Dogtown Road over Maxwell Creek Bridge (#40C0038 & #40C0039) Replacement Projects

Initial Study/Mitigated Negative Declaration



Prepared for:

Mariposa County Public Works Department

September 2020

Prepared by:

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Consulting Engineers and Scientists

Dogtown Road over Maxwell Creek Bridge (#40C0038 & #40C0039) Replacement Projects

Initial Study/Proposed Mitigated Negative Declaration

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September 2020

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Table of Contents

Abbreviations and Acronyms ..... **iii**

Chapter 1. Mitigated Negative Declaration **1-1**
1.1 Introduction 1-1
1.2 Purpose of the Initial Study 1-1
1.3 Project Information 1-2
1.4 Environmental Determination 1-4

Chapter 2. Project Description **2-1**
2.1 Introduction 2-1
2.2 Project Background and Setting 2-1
2.3 Project Objectives 2-6
2.4 Project Description 2-6
2.5 Required Permits and Approvals 2-11
2.6 Mitigation and Best Management Practices 2-12
2.7 Oversized Figures 2-12

Chapter 3. Initial Study Checklist **3-1**
3.1 Introduction 3-1
3.2 Evaluation of Environmental Impacts 3-1
3.3 Aesthetics 3-3
3.4 Agriculture and Forestry Resources 3-7
3.5 Air Quality 3-10
3.6 Biological Resources 3-14
3.7 Cultural Resources 3-43
3.8 Energy 3-50
3.9 Geology and Soils 3-52
3.10 Greenhouse Gas Emissions 3-57
3.11 Hazards and Hazardous Materials 3-59
3.12 Hydrology and Water Quality 3-63
3.13 Land Use and Planning 3-71
3.14 Mineral Resources 3-73
3.15 Noise 3-74
3.16 Population and Housing 3-78
3.17 Public Services 3-79
3.18 Recreation 3-80
3.19 Transportation 3-81
3.20 Tribal Cultural Resources 3-84
3.21 Utilities and Service Systems 3-86
3.22 Wildfire 3-88
3.23 Mandatory Findings of Significance 3-90

Chapter 4. References Cited **4-94**

Appendix A. Biological Resources **1**

Tables

Table 1-1. Summary of Mitigation Measures 1-5
Table 2-1. Proposed Construction Work Order and Schedule 2-7
Table 2-2. Summary of Temporary and Permanent Effects by Vegetation Community 2-8
Table 2-3. Proposed Equipment and Purpose 2-11
Table 2-4. Project Related Permits and Approvals 2-11
Table 3-1. Viewer Sensitivity 3-4
Table 3-2. Mariposa County Air Quality Attainment Status 3-11
Table 3-3. Vegetation Communities within the Biological Study Area for each Bridge Site 3-18
Table 3-4. Summary of Temporary and Permanent Effects for each Bridge Site 3-40
Table 3-5. Previously Recorded Resources within 0.25 miles of the Project Sites 3-44
Table 3-6. Native American Contact Efforts 3-45
Table 3-7. Soil Types within the Project Sites 3-53

Figures

Figure 2-1. Regional Location 2-3
Figure 2-2. Project Site. Bridge #40C0038 2-4
Figure 2-3. Project Site: Bridge #40C0039 2-5
Figure 2-4. Bridge #40C0038 - Proposed Project Site Plan (Including Area of Potential Effect) 2-14
Figure 2-5. Bridge #40C0039 - Proposed Project Site Plan (Including Area of Potential Effect) 2-15
Figure 2-6. Bridge #40C0038 - Proposed Road Detour: Stages 1-3 2-16
Figure 2-7. Bridge #40C0039 - Proposed Road Detour: Stages 1-3 2-19
Figure 2-8. Bridge #40C0038 - Permanent and Temporary Vegetation Community Impacts 2-22
Figure 2-9. Bridge #40C0039 - Permanent and Temporary Vegetation Community Impacts 2-23
Figure 3-1. Relationship Between Project Sites 3-16
Figure 3-2. Vegetation Communities within the BSA for Bridge #40C0038 3-19
Figure 3-3. Vegetation Communities within the BSA for Bridge #40C0039 3-20
Figure 3-4. Delineation of Waters of the U.S. and State for Bridge #40C0038 3-22
Figure 3-5. Delineation of Waters of the U.S. and State for Bridge #40C0039 3-23
Figure 3-6. Hydrologic Unit Watershed Map 3-65

Abbreviations and Acronyms

AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ADA	Americans With Disabilities Act
ADT	Average Daily Traffic
Amsl	above mean sea level
APE	Area of Potential Effect
ASR	Archaeological Survey Report
BCC	Bird of Conservation Concern
BMPs	Best Management Practices
BSA	Biological Study Area
Caltrans	California Department of Transportation
CAAQS	California Ambient Air Quality Standards
Cal-IPCs	California Invasive Plant Council's
CARB	California Air Resources Board
CCIC	Central California Information Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDO	Cease and Desist Order
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
Cfs	Cubic feet per second
CGS	California Geological Survey
CH4	Methane
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO2	carbon dioxide
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB	decibel
dBA	A-weighted sound level

Dbh	diameter at breast height
DPM	Diesel Particulate Matter
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESU	Evolutionarily Significant Unit
FE	Federally Endangered
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FSTIP	Federal State Transportation Improvement Program
GHGs	Greenhouse gases
GWh	Gigawatt hours
HBP	Highway Bridge Program
HFCs	Hydrofluorocarbons
HPSR	Historic Property Survey Report
HRER	Historic Resources Evaluation Report
HUC	Hydrologic Unit Code
ILE	Institute of Lighting Engineers
IS/MND	Initial Study/proposed Mitigated Negative Declaration
IPAC	Information, Planning, and Conservation System
Leq	equivalent continuous sound level
Ldn	day/night sound level
Lmax	maximum instantaneous noise level
LOS	level of service
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MUTCD	Manual of Traffic Control Devices
N2O	nitrogen dioxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPA	National Environment Policy Act
NMFS	National Marine Fisheries Service
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination Discharge
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OEHHA	Office of Environmental Health Hazard Assessment
OHP	Office of Historic Preservation

OHWM	Ordinary High Water Mark
PCE	Primary Constituent Elements
PFCs	Perfluorocarbons
PES	Preliminary Environmental Study
PFMC	Pacific Fishery Management Council
PM_{10}	PM equal to or less than 10 micrometers in diameter
$PM_{2.5}$	PM equal to or less than 2.5 micrometers in diameter
PPV	Peak Particle Velocity
PRC	Public Resources Code
ROG	reactive organic gases
RSP	Rock Slope Protection
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SE	State Endangered
SF6	Sulfur hexafluoride
SR	State Route
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
WPCP	Water Pollution Control Program
WSE	Water Surface Elevation

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Chapter 1. Mitigated Negative Declaration

1.1 Introduction

The Mariposa County Public Works Department (County) has prepared this Initial Study/proposed Mitigated Negative Declaration (IS/MND) in compliance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines to address the potentially significant environmental impacts of the following two bridge replacement projects:

- Dogtown Road over Maxwell Creek Bridge (#40C0038).
- Dogtown Road over Maxwell Creek Bridge (#40C0039).

Both bridges ae located on Dogtown Road in the northern portion of the County, with Bridge #40C0038 located 2 miles from the Town of Coulterville and Bridge #40C0039 located roughly ½ mile from the town. The County is the lead agency under CEQA. With both bridge projects located fairly close to each other on Dogtown Road and potentially affecting similar environmental resources, the County has prepared a single IS/MND addressing the environmental impacts of both bridge replacement projects. For the purposes of this IS, both bridges are referred to as the Proposed Project.

To satisfy specific CEQA requirements for the proposed project, this document includes:

- a proposed MND and the environmental determination (see **Chapter 1**),
- location and description of the proposed project (see **Chapter 2**),
- initial study checklist (see **Chapter 3**).

1.2 Purpose of the Initial Study

This document is an IS/MND prepared in accordance with CEQA (California Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (Title 14, Section 15000 et seq. of the California Code of Regulations [CCR]). The purpose of this IS is to (1) determine whether proposed project implementation would result in potentially significant or significant impacts on the physical environment; and (2) incorporate mitigation measures into the proposed project design, as necessary, to eliminate the proposed project's potentially significant or significant project impacts or reduce them to a less-than-significant level. An MND is prepared if the IS identified potentially significant impacts, but: (1) revisions in the proposed project plans or proposals mitigate the impacts to a point where clearly no significant impacts would occur; and (2) there is no substantial evidence, considering the whole record before the agency, that the proposed project as revised may have a potentially significant or significant impact on the physical environment.

An IS presents environmental analysis and substantial evidence in support of its conclusions regarding the significance of environmental impacts. Substantial evidence may include expert opinion based on facts, technical studies, or reasonable assumptions based on facts. An IS is neither intended nor required to include the level of detail provided in an environmental impact report (EIR).

CEQA requires that all State and local government agencies consider the potentially significant and significant environmental impacts of projects they propose to carry out or over which they have discretionary authority, before implementing or approving those projects. The public agency that has the principal responsibility for carrying out or approving a proposed project is the lead agency for CEQA compliance (State CEQA Guidelines, CCR Section 15367). The County has principal responsibility for carrying out the proposed project and is therefore the CEQA lead agency for this IS/MND.

If there is substantial evidence (such as the findings of an IS) that a proposed project, either individually or cumulatively, may have a significant or potentially significant impact on the physical environment, the lead agency must prepare an EIR (State CEQA Guidelines, CCR Section 15064[a]). If the IS concludes that impacts would be less than significant, or that mitigation measures committed to by the County would clearly reduce impacts to a less-than-significant level, a Negative Declaration or MND can be prepared.

After the required public review of this document is complete, the County will consider all comments received on the IS/MND, the entirety of the administrative record for the project, and whether to adopt the proposed MND and a Mitigation Monitoring and Reporting Program and approve the proposed project.

1.3 Project Information

1. Project title:	Dogtown Road over Maxwell Creek Bridge (*#40C0038* & *#40C0039*) Replacement Projects
2. Lead agency name and address:	Mariposa County Public Works Department 4639 Ben Hur Road Mariposa, CA 95338
3. Contact person and phone number:	Gary Brown, P.E., County Engineer 209.966.5356
4. Project location:	Both bridge replacement project sites are located along Dogtown Road which crosses over Maxwell Creek. Both sites are located near the Town of Coulterville, which is located within the northern portion of the County. Bridge #40C0039 is nearest the Town (within ½ mile) and the project site for Bridge #40C0038 is located 1.5 miles further east along Dogtown Road. <u>Bridge #40C0038:</u> The project site is located within Section 34, Township 2 South, Range 16 East, of the *Coulterville* U.S. Geological Survey (USGS) 7.5-minute quadrangle topographic map. The approximate center coordinates of the site are Latitude 37.716378 north and Longitude -120.189732 east using the World Geodetic System 1984 (WGS84) datum (USGS 1973). <u>Bridge #40C0039:</u> The project site is located within Section 2, Township 3 South, Range 16 East, of the *Coulterville* USGS 7.5-minute quadrangle topographic map. The approximate center coordinates of the site are Latitude 37.709771 north and Longitude - 120.174123 east using the WGS84 datum (USGS 1973).

5. Project sponsor's name and address:	Same As Lead Agency
6. General plan designation:	Bridge #40C0038: According to the County's General Plan Land Use map, areas north of Dogtown Road are designated as "Natural Resources" and areas south of Dogtown Road are designated as "Residential" in the vicinity of the project site. Bridge #40C0039: Similarly, areas north of Dogtown Road are designated as "Natural Resources" and areas south of Dogtown Road are designated as "Residential" in the vicinity of the project site.
7. Zoning:	Natural Resources & Rural Residential
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	The Mariposa County Public Works Department proposes to replace the existing bridges (*#40C0038* & *#40C0039*) on Dogtown Road which are required to ensure current safety and design standards for bridges and roadways are maintained. Replacement of the existing bridge (*#40C0038*) structure would occur with a single span, cast-in-place (CIP), post-tensioned concrete, slab bridge, approximately 60 feet long with two 9-foot-wide lanes, 2-foot-wide shoulders, and a 1'-5" wide concrete barrier, for a total width of 24'-10". With a soffit elevation of approximately 1,983.6, it appears there is more than 3 feet of freeboard with the existing bridge profile and the it may be lowered to smooth out the existing roadway profile Replacement of the existing bridge (*#40C0039*) structure would also occur with a single span, CIP, post-tensioned concrete, slab bridge, approximately 62 feet long with two 9-foot-wide lanes, 2-foot-wide shoulders, and a 1'-5" wide concrete barrier, for a total width of 24'-10". To increase the hydraulic capacity and to improve the roadway approach grades, the profile at the bridge will be raised approximately two feet.
9. Surrounding land uses and setting: Briefly describe the project's surroundings:	Both sites are located near the Town of Coulterville, within the northern portion of the County. Land uses surrounding the project sites consist of scattered low density residential uses, livestock grazing, woodlands, and open space uses. A residential unit is located roughly 200 feet north from the Bridge #40C0039 site. Scattered rural residential units are located near the Bridge #40C0038 site, however; the residential structures are not located along Dogtown Road, but are set back on the properties, away from the roadway and not entirely visible from the project site.
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)	California Department of Fish and Wildlife, Central Valley Regional Water Quality Control Board, State Water Resources Control Board, the United States Fish and Wildlife Service, and U.S. Army Corps of Engineers.
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of	The County has sent letters requesting AB 52 consultation to the following federally recognized tribes and California tribes: North Fork Mono Tribe Mr. Ron Goode

significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.	North Fork Rancheria of Mono Indians Mr. Gary Walker Southern Sierra Miwuk Nation Lois Martin, Chairperson Tuolumne Band of Me-Wuk Indians Kevin Day, Chairperson

1.4 Environmental Determination

1.4.1 Summary

The County has prepared an IS to assess the potential effects of the proposed project on the environment in the project area. The analysis of potential environmental impacts from the proposed project is based on data gathered for this project and other projects within the project vicinity. **Chapter 3** of this document contains the analysis and discussion of potential environmental impacts of the proposed project. Based on the issues evaluated in that chapter, it was determined that:

The proposed project would result in ***no impacts*** on the following issue areas:

- Agriculture and Forestry Resources
- Land Use and Planning
- Population and Housing
- Public Services
- Energy
- Mineral Resources
- Recreation
- Utilities and Service Systems

The proposed project would result in ***less-than-significant*** impacts on the following issue areas:

- Aesthetics
- Greenhouse Gas Emissions
- Air Quality

The proposed project would result in ***less-than-significant impacts*** after ***mitigation*** implementation on the following issue areas:

- Biological Resources
- Geology and Soils
- Hazards/Hazardous Materials
- Tribal Cultural Resources
- Cultural Resources
- Hydrology and Water Quality
- Noise and Transportation
- Wildfire

1.4.2 Mitigation Measures

Mitigation measures have been identified to reduce all potentially significant impacts of the proposed project. Implementation of identified mitigation measures would avoid or reduce all the proposed project's potentially significant impacts to a less than significant level. The mitigation measures are summarized below in **Table 1-1** by initial study topic.

Table 1-1. Summary of Mitigation Measures

Initial Study Topic	Mitigation Measure
Biological Resources	Mitigation Measure BIO-1: Conduct Preconstruction Species Surveys Mitigation Measure BIO-2: Conduct Environmental Awareness Training Mitigation Measure BIO-3: Install Temporary Fencing around Environmentally Sensitive Habitat Mitigation Measure BIO-4: Restore Temporarily Disturbed Areas Mitigation Measure BIO-5: Implement Water Quality Best Management Practices Mitigation Measure BIO-6: Provide Escape Ramps or Cover Open Trenches Mitigation Measure BIO-7: Restrict In-Stream Work to Low-Flow Period Mitigation Measure BIO-8: Monitor During Dewatering Activities Mitigation Measure BIO-9: Monitoring During Ground Disturbance and Vegetation Removal Mitigation Measure BIO-10: Install Catchment Tarps Prior to any Work Activity to the Bridges Mitigation Measure BIO-11: Rescue Stranded Aquatic Life Mitigation Measure BIO-12: Avoid the Spread of Invasive Plant Species
Cultural Resources	Mitigation Measure CUL-1: Discovery of Cultural Resources during Ground-Disturbing Activities Mitigation Measure CUL-2: Accidental Finding of Human Remains
Geology & Soils	Mitigation Measure GEO-1: Avoid and Minimize Impacts to Paleontological Resources
Hazards & Hazardous Materials	Mitigation Measure HAZ-1: Implement BMPs for Wildland Fire Prevention
Hydrology & Water Quality	Mitigation Measure BIO-2: Conduct Environmental Awareness Training Mitigation Measure BIO-3: Install Temporary Fencing around Environmentally Sensitive Habitat Mitigation Measure BIO-4: Restore Temporarily Disturbed Areas Mitigation Measure BIO-5: Implement Water Quality Best Management Practices Mitigation Measure BIO-7: Restrict In-Stream Work to Low-Flow Period Mitigation Measure BIO-10: Install Catchment Tarps Prior to any Work Activity to the Bridges
Noise	Mitigation Measure NOS-1: Construction Noise Reducing Best Management Practices
Transportation	Mitigation Measure TC-1: Prepare and Implement a Traffic Detour and Control Plan
Tribal Cultural Resources	Mitigation Measure CUL-1: Discovery of Cultural Resources during Ground-Disturbing Activities Mitigation Measure CUL-2: Accidental Finding of Human Remains
Wildfire	Mitigation Measure TC-1: Prepare and Implement a Traffic Detour and Control Plan Mitigation Measure HAZ-1: Implement BMPs for Wildland Fire Prevention

1.4.3 Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because 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 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. 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

September 2020
Date

Gary Brown, P.E.
Print Name

County Engineer
Title

Mariposa County Public Works Department
Agency

Chapter 2. Project Description

2.1 Introduction

The Mariposa County Public Works Department (County) proposes to replace two existing bridges (*#40C0038* and *#40C0039*) on Dogtown Road over Maxwell Creek (proposed project), considered by the most recent California Department of Transportation (Caltrans) bridge inspection reports as experiencing several structural deficiencies making the bridges eligible for replacement under the Highway Bridge Program (HBP). The replacement structures will be consistent with current roadway design standards.

To assess the environmental impacts of the proposed project, this chapter includes design details and the expected construction process (e.g., equipment types, timing, etc.). Background information, along with a general site description, and a list of related regulatory permits and approvals required for the project is also provided below.

2.2 Project Background and Setting

The primary purpose of the project is to meet current design and safety standards for bridges and roads while minimizing impacts to Maxwell Creek and surrounding habitats and land uses. Periodic inspections by Caltrans have classified the existing Bridge #40C0038 (built in 1958) as "Structurally Deficient", with a sufficiency rating of 35.3, making the bridge eligible for replacement under the HBP. Currently the existing bridge is experiencing several structural deficiencies (including a bent left lower chord, sections of timber missing from several of the bridge stringers, and some cracked welds in the bridge spacers). Additionally, the bridges narrow width has contributed to difficulties in evacuating the area during past fire events.

> The term "*Structurally Deficient*" or "*Functionally Obsolete*" are federal designations that mean a bridge isn't up to current building standards. Often this means the lanes are too narrow or there is no shoulder on the side of the bridge for stalled cars. Less frequently it means there could be structural problems or waterway adequacy issues serious enough to warrant a "high priority of corrective action." The Federal Highway Administration uses a scoring system to determine whether to label a bridge under these designations.

Similarly, the existing Bridge #40C0039 (built in 1944) is experiencing several structural deficiencies (including timber girders with checks and white rot) and the bridge's narrow width has contributed to difficulties in evacuating the area during past fire events. At the time the County submitted an application to Caltrans for the bridge to receive funding from the HBP, the most recent Caltrans bridge inspection report gave the bridge a sufficiency rating of 57.0 and a status of "Functionally Obsolete". This made the bridge eligible for rehabilitation as part of the HBP. However, the County provided justification for replacement, which Caltrans subsequently approved.

The proposed project is being implemented by Caltrans and the County as part of the HBP within the Federal State Transportation Improvement Program (FSTIP). Briefly, the purpose of the HBP is to replace or rehabilitate publicly owned bridges that the State and Federal Highway Administration have deemed significantly important but unsafe, due to structural deficiencies, physical deterioration, or

functional obsolescence. Federal funding is available to local agencies annually, which HBP utilizes to provide reimbursement for eligible projects. For the purposes of compliance with the National Environment Policy Act (NEPA), Caltrans is identified as the "Lead Agency", with the County identified as the "Lead Agency" for compliance with CEQA.

2.2.1 Environmental Setting

The proposed project is located on Dogtown Road in the northern portion of the County, with Bridge #40C0038 located 2 miles from the Town of Coulterville and Bridge #40C0039 located roughly ½ mile from the town (see **Figure 2-1**), near the road's intersection with Greeley Hill Road. The project sites are located in the *Coulterville*, California, U.S. Geological Survey (USGS) 7.5 minute topographic quadrangle map. Project site elevations range from 1,980 to 2,015 feet above mean sea level (amsl) for Bridge #40C0038 and slightly lower (1,750 to 1,870 feet amsl) for Bridge #40C0039.

Dogtown Road is a narrow paved rural road that connects (via Greeley Hill Road) rural unincorporated residents to the Town of Coulterville and the regional transportation network (State Routes [SR] 49 and 132). The existing roadway approaches are approximately 16 to 19 feet wide for both bridges. The latest Caltrans Bridge Inspection Reports lists the average daily traffic (ADT) to be 120 (2004), with a future ADT to be 407 (2029) vehicles per day. Based on this ADT, the functional classification, and terrain per American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets (2011)*, 30 mph is considered an appropriate design speed for this roadway. However, while no speed limit signs were observed during visits to the project sites, the existing alignment of the road allows for a speed of approximately 15 mph.

2.2.2 Surrounding Land Uses



Photo 2-1: Open space views from Bridge #40C0038.



Photo 2-2: Open space uses around Bridge #40C0039.

Land uses surrounding the proposed project sites consist of scattered low density residential uses, livestock grazing, and open space uses (see **Photos 2-1** and **2-2**). Adjoining properties are predominantly undeveloped and interspersed with scattered rural residences and oak woodlands. Residential structures are typically not located along Dogtown Road, but are set back on the properties, away from the roadway. The nearest residences to the Bridge #40C0038 project site are located 700 to 800 feet north and southwest of the bridge and the nearest residence to Bridge #40C0039 is roughly 200 feet north from the project site. Overviews of the project sites are shown in **Figures 2-2** and **2-3**.

