caltrans, dated March 2013, found the project exempt from additional analysis.

Operation

As stated above, the PES prepared for this project found the project exempt from additional analysis. Additionally, the proposed project would accommodate existing traffic and would not result in new sources of GHG emissions. Therefore, the project would not result in an impact related to operational GHG generation.

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

Less than significant impact. The proposed project would result in less than significant GHG emissions during construction and no increased emissions during operation. Because the project is not creating a new source of long-term emissions, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, this impact would be less than significant, and no mitigation would be required.

6.9 HAZARDS AND HAZARDOUS MATERIALS

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	■
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	■
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	■	☐	☐

A Phase I Initial Site Assessment (ISA) was prepared for the project and is included as Appendix E (Group Delta 2016b).

6.9.1 Environmental Setting

The existing bridge (Bridge No. 30C0062) consists of a steel girder superstructure with concrete deck single span bridge with substandard vehicular railing carrying a single lane of traffic. The substructures consist of tall closed abutments with concrete wing walls. No additional structures are located in the project site.

The school located nearest to the project site is Oakendell Community School located approximately 2.5 miles southwest of the project site. Calaveras County Airport (Maury Rasmussen Field) is located

approximately 8.1 miles southwest of the project site, and Eagle Ridge Ranch Airport is a private airstrip located approximately 7.8 miles northeast of the project site in Railroad Flat.

The records review for hazardous materials included a site and vicinity search of readily available environmental records obtained from Environmental Data Resources, Inc. which includes results from a list of government databases. The following additional databases were reviewed for the project site and surrounding area to identify potential hazardous contamination sites: the California Department of Toxic Substance Control's Envirostor; California State Water Resources Control Board Geotracker; California Department of Oil, Gas, and Geothermal Resources website for oil and gas wells; Office of California State Fire Marshal State Pipeline Mapping System for pipelines. The Calaveras County Environmental Management Agency and the Calaveras County Public Works Department were contacted for documentation of known hazards on the project site. Historical aerial and topographic maps were reviewed, and the Calaveras County Department of Public Works was interviewed.

The project site was surveyed for hazardous materials on July 14, 2016. No evidence of storage tanks, drums, hazardous substances, or petroleum products, unidentified substance containers, odors, pools of liquid, or any other potential environmental areas of concern identified during the survey. An asbestos and lead survey was conducted in conjunction with the ISA. Concrete associated with the bridge was sampled for asbestos and paint from the bridge was sampled for lead. Neither asbestos nor lead was detected in any of the bulk samples collected from the project site (Group Delta 2016b).

6.9.2 Evaluation of Hazards and Hazardous Materials

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

Less than significant impact. The project is located in an area that is not adjacent to any current or past land uses that would indicate presence of hazardous materials. Concrete from the bridge was tested for asbestos and paint from the bridge was tested for lead, with negative results for both materials. Small amounts of hazardous material such as petroleum hydrocarbon-based fuels and lubricant would be used during construction activities. Use of such materials would be required to comply with all applicable local, state, and federal standards associated with the handling and storage of hazardous material. Use of hazardous materials in accordance with Caltrans standard special provisions and BMPs would include spill prevention and cleanup measures applicable to hazardous waste. Impacts would be less than significant, and mitigation would not be necessary.

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?

Less than significant impact. As previously described, small amounts of hazardous material such as petroleum hydrocarbon-based fuels and lubricant would be present as part of the construction activities, and there is the potential for the presence of hazardous materials during the demolition of the existing bridge and construction of the replacement bridge. The potential exists that the proposed project could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Use of such materials would be required to comply with all applicable local, state, and federal standards associated with the handling and storage of hazardous material, including Caltrans specifications and California Code of Regulations Title 8, 1532. These specifications include spill prevention and cleanup measures

applicable to hazardous waste. With the implementation of BMPs, impacts would be less than significant, and mitigation would not be necessary.

c) 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. No existing or proposed school is within 0.25 mile of the project site. The school located nearest to the project site is Oakendell Community School located approximately 2.5 miles southwest of the project site. No impact would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No impact. As previously mentioned, the project site is not listed on any county, state, or federal databases listing hazardous material sites (Group Delta 2016b). Because the project is not listed as a hazardous materials site, the project would not create a significant hazard to the public or the environment, and no impact would occur.

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 site is not within two miles of a public or public use airport. Calaveras County Airport (Maury Rasmussen Field) is located approximately 8.1 miles southwest of the project site and is the nearest airport with a land use plan. The project site is not located within the airport's safety zones as identified in the Calaveras County Airport Land Use Compatibility Plan (Mead & Hunt 2010). The proposed project would not result in a safety hazard for people residing or working in the project area. No impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. During the initial stage of construction, traffic would be maintained on the existing bridge while the proposed bridge is constructed. No detours would be required during project construction, and the roadway and bridge crossing would remain open throughout construction; however, minimal traffic delays may occur. Because road closure is not required, construction would not significantly impact the circulation of emergency services through the construction site or evacuation in the event of a major emergency. Therefore, the project would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan. Impacts would be less than significant, and no mitigation would be necessary.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less than significant with mitigation incorporated. The proposed project is located within a State Responsibility Area (SRA) for fire protection and within a Very High Fire Hazard Severity Zone (VHFHSZ) (CAL FIRE 2019). The area immediately surrounding the project site was burned heavily in the 2015 Butte Fire that torched much of Calaveras County. Because heavy equipment used during project

construction has the potential start a fire, mitigation measures would be implemented to reduce the risks of wildfire. Mitigation Measure HAZ-1 would require the removal of dried vegetation or other materials, to the extent feasible, which could serve as fuel for combustion. Such vegetation removal would reduce the potential of wildland fires by providing a clearing, reducing fire fuels, and removing fire sustaining litter. In addition, during construction, spark arrestors or turbo chargers (which eliminate sparks in exhaust) and fire extinguishers would be required for all heavy equipment pursuant to Mitigation Measure HAZ-2. With the implementation of Mitigation Measures HAZ-1 and HAZ-2, impacts from risk of wildland fires would be reduced to a less than significant impact.

MM HAZ-1: Remove Dried Vegetation and Other Combustible Materials

Construction contractors shall ensure that during construction, staging and building areas using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fuel for combustion. To the extent feasible, the contractor shall keep these areas clear of combustible materials to maintain a firebreak.