Figure 2-1. Regional Location

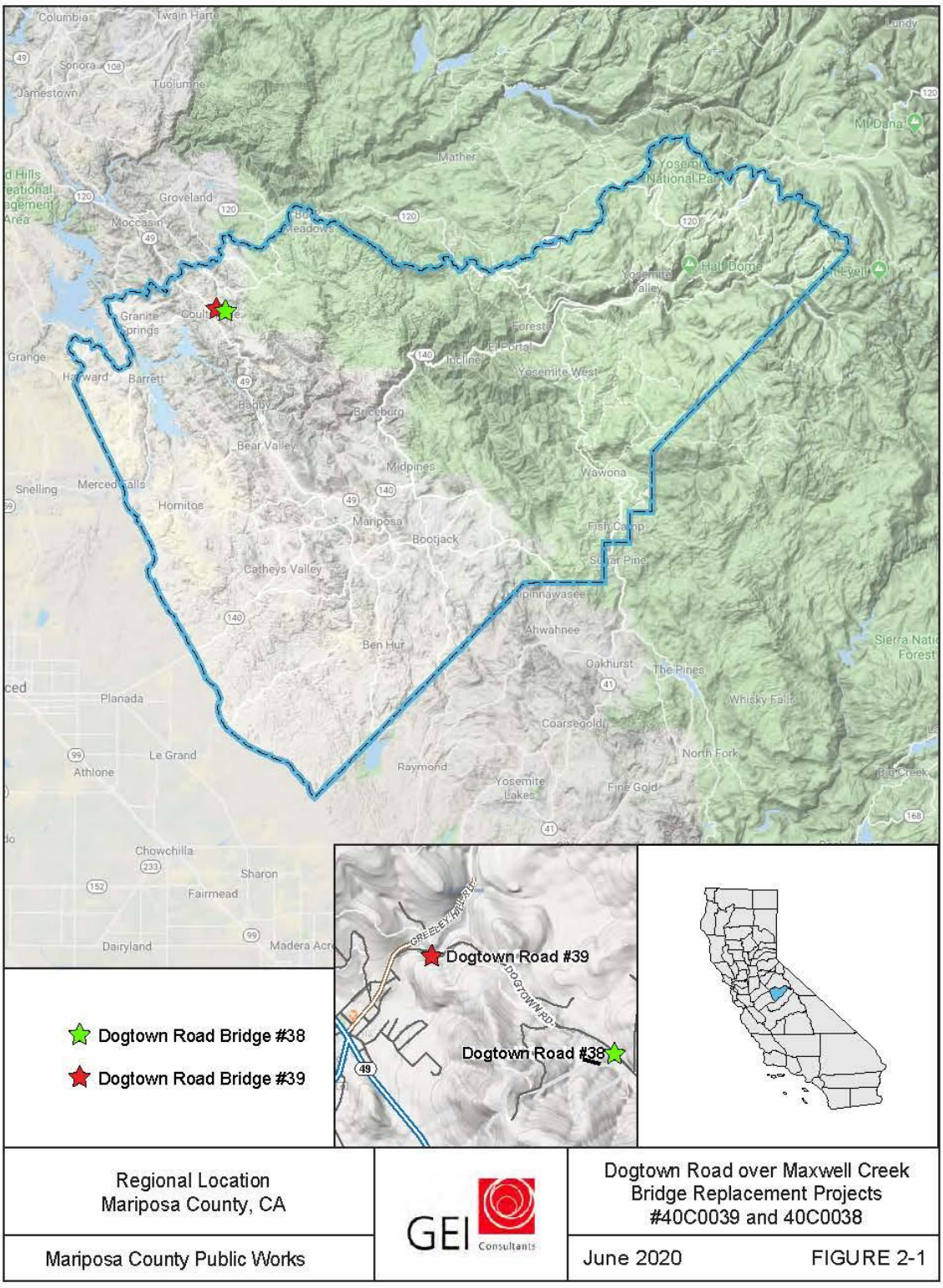


Figure 2-2. Project Site: Bridge #40C0038



Figure 2-3. Project Site: Bridge #40C0039



2.2.3 Land Use Designations and Zoning

According to the County's Land Use map, areas north of Dogtown Road are designated as "Natural Resources" and areas south of Dogtown Road are designated as "Residential" in the vicinity of the project sites (Mariposa County 2005).

2.3 Project Objectives

Specific objectives of the proposed project are to replace the existing Dogtown Road Bridges #40C0038 and #40C0039 with new structures that:

- Remove the existing structures, deemed Structurally Deficient and Functionally Obsolete, and reconstruct the bridges to accommodate safe vehicular and pedestrian access;
- Provide new structures that are wider to meet current design standards;
- Widen bridge approaches to accommodate wider structure; and
- Improve hydraulic conveyance in the creek.
- Minimizes environmental impacts to local resources.

2.4 Project Description

The proposed project would replace the existing bridges with new bridges in essentially the same locations. Overall, each construction site encompasses approximately 1 acre, with the construction footprint including the existing bridge, the portion of Maxwell Creek directly under the bridge deck, and areas adjacent to the existing bridge abutments (see **Figures 2-4** and **2-5** in **Section 2.7**, below). These figures (along with others referenced in this chapter) are oversized to show details of the construction process and are all located below in **Section 2.7** "**Oversized Figures**".

2.4.1 Description of Existing Bridge

The existing Bridge #40C0038, built in 1958, is a single span, steel pony truss bridge, approximately 67 feet long by 16 feet wide, with the bridge crossing Maxwell Creek supported by reinforced concrete, seat type abutments. The existing roadway approaches are approximately 19 feet wide.

The existing Bridge #40C0039, built in 1944, is a two span, timber stringer bridge, approximately 42 feet long by 17 feet wide, with the bridge crossing Maxwell Creek supported by a reinforced concrete pier wall and reinforced concrete seat type abutments. The existing roadway approaches are approximately 16 to 19 feet in width.

2.4.2 Construction Process

The primary activities and time periods that will comprise the construction process for the proposed project are summarized below in **Table 2-1**. The following section provides additional details regarding these activities.

Table 2-1. Proposed Construction Work Order and Schedule

Activity	Estimated Dates
Preconstruction Surveys & Environmental Awareness Training	March – May
Initial Site Construction Activities *Clearing project site and installing environmental fencing* *Install water diversion* *Install erosion control measures*	May – June
Construct Traffic Detour and Remove Existing Bridge Structures	June to August
Construction of New Bridge #40C0038 and #40C0039 *Footing construction at abutments* *Abutment construction* *Place cast-in-place slab and post-tensioned concrete slab* *Finish bridge deck and complete barriers* *Install scour countermeasures (RSP – if necessary)* *Reconstruct roadway approaches* *Restore project site*	July to October

Preconstruction Surveys and Environmental Awareness Training

Onsite preconstruction activities would be focused on completing the regulatory agency (see **Section 2.6** "**Required Permits and Approvals**" below) permitting conditions and implementation of the proposed project's mitigation monitoring and reporting plan. Key activities would focus on completion of the following:

- Nesting bird/raptor surveys.
- Preconstruction species surveys.
- Construction worker environmental awareness training.
- Restricting in-stream creek work to low-flow periods.

Initial Site Construction Activities

Prior to removal of the existing bridge structures, the initial stages of construction would include site clearing and vegetation removal, the installation of environmental fencing around sensitive trees and habitats, and implementation of a water diversion system to allow for a temporary traffic detour during the construction process. These initial construction stages are further described below.

Site Clearing, Vegetation Removal, and Tree Preservation Measures

Portions of the project site within and surrounding the Maxwell Creek area would require site clearing and vegetation removal to facilitate access to the existing bridge abutments and construction of the temporary traffic detour.

Maxwell Creek is an intermittent stream and would be considered a water of the U.S. and State because it has a well-defined ordinary high water mark (OHWM) and because water that flows within this stream drains to a navigable waterway. This habitat and its associated riparian vegetation communities qualify as natural communities of special concern, as they are regulated by state and federal resource agencies. **Table 2-2** summarizes temporary and permanent impacts on these vegetation communities. The

construction contractor will be responsible for the installation of environmental fencing, monitoring, and the protection of on-site sensitive habitats. These measures and the impacts presented below in the table are more fully described below in Chapter 3, **Section 3.6** "**Biological Resources**".

Table 2-2. Summary of Temporary and Permanent Effects by Vegetation Community

Vegetation Community	Permanent Impacts (Acres)	Temporary Impacts (Acres)
BRIDGE #40C0038		
Blue Oak – Foothill Pine Woodland	0.113	0.343
Valley Foothill Riparian	0.041	0.093
Intermittent Stream (Maxwell Creek)	0.034	0.112
Total	0.188	0.548
BRIDGE #40C0039		
Blue Oak – Foothill Pine Woodland	0.117	0.294
Valley Foothill Riparian	0.003	0.013
Intermittent Stream (Maxwell Creek)	0.016	0.091
Total	0.136	0.398

Source: *Natural Environment Study for Bridge #40C0038 and Bridge #40C0039* (Area West Environmental, Inc. 2020a, 2020b)

Proposed Dewatering Methods

The proposed project will not involve permanent modifications to the Maxwell Creek channel. However, site vegetation clearing, construction of a temporary traffic access route, bridge demolition and new bridge construction will require temporary access to the creek channel to remove the existing bridge pier/abutments, to install and remove temporary falsework supports, and to install new rock slope protection at the abutments (if necessary).

Depending on creek flows, a temporary creek diversion system will be necessary for the staged traffic access route and may be necessary during both demolition of the existing bridges and the construction of the new bridges. Since work would occur during the low flow season, only localized dewatering is anticipated at the abutment locations to control groundwater during abutment construction. The staged traffic access route will require temporary stream diversion through placement of several small culverts within the channel that are then covered with crushed rock to allow traffic to pass over small flows. The water diversion system may also include screened pumps, a temporary pipe network, siltation baffles, and cofferdams to route flow through and around the immediate work area, maintain dewatered conditions, and return flow to the downstream channel network without causing harm to biological resources or affecting water quality. Impacted waters located in the work area would either be treated per Storm Water Pollution Prevention Plan (SWPPP) requirements, or disposed of per Regional Water Quality Control Board (RWQCB) requirements.

Erosion Control

As a result of permitting conditions from the California Department of Fish and Wildlife (Section 1602 Streambed Alteration Agreement), the RWQCB, and as referenced in **Mitigation Measure BIO-5** "Implement Water Quality Best Management Practices", the construction contractor will be required to install temporary Best Management Practices (BMPs) (including silt fencing, straw bales/fiber rolls, etc.) to control any runoff or erosion from the project site into the surrounding waterways. These

temporary BMPs would be installed prior to any construction operations and would remain in place for the duration of the construction period. The removal of these BMPs would be the final operation, along with project site cleanup and restoration. BMPs would consist of all applicable federal, state, and local erosion and sediment control policies, as more fully described in Chapter 3, **Section 3.6** "**Biological Resources**" and **Section 3.12** "**Hydrology and Water Quality**".

Removal and Construction of the New Bridge

Removal or demolition of the existing bridges would involve typical concrete removal methods including saw-cutting and jackhammering, with segments of the superstructure broken into relatively large pieces and removed by a crane situated on the roadway.

Both replacement structures will be single span, cast-in-place, post-tensioned concrete, slab bridges (see **Figures 2-4** and **2-5** in **Section 2.7**, below). Bridge #40C0038 will have two 9-foot wide lanes with 2-foot wide shoulders and a 1-foot, 5-inch wide concrete barrier, for a total width of 24-feet, 10-inches. The total length of the replacement bridge will be 60-feet long. Bridge #40C0039 will also have two 9-foot wide lanes with 2-foot wide shoulders and 1-foot, 5-inch wide concrete barrier, for a total width of 24-feet, 10-inches. The total length of this replacement bridge will be slightly longer at 62-feet long. Based on the shallow rock conditions at the project sites, it is anticipated that the bridge will be founded on spread footings.

Bridge Abutments. Construction of the new bridge abutments will require two excavation areas approximately 30 feet wide by 15 feet long by 10 feet deep. Skewed abutments will improve the hydraulic conveyance at each bridge site.

Bridge Profile. Peak flows for Maxwell Creek within the project sites were determined using the USGS regional regression equations and a hydraulic analysis (incorporating these flows) was performed using the U.S. Army Corps of Engineers' (USACE) Hydraulic Engineering Center's River Analysis System (HEC-RAS). This analysis shows the 100 year and 50 year water surface elevations (WSE) to be 1,979.6 and 1,978.9, respectively for Bridge #40C0038. For Bridge #40C0039, the analysis shows the 100 year and 50 year WSE's to be 1,761.0 and 1,759.3, respectively.

Projects utilizing federal funds must conform to the Caltrans/Federal Highway Administration (FHWA) design criteria, which requires bridges to be designed to pass the 100-year design discharge and the 50-year design discharge with sufficient freeboard to accommodate debris (Caltrans design criteria recommends 2 feet). With a soffit elevation of approximately 1,983.6 it appears there is more than 3 feet of freeboard over the 50-year WSE with the current profile of Bridge #40C0038. Consequently, the proposed project includes lowering the existing profile at this bridge location to smooth out the existing roadway profile.

With a soffit elevation of approximately 1,758.5, the existing Bridge #40C0039 does not pass the 100-year or the 50-year WSE by 3.4 feet and 2.7 feet, respectively. To increase the hydraulic capacity and to improve the roadway approach grades, the profile at the Bridge #40C0039 location will be raised approximately two feet. This raise will reduce the approach grades from a non-standard 14% to a standard 12%.

Roadway Approaches, Railing, and Bridge Width. The proposed road improvements will be designed to meet or exceed AASHTO's Policy on Geometric Design of Highways and Streets (Greenbook). With the existing roadway only being between 16 and 19 feet wide at the bridge locations, the proposed

project will include a widening of the roadway on both sides of the bridges to transition from the narrow road to the wider bridges (total width of 24-feet, 10-inches. For Bridge #40C0038, these roadway transitions are anticipated to occur approximately 210 feet on the west end of the bridge and approximately 115 feet on the east end of the bridge. For Bridge #40C0039, these roadway transitions are anticipated to occur approximately 160 feet west and 195 feet east of the ends of the bridge.

In-Channel Work. As previously described, some work will be necessary within the Maxwell Creek channel to remove the existing piers and abutments, construct new abutments, and install new rock slope protection at the abutment locations (if necessary). Construction excavations within the creek channel would be restricted to as near the banks of the creek to the maximum extent practicable, and work conducted in the creek bed would be restricted to the summer/fall months when the creek is flowing at its lowest point.

Utility Relocation

The proposed project will not require the relocation of any existing utilities at the sites.

Right of Way

Temporary construction easements (primarily for equipment staging and the temporary detour) will be required from several of the parcels that comprise the project footprint (shown in **Figures 2-4** and **2-5**). A small amount of permanent right-of-way acquisition will be required to accommodate the wider roadway approach and bridge structure.

2.4.3 Construction Schedule, Site Access, and Equipment Staging

The proposed project is scheduled for construction during the 2022/2023 timeframe, with much of the work to take place during the summer months within the waterway of Maxwell Creek when flows are at their lowest levels. Primary construction activities would take place once the existing bridges are closed and would follow a simple phased process: construction temporary traffic detour, bridge demolition, followed by new bridge construction, with foundation work in the creek followed by superstructure construction. Construction staging areas will be located on and adjacent to the bridge approaches.

The proposed order of work and associated schedule was previously provided above in **Table 2-1**. A general list of equipment that may be used during the construction process is identified below in **Table 2-3**.

With the shortest available detour route around the project sites being 12 miles in length, it was determined that a full road closure during the project's construction schedule was not feasible. Also, the existing bridge types (timber deck/stringers and a truss bridge) do not facilitate staged construction or a partial removal of the existing bridge structure necessary for staged/one-way traffic use. Therefore, during construction a temporary detour (with a low water crossing) adjacent to the existing bridge will need to be utilized (see **Figures 2-6** and **2-7**). This will keep the road open throughout the duration of construction and will consist of the following stages:

- Construct adjacent detour utilizing small diameter culverts covered with crushed rock to allow flows from minor storms to pass;
- Shift traffic to the detour;

- Remove existing bridge;
- Construct new structure; and
- Remove traffic detour.

This traffic detour will need to be in use for approximately 3 - 4 months.

Table 2-3. Proposed Equipment and Purpose

Equipment	Construction Purpose
Dump Truck	Fill material delivery/surplus removal
Excavator	Soil manipulation
Front-end Loader	Dirt or gravel manipulation
Grader	Ground leveling
Haul Truck	Earthwork construction; clearing and grubbing
Paver	Roadway paving
Roller	Earthwork and compacting
Scraper	Earthwork construction; clearing and grubbing
Truck with Seed Sprayer (hydroseeded)	Erosion control and landscaping
Water Truck	Earthwork construction; clearing and grubbing
Screen Pumps, Pipe Network, Siltation Baffles, Cofferdam, or Culvert	Equipment for dewatering

2.5 Required Permits and Approvals

Major permits or approvals that would likely be required for the proposed project are identified below in **Table 2-4**.

Table 2-4. Project Related Permits and Approvals

Agency	Permit/Approval
U.S. Army Corps of Engineers (USACE)	Clean Water Act Section 404 Permit for discharge of fill to Waters of the U.S.
U.S. Fish and Wildlife Service (USFWS)	Endangered Species Act (ESA) compliance; Section 7 consultation. Consultation will take place through the Caltrans NEPA approval process.
State Historic Preservation Office	Section 106 of the National Historic Preservation Act. Consultation will take place through the Caltrans NEPA approval process.
California Department of Fish and Wildlife (CDFW)	Section 1602 Streambed Alteration Agreement.
Regional Water Quality Control Board (RWQCB)	Clean Water Act (CWA) Section 401 Certification and Clean Water Act Section 402 National Pollutant Discharge Elimination System Stormwater Permit for General Construction.
County of Mariposa	Design and CEQA review from County.

2.6 Mitigation and Best Management Practices

Various environmental control measures will be required by the proposed project and incorporated into the project's construction plans and specifications. These may include the use of erosion control and silt fencing BMPs consistent with applicable federal, state, and local regulations Additional BMPs would be enforced to maintain site appearance, control dust, and provide noise attenuation if needed. The following biological and cultural resources technical reports have been completed which identify measures that would be included in the contract documents to address potential impacts, including the need for preconstruction nesting bird surveys, revegetation measures, and other species avoidance measures. Other control measures will include water quality and environmental spill contingency plans for work near the creek channel.

2.7 Oversized Figures

This section provides the following oversized figures which illustrate the construction process described above in **Section 2.4** "**Project Description**": **Figures 2-8** and **2-9** identify the proposed project's impacts to vegetation communities within the biological study area for each bridge. These figures are more fully described in Chapter 3, **Section 3.6** "**Biological Resources**".

- Figure 2-4. Bridge #40C0038 - Proposed Project Site Plan (Including Area of Potential Effect)
- Figure 2-5. Bridge #40C0039 - Proposed Project Site Plan (Including Area of Potential Effect)
- Figure 2-6(a-c). Bridge #40C0038 - Proposed Road Detour: Stages 1-3
- Figure 2-7(a-c). Bridge #40C0039 - Proposed Road Detour: Stages 1-3
- Figure 2-8. Bridge #40C0038 – Permanent and Temporary Vegetation Community Impacts
- Figure 2-9. Bridge #40C0039 – Permanent and Temporary Vegetation Community Impacts

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Figure 2-4. Bridge #40C0038 - Proposed Project Site Plan (Including Area of Potential Effect)

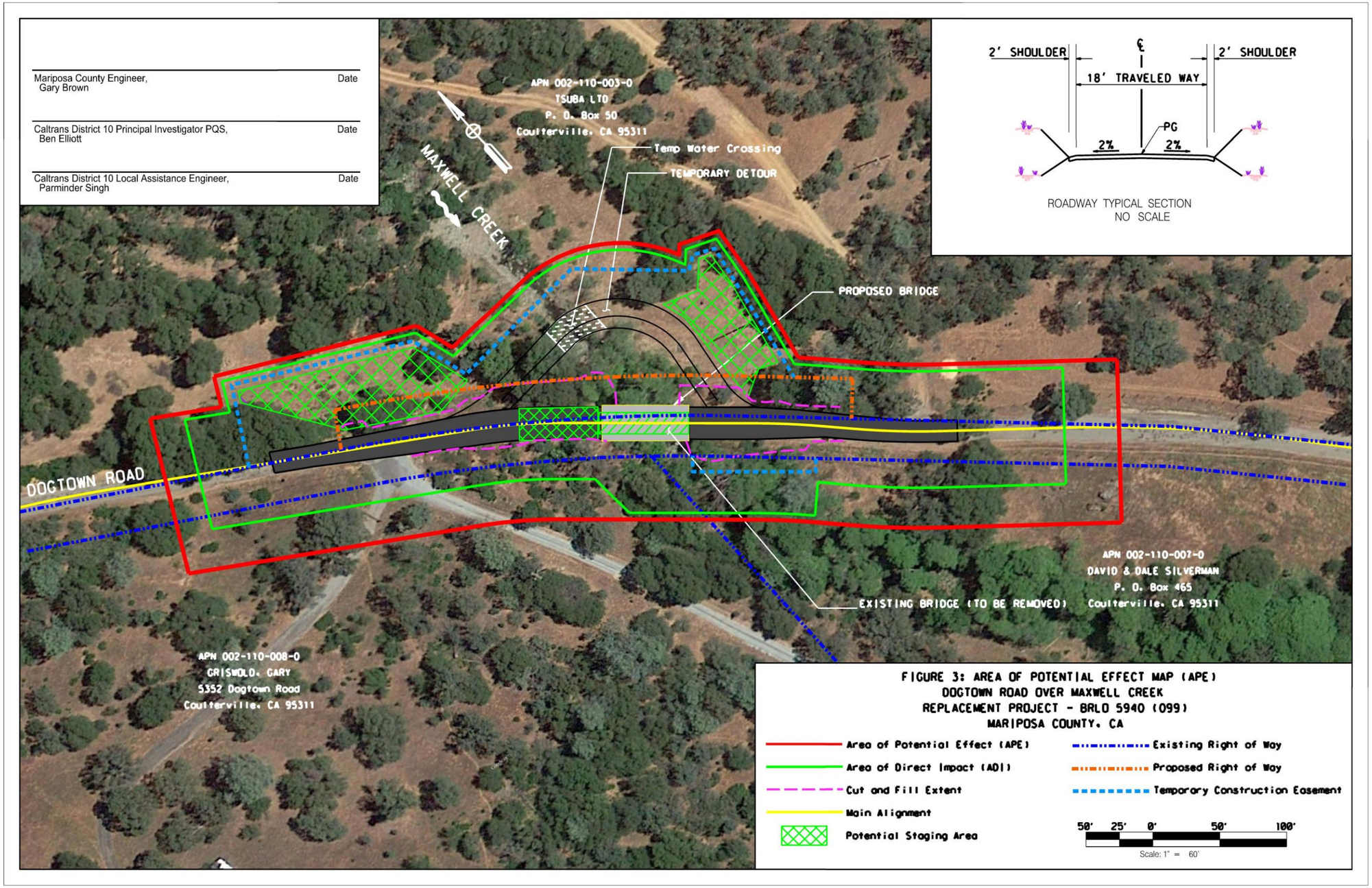


Figure 2-5. Bridge #40C0039 - Proposed Project Site Plan (Including Area of Potential Effect)

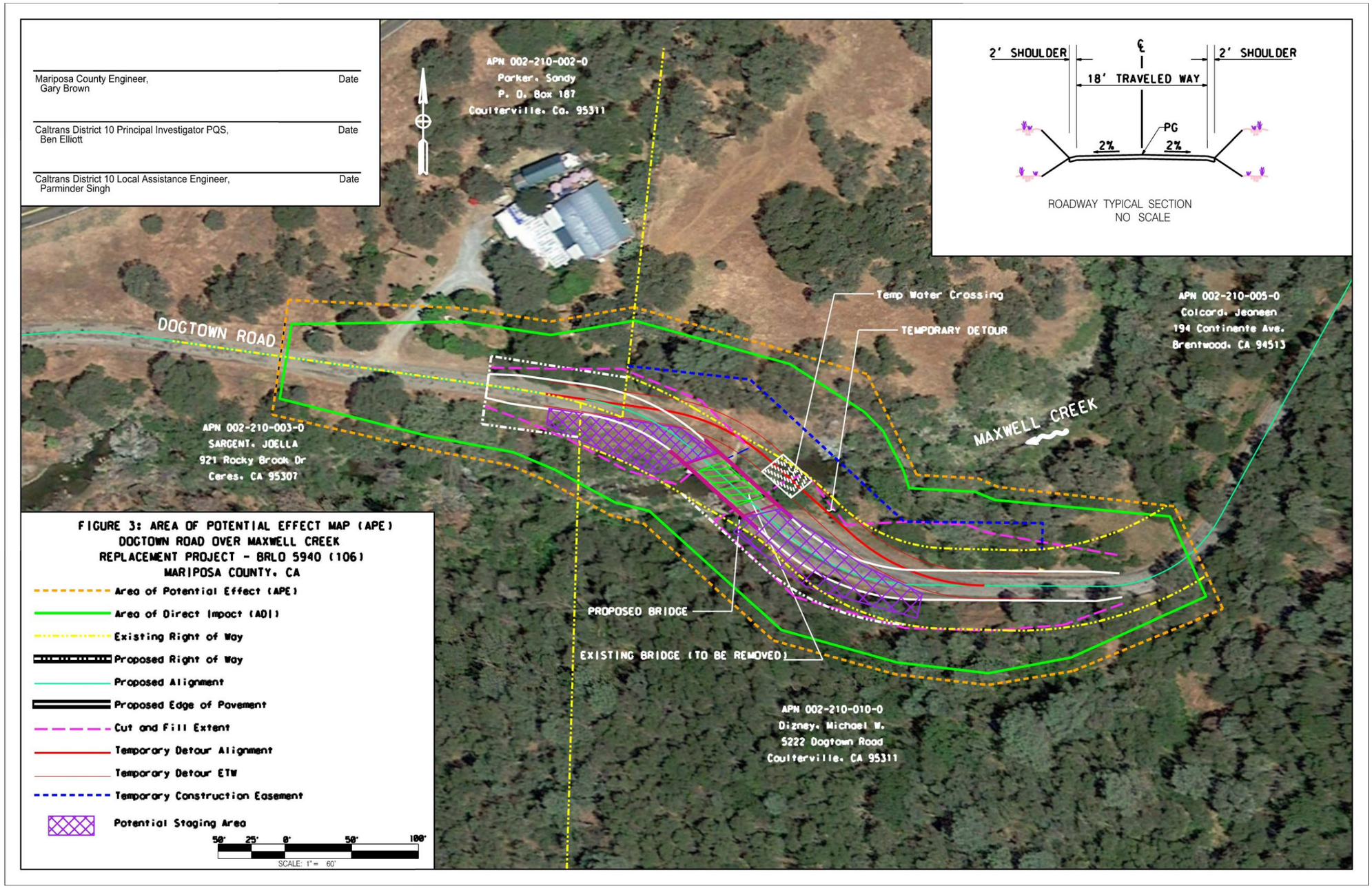


Figure 2-6a. Bridge #40C0038 - Proposed Road Detour: Stage 1

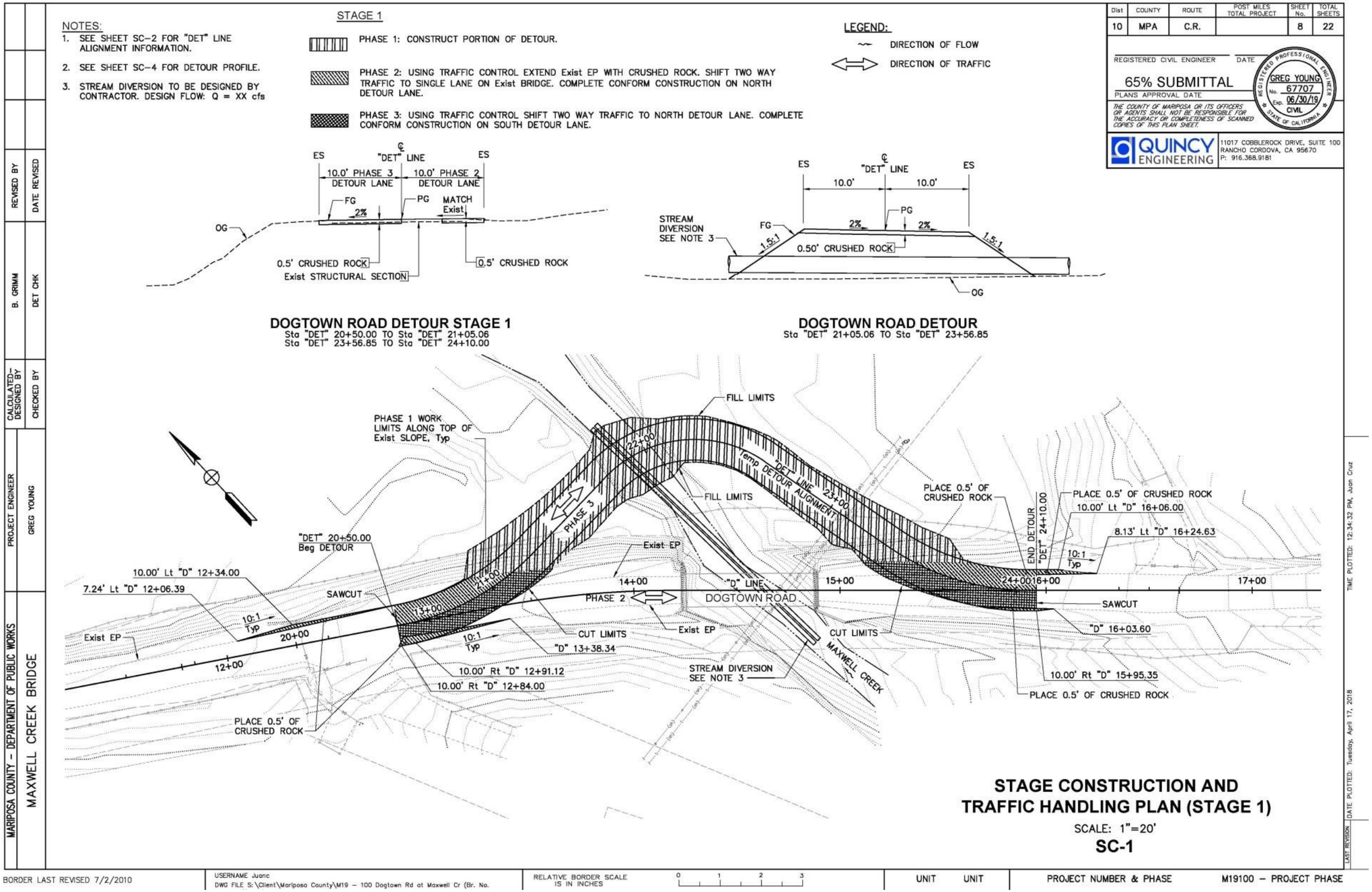


Figure 2-6b. Bridge #40C0038 - Proposed Road Detour: Stage 2

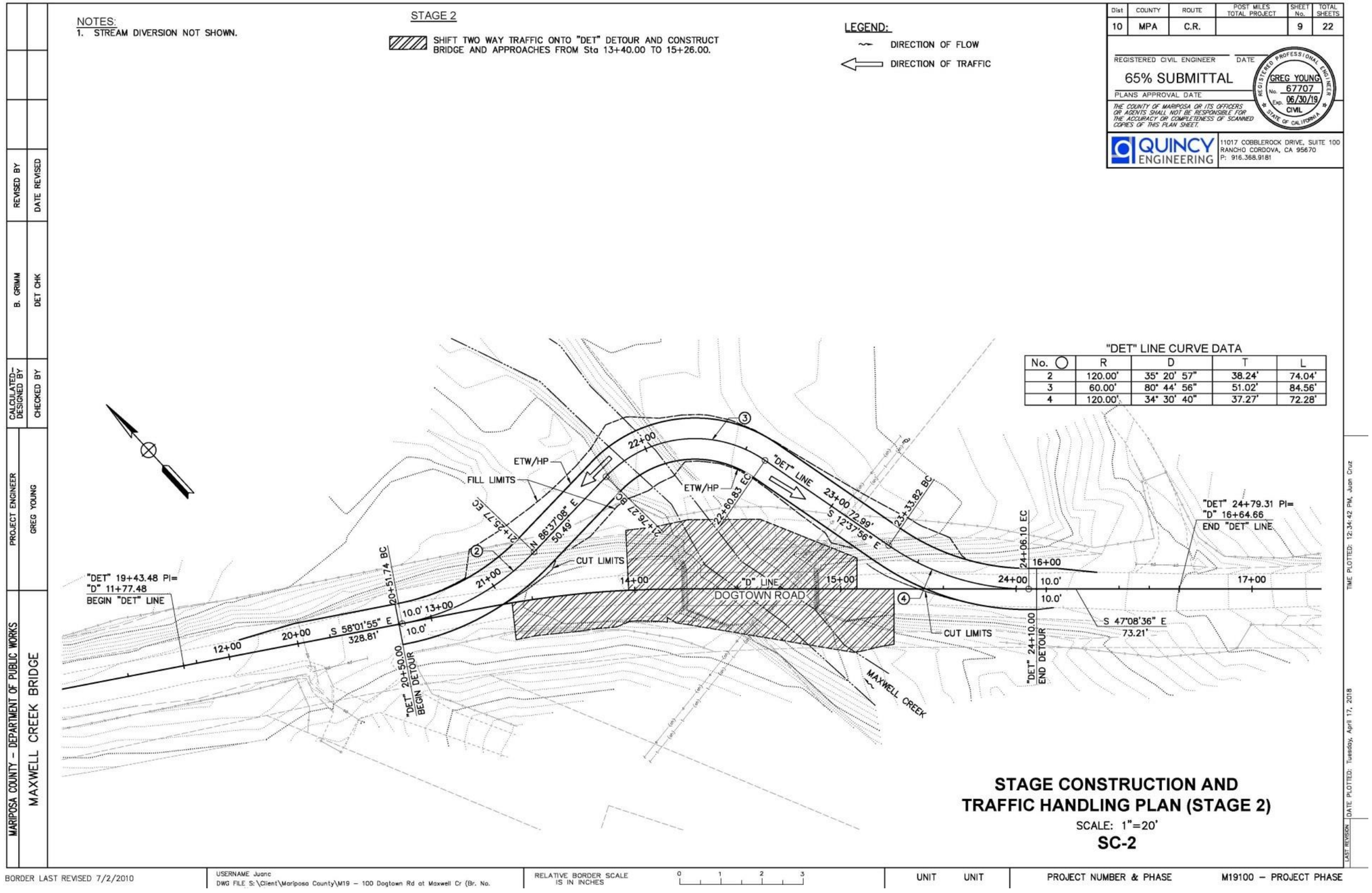


Figure 2-6c. Bridge #40C0038 - Proposed Road Detour: Stage 3

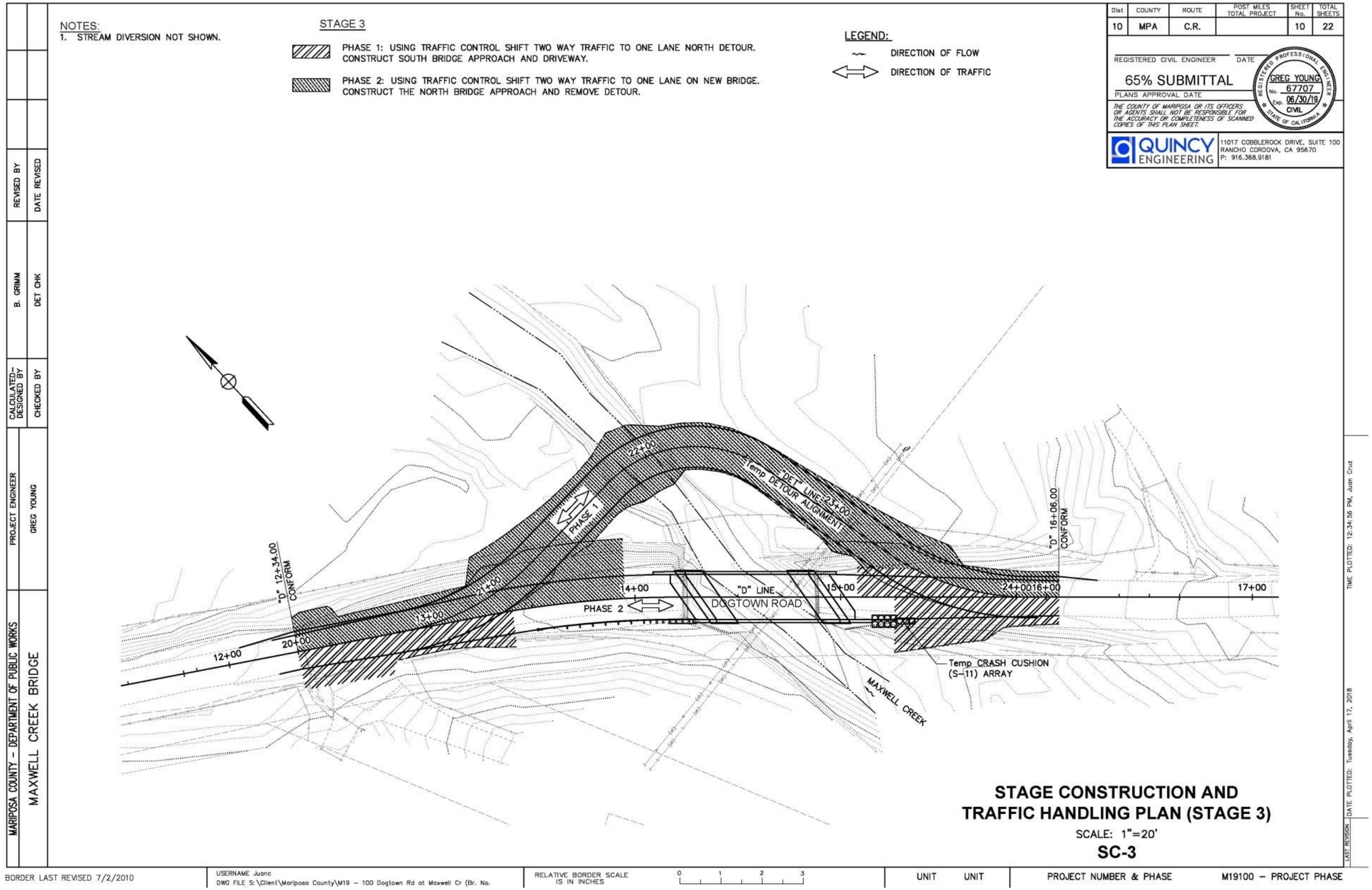


Figure 2-7a. Bridge #40C0039 - Proposed Road Detour: Stage 1

NOTES:
1. SEE SHEET SC-2 FOR "DET" LINE ALIGNMENT INFORMATION.
2. SEE SHEET SC-4 FOR DETOUR PROFILE AND SUPERELEVATION.
3. STREAM DIVERSION TO BE DESIGNED BY CONTRACTOR. DESIGN FLOW: Q = XX cfs

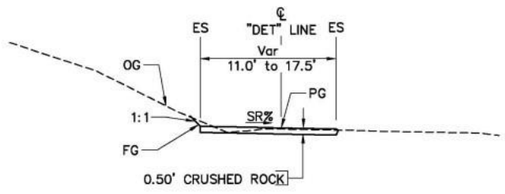
STAGE 1
PHASE 1: CONSTRUCT PORTION OF DETOUR.
PHASE 2: USING TRAFFIC CONTROL COMPLETE CONFORM CONSTRUCTION ON DETOUR LANE.

LEGEND:
DIRECTION OF FLOW
DIRECTION OF TRAFFIC

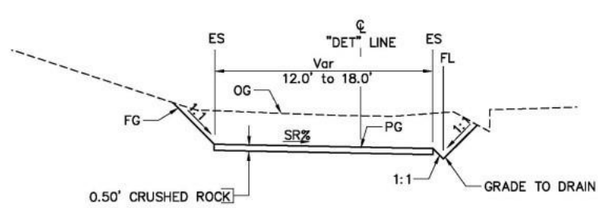
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	MPA	C.R.		7	21

REGISTERED CIVIL ENGINEER DATE
65% SUBMITTAL
PLANS APPROVAL DATE
THE COUNTY OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER — GREG YOUNG No. 67707 Exp. 6/30/19 CIVIL — STATE OF CALIFORNIA

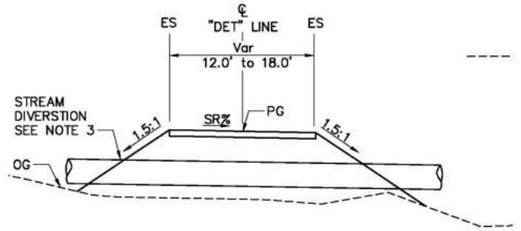
QUINCY ENGINEERING
11017 COBBLEROCK DRIVE, SUITE 100
RANCHO CORDOVA, CA 95670
P: 916.368.9181



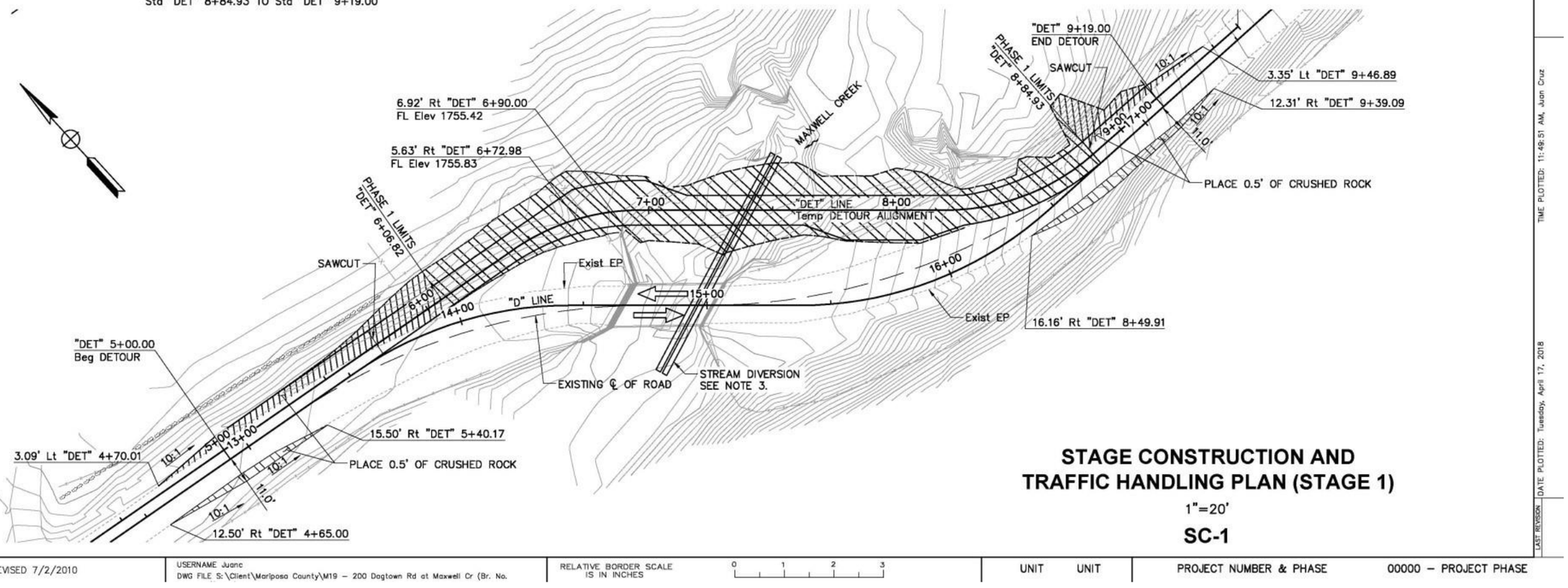
DOGTOWN ROAD DETOUR
Sta "DET" 5+00.00 TO Sta "DET" 6+72.00
Sta "DET" 8+84.93 TO Sta "DET" 9+19.00



DOGTOWN ROAD DETOUR
STA "DET" 6+72.00 TO STA "DET" 6+90.00



DOGTOWN ROAD DETOUR
STA "DET" 6+90.00 TO STA "DET" 9+19.00



STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN (STAGE 1)
1"=20'
SC-1

CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY — J. CRUZ
DATE REVISED — DET CHK
PROJECT ENGINEER — GREG YOUNG
MARIPOSA COUNTY – DEPARTMENT OF PUBLIC WORKS
MAXWELL CREEK BRIDGE
LAST REVISION
DATE PLOTTED: Tuesday, April 17, 2018
TIME PLOTTED: 11:49:51 AM, Juan Cruz

BORDER LAST REVISED 7/2/2010
USERNAME Juanc
DWG FILE S:\Client\Mariposa County\M19 – 200 Dogtown Rd at Maxwell Cr (Br. No.
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT UNIT
PROJECT NUMBER & PHASE 00000 – PROJECT PHASE