MM HAZ-2: Construction Equipment Shall Include a Spark Arrester

Construction contractors shall ensure that any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.

6.10 HYDROLOGY AND WATER QUALITY

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
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 surfaces, in a manner which would:				
	i. Result in substantial erosion or siltation on- or off-site;	☐	■	☐	☐
	ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	■	☐
	iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	■	☐
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?	☐	☐	☐	■

6.10.1 Environmental Setting

The project is located within the Upper Calaveras Watershed situated on the western slope of the Sierra Nevada foothills. The watershed is approximately 550-square miles and is located in Calaveras County. Snowmelt from higher elevations is the primary source of hydrology for lower elevation drainages (such as Jesus Maria Creek). These drainages in the Sierra Nevada are important tributaries to the hydrology of the waterways throughout the Central Valley and to the biological functions of deltas along the coast. The Calaveras River collects the flows of tributaries from the high mountains, and recharges New Hogan Lake, a reservoir at the base of the range. The river continues through the San Joaquin Valley to the San Joaquin River west of Stockton. The project site is approximately 6 miles upstream from the confluence of Jesus Maria Creek and North Fork Calaveras River.

According to the California Department of Water Resources, the project site is situated in the Eastern San Joaquin subbasin. The Eastern San Joaquin subbasin is drained by the San Joaquin River and several

of its major tributaries namely, the Stanislaus, and Calaveras, and Mokelumne Rivers. The nearest dam is at New Hogan Reservoir, approximately 15 miles southwest of the project site. The reservoir is fed by the Calaveras River but is downstream of the project site. According to the California Department of Water Resources Levee Flood Protection Zone Map, no levees exist in Calaveras County (CDWR 2011).

Regional groundwater data was obtained from groundwater monitoring wells located approximately 8 miles northwest of the project site at the Chevron #9-2797 at Highway 49S, Jackson, CA. The depth to groundwater was measured at approximately 15 feet below ground surface. Groundwater flow direction was measured to be 0.08 feet/feet east-northeast (Group Delta 2016a).

Federal Emergency Management Agency (FEMA) flood insurance rate maps were reviewed for the project's proximity to a 100-year floodplain. The proposed project is on FEMA panel 06009C0250E, effective December 17, 2010 (FEMA 2018). The map indicates that the project site on Jesus Maria Creek is within a special flood hazard area subject to inundation by the 1 percent annual chance flood, where no base flood elevation has been determined.

The replacement bridge would be approximately 6 feet higher than the existing structure to increase hydraulic clearance over Jesus Maria Creek.

Regulatory Framework Relating to Hydrology and Water Quality

Water quality is regulated according to the provisions of CWA and the California Porter-Cologne Water Quality Control Act. RWQCB and California's State Water Resources Control Board (SWRCB) discharge permitting provisions of the Clean Water Act based on water quality criteria and guidelines. The Porter-Cologne Water Quality Control Act has also established enforceable water quality objective to protect aquatic life from adverse impacts from various water quality constituents.

The U.S. Army Corps of Engineers regulates discharged or fills into waters of the United States under Section 404 of the CWA via the Nationwide Permit. The Corps would also determine whether a particular aquatic feature is considered Waters of the U.S. and whether it is subject to regulation under Section 404. Discharge or fill into Waters of the U.S. from construction activities must be in accordance with NPDES program established in Section 402 of the CWA. NPDES permits establish enforceable discharge limitations, monitoring and reporting requirements, and require the permittee to perform BMPs.

Section 401 of the CWA specifies that any applicant for a federal license or permit to conduct any activity, including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters, shall provide the federal licensing or permitting agency with a certification from the State in which the discharge originates or will originate from the State agency with jurisdiction over those waters that the proposed project will comply with water quality standards, meet water quality objectives, and comply with California anti-degradation policy.

In support of the CWA, the RWQCB prepared Basin Plans to establish water quality objectives as required by the California Water Code (Section 13240). The Central Valley RWQCB adopted a Basin Plan that covers the entire Sacramento and San Joaquin River Basin, including the project site. The project site, as previously mentioned above, is located in the Eastern San Joaquin River subbasin.

A Water Quality Assessment Report (WQAR) has been prepared for the proposed project (WRECO 2018). The purpose of the report is to provide information, to the extent possible, for NPDES permitting. The information contained in the report has been incorporated into the analysis below.

6.10.2 Evaluation of Hydrology and Water Quality

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than significant with mitigation incorporated. Ground disturbing activities associated with construction and installation of the proposed replacement bridge, the associated roadway improvements, and removal of the existing bridge and roadway alignment have the potential to result in the discharge of pollutants into Jesus Maria Creek. Ground disturbing activities would result in disturbed and exposed soils which are more susceptible to erosion. Storm water runoff may then transport sediments to Jesus Maria Creek, thereby increasing turbidity in the creek and temporarily affecting water quality. An increase in sediment and turbidity from excessive sedimentation would be a potentially significant impact.

Leaks and spills of fuel or other potentially hazardous materials may also impact water quality if allowed to enter the waterway, which would be a potentially significant impact. The proposed project would be required to comply with various federal, state and local water quality standards, which would ensure the proposed project would not violate water quality standards or waste discharge permits, or otherwise substantially degrade water quality.

Construction over and near water results in increased opportunities for materials to spill into the waterway. To reduce potential impacts to water quality from removal of the existing bridge, the contractor would be responsible for implementing BMPs to avoid materials and debris from the existing bridge from entering the creek. As described in the project description, the existing bridge structure would be lifted out with a crane, and an excavator would be used to dismantle and remove the abutments. Avoidance and minimization measures (MM BIO-9) regarding debris containment methods would be implemented to prevent material or debris from entering the creek or other sensitive habitats.

The concrete form of the new bridge would be poured in place over the creek. Concrete forms are considered water tight to allow placement of wet concrete. No spills associated with working over the creek are expected. As previously described, the contractor would be responsible for implementing BMPs to prevent spills.