Figure 2-7b. Bridge #40C0039 - Proposed Road Detour: Stage 2

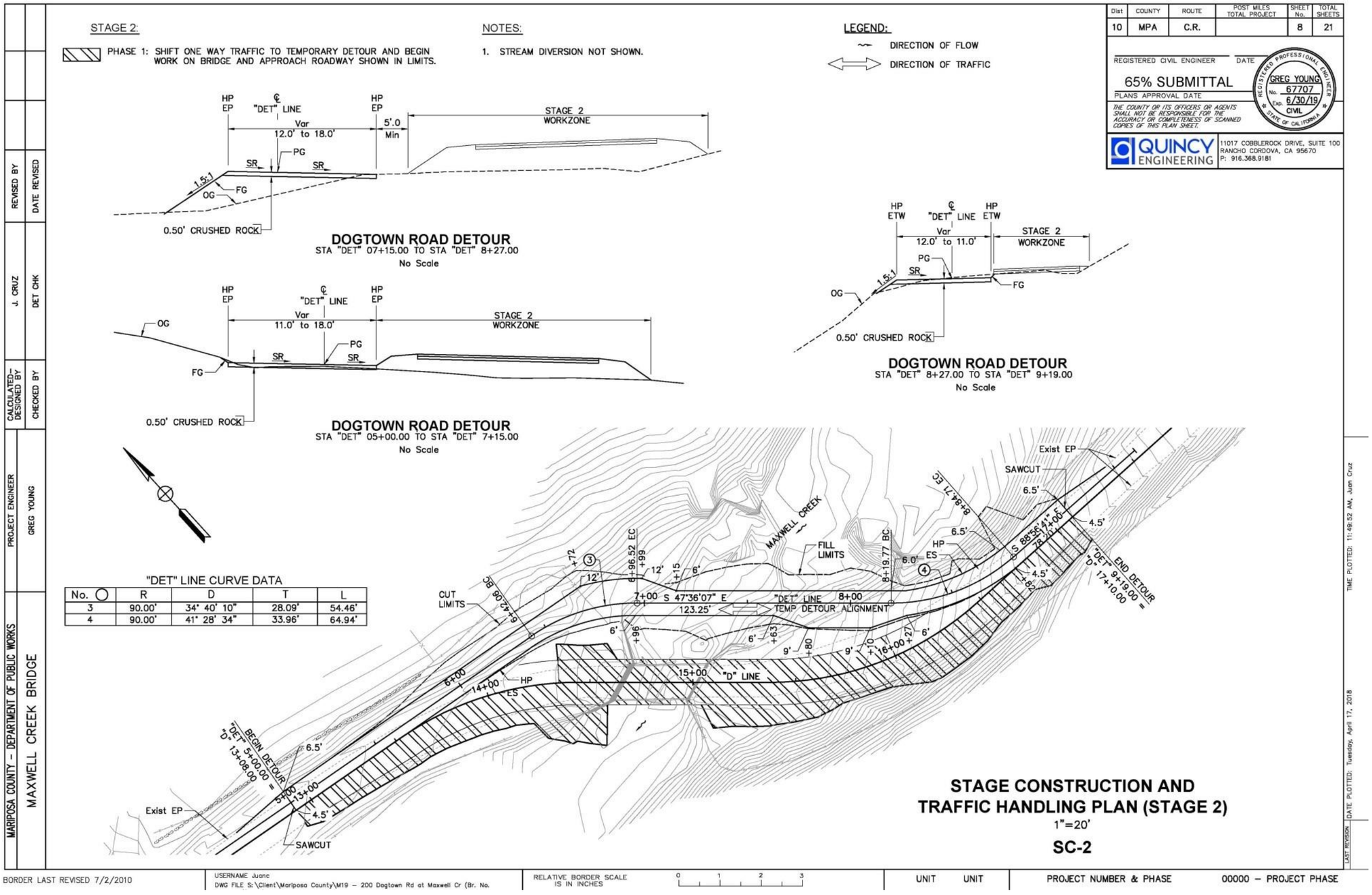
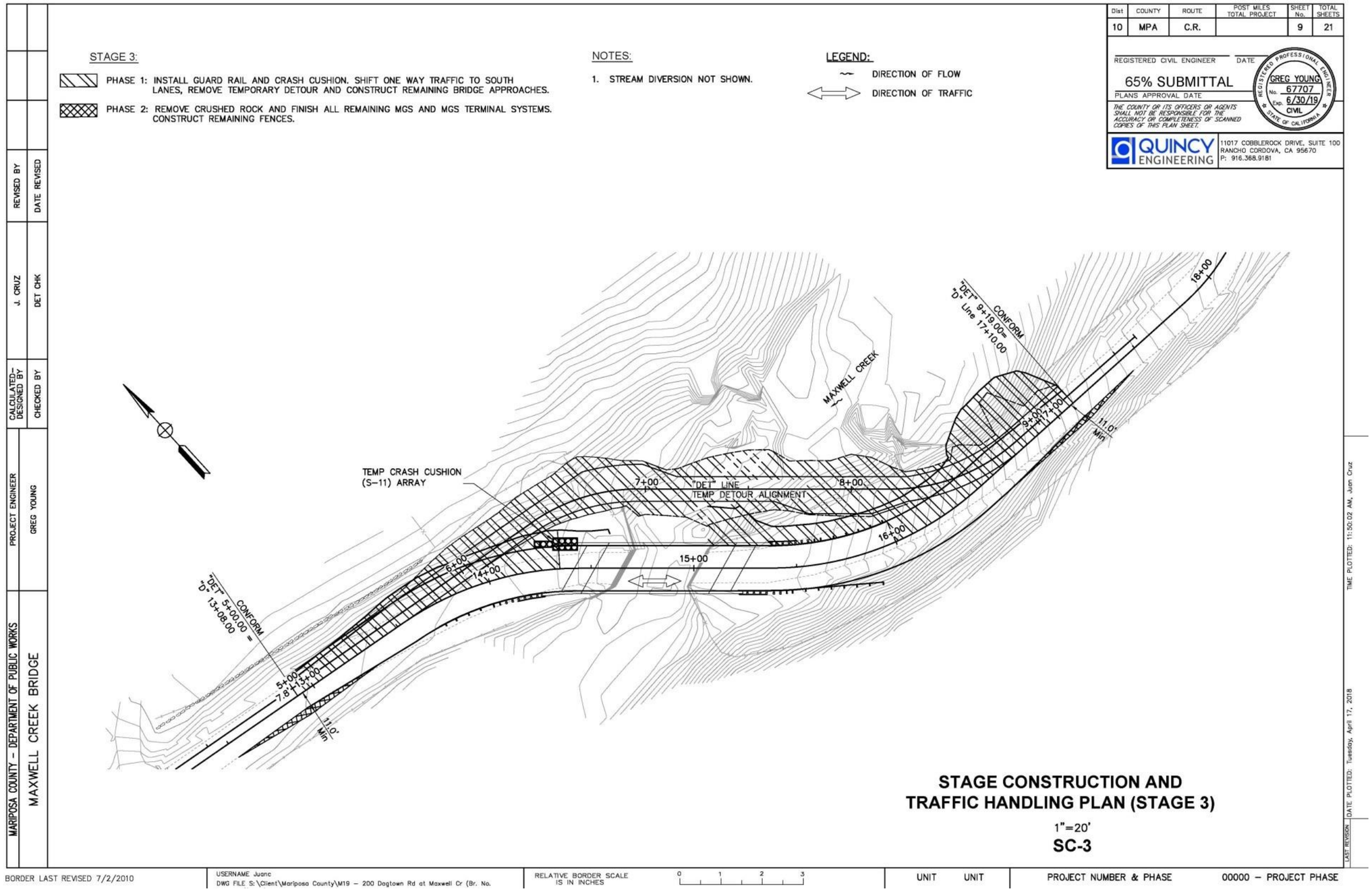


Figure 2-7c. Bridge #40C0039 - Proposed Road Detour: Stage 3



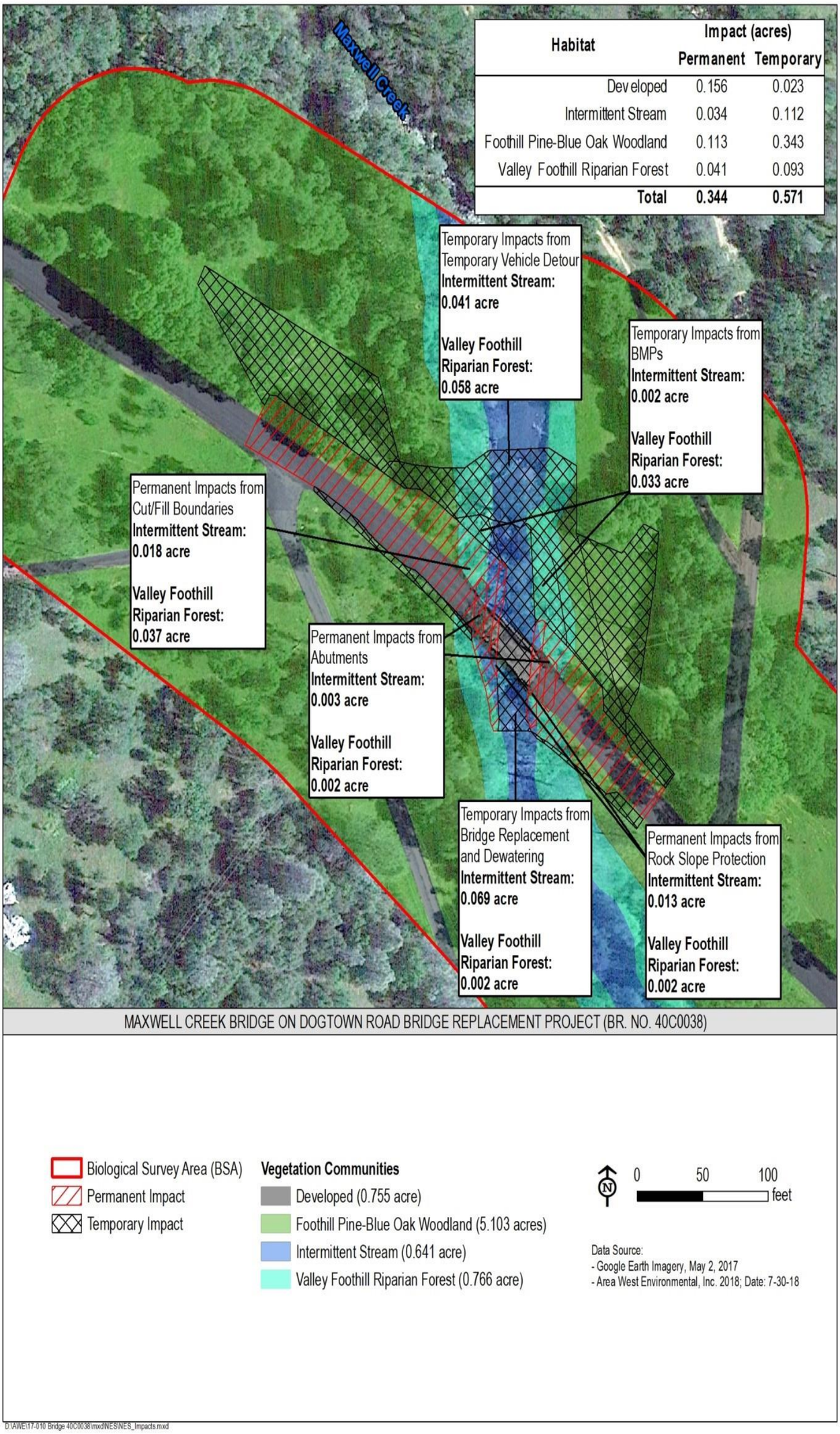
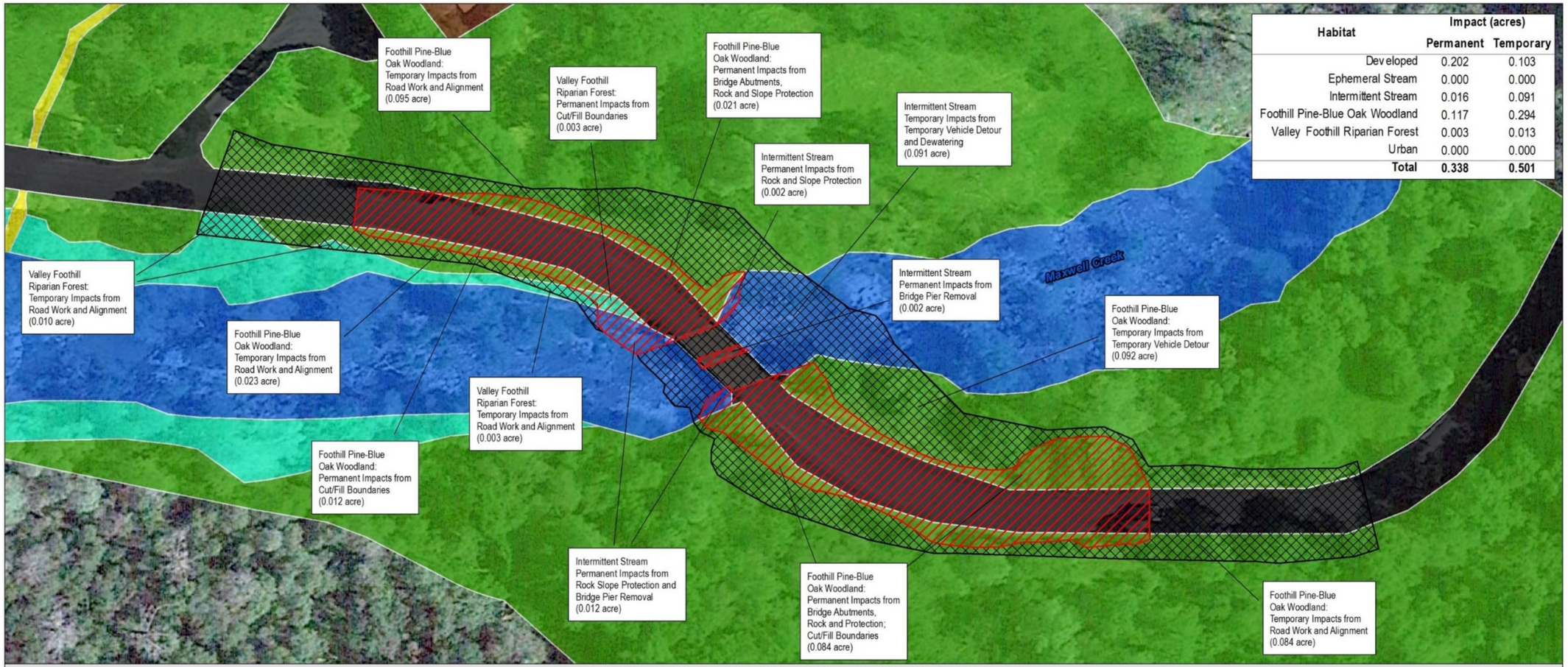


Figure 2-8. Bridge #40C0038 - Permanent and Temporary Vegetation Community Impacts

Figure 2-9. Bridge #40C0039 – Permanent and Temporary Vegetation Community Impacts



Habitat	Impact (acres)	
	Permanent	Temporary
Developed	0.202	0.103
Ephemeral Stream	0.000	0.000
Intermittent Stream	0.016	0.091
Foothill Pine-Blue Oak Woodland	0.117	0.294
Valley Foothill Riparian Forest	0.003	0.013
Urban	0.000	0.000
Total	**0.338**	**0.501**

MAXWELL CREEK BRIDGE ON DOGTOWN ROAD BRIDGE REPLACEMENT PROJECT (BR. NO. 40C0039)

Vegetation Communities

- Developed (0.543 acre)
- Ephemeral Stream (0.026 acre)
- Foothill Pine-Blue Oak Woodland (4.734 acres)
- Intermittent Stream (1.062 acres)
- Urban (0.149 acre)
- Valley Foothill Riparian Forest (0.299 acre)

0 25 50 feet

Data Source:
-Google Earth Imagery, May 2, 2017
- Area West Environmental, Inc. 2018; Date: 12-7-18

NOTE:
Sites 1, 3 and 6 will be accessed through an existing vault and will not require ground disturbance, therefore they are not included as part of the project.

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Chapter 3. Initial Study Checklist

3.1 Introduction

In compliance with the CEQA Guidelines, the County has prepared the following initial study checklist to analyze the environmental impacts of the proposed project. This checklist uses Appendix G of the CEQA Guidelines to provide a basis for the analysis of the resource areas addressed. An evaluation of potential impacts and mitigation measures to reduce potentially significant impacts is presented in the analysis.

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. However, all impacts would be mitigated to a less than significant level as indicated on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Energy
☒	Geology/Soils	☐	Greenhouse Gas Emissions	☐	Hazards and 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

3.2 Evaluation of Environmental Impacts

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources 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 will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Operations and maintenance impacts of the proposed project are routine, minimal, and essentially the same as current operations and maintenance of the existing facilities. There is no

potential for a significant impact to any resource category from project operations and maintenance of the existing and proposed facilities.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "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. “Beneficial impact” is also identified where appropriate to provide full disclosure of any benefits from implementing the proposed project.

4) "Less-than-Significant Impact with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-than-Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063[c][3][D]). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are a "Less-than-Significant Impact with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

   Significance thresholds are identified for certain resources, but others are not explicitly identified because there is clearly no impact or the checklist question itself serves as the significance threshold.

3.3 Aesthetics

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
I. AESTHETICS.					
Except as provided in PRC Section 21099, **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) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒	☐

3.3.1 Environmental Setting

Visual Character

The project sites are located along Dogtown Road. At these locations, the roadway is a narrow two lane roadway traversing an area characterized as relatively flat between gently rolling hills comprised of dense oak woodland and grassland habitats. Natural features also include Maxwell Creek and its associated riparian vegetation. While some scattered low density residential uses are interspersed within the oak woodland and grassland areas, the residential structures are typically set back on the properties and not visible from the roadway. Public views of the project sites are generally limited to those from motorists traveling along Dogtown Road.

Dogtown Road is a narrow paved rural road that connects (via Greeley Hill Road) rural unincorporated residents to the Town of Coulterville and the regional transportation network (SR 49 and SR 132). Traffic volumes on Dogtown Road are considered low, with an estimated 120 ADT (2004) and a future ADT to be 407 (2029) vehicles per day. While no speed limit signs were observed during visits to the project sites, the existing alignment of the road allows for a speed of approximately 15 mph. Vehicle trips are largely the result of local residential uses, some limited agricultural uses, and fire/emergency response vehicles.

Viewer Exposure and Sensitivity

Viewer sensitivity is a measure of viewer exposure and viewer awareness. Factors that affect the level of viewer concern are described in **Table 3-1**.

Table 3-1. Viewer Sensitivity

Factor	Characteristics
Type of and Frequency of Use	Daily use from motorists traveling along Dogtown Road to local retail/employment opportunities and the larger regional roadway network.
Public Interest	Low (limited views outside of immediate area). No public view points.
Adjacent Land Uses	Open Space Land Uses.

Dogtown Road serves predominantly rural residential-related vehicle traffic. Typical motorist views (looking primarily west) are shown below in **Photos 3-1** and **3-2**. Foreground views for motorists are focused on the bridge approaches and the surrounding vegetation along the roadway. Background views are focused on the surrounding vegetated hillsides with oak woodland and grassland landscapes. Viewer sensitivity for these residential commuter motorist trips travelling along Dogtown Road is considered low due to frequency and regularity of use by these travelers and the lack of public view points.



Photo 3-2: Typical Motorist View Facing West – Bridge #40C0039

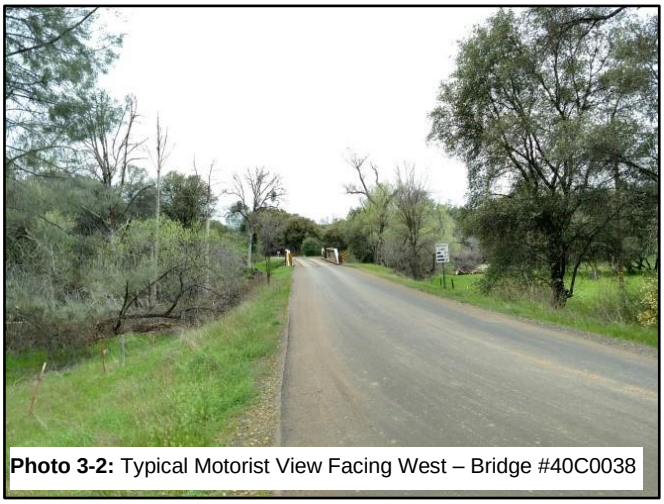


Photo 3-2: Typical Motorist View Facing West – Bridge #40C0038

Scenic Routes and Vistas

According to the Caltrans State Scenic Highway Program, the project sites are not located on or near a state designated scenic highway. The nearest scenic route (included in the Caltrans 2018 Scenic Highway Mapping System) is State Route 49, located approximately one mile southwest from the Bridge #40C0039 site.

Light and Glare

Light pollution is defined as any adverse effect of artificial light, including sky glow, glare, light trespass, light clutter, decreased visibility at night, and energy waste. Existing sources of light and glare are generally from motorists travelling on Dogtown Road and stationary sources from the interspersed rural residences located throughout the surrounding landscapes.

3.3.2 Discussion

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

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 sites commonly associated with scenic vistas (peaks, overlooks, ridgelines, etc. (Caltrans 2018); however, the Mariposa County General Plan Background Report states that the vistas of forested rolling hills and valleys are an important part of the County's scenic character. Because the project sites are within a narrow area with a limited viewshed dominated by the existing roadway alignment and the surrounding vegetated landscapes (see **Photos 3-1** and **3-2**, above), the project sites would not be considered a scenic vista.

Construction of the proposed project would involve vegetation removal, grading and other earthwork, concrete work, and related construction activities within the 1-acre construction sites. However, construction activities would be temporary (single construction season) and the project sites would be restored and revegetated using native vegetation (see **Mitigation Measure BIO-4** in **Section 3.6** "**Biological Resources**") as part of the project. The project sites are not considered scenic vistas and the proposed project would not be visible from a designated scenic vista. Consequently, ***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?

The project sites are not located on or near a state designated scenic highway and will not result in damage to scenic resources within a state scenic highway. Consequently, ***no impact*** would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?

Construction. Construction is anticipated to take approximately 5 to 6 months. During construction, the following activities and equipment may be easily seen in the project vicinity:

- Work crews accessing the project sites.
- Removal of vegetation from the project sites.
- Large pieces of equipment used for moving earth; trenching ditches; transporting, lifting, and placing equipment; hauling concrete; spraying water to control dust; and other construction activities.

Construction activities would be temporary and limited to daylight hours. Due to intervening topography and vegetation, and because the project sites are located adjacent to larger parcels, 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 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 bridge approaches and removing existing trees and vegetation.

During construction, both the temporary staging areas and traffic detour locations would be cleared, as needed. These areas are located on private property and were selected because of their lack of existing native vegetation 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 project sites would be restored and revegetated using native vegetation (see **Mitigation Measure BIO-4** in **Section 3.6** "**Biological Resources**") as part of the construction process at each bridge location. The County is coordinating with the various property owners and agrees to return the staging and traffic detour areas to a state acceptable by the property owners. 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 proposed 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 Dogtown Road. Consequently, this impact is ***less-than-significant***, with no additional mitigation measures required.

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

Currently, the only source of substantial light or glare in the project sites are the relatively few vehicles traveling along Dogtown 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 Dogtown Road; therefore, an increase in light and glare from additional vehicles traveling through the area is not expected. The proposed 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). Consequently, the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views. ***No impact*** would occur.

3.4 Agriculture and Forestry Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
II. AGRICULTURE AND FORESTRY RESOURCES.					
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the project:**					
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 PRC Section 12220(g)), timberland (as defined by PRC 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?	☐	☐	☐	☒	☐

3.4.1 Environmental Setting

According to the Mariposa County General Plan (Mariposa County 2006) Land Use map, areas north of Dogtown Road are designated as "Natural Resources" and areas south of Dogtown Road are designated as "Residential" in the vicinity of the project sites. The "Natural Resource" land use classification

defines lands for open space, recreation, ecosystem conservation, watershed protection, environmental protection, conservation of natural resources, and protection of public health and safety. This land use classification also supports the role of the "Agriculture/Working Landscape" land use classification. Land uses surrounding the proposed project sites consist of scattered low density residential uses, some livestock grazing, and open space uses.

As a means of agricultural land preservation, the State Legislature enacted the California Land Conservation Act of 1965, commonly referred to as 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." According to County records, no lands within the project sites are designated, zoned, or are covered by a Williamson Act contract. The project sites are associated with existing transportation uses (i.e., Dogtown Road) and no timber management activities occur on the project sites. Some land owners use portions of their properties (including lands adjacent to the bridge sites for cattle grazing. No other agricultural activities occur in the vicinity.

Important Farmlands – Farmland Mapping and Monitoring Program

Based upon a review of maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, the proposed project is located on lands designated as "Grazing Lands" and is not located on lands identified as "Prime Farmland," "Unique Farmland," or "Farmland of Statewide Importance" (California Department of Conservation 2016). Lands surrounding the bridge locations are similarly designated as "Grazing Lands".

3.4.2 Discussion

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?

According to the California Department of Conservation's Farmland Mapping and Monitoring Program, lands surrounding the project construction sites are designated as "Grazing Lands". Implementation of the proposed project would not result in the conversion of lands actively used for agricultural or timber production, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Consequently, ***no impact*** would occur.

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

The project sites do not contain any lands with an active Williamson Act contract. Therefore, the proposed project will not result in the conversion of or encourage the non-renewal or cancellation of Williamson Act contracted lands. Consequently, ***no impact*** would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

See checklist Item "**a**" above.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

See checklist Item "**a**" above.

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?

See checklist Item "**a**" above.

3.5 Air Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
III. AIR QUALITY.					
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on 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) adversely affecting a substantial number of people?	☐	☐	☒	☐	☐

3.5.1 Environmental Setting

Criteria Air Pollutants and Existing Air Quality Conditions

The proposed project is located within the boundaries of the Mariposa County Air Pollution Control District, which is within the Mountain Counties Air Basin (8 eastern sierra California counties from Plumas County, south to Mariposa County).

The U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have identified criteria air pollutants that are a threat to public health and welfare. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria. These air pollutants include ozone, particulate matter less than 10 microns in diameter (PM10), particulate matter less than 2.5 microns in diameter (PM2.5), and nitrogen dioxide (NO2). **Table 3-2** (following page) presents the federal and state attainment status for these monitored pollutants. The primary sources of the precursors of ozone (ROG and NOx) are from motor vehicles. The primary sources of particulate matter are from residential burning, agricultural practices (including tilling and burning), and construction activities.

Sensitive Receptors

For the purposes of this air quality analysis, sensitive receptors are defined as facilities and land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include residential areas, schools, hospitals, and daycare centers.

The nearest residences to the Bridge #40C0038 project site are located 700 to 800 feet north and southwest of the bridge. The residences are not visible from the project site, as they are set back on the properties within the surrounding oak woodlands. A single family residence is located roughly 200 feet north from the north western edge of the Bridge #40C0039 project site (see **Figure 2-3**). This residence is visible closer to the western edge of the project site. The nearest school and medical facilities to the project sites are likely to occur within the Town of Coulterville, located roughly ½ mile from the Bridge #40C0039 project site.