As previously mentioned, the proposed project would be required to obtain the appropriate CWA Section 404 permit, certification from the RWQCB to use the NPDES permit under CWA Section 401 and would be subject to the conditions included in those permits which includes the preparation of a SWPPP and implementation of BMPs included in the SWPPP to capture storm water runoff during project demolition, construction, and operation. The proposed project would also be subject to all of the County's standard Code requirements. While the project site is not located within the Calaveras County MS4 Stormwater Discharge Permit area, the County applies Post-Construction Standards. Compliance with these requirements would ensure that water quality standards and discharge requirements would not be violated, and water quality is protected. Additionally, mitigation measures BIO-8 and -9 would be implemented to reduce potential impacts to a level of less than significant.

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

Less than significant impact. Increases in impervious surfaces may affect groundwater recharge by decreasing the area available for runoff to infiltrate the soil. The new bridge would result in a minor increase in impervious surface area compared with existing; however, the increase is not considered a significant increase and would not significantly affect the infiltration rates (WRECO 2018).

Construction of the new bridge footings would require excavation that may encounter groundwater, depending on the groundwater levels at the time of construction (Group Delta 2016a). If groundwater is encountered, the work area for the footings would need to be temporarily dewatered. Temporary dewatering activities would not interfere with groundwater recharge or supplies. Therefore, the project would not substantially deplete groundwater supplies and would not affect groundwater recharge such that a net deficit would occur. Impacts related to groundwater would be less than significant, and no mitigation would be necessary.

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

    i. Result in substantial erosion or siltation on- or off-site;

Less than significant with mitigation incorporated. The project site drains into Jesus Maria Creek. Alterations to the existing drainage patterns of the creek, including changes to velocity, may result in erosion or siltation on or off-site. The proposed project has been designed to maintain the existing drainage patterns; however, flows along the creek would be temporarily altered during construction activities, and the proposed project design would result in slight modifications to on-site drainage.

Areas of the creek may need to be temporarily dewatered for construction of the new bridge and embankments, and temporary placement of falsework. If dewatering is necessary, it would occur within a 150-foot-long segment of the creek, and flows would be diverted through the work area in the creek in a pipe. Depending on the seasonal water surface levels, water diversion may not be necessary during low flow or drought conditions. Following construction, the falsework and diversion structures would be removed, and the creek would be allowed to return to a natural state within the recontoured banks of the channel segment. Although there may be temporary alterations to flow during construction activities resulting from water diversion activities (if necessary), any water diversion structures utilized would be in place for a relatively short time and are not anticipated to significantly alter the existing drainage pattern of the site in a way that would result in substantial erosion or siltation on- or off-site.

The proposed project involves the construction of new embankments for the new bridge which would partially encroach on the active channel of Jesus Maria Creek (approximately 0.07 acre). The net increase in fill in the channel would decrease the cross-sectional area of the channel, which would result in a maximum increase in the 100-year flood water surface elevation of 5 feet with existing land uses and 7 feet with future land uses (WRECO 2016). The maximum increase would occur at the location of the downstream face of the proposed bridge for the 100-year storm. The water surface elevation would match the existing condition water surface elevations approximately 5 feet upstream and 425 feet downstream of the proposed bridge for the 100-year storm event (WRECO 2018). A decrease in the change in the cross-sectional area of the channel may result in an increase in the velocity of flows through the project site, which may result in erosion and siltation; however, the proposed project

includes the placement of rock slope protection along the banks to prevent substantial erosion or siltation on- or off-site.

Implementation of the SWPPP, CWA Section 401 and 404 permit Conditions of Approval, as well as standard construction erosion control BMPs, and County and Caltrans standards would ensure any potential construction and post-construction erosion and siltation would not affect drainages. Additionally, mitigation measures MM BIO-8 and 9 would be implemented to reduce potential impacts to a level of less than significant.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Less than significant impact. As described in the previous section, the proposed project would temporarily alter flows along the creek during construction activities, and the proposed project design would result in slight modifications to on-site drainage. Temporary dewatering activities in the creek during construction would not result in on- or off-site flooding.

Further, construction of the project would not substantially alter the existing drainage pattern of the site or area. While the proposed project would result in minor increases of impervious surfaces and would result in a slight increase in water surface elevation from the slightly modified segment of Jesus Maria Creek through the project site, the results of the hydraulic analysis indicated that the proposed project would not result in on- or off-site flooding. Additionally, compliance with Permit Conditions as well as construction BMPs, implementation of SWPPP, and permit Conditions of Approval ensure the project would not substantially increase the rate or amount of surface runoff that would result in flooding. Impacts would be less than significant, and no mitigation would be necessary.

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 impact. Existing drainage through the project site is comprised of narrow, unlined drainage channels following Whiskey Slide Road. There are no existing or planned stormwater drainage systems surrounding the project area. As described above, the project would not result in a significant increase in runoff. Furthermore, implementation of the SWPPP, permit Conditions of Approval, and construction BMPs would reduce any potential pollution impacts during construction. Therefore, the proposed project would not result in substantial additional sources of polluted runoff. Impacts would be less than significant, and no mitigation would be necessary.

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

No impact. Tsunamis are a series of waves generated in a body of water by a pulsating or abrupt disturbance that vertically displaces water. Inundation of the project site by a tsunami would not occur as the project site is over 100 miles east of the Pacific Ocean. Seiches are oscillation in enclosed bodies of water that are caused by a number of factors, most often wind or seismic activity. There are no bodies of water near the project site capable of producing seiches. Areas surrounding the project site consist primarily of vegetated slopes and are not likely to produce mudflows. Therefore, inundation by a seiche, tsunami, or mudflow is unlikely to occur on the project site, and no impact would occur.

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

No impact. Calaveras County is located within the jurisdiction of the CVRWQCB (Region 5). The CVRWQCB developed a Water Quality Control Plan for the Sacramento and San Joaquin River Basins, which defines the river basins and establishes beneficial uses to be protected, water quality objectives to protect those uses, and a program of implementation needed for achieving the objectives. The proposed project would not conflict with or obstruct the implementation of this plan and would therefore have no impact.

6.11 LAND USE AND PLANNING

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Physically divide an established community?	☐	☐	☐	■
b)	Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	■	☐	☐

6.11.1 Environmental Setting

The Calaveras County General Plan Update was adopted by the Board of Supervisors on November 12, 2019 and designates the land in which the project site is located as "Resource Production" (RP; Calaveras County 2019a). RP lands may be used for a variety of production activities, and primarily identify lands capable of and primarily used for agricultural operations, timber production, and/or mineral resource production (Land Use Element; Calaveras County 2019a). The parcel in which the project site is located is zoned as "Agricultural Preserve" (AP) on the Calaveras County Zoning Map (Calaveras County 2018). Lands zoned AP are intended to be protected and preserved for intensive agriculture and ranching production.

Under provision of the California Land Conservation Act commonly referred to as the "Williamson Act", lands used for agricultural purposes or for related open space, may enter into a voluntary contract with the County in order to seek property tax relief. The project site and immediately surrounding areas are under a Williamson Act contract.

6.11.2 Evaluation of Land Use and Planning

a) Physically divide an established community?

No impact. The project would replace an existing bridge along an already established transportation corridor. While approximately 0.5 acre of new ROW would be required to accommodate the new bridge alignment and expanded approaches, the project would not physically divide an established community. The project is designed to improve connectivity through the area by providing an all-weather access crossing. Detours and traffic delays would be avoided because traffic would be maintained on the existing bridge while the replacement bridge is constructed. Therefore, the project would not physically divide an established community, and no impact would occur.

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

Less than significant with mitigation incorporated. The proposed project would require the acquisition of 0.5 acre of new ROW that is currently zoned AP and converting it to transportation land uses. A total

of 0.1 acre of existing ROW would be relinquished to the property owner at the end of the project. The conversion of the AP-zoned land to transportation land uses would conflict with the AP zoning, which would be a potentially significant impact. Mitigation Measure AG-1, which requires notification to the California Department of Conservation, would be implemented to reduce the potential impacts to less than significant (see Section 6.2, Agriculture and Forestry Resources). With implementation of Mitigation Measure AG-1, potential impacts would be reduced to less than significant.

6.12 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	■

6.12.1 Environmental Setting

The California Surface Mining and Reclamation Act (1975) mandated the classification of land into Mineral Resource Zones (MRZ) to conserve the mineral potential of land subject to mining (CDC 2008). A simplified version of land classification categories include:

- MRZ–1 No Resource
- MR –2a Reserves (permitted)
- MRZ–2b Resource
- MRZ–3 Suspended Resource
- MRZ–4 Unknown

The most significant mineral resources present in Calaveras County are gold, copper-zinc, lead, asbestos, chromite, limestone, clay, sand and gravel, construction aggregates, silver, and tungsten (Calaveras County 2019a). The project site located in Section 30 of Township 5 North, and Range 13 East of the USGS 7.5-minute "Rail Road Flat" quadrangle map which is classified as Mineral Resource Area (MRA)-3 in the County General Plan Mineral Resources Map. MRA-3 is defined by the County as lands that might contain mineable deposits, but that have not yet been sufficiently developed to demonstrate this (consistent with MRZ-3 of the California Surface Mining and Reclamation Act).

6.12.2 Evaluation of Mineral Resources

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?

No impact. The project is not within or adjacent to any active mining operations according to the California Department of Conservation Office of Mine Reclamation Map Viewer (CDC 2018b). Furthermore, the County's Mineral Resource Map classifies the project site as MRA-3, indicating lands that might contain mineable deposits, but that have not yet been sufficiently developed to confirm this are located on-site. No active mining operations are present on or near the project site. Implementation of the project would not result in the permanent loss of availability of a known mineral resource, and no impact would occur.

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?

No impact. As mentioned above, the land around the project site is classified as MRA-3 by the County, indicating that there is the potential for mineable deposits to be on or near the project site. Implementation of the project would not result in the permanent loss of availability of a locally important mineral resource recovery site, and no impact would occur.

6.13 NOISE

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:					
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	■	☐
b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c)	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

A Construction Noise Impact Planning Memorandum was prepared for the proposed project and is included in Appendix F (HELIX 2017c).

6.13.1 Environmental Setting

Sound can be described as pressure waves traveling through air that the human ear can detect. Noise is typically defined as unwanted sound. Noise may produce physiological or psychological damage or cause interference that may hinder communication, work, rest, recreation, or sleep. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound, with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}.

Calaveras County regulates construction noise through Chapter 9.02, Noise Control, of the Calaveras County Code of Ordinances. According to Chapter 9.02, noise from construction activities is exempt from the County's noise level standards provided that all construction in or adjacent to residential areas shall be limited to the daytime hours between 7:00 a.m. and 6:00 p.m.

Calaveras County does not have any established performance standards regarding groundborne vibration levels from construction activities. Therefore, for purposes of this analysis, the "severe" impact criterion of 0.4 inch per second peak particle velocity (PPV) for vibration is utilized from the Caltrans 2013 *Transportation and Construction Vibration Guidance Manual* (Caltrans 2013).

6.13.2 Evaluation of Noise

a) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than significant impact. Construction such as clearing and grubbing (removal of trees), excavation, and staging location activities would temporarily increase noise levels in the vicinity of the project. Construction would require heavy equipment during foundation excavation for the bridge abutments. Construction equipment utilized during this phase would include an excavator and a dump truck and a tracked drill with concrete pumper and concrete truck. Clearing and grubbing would require the use of chainsaws to cut down trees. Construction equipment used at the staging location would include a front-end loader, dump truck, and a generator.

The nearest sensitive receptors to this noise would be the residential property to the east of the project site. The nearest structure on this property to construction activities is located approximately 200 feet from the north end of the bridge where foundation excavation would occur and 180 feet from the nearest tree where chainsaw operation may occur. Although the exact staging location is unknown, it is assumed to be in the footprint area closest to the nearby residence that is at a distance of 100 feet.

During foundation excavation, the operation of an excavator and dump truck would generate a noise level of 66.1 dBA L_{EQ} at 200 feet and the tracked drill with concrete pumper and concrete truck would generate a noise level of 67.2 dBA L_{EQ} at 200 feet. During tree removal, a chainsaw would generate a noise level of 65.6 dBA L_{EQ} at 180 feet. At the staging location, a front-end loader, dump truck, and generator[1] would generate a noise level of 74.3 dBA L_{EQ} at 100 feet.