Table 3-2. Mariposa County Air Quality Attainment Status

Criteria Air Pollutant	State Attainment Status	Federal Attainment Status
Ozone	Nonattainment	Nonattainment
Suspended Particulate Matter (PM10)	Unclassified (Nonattainment for Northeastern portion of County)	Unclassified
Fine Particulate Matter (PM2.5)	Unclassified	Unclassified/Attainment
Carbon Monoxide	Unclassified	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment

Source: (California Air Resources Board 2020)

Construction Air Quality Emissions

Construction of the proposed project would generate temporary criteria pollutant exhaust emissions through the use of heavy-duty construction equipment, such as excavators and graders, and through vehicle trips generated from worker vehicles and haul trucks traveling to and from the project site. In addition, fugitive dust emissions would result from demolition of the existing bridge structure and various soil-handling and debris-management activities. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions.

While fugitive dust emissions are typically generated during construction phases, studies have shown that the application of BMPs at construction sites significantly controls fugitive dust and individual measures have been shown to reduce fugitive dust by anywhere from 30 to 90 percent. The Mariposa County Air Pollution Control District implements two rules that address construction-related air quality emissions. These include Rule 202, which prohibits visible emissions and Rule 205, which is a general nuisance prevention rule. The air pollution control district recommends the implementation of the following measures to reduce construction-related emissions:

- Maintaining construction vehicles and equipment according to manufacturer's specifications.
- Limiting construction equipment engine idling time.
- Using water or chemicals to control dust from demolition, construction, or grading.
- Scheduling construction truck work trips to non-peak traffic hours.
- Minimizing the length of construction truck trips.
- Maintaining paved roadways in a clean condition.

3.5.2 Discussion

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

A Preliminary Environmental Study (PES), completed by Caltrans in February 2013, determined that the proposed project is exempt from the air quality conformity determination under the EPA 40 CFR 93.126, "Exempt Projects" (see Table 2: widening narrow pavements or reconstructing bridges, no additional travel lanes).

This impact is determined based on whether the proposed project would conflict with or obstruct implementation of the local air quality plan and/or applicable portions of the State Implementation Plan, which would lead to increases in the frequency or severity of existing air quality violations. As bridge replacement projects (with the primary objective of accommodating safe vehicular and pedestrian access and maintaining public safety), the proposed project would not increase roadway capacity or service capabilities that would induce unplanned growth, remove an existing obstacle to growth, or lead to permanent increases in vehicle miles travelled by existing motorists. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. Consequently, this impact is ***less-than-significant***, with no mitigation measures required.

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?

Construction Emissions. The project site is in a region designated as non-attainment with respect to air quality due to emissions of precursors of ozone (ROG and NOx). 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 PM10. Emissions of ozone precursors and PM10 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 PM10, 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, a quantitative air quality emission analysis was not performed. Construction-related emissions would result in a minimal impact on ambient air quality conditions at the project site or in the region, based on a review of similar bridge replacement projects and because the proposed project will be required to comply with all applicable Mariposa County Air Pollution Control District emissions and fugitive dust measures. Additionally, as stated above, emissions would be temporary. Therefore, impacts related to construction emissions would be ***less than significant***, with no mitigation measures required.

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). As discussed above, construction and operation of the proposed project are expected to result in a less than significant impact and no impact, respectively, related to criteria pollutant emissions. Therefore, the proposed 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?

See checklist Item "**a**" above.

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

Combustion emissions from the use of diesel fuel in construction equipment, as well as tar or asphalt used for any paving improvements, could generate localized objectionable odors. If sensitive receptors are located in the immediate vicinity of these activities, odors could be perceivable and constitute a nuisance impact. As previously described, 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. With a majority of sensitive receptors shielded and located some distance from the project site (200 to 600 feet), overall air emissions would not expose sensitive receptors to substantial air pollutant concentrations or create objectionable odors. Consequently, this impact is ***less-than-significant***, with no additional mitigation measures required.

3.6 Biological Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IV. BIOLOGICAL RESOURCES.					
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, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐	☐
c) Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	☒	☐

3.6.1 Environmental Setting

A Natural Environment Study (Area West Environmental, Inc. 2020a, 2020b) was prepared for the proposed project. Biological surveys conducted for the proposed project included general biological surveys (which included habitat mapping), rare plant surveys, a California Red-legged Frog habitat assessment according to USFWS protocol, a delineation of wetlands and other waters of the U.S. and State, and a native tree survey. The study area for these biological surveys is referred to as the Biological Study Area (BSA) and includes both the construction site for each bridge (see **Figures 2-4** and **2-5**, in **Chapter 2**) and a surrounding buffer area (as shown in **Figures 3-2** and **3-3**, below). **Figure 3-1** shows the relationship or proximity of each bridge site.

The following description of the environmental setting is based on the Natural Environment Study reports prepared for each bridge project. Refer to the Natural Environment Study reports for detailed descriptions of the methods used and the regulatory framework related to biological resources.

Key resource data sources reviewed and referenced, included:

- a species list for the *Coulterville* 7.5 minute USGS topographic quadrangle from USFWS (USFWS 2018, 2019, and 2020);
- records search of CDFW's California Natural Diversity Database (CNDDB) for species within 10 miles of the *Coulterville* 7.5 minute USGS topographic quadrangles (CDFW 2018, 2019, and 2020);
- a search of the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants Database for the Coulterville and eight surrounding USGS topographic quadrangles (CNPS 2018, 2019, 2020);
- California Invasive Plant Council's (Cal-IPC's) California Invasive Plant Inventory (Cal-IPC 2018);
- soils information from the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2018); and
- EPA's Hydrologic Unit Code (HUC) data for California watershed boundaries (U.S. Department of Agriculture, USDA, 2015).

Biologists conducted field surveys (April 4/5, 2018, May 9/10, 2018, and July 5, 2018) to determine the likelihood of sensitive resources occurring within the study area or BSA. Biologists walked the entirety of the BSA to document plant communities and habitat types. In addition, wetlands were delineated using the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008). Other waters of the U.S. and State that did not meet the wetland criteria were delineated based on the location of the ordinary high water mark (OHWM) using the guidance identified in the *Corps Regulatory Guidance Letter No. 05-05 Subject: Ordinary High Water Mark Identification* (USACE 2005). All plants and animals observed in the BSA during the reconnaissance survey are listed in Appendix D of each Natural Environment Study.

On April 4/5, 2018 and May 9/10, 2018, botanical surveys were conducted to assess habitat for special-status plants and to identify to presence of noxious weeds. All areas within the BSA were walked and all plants observed were identified to species level when applicable. Species not readily identifiable in the field were collected and later identified using *The Jepson Manual: Vascular Plants of California, 2nd Edition* (Baldwin 2012). A list of all plant species encountered during the botanical field survey is included in Appendix D of each Natural Environment Study.

During the April 5, 2018 survey, a protocol-level habitat assessment for California red-legged frog according to the *USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (*USFWS 2005) was conducted within a one mile (1.6 km) radius of each bridge BSA. Field surveys were conducted by driving or walking to all potential aquatic habitat accessible via public

Figure 3-1. Relationship Between Project Sites



roads. Due to private property restrictions, biologists were not able to field survey all potential aquatic habitat features. For inaccessible sites, features were evaluated based on historical aerial photograph for potential to support California red-legged frog aquatic habitat. A total of 14 survey sites (ponds and streams) were assessed in the field or by aerial photograph interpretation for potential to support California red-legged frog aquatic habitat for Bridge #40C0038 and 16 survey sites were assessed for Bridge #40C0039. Results from the habitat assessment are summarized in this section, with data sheets and representative photographs for each of the survey sites included in Appendix F of each Natural Environment Study.

During the botanical field surveys conducted for the project (May 9 and 10, 2018), biologists identified and inventoried trees located within the project site footprint in the BSA which may be impacted during project construction. An inventory of all trees (including a description of tree health and dbh or Diameter at breast height) is included in **Appendix A** of this IS/MND and in Appendix E of each Natural Environment Study.

Natural Communities (Habitats and Land Cover Types)

The project sites are located in rural Mariposa County. Elevation within the BSA for each bridge ranges from 1,980 to 2,015 feet amsl for Bridge #40C0038 and from 1,750 to 1,870 feet amsl for Bridge #40C0039. The topography within the BSAs is relatively flat between rolling hills with a general upward slope towards the south-southeast of the BSA for Bridge #40C0038 and a general upward slope towards the east-southeast for Bridge #40C0039. Natural features within the BSAs include Maxwell Creek and riparian vegetation, with dense oak woodland and grassland habitats located outside the riparian area.

The BSA for each bridge site consists of one aquatic vegetation community (intermittent stream [Maxwell Creek]) and three upland vegetation communities (developed, blue oak – foothill pine woodland, and valley foothill riparian). The BSA for Bridge #40C0039 also supports an additional aquatic vegetation community (ephemeral stream). However, this aquatic vegetation community is not located within the proposed project footprint for this bridge. Acreages of these vegetation communities are provided in **Table 3-3** and a description of these community types, including dominant plant species, follows. **Figures 3-2** and **3-3** show the location of these generalized vegetation communities and **Figures 3-4** and **3-5** provide a delineation of potential waters of the U.S. and state, including wetlands, within the BSA for each bridge site.

Blue Oak – Foothill Pine Woodland. The blue oak – foothill pine woodland vegetation community is located throughout the BSA for each bridge. This community is a diverse woodland that consists of a mixture of hardwoods, conifers, and shrubs. This community is nearly continuous in the western foothills of the Sierra Nevada and is dominated by both blue oaks (*Quercus douglasii*) and grey pines (*Pinus sabiniana*), with interspersed patches of annual grasslands (Verner 1988). Within the BSA for each bridge, the composition of the woodland canopy differs depending on slope aspect.

Within the BSA for each bridge, other trees contributing to the canopy on north facing slopes include interior live oak (*Quercus wislizeni*) and California buckeye (*Aesculus californica*). The shrub understory is sparse, but includes western poison oak (*Toxicodendron diversilobum*), common toyon (*Heteromeles arbutifolia*), common snowberry (*Symphoricarpos albus var. laevigatus*), hoary coffeeberry (*Frangula californica subsp. tomentella*), and black elderberry (*Sambucus nigra*). Within openings in the canopy, the understory is composed of annual grasslands consisting of mainly of non-native annual grasses and forbs, primarily consisting of ripgut brome (*Bromus diandrus*), soft brome

(*Bromus hordeaceus*), bulbous blue grass (*Poa bulbosa*), tall sock-destroyer (*Torilis arvensis*), miner's-lettuce (*Claytonia perfoliata subsp. perfoliata*), climbing bedstraw (*Galium porrigens*), and chaparral honeysuckle (*Lonicera interrupta*).

Table 3-3. Vegetation Communities within the Biological Study Area for each Bridge Site

Vegetation Community	Acres within the Biological Study Area	Acres within the Proposed Project footprint
BRIDGE #40C0038		
Blue Oak – Foothill Pine Woodland	5.103	0.456
Valley Foothill Riparian	0.766	0.134
Intermittent Stream (Maxwell Creek)	0.641	0.146
Total	**6.510**	**0.736**
BRIDGE #40C0039		
Blue Oak – Foothill Pine Woodland	4.734	0.411
Valley Foothill Riparian	0.299	0.016
Ephemeral Stream	0.026	0.000
Intermittent Stream (Maxwell Creek)	1.066	0.107
Total	**6.121**	**0.534**

Source: *Natural Environment Study for Bridge #40C0038 and Bridge #40C0039* (Area West Environmental, Inc. 2020a, 2020b)

The blue oak – foothill pine woodland community provides habitat for a variety of wildlife species, although no species is totally dependent on them for breeding, feeding, or cover (Verner 1988). Acorn produced by the various oaks in this habitat are an important food source for many species of birds and mammals. Wildlife species expected to use this community would include mule deer (*Odocoileus hemionus*), acorn woodpecker (*Melanerpes formicivorus*), red-tailed hawk (*Buteo jamaicensis*), canyon wren (*Catherpes mexicanus*), and oak titmouse (*Baeolophus inornatus*).

Valley Foothill Riparian. Riparian habitats are important to aquatic environments; they serve as natural biofilters and plant root systems prevent erosion by providing soil stabilization. Within the BSAs, valley foothill riparian vegetation is present on both sides of Maxwell Creek, an intermittent stream. Trees rooted in the valley foothill riparian vegetation community provide instream shade over Maxwell Creek.

All riparian vegetation is located along the rocky banks of Maxwell Creek, above the OHWM. Vegetation within the valley foothill riparian vegetation community was dominated by hydrophytic vegetation. Dominant tree species contributing to the canopy layer of this vegetation community in the BSAs are Goodding's black willow (*Salix gooddingii*) and Oregon ash (*Fraxinus latifolia*). The understory layer is sparse, but is characterized by a dominance of hydrophytes, which includes Himalayan blackberry (*Rubus armeniacus*), Douglas' wormwood (*Artemisia douglasiana*), Sonoma hedge-nettle (*Stachys stricta*), narrow-leaf willow (*Salix exigua*), and durango-root (*Datisca glomerata*).

Riparian vegetation provides instream shade over the stream, refuge, migration corridors, and diverse nesting and feeding opportunities for many types of wildlife. Trees in riparian vegetation with tree hollows could provide habitat for cavity nesting birds and willow and blackberry brambles provide habitat for many migratory nesting birds. Tall riparian trees provide nesting habitat for raptor species

Figure 3-2. Vegetation Communities within the BSA for Bridge #40C0038

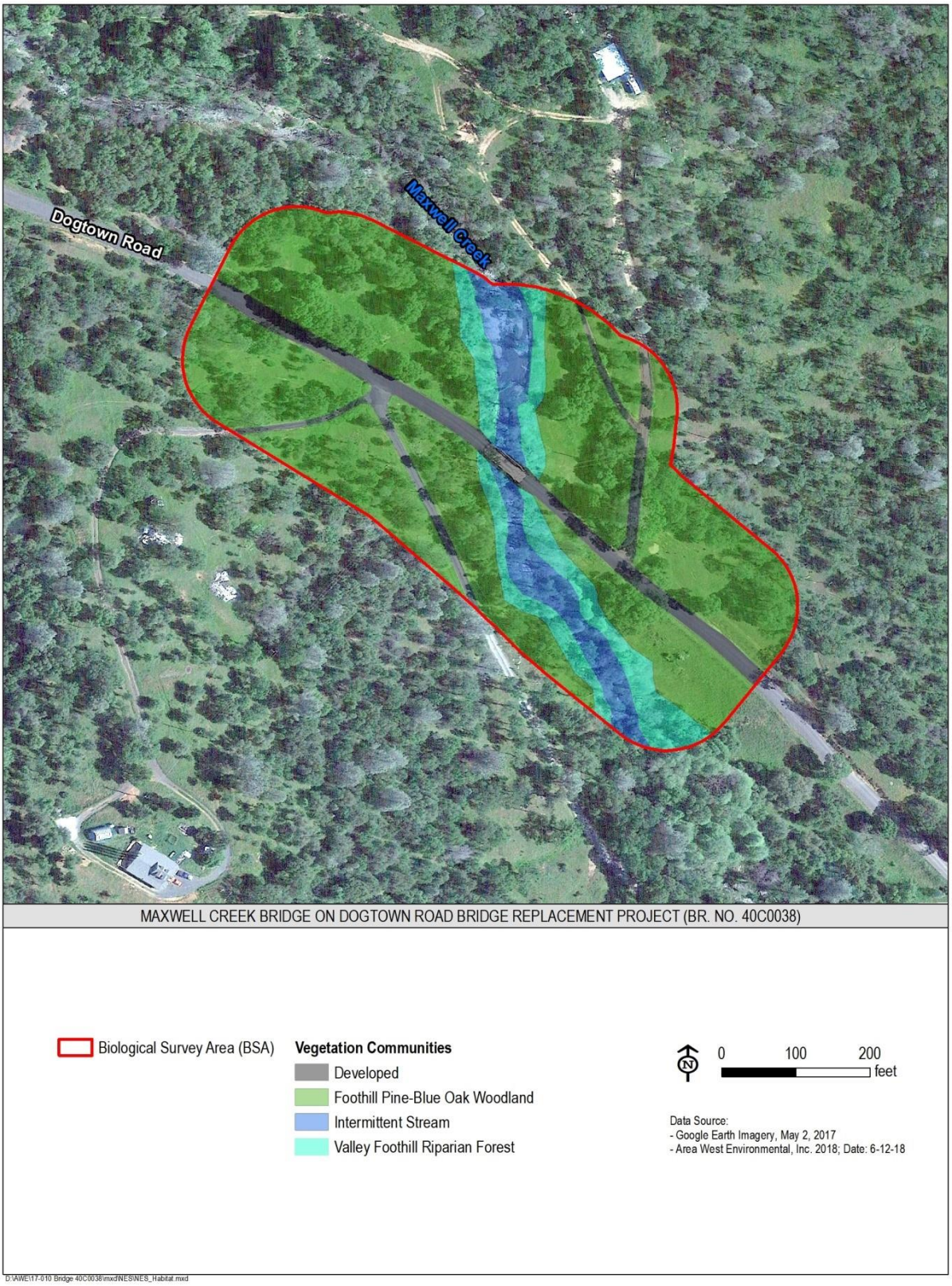
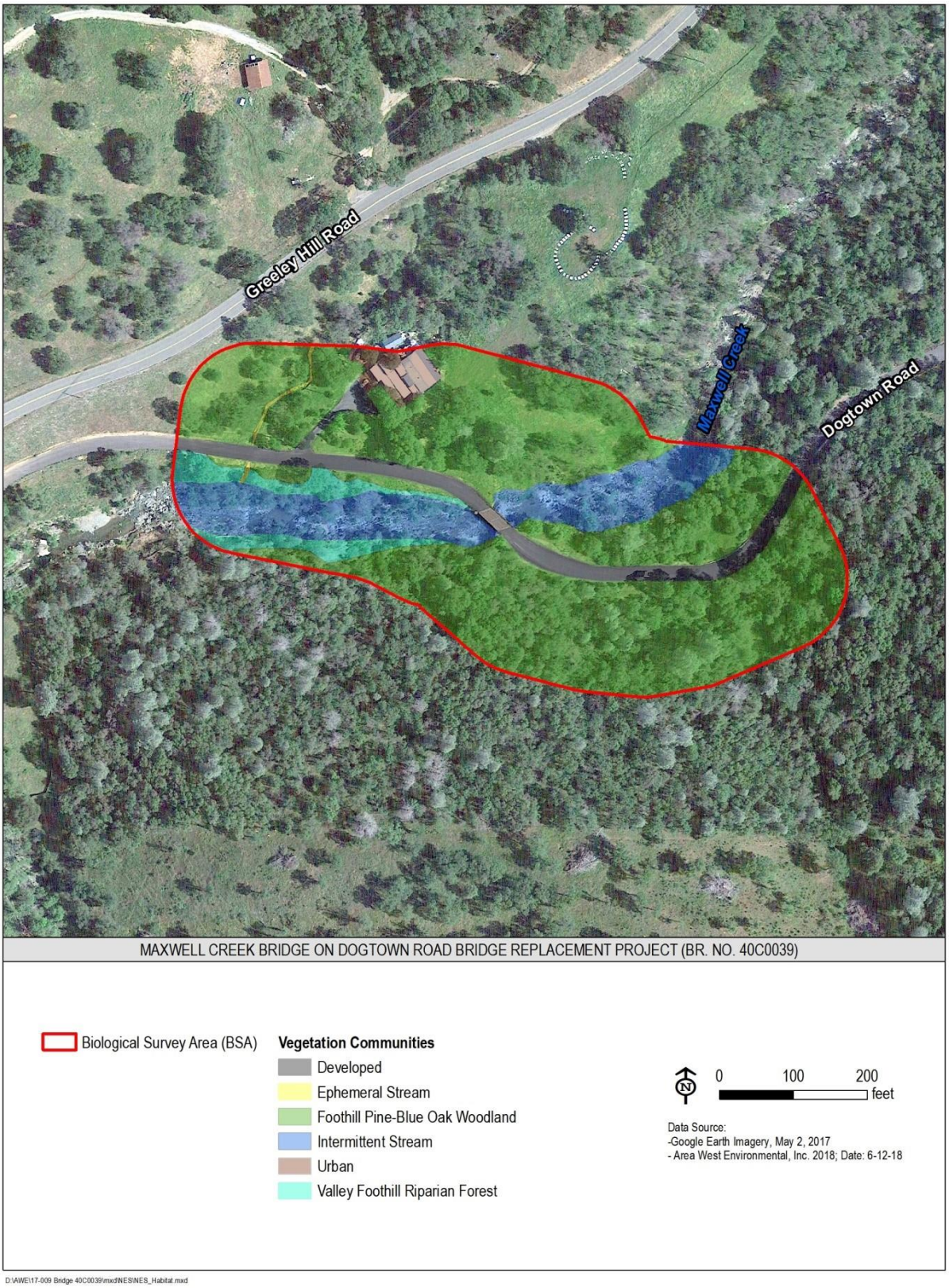


Figure 3-3. Vegetation Communities within the BSA for Bridge #40C0039



such as red-shouldered hawk (*Buteo lineatus*) and red-tailed hawk, which can forage in adjacent oak woodland. Vegetation in the riparian vegetation community was dominated by hydrophytic vegetation and showed signs of wetland hydrology, however it lacks hydric soil indicators. Because of these conditions, the valley foothill riparian vegetation community was not considered waters of the U.S. or State. However, riparian vegetation along the stream bank may be evaluated as part of the Section 1602 permit.

Intermittent Stream (Maxwell Creek). Maxwell Creek is an intermittent stream that flows from southeast to northwest through the BSAs, perpendicular to the proposed project. The gradient of the stream is moderate throughout the BSAs. Maxwell Creek is an intermittent stream in the BSAs characterized by flowing water within the low-flow channel that is largely un-vegetated and very rocky. The creek is moderately shaded (15 percent canopy) by valley foothill riparian vegetation (discussed above) located above the banks above the OHWM. Open water within the low-flow channel is devoid of vegetation north and south of the bridge.

Substrate was found to be mostly comprised of coarse sand, gravel, and cobble. Flows within Maxwell Creek are likely of high velocity during winter storm events; flow at the time of the assessment was low to moderate, with low turbidity. Maxwell Creek within the BSAs was shallow, with average depths varying from only 4 to 12 inches. Since Maxwell Creek exhibits an OHWM and eventually flows into the Merced River (a navigable water), it is considered to be USACE-jurisdictional.

Due to impassable impoundments downstream, Maxwell Creek does not provide habitat for anadromous fish species. It does provide habitat for warm water fish species, such as Sacramento sucker (*Catostomus occidentalis occidentalis*) (observed), Central California roach (*Lavinia symmetricus symmetricus*) (observed), coastal rainbow trout (*Oncorhynchus mykiss irideus*), and Sacramento pikeminnow (*Ptychocheilus grandis*). The intermittent stream also provides habitat for common amphibian species such as sierra tree frog (*Pseudacris sierra*) (which was observed within the BSAs), and species-status amphibian species such as foothill yellow-legged frog (*Rana boylii*), California red-legged frog (*Rana draytonii*), and western spadefoot (*Spea hammondii*). Foraging habitat for reptiles such as common garter snake (*Thamnophis sirtalis*), and western pond turtle (*Actinemys marmorata*). A western pond turtle was observed approximately 1.0 mile southwest of the BSA in Blacks Creek, which is a tributary to Maxwell Creek.

Ephemeral Stream. One ephemeral stream is located in the western portion of the BSA for Bridge #40C0039. This stream is a small waterway that exhibits a scoured channel with a defined bed and bank. This stream typically has a brief hydroperiod and only flows during periods of heavy precipitation. This ephemeral stream originates in uplands and terminates into Maxwell Creek. Ephemeral streams typically do not support wetlands since their hydroperiod is brief. Vegetation is consistent with the surrounding landscape and is sparsely vegetated. The ephemeral stream exhibits a well-defined OHWM, therefore, it was determined to be an "other waters" and is considered to be USACE-jurisdictional.