Increases in ambient noise from these construction activities would be temporary and would only occur during the daytime hours from 7:00 a.m. and 6:00 p.m. when construction noise is exempted from the County construction noise standards described above. Given that the construction noise would be temporary and only occur between the exempted hours, impacts would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact. Construction activities such as excavation and roadway paving would temporarily increase groundborne vibration and/or groundborne noise levels in the vicinity of the project. The nearest vibration-sensitive land use from project construction is the adjacent residential property, with the closest structure located approximately 100 feet from the closest extent of the project footprint. An on-site source of vibration during project construction would be a vibratory roller, which would be used for road compaction during modifications to Whiskey Slide Road. A vibratory roller would create approximately 0.210 inches per second PPV at a distance of 25 feet (Caltrans 2013). Using the Caltrans criterion of 0.4 inches per second PPV at 25 feet, the approximately 0.210 inches per second PPV vibration impact generated at 25 feet would be less than what is considered a “severe” impact. Therefore, although vibration may be perceptible by nearby residences (the nearest of which would be 100 feet from the closest operation of a vibratory roller), temporary impacts associated with the roller (and other potential equipment) would be less than significant.

[1] It is recommended that a generator be positioned as far as possible from residences.

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 located within the vicinity of a private airstrip or an airport land use plan area or within two miles of a public airport or public use airport. Therefore, no impact would occur.

6.14 POPULATION AND HOUSING

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

6.14.1 Environmental Setting

A CIA was prepared for the proposed project and is included as Appendix C (HELIX 2017a). The results of the assessment are incorporated into the following analysis.

6.14.2 Evaluation of Population and Housing

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No impact. The project would not include the construction or replacement of homes or businesses and thus would not directly induce population growth. Additionally, the project would not increase the roadway's capacity thereby indirectly inducing population growth. Construction of the project would not increase the demand for housing and no impact would occur.

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

No impact. While residences are present within the project vicinity, there are no residential dwellings within in the project site. The proposed project would not displace any housing units or require the construction of replacement housing elsewhere. Therefore, no impact would occur.

6.15 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	☐	☐	☐	■
b) Police protection?	☐	☐	☐	■
c) Schools?	☐	☐	☐	■
d) Parks?	☐	☐	☐	■
e) Other public facilities?	☐	☐	☐	■

6.15.1 Environmental Setting

The proposed project is located within unincorporated Calaveras County and is served by the following providers:

Fire and police protection are provided by Central Calaveras Fire and Rescue Protection District and the Calaveras County Sheriff's Department (Central Calaveras Fire and Rescue Protection District 2018). Oakendell Community School is the nearest public school located approximately 2.5 miles southwest of the project site. With the exception of the few nearby residences on the parcel in which the project site is located, the project area is largely undeveloped and secluded and is not near any public parks or other public facilities.

6.15.2 Evaluation of Public Services

a) Fire protection?

No impact. The proposed project would not result in an increase in the population of the area or a change in the existing land uses; therefore, the project would not result in an increase in demands on fire protection services in the area. The construction phase of the project would be temporary and would not likely result in an increase in emergency fire service needs. The new bridge and its approaches would be designed to accommodate emergency vehicle use and would provide all-weather access across the creek, thereby improving emergency access through the area. Therefore, no impacts on fire protection services or facilities would occur.

b) Police protection?

No impact. As mentioned above, project activities would not result in an increase in the population or demands for emergency services in the area. The improved bridge would benefit emergency vehicle access through the area. Therefore, the project would have no impact on the demand for police protection service.

c) Schools?

d) Parks?

e) Other public facilities?

No impact. The project would not develop residential housing and would not directly or indirectly induce population growth in the area; therefore, the project would not result in the need for new or expanded school facilities. No impact would occur.

6.16 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b) 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?	☐	☐	☐	■

6.16.1 Environmental Setting

Recreation resources are addressed in the Calaveras County General Plan Update, and there are no public or private park and recreation facilities or major trails in the vicinity of the project (Conservation and Open Space Element; Calaveras County 2019a). No existing recreational facilities are located in or near the project site.

6.16.2 Evaluation of Recreation

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

No impact. The project would not directly induce population growth or otherwise result in an increased demand on existing recreational facilities. There are no recreational resources located in or near the project site. No impact would occur.

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. The proposed project would not directly induce population growth or otherwise result in an increased demand on existing recreational facilities that would require the construction or expansion of recreational facilities. Further, the proposed project does not include construction of recreational facilities. No impact would occur.

6.17 TRANSPORTATION

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
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?	☐	☐	■	☐

Transportation and traffic were evaluated in a project specific traffic impact analysis as attached in Appendix G (Calaveras County 2016b).

6.17.1 Environmental Setting

In a routine bridge inspection report completed by Caltrans in 2010, the existing bridge was given a sufficiency rating of 35.1 out of 100 and a status of structurally deficient. The existing bridge is a single-lane, approximately 14.4 feet wide. The replacement bridge under the proposed project would be expanded to a 20 to 24-foot-wide cast-in-place prestressed single-span bridge but would not increase the number of travel lanes. The project would raise, widen and realign the bridge approaches on Whiskey Slide Road and is designed to improve connectivity through the area by providing an all-weather access crossing.

The bridge and roadway in the project area experiences a low traffic volume and primarily services local traffic, a heavy equipment business, and commercial deliveries. The average daily traffic volume is approximately 93 vehicles and is expected to increase to 385 vehicles by 2036. Seasonal fluctuations increase the daily traffic volumes due to local property owners' activities and hauling operations related to agricultural harvesting, livestock transport, and timber harvesting. These increases would not typically be sustained beyond several months during any given year, but peak average daily traffic volumes may increase over 400 vehicles (Calaveras County 2016b).

During construction of the replacement bridge, traffic would be maintained on the existing bridge and roadway. Following construction of the new roadway and bridge, traffic would be shifted to the new bridge, and the new driveway tie-ins would then be constructed, and the existing bridge and approaches would be removed. No detours would be required during project construction, and the roadway and bridge crossing would remain open throughout construction. Traffic disruptions through the project limits would be minimized by staging construction off the roadway approaches to maintain, at a minimum, a single lane of through traffic throughout the duration of construction.

6.17.2 Evaluation of Transportation/Traffic

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

Less than significant impact. The proposed project involves replacing a structurally deficient bridge and improving the alignment of the road segment and approaches but would not affect the capacity of the road through the project site. The proposed bridge would be designed to meet current standards for lane and shoulder widths and would provide a safer crossing for motorists, pedestrians, and emergency response vehicles. Construction of the proposed project would be staged to maintain traffic through the project site, and while no detours would be necessary, traffic controls would be needed during construction to maintain through-traffic. A Traffic Control Plan would be prepared and implemented to maintain traffic flow through the project area during construction. The plan would comply with the requirements of the County regarding traffic control. Implementation of the Traffic Control Plan would further minimize project impacts, and impacts would be less than significant.

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

Less than significant impact. The project site is in a rural part of the County with a low daily traffic volume. The proposed project involves replacing the existing bridge with a similar structure that would not change the existing capacity or circulation of the area. As a result, the project would not increase the vehicle miles traveled through the project site or area. The proposed project would be expected to improve congestion through the project site because the replacement bridge would be designed to meet current standards for lane and shoulder widths, which would provide improved use for vehicles traveling through the project site. Therefore, impacts would be less than significant.

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

No impact. The project site is located along a narrow, paved road in mountainous terrain. Whiskey Slide Road makes an approximately 90-degree turn north of the bridge over Jesus Maria Creek and the existing bridge is narrow and structurally deficient. The proposed project is designed to improve safety and access. Under the proposed project, the road would be realigned to improve the turn radius and sight distance, and the replacement bridge and new roadway segment would conform to Caltrans and County standards. Therefore, the project design features would reduce potential hazards, and impacts would be beneficial. No adverse impact would occur.

d) Result in inadequate emergency access?

Less than significant impact. The project would improve emergency access by improving the alignment of Whiskey Slide Road through the project site, widening the bridge approaches, and replacing the existing structurally deficient bridge with a bridge that confirms to Caltrans and County standards.

Construction activities would be staged to allow Whiskey Slide Road to remain open during construction; therefore, while construction activities may result in temporary delays through the site, emergency access through the project site would not be restricted. Due to the low average daily number of vehicles through the site, the potential for traffic delays would be minimal. No permanent changes in emergency access would occur as a result of the project, and impacts would be less than significant.

6.18 TRIBAL CULTURAL RESOURCES

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

6.18.1 Environmental Setting

Effective July 1, 2015, AB 52 amended CEQA to mandate consultation with California Native American tribes during the CEQA process to determine whether a proposed project may have a significant impact on a tribal cultural resource, and that this consideration be made separately from cultural and paleontological resources. Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies carry out consultation with tribes at the commencement of the CEQA process to identify tribal cultural resources. Furthermore, because a significant effect on a tribal cultural resource is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures. By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and tribal governments, public agencies, and project proponents would have information available to identify and address potential adverse impacts to tribal cultural resources.

A tribal cultural resource is a site, feature, place, cultural landscape, sacred place, or object which is of cultural value to a tribe. Tribal cultural resources are either listed in or eligible for the CRHR or a local historic register. Tribes may choose not to share information regarding these resources with the public, in accordance with state and/or federal laws.

CA-CAL-1067/H (P-05-001383)

The proposed project's APE corresponds to the boundary of CA-CAL-1067/H, a multicomponent site consisting of historic period and Native American archaeological and ethnohistorical components, and this site was the focus of Native American consultation for the proposed project. The site was evaluated for NRHP eligibility by Garcia and Associates in 2018 (see Section 6.5). Research and Native American consultation conducted prior to and during the evaluation determined that the site, including portions located both inside and outside the ADI, is associated with events that have made a significant contribution to the broad patterns of tribal history, retains meaning as a place to gather medicine, and otherwise conveys a sense of place and history of tribal events. Thus, the site is eligible for the NRHP under Criterion A. Per PRC Section 5024.1(c), by virtue of being NRHP-eligible the site is also eligible for inclusion in the CRHR under Criterion 1, its association with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. As such, the site qualifies as a tribal cultural resource under CEQA (PRC Section 21074).

Native American Consultation

NAHC was contacted for a Sacred Lands File search on June 21, 2013. A response was received on June 26, 2013 stating that the file search did not identify the presence of Native American cultural resources and provided the names and addresses of 14 individuals representing Native American groups that may have an interest in the proposed project. On September 15, 2014, letters were sent to all 14 individuals requesting information regarding cultural resources in the immediate area, as well as any feedback or concerns related to the proposed project. Additional consultation follow-up attempts were made by telephone on September 22-23 and October 3, 2014. A representative of the California Valley Miwok Tribe replied on October 9, 2014 requesting that the tribe be notified if Miwok artifacts and/or human remains are discovered. The Buena Vista Rancheria stated that they would defer to tribes in Calaveras County for this project and did not have any specific comments. The Ione Band of Miwok Indians replied by email on September 22, 2014 requesting copies of cultural and environmental reports associated with the proposed project.

Debra Grimes, Cultural Resources Specialist of the Calaveras Band of Mi-Wuk Indians, contacted project archaeologist Charla Francis via telephone on September 23, 2014. Ms. Grimes expressed a high level of concern about the proposed project. Through subsequent emails, Ms. Grimes, Ms. Francis, and the County agreed to meet at the project site at a later date to discuss the tribe's concerns.

Formal invitations to participate in AB 52 consultation on several proposed County projects, including the Whiskey Slide Road over Jesus Maria Creek Bridge Replacement Project, were sent by the County to 15 tribal representatives on July 15, 2015. The representatives included:

- Anthony Burris, Ione Band of Miwok Indians
- California Valley Miwok Tribe
- Briana Creekmore, Representative of the Miwok Indians
- Darryl Cruz, Washoe Tribe of Nevada and California
- Arvada Fisher, Calaveras County Mountain Mi-Wuk Indian Council
- Andrew Franklin, Wilton Rancheria
- Debra Grimes, Calaveras Band of Mi-Wuk Indians
- Gloria Grimes, Calaveras Band of Mi-Wuk Indians
- Steven Hutchason, Wilton Rancheria

- Adam Lewis, Calaveras Band of Mi-Wuk Indians
- Yvonne Miller, Ione Band of Miwok Indians
- Katherine Erolinda Perez, Nototomne/Northern Valley Yokuts Tribe
- Rhonda Morningstar Pope, Buena Vista Rancheria of Mi-Wuk Indians
- Charles Williams, Calaveras Band of Mi-Wuk Indians
- Lois Williams, Calaveras Band of Mi-Wuk Indians

A single written response was received. Darryl Cruz of the Washoe Tribe of Nevada and California responded on April 12, 2016. Mr. Cruz stated that the ancestral lands of the Washoe are within the State of California, and that the Washoe Tribe was requesting consultation with Calaveras County per AB 52. However, Washoe Tribe did not have any comments or concerns specific to the proposed project, and AB 52 consultation with the tribe was closed.