Developed and Urban. Vegetation communities defined as "Developed" and "Urban" are also located within the BSAs. Developed areas are characterized by the presence of anthropogenic features, including Dogtown Road, graveled driveways, dirt pullouts for vehicles, and the bridge structures. These areas are continuously disturbed (active roadways) and are primarily un-vegetated. When present, vegetation is sparse and consists primarily of scattered upland annual grasses and forbs. Both bridge structures have the potential to support bird nesting and bat roosting. The urban area consists of a single residential home located along Dogtown Road in the northwestern portion of the BSA for Bridge #40C0039. The canopy of the blue oak – foothill pine woodland vegetation community extends into the

Figure 3-4. Delineation of Waters of the U.S. and State for Bridge #40C0038

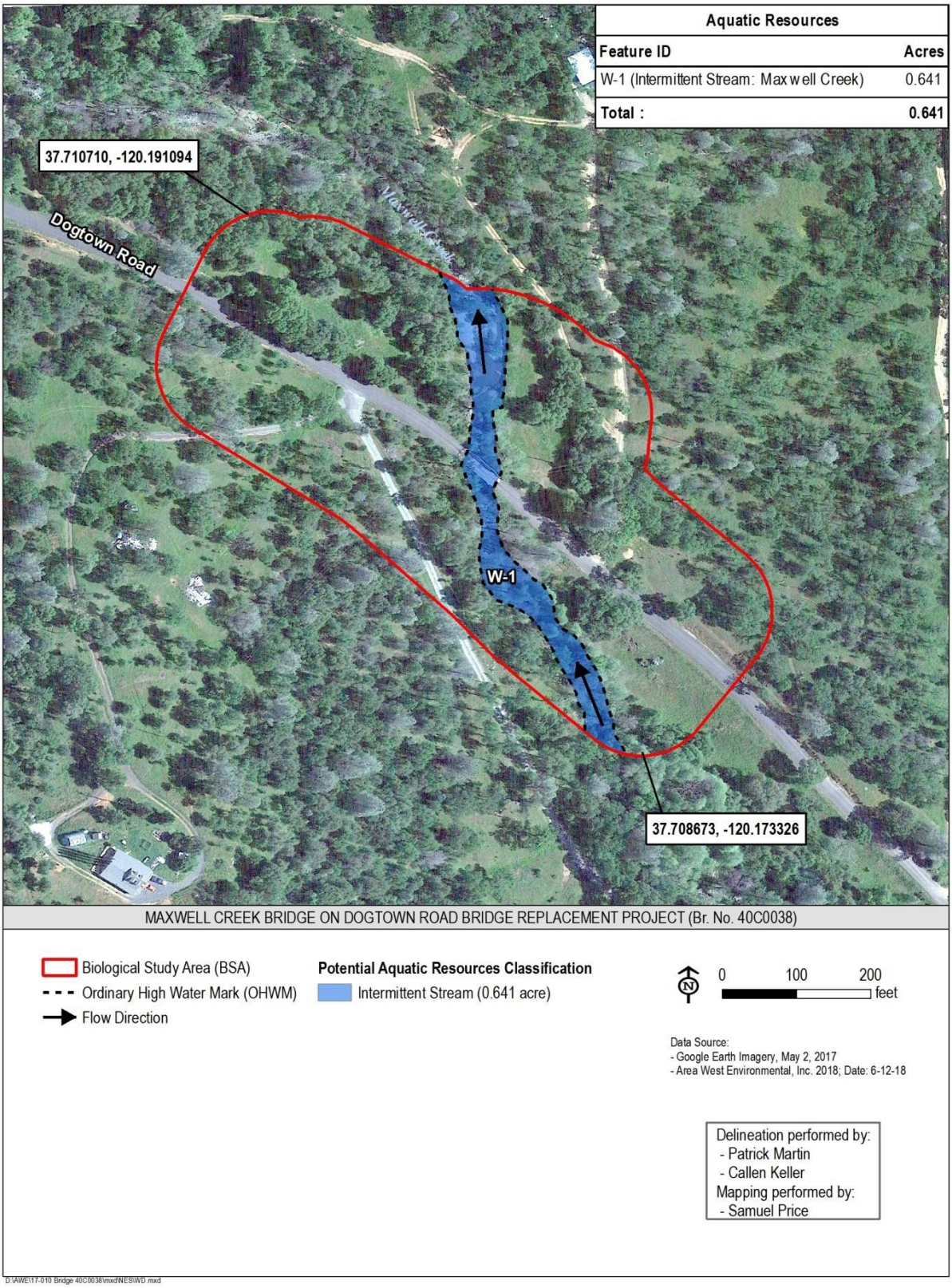
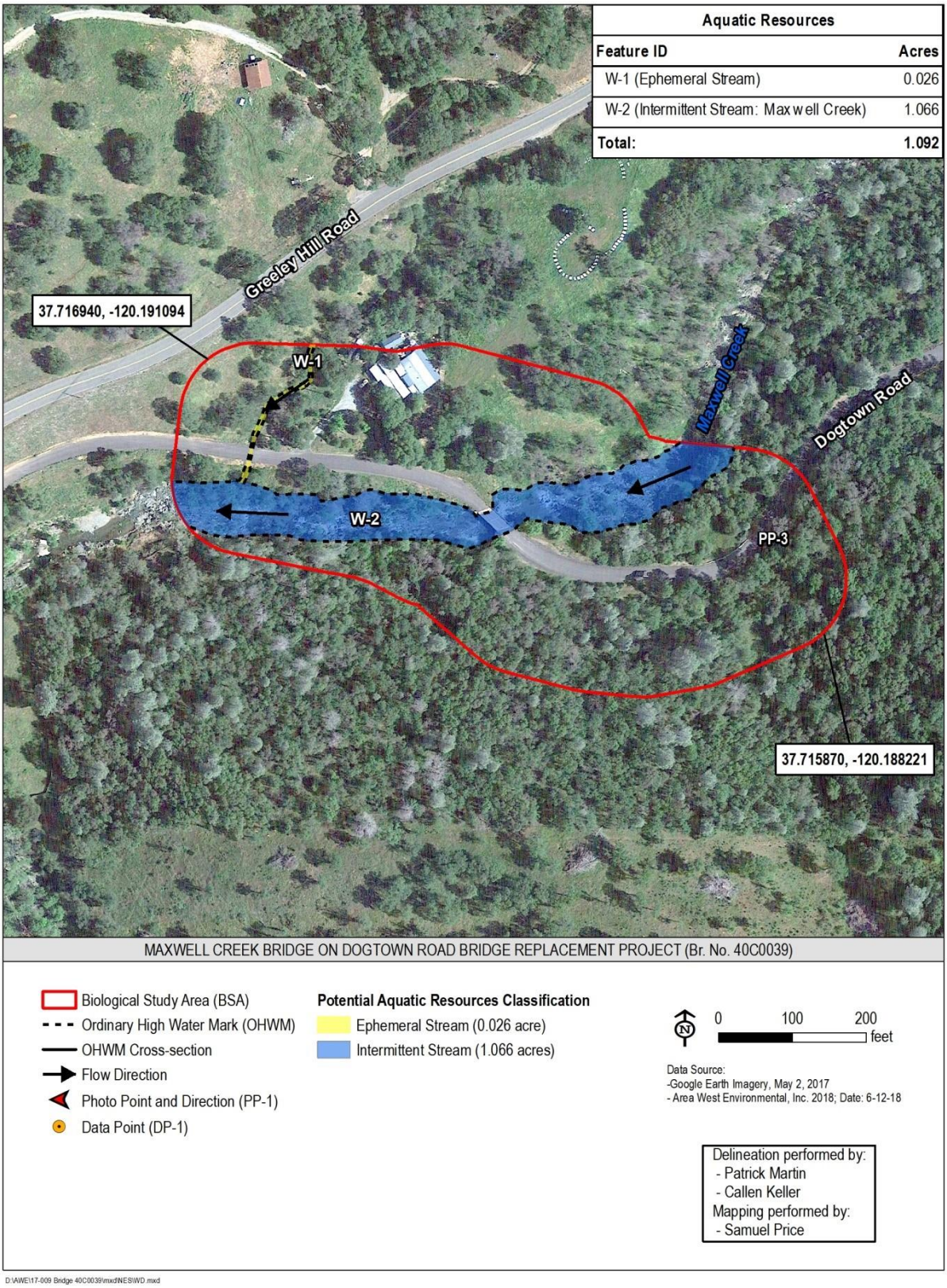


Figure 3-5. Delineation of Waters of the U.S. and State for Bridge #40C0039



urban area, but the vegetation surrounding the residential home is comprised of ornamental species. The urban area does not provide suitable habitat for special-status wildlife species.

Common Animal Species

The BSAs provide habitat for an assemblage of wildlife species that are commonly found within stream/riparian corridors, as described above under each vegetation community description. During field surveys of the sites, birds observed within the BSAs included acorn woodpecker, downy woodpecker (*Dryobates pubescens*), oak titmouse, California towhee (*Melozone crissalis*), red-shouldered hawk, red-tailed hawk, bushtit (*Psaltriparus minimus*), and wild turkey (*Meleagris gallopavo*). Additionally, during field surveys on April 5, 2018 wildlife survey, a golden eagle (*Aquila chrysaetos*) was observed flying over the BSAs. Sierra treefrogs (*Pseudacris sierra*) and one of their egg masses were also observed within Maxwell Creek.

Habitat Connectivity - Established Native Resident or Migratory Wildlife Corridors

Stream/riparian corridors such as Maxwell Creek are commonly used by wildlife as migration and movement corridors. Striped skunk (*Mephitas mephitis*), Virginia opossum (*Didelphis virginiana*), black-tailed deer (*Odocoileus heminonus*) and song birds are commonly found traversing stream/riparian corridors. Species of special concern that could use Maxwell Creek as a migration corridor to reach breeding sites include foothill yellow-legged frog, California red-legged frog, western spadefoot, western pond turtle, ringtail (*Bassariscus astutus*), and San Joaquin roach (*Lavinia symmetricus*).

Habitats and Natural Communities of Concern

The County supports many special-status plants, animals, and unique habitats. The majority of special-status plant species identified during pre-field reviews are endemic to unique habitats such as marshlands, vernal pools, and areas with serpentine soils, which are absent from the BSAs. Similarly, special-status wildlife species are also typically associated with regional habitats of concern such as vernal pools, freshwater ponds, marsh habitat, and high elevation conifer forests, though some occur in more common plant communities like riparian and oak woodlands. Habitats of concern, including waters of the U.S. and State, located within the BSAs include Maxwell Creek and associated riparian vegetation.

Special Status Species

Special-status species are plant and wildlife species that are legally protected under the Federal and California Endangered Species Acts (FESA), (CESA), or other State regulations, and species that are considered sufficiently rare by the scientific community to warrant conservation concern. The desktop literature and database review performed for each BSA (and surrounding area) identified 23 special-status plant and 25 special-status wildlife species. Of these, ten plant and 11 wildlife species were determined to have at least some potential to occur in the BSAs; these species, and their habitat requirements, are listed and more fully described in **Appendix A** of this IS/MND and the Natural Environment Study reports prepared for each bridge.

Special-Status Plants. A complete list of special-status plants that are known to occur or have potential to occur in the project region is provided in **Appendix A** of this IS/MND and the Natural Environment Study. The list of species is based on USFWS and CNPS information and was cross-referenced against CNDDB occurrence records. During the pre-field investigation, 23 special-status plant species were identified during the pre-field review as potentially occurring in the vicinity of the BSAs. Based on the lack of suitable habitat (i.e., serpentine soils, acidic soils, vernal pools, and marsh/swamp) and the BSA

being located outside the species known elevational range, 13 of the 23 special-status plant species listed (see **Appendix A** of this IS/MND) do not have the potential to occur in the BSAs. However, none of the remaining 10 special-status plant species were observed during the April 5, 2018 and May 9, 2018 botanical surveys, which were conducted during the appropriate bloom period for these species. Therefore, the proposed project would have no impact on special-status plant species.

Special-Status Wildlife. A complete list of special-status animals that are known to occur or have potential to occur in the project region is provided in **Appendix A** of this IS/MND and the Natural Environment Study. Based on the results of the field surveys and review of existing information including a search of the CNDDB, USFWS species lists, and species distribution and habitat requirements data, 25 special-status wildlife species were identified during the pre-field review as occurring or having the potential to occur within the vicinity of the proposed project. The listing status, preferred habitat, and potential for occurrence in the BSA for each of these species are provided in **Appendix A** of this IS/MND. Nesting birds and roosting bats, which are protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC), are also addressed.

Of the 25 special-status wildlife species listed, 14 species would not occur in the BSA or have the potential to be affected by the proposed project construction because: 1) the BSAs lack suitable habitat for the species, 2) the BSAs are outside the species' known range, and/or 3) field surveys determined that the species is not present. The remaining 11 species, listed below, have potential to occur within the BSAs:

- Foothill yellow-legged frog (*Rana boylii*), state candidate for threatened;
- California red-legged frog (*Rana draytonii*); federally threatened and state species of special concern;
- Western spadefoot (*Spea hammondii*); state species of special concern;
- Western pond turtle (*Actinemys marmorata*), state species of special concern;
- Golden eagle (*Aquila chrysaetos*), state fully protected;
- Bald eagle (*Haliaeetus leucocephalus*), federally delisted, state endangered, and state fully protected;
- California spotted owl (*Strix occidentalis occidentalis*), state species of special concern;
- Pallid bat (*Antrozous pallidus*), state species of special concern;
- Western red bat (*Lasiurus blossevillii*); state species of special concern;
- Ringtail (*Bassariscus astutus*), state fully protected; and
- San Joaquin roach (*Lavinia symmetricus*); state species of special concern.

Special-Status Species Critical Habitat or Essential Fish Habitat. Based on the results of the field surveys and review of existing information, the BSAs do not fall within any designated critical habitat for federally listed species or essential fish habitat.

3.6.2 Discussion

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 the U.S. Fish and Wildlife Service?

Impacts of the proposed project on biological resources will result from vegetation removal, equipment access and construction work within the Maxwell Creek corridor, and RSP placement during construction (see **Figures 2-8** and **2-9** in **Chapter 2**). Additionally, in-water work will result in temporary disturbance to aquatic biological resource habitats (see **Figures 2-8** and **2-9**), with work restricted to periods of low-flow, most likely beginning in late May or early June.

Special-Status Plant Species

As previously described above, only ten of the identified 23 special-status plant species would be expected to occur in the study area. However, these species were not observed within the BSAs during the April 5, 2018 and May 9, 2018 botanical surveys, which were conducted during the appropriate bloom period for these species and would have been detectable if they occurred there. Therefore, the proposed project would have ***no impact*** on special-status plant species.

Special-Status Amphibian and Reptile Species

Foothill Yellow-Legged Frog. No foothill yellow-legged frogs (a state candidate for threatened) were observed in the BSAs during the wildlife surveys. Suitable breeding (rocky streams) and dispersal habitat for this species is present within the BSAs in Maxwell Creek. Based on observations and communications with local residents, some pools within Maxwell Creek likely persist throughout the year, even if the creek goes dry. Therefore, these pools may have a long enough hydroperiod to support potential foothill yellow-legged frog breeding. Additionally, the blue oak – foothill pine vegetation communities included areas with open grasslands within the BSAs that could provide refugia sites and a movement corridor for adult dispersal movements to suitable breeding habitat located within the vicinity of the BSAs.

If foothill yellow-legged frog is present within the project sites or construction footprint, implementation of the proposed project activities may affect this species. Direct effects could include crushing and other injuries resulting from contact with vehicles and other construction equipment; entrapment in open trenches; a reduction of prey or forage items caused by silting, fill placement, or spilling of oil or other chemicals; obstruction of movement corridors due to the presence of people, cofferdams, equipment, and topographic changes; displacement from the BSAs due to the presence of people and equipment; and an increased risk of predation by wildlife inadvertently attracted by the proposed project (trash in project site, freshly up-turned soils, etc.). Moreover, construction of the temporary creek diversion system and dewatering activities could temporarily impede the movement of foothill yellow-legged frog dispersing between breeding areas and refugia sites.

Implementation of the proposed project will have short-term construction activity that will be completed within a few months. Although the proposed project will convert a small amount of aquatic habitat (see **Figures 2-8** and **2-9**) to transportation uses (i.e., road fill and RSP under the bridges), construction of the new bridges is unlikely to result in changes to the aquatic habitat provided by the creek within the BSAs. Therefore, the proposed project is not expected to

significantly alter habitat suitability for foothill yellow-legged frog from existing conditions. If Foothill Yellow-legged frogs are located under refugia within the BSAs, they may be trapped within the construction area during the vegetation removal and dewatering process, resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction surveys, environmental awareness training, site monitoring, water diversion/dewatering measures, site replanting, water quality best management practices, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-9** (more fully described below) would reduce the potentially significant impact associated with aquatic habitat disturbance/loss and direct impacts to Foothill Yellow-legged frog to a ***less-than-significant*** level.

Mitigation Measure BIO-1: Conduct Preconstruction Species Surveys

Special Status Amphibians. A qualified biologist shall conduct a survey no less than 7 days prior to the initiation of any ground disturbing activities within or adjacent to suitable habitat for foothill yellow-legged frog, California red-legged frog, western spadefoot, and other special-status aquatic species that have potential to occur in the BSAs. This survey will comprise walking transects while conducting visual encounter surveys within areas that will be subject to staging, vegetation clearing, grubbing, grading, cut and fill, or other ground disturbing activities. The survey will include areas upstream and downstream of the BSAs. All potential habitat features in the BSAs, such as crevices, burrows and/or insulated ledges along waterways shall be inspected for signs of foothill yellow-legged frog, California red-legged frog, and western spadefoot usage to the maximum extent practicable.

Immediately prior to in-stream activities or installation of water diversion structures, and after the 7 day survey, a qualified biologist shall conduct a follow-up survey for foothill yellow-legged frog, California red-legged frog, western spadefoot, and other special-status aquatic species that have potential to occur in the BSAs. All potential habitat features in the BSAs shall be inspected for special-status amphibian species, such as crevices, burrows and/or insulated ledges along waterways. If foothill yellow-legged frog, California red-legged frog, western spadefoot, and other special-status aquatic species that have potential to occur in the BSAs are present (including their egg masses or tadpoles) in the immediate work area, then all work shall stop and the appropriate agencies shall be notified. Any species observed shall be allowed to voluntarily move outside of the work area on its own volition. If egg masses or tadpoles of special-status aquatic species are detected during preconstruction surveys, no in-stream construction may commence until species have metamorphosed and moved out of the work area on its own volition.

Non-listed and common aquatic species shall be captured and relocated out of the work area in a net or placed in buckets containing stream water and then moved directly to the nearest suitable habitat in the same branch of the creek. Suitable habitat shall be identified prior to capturing aquatic species to minimize holding time.

Once the biologist has determined that all aquatic species have moved out of the work area or been effectively relocated, barrier seines or exclusion fencing shall be installed to prevent amphibians from moving back in, as appropriate and the work area will be dewatered, as necessary.

construction personnel shall attend a mandatory environmental education program delivered by an approved biologist prior to working on the proposed project. The training shall include: a description of protected biological resources including identification of special-status species and habitats that may occur within the proposed project construction area; an explanation of the status of these species and habitats and their protection under the Endangered Species Act and other laws; the measures to be implemented to conserve listed species and their habitats as they relate to the work site; descriptions of the boundaries within which construction may occur; and, all of the mitigation measures and BMPs to be followed during project implementation. If new construction personnel are added to the proposed project, they must receive the mandatory training before starting work.

Western Pond Turtle. A qualified biologist shall conduct a preconstruction clearance survey for western pond turtles within 48 hours prior to any ground disturbance within Maxwell Creek and within the proposed project footprint, as well as up-stream and down-stream from the project footprints and up to 1,300 feet from the stream channel in undeveloped upland habitats where access permits. For surveys outside the project footprints where access is not permitted, the surveying biologist shall use binoculars to scan up-stream, down-stream, and within uplands for western pond turtle. Any western pond turtles found within the construction work area shall be allowed to voluntarily move out of this area or shall be captured and held by a qualified biologist for the minimum amount of time necessary to release them into suitable aquatic habitat outside the construction work area. If a western pond turtle nest containing eggs or young is identified within the construction work area, the biologist shall consult with CDFW to determine an appropriate no-disturbance buffer to ensure avoidance of the nest.

Nesting Migratory Bird and Raptor Survey. If construction or vegetation removal will occur during the breeding season for migratory birds and raptors (generally February through August), the County shall retain a qualified biologist to conduct a preconstruction nesting bird and raptor survey prior to the start of construction activities (including equipment staging). The preconstruction nesting bird and raptor surveys shall be conducted between February 1 and August 31 within suitable habitat within the designated project footprints. Surveys for raptors' nests should also extend 1,250 feet from the project footprints to ensure that nesting raptors are not affected by construction disturbances. For raptor surveys outside the project footprints where property access has not been granted, the surveying biologist shall use binoculars to scan any suitable nesting substrate for potential raptor nests. The preconstruction survey shall be conducted no more than 48 hours before the initiation of construction activities.

If an active bird or raptor nest is identified within the construction work area or an active raptor nest is identified within 1,250 feet from the construction work area, a no-disturbance buffer shall be established around the nest to avoid disturbance of the nesting birds or raptors until a qualified biologist determines that the young have fledged and are foraging on their own. The extent of these buffers shall be determined by the biologist (coordinating with CDFW) and shall depend on the species identified, level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographic or artificial barriers. In addition to the establishment of buffers, other avoidance measures (determined during CDFW coordination) may include monitoring of the nest during construction

and restricting the type of work that can be conducted near the nest site. If no active nests are found during the preconstruction surveys, then no additional mitigation is required.

Bats. If construction is scheduled between April and September, before construction begins, a qualified biologist will survey trees and rocky outcrops within the project footprints and identify any snags, hollow trees, or other trees with cavities that may provide suitable roosting habitat for bats. If no suitable roosting trees are found, construction may proceed. If snags, hollow trees, or other trees with suitable cavities are found, they will be examined for roosting bats. Rocky outcrops in the BSAs will also be examined. If bats are not found and there is no evidence of use by bats, construction may proceed. If bats are found or evidence of use by bats is present, the qualified biologist will work with CDFW to implement measures to avoid or minimize disturbance to the colony.

Special Status Mammals. The following measures shall be implemented to minimize or avoid potential impacts to special-status mammal species:

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

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-2: Conduct Environmental Awareness Training

Before any work occurs in the project footprints, including grading and equipment staging, all construction personnel shall participate in an environmental awareness training regarding special-status species and sensitive habitats present in the project limits. If new construction personnel are added to the projects, they must receive the mandatory training before starting work. The training shall be provided to all personnel and will discuss sensitive resources (i.e.,

waters of the U.S. and State, riparian habitat, special-status species and habitat, nesting birds/raptors) to be avoided during project construction and lists applicable permit conditions identified by state and federal agencies to protect these resources.

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-3: Install Temporary Fencing around Environmentally Sensitive Habitat

Final proposed project construction drawings will identify the locations of temporary fencing around environmentally sensitive habitat areas to ensure that sensitive resources proposed for avoidance (waters of the U.S. and State, riparian vegetation, special-status species habitat, etc.) will be protected during construction activities. The County shall ensure that temporary construction barrier fencing, silt fencing, and/or flagging is installed between the work area and environmentally sensitive habitat areas, before any ground-disturbing activity occurs within the project footprints, as appropriate. Construction personnel and construction activity shall avoid areas identified as environmentally sensitive by the fencing/flagging. The fencing/flagging shall be checked regularly and maintained until all construction is complete. No construction activity shall be allowed until this condition is satisfied. Any required barrier or sediment fencing and a note reflecting this condition shall be shown on the final construction documents.