The Calaveras Band of Mi-Wuk Indians (Tribe) remained actively involved throughout the consultation process. Debra Grimes provided knowledge and interpretation of local history, Native American use, artifacts recovered, and living resources present at the site. Additional members of the Tribe that were consulted include Tribal Chair Gloria Grimes, Adam Lewis, Ronald Grimes, and Leonard Grimes.

Onsite consultation with the Tribe was conducted on March 14, 2016. The consultation was attended by Debra Grimes and Adam Lewis of the Tribe, and representatives of the County, Caltrans, the project proponent, HELIX, and the landowner. Ms. Grimes described the importance of CA-CAL-1067/H with respect to the Mi-Wuk and their history and stated that the site contains buried as well as exposed components. She stressed the importance of increased contact and communication with the Mi-Wuk regarding any activities that will disturb the soils. Ms. Grimes said that Native American expertise, beyond just archeological experience, would be necessary to differentiate between common site features and features with potential ties to Native American culture.

The County agreed that the proposed project could be modified to accommodate any additional information regarding the cultural assets onsite. The County agreed to notify the Tribe in advance of activities that will result in ground disturbance (borings, excavations, etc.) and to allow a Tribal representative the opportunity to be onsite during those activities. The County further agreed to notify the Tribe of the findings from the ground disturbing activities and allow Tribal consultants to evaluate any resources discovered during construction. It was also agreed that due to context of the rural and natural site, the post-project appearance of the new bridge and surrounding area should reflect the pre-project aesthetic as much as possible.

A second consultation session was conducted at the project site on October 26, 2016 to discuss the Phase II evaluation of CA-CAL-1067/H. This session was attended by Debra Grimes and Adam Lewis of the Tribe, and representatives of the County, Caltrans, the project proponent, Garcia and Associates, Davis-King and Associates, and the landowner. The County agreed that an ethnographic study would be conducted by Davis-King and Associates to complement the archaeological investigations; the study would gather information about the site and its' past and present residents from multiple sources, including oral testimonies of living descendants. Field methods for the Phase II evaluation were also discussed and were agreed to include surface transect units, control units, surface scrapes, surface collection and mapping. The tribe understood that the goal of the fieldwork would be to excavate a sufficient sample of archaeological materials to establish the horizontal and vertical extent of the deposits, identify historic period features and artifacts, and characterize the diversity and abundance of diagnostic materials in a way that would address the project's research questions and allow the

application of NRHP criteria. The County and the Tribe agreed that additional research would also be required to properly address the site's ethnographic and historical resources.

Consultation with the Tribe remained ongoing throughout the Phase II process. Tribal representatives monitored geotechnical borings and the subsequent archaeological fieldwork, including the Phase I surveys and Phase II archaeological excavations. Documentation related to Native American consultation is provided in the proposed project's Archaeological Survey Report (Francis 2016).

6.18.2 Evaluation of Tribal Cultural Resources

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

   i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

   ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less than significant with mitigation incorporated. Ground disturbing activities, such as trenching and grading, could inadvertently damage or destroy culturally sensitive portions of CA-CAL-1067/H if they occur outside of the ADI boundaries. This is considered a potentially significant impact, and an ESA Action Plan has been prepared. Proposed mitigation includes implementation of the action plan to protect CA-CAL-1067/H from any potential effects through establishment of an ESA. With implementation of the proposed mitigation (MM CUL-1; see Section 6.5.2), potential impacts would be reduced to a level of less than significant.

Subsurface construction activities such as trenching and grading associated with the project could also potentially damage or destroy previously undiscovered, buried tribal cultural resources. This is considered a potentially significant impact. With implementation of the proposed mitigation (MM CUL-2; see Section 6.5.2), potential impacts to previously undiscovered tribal cultural resources would be reduced to a level of less than significant.

6.19 UTILITIES AND SERVICE SYSTEMS

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	■	☐
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	■
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	■	☐
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	■	☐

6.19.1 Environmental Setting

Solid waste collection in the County is provided by Calaveras County Integrated Waste Management. The nearest landfill within Calaveras County is Rock Creek Solid Waste Facility, Landfill, Transfer Station and Permanent Hazardous Waste Collection Facility approximately 20 miles southwest at 12021 Hunt Road, Milton, California (CalRecycle 2018). Pacific Gas & Electric provides both gas and electric services to the County.

The project site does not contain any utility facilities and is not currently served by any service providers. Nearby residences pump groundwater via private wells and dispose of wastewater in private septic systems. The project site does not contain developed storm drain facilities. Storm water is conveyed via sheet flow and in unlined ditches along Whiskey Slide Road to Jesus Maria Creek.

6.19.2 Evaluation of Utilities

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?

Less than significant impact. Existing overhead Pacific Gas & Electricity and AT&T lines cross the project site and would be relocated within the BSA and SA studied for the proposed project. The utility lines would not be relocated within an environmentally sensitive area, and no significant impacts from the relocation of the existing Pacific Gas & Electricity and AT&T lines are anticipated. The proposed project would not result in the need for relocation or construction of new or expanded water, wastewater treatment or storm water drainage, or natural gas facilities. Therefore, impacts would be less than significant.

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

No impact. The proposed project would not increase the demand of existing water or wastewater treatment facilities. Water required for project construction would be supplied to the project site by truck, which would be obtained from sources with existing entitlements. Following construction, no water sources would be required for operation of the project. No impacts to water supplies would occur.

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

No impact. The project would not produce additional wastewater. During construction operations, wastewater would be contained within portable toilet facilities and disposed of at any approved site according to County regulations. The County would contract with a local service provider to dispose of the wastewater at an approved wastewater disposal facility. The amount of wastewater generated during construction would be negligible and thus would not affect any public wastewater treatment facilities operations. No impacts to wastewater facilities or exceedances of wastewater treatment requirements would occur.

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?

Less than significant impact. The Rock Creek Landfill and Recycling facility is the nearest landfill to the project site. The landfill is operating within its capacity and is allowed to receive up to 500 tons of waste per day and is estimated to remain open until 2035 (CalRecycle 2018). The proposed project would result in a relatively minor amount of construction and demolition waste. All the waste would be separated, recycled to the extent feasible, and disposed of at the Rock Creek facility. Because the landfill serving the project area is of sufficient capacity to accommodate solid waste needs, potential impacts related to landfill capacity would be less than significant.

Solid waste disposal must follow the requirements of the contracted waste hauler and disposal facility, which follow federal, state, and local statues and regulations related to the collection and disposal of solid waste. The project would comply with all state and local waste diversion requirements regarding trash and recycling, and impacts would be less than significant for questions d) and e).

6.20 WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
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?	☐	☐	☐	■

6.20.1 Environmental Setting

The proposed project is located within a State Responsibility Area (SRA) for fire protection and within a Very High Fire Hazard Severity Zone (VHFHSZ) (CAL FIRE 2019). The project area is located in a mountainous, rural area of Calaveras County in the foothills on the western slope of the Sierra Nevada Range. Portions of the project site were burned by the Butte Fire during September of 2015. The extent of the burn through the project site was observed during a site visit on November 11, 2015. While upland habitats south of the bridge and wooded upland habitats north of the bridge were substantially burned, the riparian habitat was not significantly altered. Within the burned areas, the trees, understory, and soils were burned, and soils were exposed.

Local Regulations

Title 8, Chapters 8.08 (Hazardous Fire Areas) and 8.10 (Fire and Life Safety Regulations) of the Calaveras County zoning code address restrictions within Hazardous Fire Areas of the county and regulations to help prevent hazardous fires. All development within Calaveras County is held to wildfire protection standards established in this code section (Calaveras County 2019b).

6.20.2 Evaluation of Wildfire

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

Less than significant impact. As discussed in Section 6.17, Transportation, during construction of the replacement bridge, traffic would be maintained on the existing bridge and roadway. Following construction of the new roadway and bridge, traffic would be shifted to the new bridge, and the new driveway tie-ins would then be constructed, and the existing bridge and approaches would be removed. No detours would be required during project construction, and the existing roadway and bridge crossing would remain open throughout construction of the new bridge. Traffic disruptions through the project limits would be minimized by staging construction off the roadway approaches to maintain, at a minimum, a single lane of through traffic throughout the duration of construction. The proposed bridge would be designed to meet current standards for lane and shoulder widths and would provide a safer crossing for motorists, pedestrians, and emergency response vehicles. While no detours would be necessary, traffic controls would be needed during construction to maintain through-traffic. A Traffic Control Plan would be prepared and implemented to maintain traffic flow through the project area during construction. The plan would comply with the requirements of the County regarding traffic control. Implementation of the Traffic Control Plan would further minimize project impacts, and impacts to adopted emergency response or evacuation plans would be less than significant.

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?

No impact. The proposed project would not exacerbate wildfire risks as the project involves the replacement of an existing bridge. Therefore, the proposed project would have no impact.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than significant impact. The proposed project includes replacing a structurally deficient bridge with a bridge that meets current design and safety standards and would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk. However, as discussed in Section 6.9, Mitigation Measure HAZ-1 would require the removal of dried vegetation or other materials, to the extent feasible, which could serve as fuel for combustion. Such vegetation removal would further reduce the potential of wildland fires by clearing vegetation, reducing fire fuels, and removing fire sustaining litter. In addition, during construction, spark arrestors or turbo chargers (which eliminate sparks in exhaust) and fire extinguishers would be required for all heavy equipment pursuant to Mitigation Measure HAZ-2. Impacts to risk from wildland fires would be less than significant, and the implementation of Mitigation Measures HAZ-1 and HAZ-2, would further minimize any potential impacts.

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?

No impact. The proposed project is an infrastructure improvement project and would not expose people or structures to flooding or landslides. Additionally, existing site conditions would not be altered

in any way that could expose people or structures to significant risks. Therefore, the proposed project would have no impact.

6.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and 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 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?

Less than significant with mitigation incorporated. The preceding analysis indicates that the proposed project has the potential to result in adverse impacts related to agriculture and forestry resources (Section 6.2), biological resources (Section 6.4), cultural resources (Section 6.5), geology and soils (Section 6.7), hazards and hazardous materials (Section 6.9), land use and planning (6.11), and tribal cultural resources (Section 6.18). Refer to the corresponding sections of this IS/MND for discussion of the proposed project's potential impacts on these environmental issue areas. With implementation of the mitigation measures identified in those sections, and compliance with County and Caltrans programs and requirements identified in this report, impacts would be reduced to a less than significant level. No significant or potentially significant impacts would remain.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when

viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?

Less than significant impact. As described in the evaluations of potential impacts in the preceding sections of this IS/MND, all potentially significant impacts of the proposed project would be reduced to a level of less than significant with the proposed mitigation measures incorporated. While ongoing and future activities in the area, such as timber harvest, agricultural activities, and other non-federal actions may result in cumulative impacts to resources also impacted by the proposed project, those actions would also be subject to avoidance and minimization measures and the appropriate mitigation as necessary. With incorporation of the proposed mitigation contained in this IS/MND, the project's contribution to cumulative impacts would be less than significant.

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

Less than significant impact. The proposed project would not directly or indirectly result in substantial adverse effects on human beings. With the proposed mitigation in this IS/MND incorporated, the proposed project would result in less than significant impacts on human beings.

7.0 MITIGATION MONITORING AND REPORTING PROGRAM

A Mitigation Monitoring and Reporting Program (MMRP) has been prepared and is presented in Appendix H.

8.0 INITIAL STUDY PREPARERS

The following people contributed to the preparation of this report:

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9.0 REFERENCES

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