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-4: Restore Temporarily Disturbed Areas

Immediately after bridge construction is complete, all exposed soil shall be stabilized. Soil stabilization may include, but is not limited to, seeding with a native grass seed mix, planting native plants, and placement of rock. These areas will be properly protected from washout and erosion using appropriate erosion control devices including coir netting, hydroseeding, and revegetation.

Timing: During and after construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-5: Implement Water Quality Best Management Practices

Before any ground-disturbing activities, the County shall ensure the construction contractor (as part of the construction specifications) implements erosion control measures and construction waste containment measures to ensure that waters of the state are protected during and after proposed project construction.

The erosion control and construction waste containment measures shall: (a) to identify pollutant sources, including sources of sediment, that may affect the quality of storm water discharges from the construction of the proposed project; (b) to identify BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the

proposed project during construction; (c) to outline and provide guidance for BMP monitoring; (d) to identify proposed project discharge points and receiving waters; to address post-construction BMP implementation and monitoring; and (f) to address sedimentation, siltation, and turbidity.

The erosion control and construction waste containment measures will require BMPs including, but not limited to:

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

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-6: Provide Escape Ramps or Cover Open Trenches

To avoid entrapment of wildlife, all excavated steep-walled holes or trenches more than 2 feet deep will be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, then holes or trenches will be covered with plywood or similar materials. Providing escape ramps or covering open trenches will prevent injury or mortality of wildlife resulting from falling into trenches and becoming trapped. The trenches will be thoroughly inspected for the presence of federally listed species at the beginning of each workday. Any species observed shall be allowed to voluntarily move outside of the work area on its own.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-7: Restrict In-stream Work to Low-flow Period

To minimize impacts of dewatering and construction on foothill yellow-legged frog California red-legged frog, western pond turtle, and other resident aquatic species, limit in-creek construction to between June 1 and October 15, unless otherwise specified by appropriate agencies. This window can be extended based on stream conditions, if approved in writing by regulatory agencies with jurisdiction. Work from the existing roadway, top of banks, and within falsework can occur year-round.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-8: Monitor during Dewatering Activities

Appropriate temporary cofferdams shall be used to dewater the construction site and divert water through the project footprints during the construction period to prevent impeding water flow through the work area. When dewatering is required, a qualified biologist shall be present during the dewatering period to inspect and ensure that sensitive aquatic species will not be trapped within the temporary cofferdams and to monitor the construction site during aquatic species relocation and dewatering activities. If foothill yellow-legged frog or any other special-status aquatic species are found within the cofferdams, then all work shall stop and the appropriate agencies shall be notified. Any species observed shall be allowed to voluntarily move outside of the work area on its own. All cofferdams shall be inspected and maintained on a daily basis to ensure its integrity for the duration of the work below the OHWM of the creek. Pumps used for dewatering shall have fish screens, as identified in Project permits, installed to minimize intake of fish and other aquatic species into pumps. Diversion structures shall be left in place until all in-stream work is completed.

At the completion of project construction, the County/contractor shall remove from the streambed all materials used to maintain flow and divert water from the project site during the construction period, including cofferdams, pipes, and filter fabric. Temporary culverts and all construction materials and debris shall be removed from the affected area prior to reestablishing flow and prior to the rainy season. A monitor shall be present during the removal of dewatering materials.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-9: Monitor during Ground Disturbance and Vegetation Removal

A qualified biological monitor will be present during all project activities requiring ground disturbance or vegetation removal within the construction area. Vegetation less than 3 inches in diameter will be cleared by hand or small engine weedeaters or chainsaws. Small material or grasses will be mowed close to ground with low impact rubber-tired tractors. Vegetation over 3 inches in diameter may require larger equipment such as telescoping chainsaws, hoe-mounted flail mowers, bucket machines to hoist crews and equipment, and climbing crews with chainsaws.

The biological monitor must be a biologist with demonstrated knowledge of foothill yellow-legged frog, California red-legged frog, and western pond turtle natural history, ecology and identifying characteristics, as well as demonstrated field experience identifying other amphibian and reptile species within the range of these listed species.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

California Red-Legged Frog. During the April 5, 2018 survey, biologists conducted habitat assessments for California red-legged frog (a federally threatened and state species of special concern) according to the USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (USFWS 2005). Based on the results of the site assessment, there is moderate potential for California red-legged frog to occur within the BSAs within Maxwell Creek.

If California red-legged frog is present within the proposed project footprints during construction activities, the proposed project may affect this species. Direct effects could include crushing and other injuries resulting from contact with vehicles and other construction equipment; entrapment in open trenches; a reduction of prey or forage items caused by silting, fill placement, or spilling of oil or other chemicals; obstruction of movement corridors due to the presence of people, cofferdams, equipment, and topographic changes; displacement from the BSAs due to the presence of people and equipment; and an increased risk of predation by wildlife inadvertently attracted by some project-related activities (trash in Project site, freshly up-turned soils, etc.). Moreover, construction of the temporary creek diversion system and dewatering activities would temporarily impede the movement of California red-legged frog dispersing between breeding areas and refugia sites.

The proposed project will result in short-term construction activity that will be completed within a few months. Although the proposed project will convert a small amount of aquatic habitat (see **Figures 2-8** and **2-9**) to transportation uses (i.e., road fill and RSP under the bridge), construction of the new bridges are unlikely to result in permanent changes to the aquatic habitat provided by the creek within the BSAs. Therefore, the proposed project is not expected to significantly alter habitat suitability for California red-legged frog from existing conditions. However, if California red-legged frogs are located under refugia within the BSAs, they may be trapped within the construction area during the vegetation removal and dewatering process, resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction surveys, environmental awareness training, site monitoring, water diversion/dewatering measures, site replanting, water quality best management practices, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-9** (more fully described above) would reduce the potentially significant impact associated with aquatic habitat disturbance/loss and direct impacts to California red-legged frog species to a ***less-than-significant*** level.

Western Spadefoot Toad. No western spadefoot (a state species of special concern) were observed in the BSAs during the wildlife surveys; however, suitable breeding and dispersal habitat for this species is present within the BSAs. Based on observations and communications with local residents, some pools within Maxwell Creek likely persist throughout the year, even if

the creek goes dry. Therefore, these pools may have a long enough hydroperiod to support potential western spadefoot breeding. Additionally, the blue oak – foothill pine vegetation communities included areas with open grasslands within the BSAs that could provide refugia sites and a movement corridor for adult dispersal movements to suitable breeding habitat located within the vicinity of the BSAs.

If western spadefoot is present within the proposed project footprints during construction activities, the proposed project may affect this species. Direct effects could include crushing and other injuries resulting from contact with vehicles and other construction equipment; entrapment in open trenches; a reduction of prey or forage items caused by silting, fill placement, or spilling of oil or other chemicals; obstruction of movement corridors due to the presence of people, cofferdams, equipment, and topographic changes; displacement from the BSAs due to the presence of people and equipment; and an increased risk of predation by wildlife inadvertently attracted by some project-related activities (trash in Project site, freshly up-turned soils, etc.). Moreover, construction of the temporary creek diversion system and dewatering activities could temporarily impede the movement of western spadefoot dispersing between breeding areas and refugia sites.

The proposed project will result in short-term construction activity that will be completed within a few months. Although the proposed project will convert a small amount of aquatic habitat (see **Figures 2-8** and **2-9**) to transportation uses (i.e., road fill and RSP under the bridge), construction of the new bridges are unlikely to result in changes to the aquatic habitat provided by the creek within the BSAs. Therefore, the proposed project is not expected to significantly alter habitat suitability for western spadefoot from existing conditions. However, if western spadefoot are located under refugia within the BSAs, they may be trapped within the construction area during the vegetation removal and dewatering process, resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction surveys, environmental awareness training, site monitoring, water diversion/dewatering measures, site replanting, water quality best management practices, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-9** (more fully described above) would reduce the potentially significant impact associated with aquatic habitat disturbance/loss and direct impacts to western spadefoot species to a ***less-than-significant*** level.

Western Pond Turtle. No western pond turtles (a state species of special concern) were observed in the BSAs during the wildlife surveys. However, this species was observed approximately 1 mile southwest of the BSAs during the California red-legged frog habitat assessment in Blacks Creek. Blacks Creek is a tributary to Maxwell Creek. Potential aquatic habitat is available for this species in the BSAs within Maxwell Creek.

If western pond turtle is present within the proposed project footprints during construction activities, the proposed project may affect this species. Direct effects could include impacts to nests containing eggs or young resulting from contact with vehicles and other construction equipment; entrapment in open trenches; a reduction of prey or forage items caused by silting, fill placement, or spilling of oil or other chemicals; obstruction of movement corridors due to the presence of people, cofferdams, equipment, and topographic changes; displacement from the BSAs due to the presence of people and equipment; and, an increased risk of predation by

wildlife inadvertently attracted by some project-related activities (trash in project site, freshly up-turned soils, etc.).

The proposed project will result in short-term construction activity that will be completed within a few months. Although the proposed project will convert a small amount of aquatic habitat (see **Figures 2-8** and **2-9**) to transportation uses (i.e., road fill and RSP under the bridge), construction of the new bridges are unlikely to result in changes to the aquatic habitat provided by the creek within the BSAs. Therefore, the proposed project is not expected to significantly alter habitat suitability for western pond turtle from existing conditions. However, if western pond turtle are located under refugia within the BSAs, they may be trapped within the construction area during the vegetation removal and dewatering process, resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction surveys, environmental awareness training, site monitoring, water diversion/dewatering measures, site replanting, water quality best management practices, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-9** (more fully described above) would reduce the potentially significant impact associated with aquatic habitat disturbance/loss and direct impacts to western pond turtle species to a ***less-than-significant*** level.

Special-Status Fish Species

San Joaquin Roach. Suitable habitat for the San Joaquin roach (a state species of special concern) is present within the BSAs. Maxwell Creek is a warm water stream with intermittent flow and pools, which is ideal habitat for this species. Warm water fish species were observed during wildlife surveys in Maxwell Creek, which include Sacramento sucker and the Central California roach.

If San Joaquin roach is present within the proposed project footprints during construction activities, direct effects could include crushing and other injuries resulting from contact with vehicles and other construction equipment; a reduction of prey or forage items caused by silting, fill placement, or spilling of oil or other chemicals; obstruction of movement corridors due to the presence of people, cofferdams, equipment, and topographic changes; displacement from the BSAs due to the presence of people and equipment; and the removal of riparian vegetation may result in a loss of shade, a potential slight increase in summer stream temperatures, and a potential decrease in food source and detritus associated with canopy cover.

The proposed project will result in short-term construction activity that will be completed within a few months. Although the proposed project will convert a small amount of aquatic habitat (see **Figures 2-8** and **2-9**) to transportation uses (i.e., road fill and RSP under the bridge), construction of the new bridges are unlikely to result in changes to the aquatic habitat provided by the creek within the BSAs. Therefore, the proposed project is not expected to significantly alter habitat suitability for San Joaquin roach or other fish species from existing conditions. However, these fish species are located within the BSAs and may be trapped within the construction area during the dewatering process, resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including environmental awareness training, site monitoring, water diversion/dewatering measures, water quality best management practices, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-2, BIO-3, BIO-4,**

BIO-5, BIO-7, and BIO-8 (more fully described above) along with the stranded aquatic life rescue measures described in **Mitigation Measures BIO-10** and **BIO-11** (more fully described below) would reduce the potentially significant impact associated with aquatic habitat disturbance/loss and direct impacts to San Joaquin Roach and other fish species to a ***less-than-significant*** level.

Mitigation Measure BIO-10: Install Catchment Tarps Prior to any Work Activity to the Bridges

Prior to any bridge demolition, decommissioning, or work activity within the channel floodway embankments, catchment tarps, or "bridge diapers" will be installed to ensure all construction debris is caught and removed daily from the work area.

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-11: Rescue Stranded Aquatic Life

All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include fish landing nets, dip nets, buckets, and by hand. Captured aquatic life shall be released immediately downstream in Maxwell Creek or in the closest body of water. Efforts shall be made to reduce collecting and handling stress, minimize the time that animals are held in buckets, and minimize handling stress during processing and release. No employee or contractor shall remove any fish, dead or alive, from the site for personal use.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

Special-Status Bird Species

Golden Eagle. During field surveys for the proposed project, a single golden eagle (state fully protected species) was observed in flight over the BSA. While no large stick nests were observed during the biological surveys, potential golden eagle nesting habitat is present in tall trees that overlook the BSAs. Additionally, woodland habitat that provides habitat for small rodent prey provides foraging habitat in and adjacent to the BSAs.

If golden eagles are present within the proposed project footprints during construction activities, the proposed project may affect this species. Noise associated with construction activities and vegetation removal involving heavy equipment operation that occurs during the breeding season (generally between March 1 and August 31) could directly affect nesting golden eagle if an active nest is located in tall trees near the BSAs. Additionally, vegetation removal and ground disturbance activities will result in alteration of golden eagle foraging habitat (see **Figures 2-8** and **2-9**), resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction nesting/species surveys, environmental awareness training, site monitoring, site replanting and revegetation, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-4** (more

fully described above) would reduce the potentially significant impact associated with disturbance and loss of golden eagle foraging and nesting habitat to a ***less-than-significant*** level.

Bald Eagle. No bald eagles (state listed endangered and fully protected species) or their nests were observed in the BSAs during the wildlife surveys. While large coniferous trees are located in the BSAs along Maxwell Creek, this species is more likely to occur nesting closer to large reservoirs in the area, which are stocked with fish. However, suitable foraging habitat is present in and adjacent to the BSAs.

While bald eagle nesting habitat may be present within the BSAs, the likelihood of presence is considered low. Therefore, the proposed project is not expected to have an impact on nesting habitat for bald eagle, as the BSAs occur at the edge of the forest, along a roadway, where bald eagles are less likely to forage. Vegetation removal and ground disturbance activities will result in the alteration of a small area of bald eagle foraging habitat (see **Figures 2-8** and **2-9**). Consequently, vegetation removal and soil disturbance will result in impacts to water quality in aquatic foraging habitat for bald eagle in the watersheds (**Figures 2-8** and **2-9**), resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction nesting/species surveys, environmental awareness training, site monitoring, site replanting and revegetation, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-4** (more fully described above) would reduce the potentially significant impact associated with disturbance and loss of bald eagle foraging habitat to a ***less-than-significant*** level.

California Spotted Owl. While no California spotted owl (a state species of special concern) or large cavity nests were observed in the BSAs during the wildlife surveys, potential owl nesting habitat is present within the blue oak – foothill pine woodlands in the BSAs. Suitable foraging habitat is also present in and adjacent to the BSA.

Construction site clearing will include removal of trees and shrubs which would directly affect nesting California spotted owl, if present. Additionally, noise associated with construction activities involving heavy equipment operation that occurs during the breeding season (generally between March 1 and August 31) will disturb nesting California spotted owl if an active nest is located near these activities. Vegetation removal and ground disturbance activities will also result in the temporary alteration of owl foraging habitat (blue oak – foothill pine woodlands) within and slightly adjacent to the project sites (see **Figures 2-8** and **2-9**), resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction nesting/species surveys, environmental awareness training, site monitoring, site replanting/revegetation, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-4** (more fully described above) would reduce the potentially significant impact associated with disturbance and loss of California spotted owl nesting and foraging habitat to a ***less-than-significant*** level.

Other Protected Migratory Birds and Raptors. Although no potential raptor nests or other large bird nests were identified within the project footprints during the wildlife surveys, the BSA has the potential to support nesting birds and raptors within the riparian, ruderal, and the

developed habitats. Migratory birds and raptors could nest in trees and along bridge structures within or adjacent to the BSA. The breeding season for most birds and raptors within the region is generally from March 1 to August 31. The occupied nests and eggs of these birds are protected by federal and state laws, including the MBTA and CFGC Sections 3503 and 3503.5.

Removal of trees, shrubs and the bridge structure within each project footprint will directly affect nesting birds if present. Additionally, noise associated with construction activities involving heavy equipment operation that occurs during the breeding season (generally between March 1 and August 31) will disturb nesting migratory birds and raptors if an active nest is located near these activities. Any disturbance that causes migratory bird or raptor nest abandonment and subsequent loss of eggs or developing young at active nests located at or near the construction work area (**Figures 2-8** and **2-9**) would violate CFGC Sections 3503 or 3503.5 and the MBTA, resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction nesting surveys, environmental awareness training, site monitoring, site replanting/revegetation, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-4** (more fully described above) would reduce the potentially significant impact associated with disturbance and loss of protected migratory birds and raptors nesting habitat to a ***less-than-significant*** level.

Special Status Mammal Species

Roosting Bats. Two bat species designated as a state species of special concern have the potential to occur within the BSAs: Pallid bat and western red bat. No pallid bats, western red bats, other roosting bats, or evidence of bat use (e.g., guano, staining) was observed in the BSAs during the wildlife surveys conducted for the bridge projects. Within the BSAs, potential roosting habitat occurs within large trees (with holes) in the riparian woodland, and under the Maxwell Creek Bridge. Additionally, bat species could forage in openings in the oak woodland habitat or above Maxwell Creek in the BSAs.

If roosting bats are present within the bridge project footprints during construction activities, direct effects will include vegetation removal, soil disturbance, and construction activities in areas that could support roosting bats. Noise associated with construction activities involving heavy equipment operation will also disturb roosting bats if they are found to be using habitat near these activities. Bat foraging habitat (surrounding oak woodlands) will also be temporarily affected through vegetation removal activities (see **Figures 2-8** and **2-9**). However, construction activities are not expected to disturb foraging pallid bats, western red bats, or other bat species, as these activities would not be conducted during dusk or dark when bats would be actively foraging. Vegetation removal and ground disturbance activities will result in the temporary alteration of bat nesting and foraging habitat within and slightly adjacent to the project sites (see **Figures 2-8** and **2-9**), resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction nesting/species surveys, environmental awareness training, site monitoring, and site replanting/revegetation) measures identified in **Mitigation Measures BIO-1** through **BIO-4** (more fully described above) would reduce the potentially significant impact to bat nesting and foraging habitat to a ***less-than-significant*** level.

Ringtail. The ringtail is designated as fully protected by the state. While no ringtails or their sign were observed in the BSAs during the wildlife surveys, potential foraging and den habitat for ringtail occurs within large trees in the oak woodland and riparian woodland habitats in the BSAs (see **Figures 2-8** and **2-9**). Forage that is present includes berries from berry producing vegetation, insects, and small vertebrate prey such as mice or lizards. This species is nocturnal and very difficult to observe during the day and would not likely be detected during daytime surveys.

If ringtail are present within the bridge project footprints during construction activities, direct effects will include vegetation removal, soil disturbance, and construction activities in areas that could support potential foraging, cover, or denning habitat for this species. Additionally, noise associated with construction activities involving heavy equipment operation will also temporarily disturb ringtail that may forage within the BSAs (see **Figures 2-8** and **2-9**). However, ringtails typically forage after sunset and so would not be foraging in the project construction footprints during daylight hours. Vegetation removal and ground disturbance activities will result in the temporary alteration of ringtail foraging, cover, and denning habitat within and slightly adjacent to the project sites, resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction species surveys, environmental awareness training, site monitoring, site replanting/revegetation, and wildlife escape/safety protocols) measures identified in **Mitigation Measures BIO-1** through **BIO-4** and **BIO-6** (more fully described above) would reduce the potentially significant impact to ringtail foraging, cover, and denning habitat to a ***less-than-significant*** level.

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?

Sensitive natural communities occurring in the BSAs include Waters of the U.S. and State, and riparian vegetation communities. **Table 3-4** summarizes the temporary and permanent impacts to all habitats (including sensitive natural communities) and **Figures 2-8** and **2-9** identify their locations within the project sites.

Within the project sites, the bed, bank and channel of Maxwell Creek are regulated by CDFW under Section 1602 of the CFGC for protecting fish and wildlife resources; riparian habitat along the creek bank may be evaluated as part of the Section 1602 permit. While the proposed project has been sited to minimize impacts within the project sites (using developed areas and roadway approaches surrounding Bridge #40C0039 for construction staging), construction of the proposed project will result in both temporary and permanent impacts to both aquatic and riparian habitats or vegetation communities within the project sites.

As summarized in **Table 3-4**, project construction activities would result in the permanent impact of 0.034 acre and temporary impact of 0.112 acre of intermittent stream (Maxwell Creek) for Bridge #40C0038 and result in the permanent impact of 0.016 acre and temporary impact of 0.091 acre of intermittent stream for Bridge #40C0039. During construction, permanent impacts to Maxwell Creek would result from the installation of RSP under the new bridge and fill within the channel associated with construction of the replacement bridge and widening the roadway

approaches. Temporary impacts to Maxwell Creek would include disturbance by vegetation removal, removal of the existing bridge and support columns, construction of the detour road, and water diversion (if necessary). Additionally, earth moving adjacent to Maxwell Creek due to construction of the new bridge abutments could result in increased sediment loads, turbidity, and siltation into the stream.

Construction activities will also result in the permanent removal of 0.041 acre and temporary impact of 0.093 acre of riparian vegetation for Bridge #40C0038 and result in the permanent removal of 0.003 acre and temporary impact of 0.013 acre for Bridge #40C0039. Permanent impacts would occur from constructing a wider bridge structure and widening the bridge approach. Temporary impacts would occur from vegetation clearing, grubbing, or trimming of tree canopy that would be required in order to provide construction crews and equipment access to Maxwell Creek.

The loss of riparian vegetation can have adverse effects on terrestrial and aquatic habitat in Maxwell Creek. Riparian vegetation reduces sedimentation and erosion along stream banks. This vegetation community also provides nesting habitat for bird species, creates an important movement corridor for wildlife, overhanging canopies provide shade, and riparian vegetation offers habitat for invertebrates that are a source of food for aquatic and terrestrial life. However, the proposed project will only convert a small amount of valley foothill riparian to transportation uses (i.e., road fill and RSP under the bridge) and is not expected to significantly alter the riparian habitat quality from existing conditions.

Table 3-4. Summary of Temporary and Permanent Effects for each Bridge Site

Vegetation Community	Permanent Impacts (acres)	Temporary Impacts (acres)
BRIDGE #40C0038		
Blue Oak – Foothill Pine Woodland	0.113	0.343
Valley Foothill Riparian	0.041	0.093
Intermittent Stream (Maxwell Creek)	0.034	0.112
Total:	**0.188**	**0.548**
BRIDGE #40C0039		
Blue Oak – Foothill Pine Woodland	0.117	0.294
Valley Foothill Riparian	0.003	0.013
Intermittent Stream (Maxwell Creek)	0.016	0.091
Total:	**0.136**	**0.398**

Source: *Natural Environment Study for Bridge #40C0038 and Bridge #40C0039* (Area West Environmental, Inc. 2020a, 2020b)

As part of the proposed project, the County will obtain a California Fish and Game Code 1600-1602 Streambed Alteration Agreement (SAA) from the CDFW. Implementation of all SAA permit requirements and habitat revegetation measures including riparian/native vegetation habitat re-planting requirements (see **Mitigation Measures BIO-4**, more fully described above) will be required to mitigate impacts to these sensitive natural communities. Additionally, the implementation of best management practices to protect wildlife and habitats (**Mitigation Measures BIO-2, BIO-3, BIO-7,** and **BIO-10**, more fully described above), erosion prevention

measures/water quality best management practices provided under **Mitigation Measure BIO-5** (also more fully described above), and the invasive plant species reduction measures provided in **Mitigation Measure BIO-12** (see below) would serve to further minimize impacts to sensitive natural communities. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures BIO-2** through **BIO-5, BIO-7, BIO-10,** and **BIO-12.**

Mitigation Measure BIO-12: Avoid the Spread of Invasive Plant Species

The following mitigation measures shall be implemented, as appropriate, to avoid the spreading of invasive plant species throughout the project sites during construction activities, particularly in riparian areas:

- All hay, straw, hay bales, straw bales, seed, mulch or other material used for erosion control or landscaping on the project sites shall be free of noxious weed seeds and propagules.
- All equipment brought to the project sites for construction shall be thoroughly cleaned of all dirt and vegetation prior to entering the site, in order to prevent importing noxious weeds.
- All material brought to the sites, including rock, gravel, road base, sand, and top soil, shall be free of noxious weed seeds and propagules.

Timing: During and after construction.

Responsibility: County of Mariposa / Construction Contractor.

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?

Maxwell Creek (intermittent stream) is an aquatic feature within the BSAs and is considered a water of the U.S. and State because it has a well-defined OHWM and because water that flows within this stream drains to a navigable waterway. No wetlands were identified during field surveys. An ephemeral stream (located within the BSA for Bridge #40C0039, but outside the project site as shown in **Figures 2-9**, **3-3**, and **3-5**) also exhibits a well-defined OHWM and was determined to be an "other waters" and is considered to be USACE-jurisdictional. No impacts to the ephemeral stream would occur (see **Figure 2-9**) under the proposed project.

Approximately 0.034 acre (Bridge #40C0038) and 0.016 acre (Bridge #40C0039) of jurisdictional waters (see **Table 3-3**, above) would experience permanent impacts under the proposed project. Permanent impacts to Maxwell Creek would result from the installation of RSP under the new bridge and fill within the channel associated with construction of the replacement bridge and widening the roadway approaches. Approximately 0.112 acre (Bridge #40C0038) and 0.091 acre (Bridge #40C0039) of jurisdictional waters (see **Table 3-3)** would experience temporary impacts under the proposed project. Temporary impacts to Maxwell Creek include disturbance by vegetation removal, removal of the existing bridge and support columns, construction of the detour road, and water diversion (if necessary). Waters located in the project sites would either be treated per SWPPP requirements, or disposed of per RWQCB requirements.

As part of the proposed project, the County will obtain a Clean Water Act Section 404 Nationwide Permit from the USACE; and a Clean Water Act Section 401 Water Quality Certification Waiver from the Regional Water Quality Control Board.

Implementation of all permit requirements and habitat revegetation measures including riparian/native vegetation habitat re-planting requirements (see **Mitigation Measures BIO-4**, more fully described above) will be required to mitigate impacts to these sensitive natural communities. Additionally, the implementation of best management practices to protect wildlife and habitats (**Mitigation Measures BIO-2, BIO-3, BIO-7,** and **BIO-10**, more fully described above) and the erosion prevention measures/water quality best management practices provided under **Mitigation Measure BIO-5** (also more fully described above) would serve to further minimize impacts to waters of the U.S. and State. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures BIO-2** through **BIO-5, BIO-7,** and **BIO-10.**

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?

See checklist Item "**a**" through "**c**" above.

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

The proposed project is likely to require the removal of up six (6) trees within the construction footprint for Bridge #40C0038 and up to 11 trees within the construction footprint for Bridge #40C0039. Tree types include blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), and Goodding's willow (*Salix gooddingii*). **Appendix A** of this IS/MND includes an inventory of all trees to be affected (removal or trimming) by the proposed project along with a description of the individual tree health and size. While Mariposa County does not have an oak tree ordinance or management plan, the Mariposa County Resource Management District does implement the County's Voluntary Oak Woodland Management Guidelines which plans for the retention and replacement of all types of trees (including heritage sized oaks), to reforest oak species through natural or artificial regeneration, remove hazard trees, and retain wildlife trees. Implementation of the management practices to protect native trees and vegetation through the establishment of protective fencing around environmentally sensitive habitats (including riparian and oak woodlands) surrounding the construction sites, onsite revegetation requirements using native plant species, and preventative measures to minimize the spread of invasive plant species are consistent with the goals and objectives of the County's Voluntary Oak Woodland Management Guidelines. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures BIO-3**, **BIO-4**, **BIO-5**, and **BIO-12** (more fully described above).

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?

There are no adopted habitat conservation plans, natural community conservation plans, or other approved plans that apply to the project sites. ***No impact*** would occur.

3.7 Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
V. CULTURAL RESOURCES.					
Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations (CCR) Section 15064.5?	☒	☐	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?	☒	☐	☐	☐	☐
c) Disturb any human remains, including remains interred outside of dedicated cemeteries?	☒	☐	☐	☐	☐

3.7.1 Environmental Setting

A *Historic Property Survey Report (HPSR) / Archaeological Survey Report (ASR)* (Area West Environmental, Inc. 2020a, 2020b) were prepared for each bridge project and a *Historic Resources Evaluation Report (HRER)* (Area West Environmental, Inc. 2020a) was prepared for Bridge #40C0038. Area of Potential Effect (APE) Maps (see **Figures 2-4** and **2-5**, above in **Chapter 2**) were prepared for each project and approved by Caltrans.

An HRER was requested and prepared for Caltrans and the County to re-evaluate the historical significance rating of Bridge #40C0038. The previous Caltrans statewide historic bridge inventory found the structure to be ineligible (Category 5) for listing in the National Register of Historic Places (NRHP). The conclusions of the recently prepared HRER (Area West Environmental, Inc. 2020a) for Bridge #40C0038 confirmed that the bridge is not considered eligible for either the NRHP or the California Register of Historic Resources (CRHR). Under the same statewide historic bridge inventory, Bridge #40C0039 is also considered ineligible for listing in the NRHP and a re-evaluation was not requested by Caltrans.

The HPSR/ASRs prepared for the proposed project included archival research and outreach to the Native American Heritage Commission (NAHC) and local Native American representatives and/or tribal contacts, as detailed below. A pedestrian survey of the project APEs (see **Figures 2-4** and **2-5**) was also performed by a qualified archaeologist in April 2018, with the survey results included in the documents.

The APE (or "project site", as referenced in other sections of this Initial Study) incorporates all areas subject to project-related impacts, including staging areas, traffic detour areas, and grading limits, as shown in **Figures 2-4** and **2-5** (see **Chapter 2**, above). The project sites include the existing bridge structures, the Maxwell Creek bed directly under the bridge deck (with portions extending (not more than 100 feet) both south and north of the bridge deck), and areas adjacent to the existing bridge abutments.

Archival Search and Literature Review

As part of the background research for this project, a "records" or archival search at the Central California Information Center (CCIC) of the California Historical Resources Information System located at California State University, Stanislaus, in Turlock, California was conducted. Records consulted at the CCIC included the NRHP, the CRHR, the California Historic Landmarks list, topographic maps showing the locations of sites or surveys, and historic topographic maps. A 0.25-mile search radius was utilized.

The CCIC records search included one archived report within the 0.25-mile radius of the APE or project sites. The report is titled "The Historic Survey Project, Mariposa, California March 1, 1981 – April 30, 1982," for the Mariposa Town Planning Area. In total, the CCIC records search identified four historic resources located outside the APEs (but within 0.25 miles of the project sites), as summarized below in **Table 3-5**. No recorded prehistoric cultural resources have been identified within the project APEs. The full record search is included in the HPSR/ASR prepared for each bridge project.

Table 3-5. Previously Recorded Resources within 0.25 miles of the Project Sites

Site Name / Description	Proximity to APE
CA-MRP-1266H (P-22-000002) / the Coulterville and Yosemite Turnpike Route, a stage road constructed 187-1874 that runs east from Coulterville 48 miles to the western end of Yosemite Valley.	Outside APE
P-2-002005 / the Coulterville Business District. Listed on the National Register of Historic Places (#82002205) and as a California Historic Landmark (#332).	Outside APE
P-2-002144 / the Canova Barn in Coulterville.	Outside APE
P-22-002151 / the Fiske Ranch Site north of Coulterville.	Outside APE

Source: *HPSR /ASR for Bridge #40C0038 and Bridge #40C0039* (Area West Environmental, Inc. 2020a, 2020b)

Field Survey

On April 5, 2018, an archaeologist conducted an intensive pedestrian survey using 10-20 meter transects within the APE (see **Figures 2-4** and **2-5**). Ground visibility varied from good where vegetation was sparse to poor where vegetation was dense. All area around the direct construction of the bridge were intensively surveyed. All exposed soils were specifically examined for evidence of cultural resources. Field survey results are summarized below.

Dogtown Road Bridge #40C0038 Project Site. While no surface prehistoric cultural resources were located during the pedestrian survey, two historic resources were identified, consisting of sections of a linear rock wall and five rusted tin cans. The HPSR/ASR concluded that both of these resources are exempt from evaluation under Attachment 4 (Properties Exempt from Evaluation) of the Section 106 Programmatic Agreement between the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act. The sections of rock wall and tin cans within the APE have been documented and their information potential thereby preserved; they do not require additional study or preservation.

The existing Dogtown Road Bridge (#40C0038) is rated Category 5 (not eligible to the NRHP) on the Caltrans Historic Bridge Inventory for Local Agency Bridges dated July 2018. The conclusions of the recently prepared HRER (Area West Environmental, Inc. 2020a) for this bridge confirmed that the

bridge is not considered eligible for either the NRHP or the CRHR. Consequently, the bridge does not require additional study or preservation and will be removed after the new bridge is completed.

Dogtown Road Bridge #40C0039 Project Site. During the pedestrian field survey of the APE, both prehistoric and historic resources were identified near Maxwell Creek approximately 50-75 feet south of the northwest end of the existing bridge. The prehistoric resources consist of two boulders, each possessing a slick surface, which may have been used for less intensive resource processing, such as lightly crushing manzanita berries for juice for smoothing hides. The historic resource consists of a rock wall starting in the same location as the boulders with slicks, and continuing westward for approximately 150 feet. Both the prehistoric boulders with slicks and the historic rock wall do not satisfy any of the four Criteria of Evaluation and would be ineligible for listing on either the National or State registers. These resources are also exempt from further evaluation pursuant to Attachment 4 of the Caltrans Section 106 Programmatic Agreement. The boulders and rock wall have been documented and their information potential thereby preserved; they do not require additional study or preservation.

The existing Dogtown Road Bridge (#40C0039) is rated Category 5 (not eligible to the NRHP) on the Caltrans Historic Bridge Inventory for Local Agency Bridges dated July 2018. Consequently, the bridge does not require additional study or preservation and will be removed after the new bridge is completed.

Native American Consultation

As part of the tribal consultation process with Native American groups and individuals, as per 36 CFR Part 800.3, the initiation of the Section 106 (of the National Historic Preservation Act) process, and Assembly Bill (AB) 52 under the provisions of CEQA, the Native American Heritage Commission (NAHC) was contacted and a list of Native American contacts was provided. The NAHC also reported that no recorded Sacred Land was within or adjacent to the project sites. Section 106 letters to the NAHC list of contacts were sent in March 2018. Follow-up voicemails and emails were sent to Native American Contacts on November 7, 2018. The North Fork Mono Tribe Chairman replied that the proposed project is outside of their territory. No other response was received by any of the Native American contacts. AB 52 consultation letters were sent in July 2020 as part of the CEQA process. **Table 3-6** provides a summary of Native American consultation activities to date.

Table 3-6. Native American Contact Efforts

Contact	Initial Contact Date	AB 52 Contact Date	Contact Method / Response
North Fork Mono Tribe Ron Goode, Chairperson	March 26, 2018	July 30, 2020	Letters for both 2018 and 2020 contacts. Follow-up email/vm: November 7, 2018. North Fork Tribe responded that the projects are outside their jurisdiction.
North Fork Rancheria of Mono Indians of California Guy Walker, Chairperson	March 26, 2018	July 30, 2020	Letters for both 2018 and 2020 contacts. Follow-up email/vm: November 7, 2018. No response to date.
Southern Sierra Miwuk Nation Lois Martin, Chairperson	March 26, 2018	July 30, 2020	Letters for both 2018 and 2020 contacts. Follow-up email/vm: November 7, 2018. No response to date.
Tuolumne Band of Me-Wuk Indians Kevin Day, Chairperson	N/A	July 30, 2020	Letter for 2020 contact. No response to date.

Consultation with Other Interested Parties

The Mariposa Museum & History Center was contacted prior to the preparation of this report, during which time a message was left. During a subsequent call to the museum, on July 17, 2018, Area West Environmental was referred to the Northern Mariposa County History Center, where a message was left in July and a letter about the proposed project was mailed on November 5, 2018, and no response was received. Subsequently, a letter was sent via US Mail to the Mariposa Museum and History Center and California State Mining and Mineral Museum on January 9, 2019. The letter was re-sent via email to both organizations on March 4, 2019, and was also emailed to the Northern Mariposa County History Center in Coulterville on March 11, 2019. No responses were received.

3.7.2 Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to in California Code of Regulations Section 15064.5?

Under CEQA, public agencies must consider the effects of their actions on "historical resources." CEQA defines an "historical resource" as any resource listed in or determined to be eligible for listing in the CRHR. The CRHR includes resources listed in or formally determined eligible for listing in the NRHP, as well as some California Historical Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (California PRC Section 5024.1, 14 CCR Section 4850). The eligibility criteria for listing in the CRHR are similar to those for NRHP listing but focus on importance of the resources to California history and heritage. A cultural resource may be eligible for listing on the CRHR if it:

1. is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. is associated with the lives of persons important in our past;

3. embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values; or

4. has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association resources (CCR, CRHR, Title 14, Chapter 11.5, Section 4852(c)).

As described above, historic resources (rock walls and tin cans) are located within the APEs for each bridge project. However, these resources do not satisfy any of the four Criteria of Evaluation (for listing) and would be ineligible for listing on either the National or State registers. These resources are also exempt from further evaluation pursuant to Attachment 4 of

the Caltrans Section 106 Programmatic Agreement. While these resources are considered exempt, the APEs are considered moderately sensitive for historic resources, given the history of placer mining in the region.

Construction of the proposed project would require ground disturbing work during existing bridge removal, traffic detour, bridge abutment installation, grading, and RSP placement. During construction, the possibility remains that a previously undiscovered historic resource meeting NRHR or CRHR significance criteria may be discovered during project-related ground-disturbing activities. If these actions were to occur, then it would result in a ***potentially significant*** impact**.** Implementation of standard inadvertent discovery procedures (identified in **Mitigation Measures CUL-1**) would reduce this ***potentially significant*** impact to any previously undiscovered subsurface historic resources (including tribal resources) to a ***less-than-significant*** level. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures CUL-1**.

Mitigation Measure CUL-1: Discovery of Cultural Resources during Ground-Disturbing Activities

To minimize the potential for significant impacts to undiscovered historical resources and unique archaeological resources during project-related ground-disturbing activities, the County and the construction contractor(s) shall implement the following:

If a potentially significant historical or archaeological resource is encountered during subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation forms. The archaeologist shall determine whether the item requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the item is determined to be significant under CEQA, the archaeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlined in Public Resources Code section 21083.2. Upon the County's approval of the recommended mitigation measures, the project proponent shall implement said measures. The County shall fund the costs of the qualified archaeologist and required analysis and shall include this mitigation measure in every construction contract to inform contractors of this requirement.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5?

The State CEQA Guidelines require consideration of unique archaeological resources (CCR Section 15064.5). As used in California PRC Section 21083.2, the term "unique archaeological resource" refers to an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,

- has a special and particular quality such as being the oldest of its type or the best available example of its type, or

- is directly associated with a scientifically recognized important prehistoric or historic event or person.

While implementation of the proposed project will result in the construction of a new bridge within the same alignment as the existing bridge, construction activities (including excavations and grading) could potentially damage or destroy any displaced artifacts within the study area boundaries from surrounding archaeological resources. If this were to occur, then it would result in a ***potentially significant*** impact**.** Implementation of resource avoidance and standard inadvertent discovery procedures (identified in **Mitigation Measures CUL-1**, see above) would reduce this ***potentially significant*** impact to any previously undiscovered subsurface archaeological resources to a ***less-than-significant*** level. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures CUL-1**.

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

No human remains have been identified or discovered in the study area (or surrounding area) and it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be discovered during ground disturbance activities resulting from the proposed project. However, should human remains, including those interred outside of formal cemeteries and including associated items and materials, be discovered during subsurface activities, the human remains and associated items and materials could be inadvertently damaged resulting in a ***potentially significant*** impact. However, implementation of resource discovery and avoidance measures consistent with the California Health and Safety Code and California PRC Section 5024.1, 14 CCR Section 4850 (as described in **Mitigation Measure CUL-2**) would reduce this ***potentially significant*** impact to a ***less-than-significant*** level. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures CUL-2**.

Mitigation Measure CUL-2: Accidental Finding of Human Remains

1. If human remains are found, the California Health and Safety Code requires that excavation be halted in the immediate area and that the Mariposa County Coroner be notified to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private of State lands (California Health and Safety Code, Section 7050.5[b]). If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by telephone within 24 hours of making that determination (California Health and Safety Code, Section 7050.5[c]).

2. Once notified by the Coroner, the NAHC shall identify the person it believes it the Most Likely Descendant (MLD) of the Native American remains. With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the

treatment and disposition of the human remains and any associated grave goods. This visit should be conducted with 24 hours of the MLD's notification by the NAHC (California Public Resources Code [PRC], Section 5097.98[a]). If a satisfactory agreement for treatment of the remains cannot be reached, any of the parties may request mediation by the NAHC (California PRC, Section 5097.94[k]). Should mediation fail, the landowner or landowner's representative must reinter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (California PRC, Section 5097.98[b]).

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

3.8 Energy

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VI. ENERGY.					
Would the project:					
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?	☐	☐	☐	☒	☐

3.8.1 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 F (Energy Conservation) and Appendix G (Environmental Checklist Form) of the State CEQA Guidelines.

California Energy Overview

California's major sources of energy are petroleum products (i.e., gasoline, diesel, and oil), electricity, and natural gas.

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 2018, the California power mix totaled 285,488 gigawatt hours (GWh), and in-state generation accounted for 194,842 GWh, or 68 percent, of the state's power mix. The remaining electricity came from out-of-state imports (California Energy Commission 2018).

Natural Gas. Nearly 45 percent of the natural gas burned in California is currently used for electricity generation. Much of the remainder was consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors for uses such as cooking, space heating, and as an alternative transportation fuel. California continues to depend upon out-of-state imports for nearly 90 percent of its natural gas supply (California Energy Commission 2020a).

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. In 2015, 15.1 billion gallons of gasoline were sold in California (California Energy Commission 2020b). 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 (California Energy Commission 2020b)

3.8.2 Discussion

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

Implementation of the proposed project would require the temporary use of energy resources for removal and construction of the bridge replacement projects over a 6 month construction period. This energy use would primarily be in the form of petroleum products and electricity used to operate construction equipment and consumed during vehicle trips associated with material delivery/debris hauling and commuting workers. Indirect energy use would also occur and include the extraction, production, and transportation of goods and materials needed for construction. 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. Consequently, this impact is ***less-than-significant***, with no additional mitigation measures required.

Implementation of the proposed project would require the use of minimal energy resources for operation and maintenance of the bridge and sewer line components. Maintenance of these structures would require minimal energy use, similar to existing County infrastructure maintenance activities. These activities would occur on an annual, or as-needed, basis. Additionally, the proposed project does not involve constructing buildings for human inhabitation, therefore no energy efficiency policies apply. For these reasons, energy impacts during proposed project maintenance and operation would be ***less-than-significant***, with no mitigation measures required, as they are considered part of existing agency operations and would not require additional sources of energy to implement.

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

The proposed bridge replacement project would not conflict with or obstruct a plan for renewable energy or energy efficiency. Consequently, ***no impact*** would occur.

3.9 Geology and Soils

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VII. GEOLOGY AND SOILS.					
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 California Geological Survey 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, as updated),), 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?	☐	☒	☐	☐	☐

3.9.1 Environmental Setting

The Conservation and Open Space Element (Technical Background Report) of the Mariposa County General Plan describes the geologic resources that occur within the County.

Seismicity and Ground Shaking Potential

As part of Mariposa County's location on the western slopes of the central Sierra Nevada Mountains, the Foothills Fault System traverses the County. This fault system has a total length of more than 200 miles, located primarily along the western front of the Sierra Nevada foothills and consists of two major parallel fault and fracture zones that trend northwest-southeast across Mariposa County: the Bear Mountains Fault Zone and the Melones Fault Zone. The Bear Mountains Fault Zone crosses the north Mariposa County line at Highway 132 near the northwest corner of Lake McClure. It trends south-southeast through the main pool of the lake near New Exchequer Dam, but appears not to continue more than a few miles to the southeast beyond the lake. The Melones Fault Zone also trends southeast across the County closely following Highway 49 from the area of Jamestown through Bear Valley to the town of Mariposa. Both fault zones are not considered to be active and are therefore not recognized as Alquist-Priolo zones by the State of California.

The probability of earthquake occurrence on the Foothills Fault System is considered low and the fault zone is classified as a "C" Zone under the Universal Building Code. Historically, few earthquakes are known to have originated in Mariposa County, and these have been relatively minor. Only two are known; one occurred in 1954 and the second in 1974. Both caused only minor damage. The historic earthquake occurrences indicate that the area could experience rare earthquakes with magnitudes of up to 6.5 in the future.

Soils and Elevation

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. Project site elevations range from 1,980 to 2,015 feet amsl for Bridge #40C0038 and slightly lower (1,750 to 1,870 feet amsl) for Bridge #40C0039. The native geology at each project site consists of the soil map units presented in **Table 3-7**.

Table 3-7. Soil Types within the Project Sites

Soil Series Symbol and Name	Parent Material	Depth to Restrictive Layer (inches)	Bridge Site
AhD. Auburn loam, 2 to 15 percent slope	Amphibolite schist	8 to 20 inches to lithic bedrock	Bridge #40C0038
AnE. Auburn very rocky loam, 15 to 30 percent slope	Amphibolite schist	8 to 20 inches to lithic bedrock	Bridge #40C0039
BdD. Blasingame loam, 2 to 15 percent slope	Metabasic, weathered residuum from metamorphic rock and/or from basic igneous rock	24 to 40 inches to paralithic bedrock	Bridge #40C0038
BrF2. Boomer cobbly loam, 15 to 50 percent slope	Residuum weathered from metavolcanics	40 to 49 inches to paralithic bedrock; 47 to 49 inches to lithic bedrock	Bridge #40C0038 Bridge #40C0039
BrG2. Boomer cobbly loam, 50 to 75 percent slope	Residuum weathered from metavolcanics	About 49 inches to lithic bedrock; 40 to 60 inches to paralithic bedrock	Bridge #40C0039
Rb. Riverwash and Tailings	Mixed alluvium	None specified	Bridge #40C0038 Bridge #40C0039

Source: NRCS 2018

3.9.2 Discussion

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 California Geological Survey Special Publication 42.)

As more fully described above in the "Environmental Setting", both the Bear Mountains Fault Zone and the Melones Fault Zone are not considered active and are therefore not recognized as Alquist-Priolo zones by the State of California. According to the Alquist-Priolo Earthquake Fault Zoning Map, the project sites are not located within or near an Alquist-Priolo Earthquake Fault Zone. Implementation of the proposed project would adhere to construction recommendations in the Caltrans Design Manual and the current design parameters of the Structural Engineers of California Uniform Building Code. Therefore, the proposed 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?

As more fully described above in the "Environmental Setting", both the Bear Mountains Fault Zone and the Melones Fault Zone (Foothills Fault System) are not considered active, with the probability of earthquake occurrence on the Foothills Fault System considered low. Implementation of the proposed 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 projects 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***, with no additional mitigation measures required.

iii) Seismic-related ground failure, including liquefaction?

As more fully described above in the "Environmental Setting", both the Bear Mountains Fault Zone and the Melones Fault Zone (Foothills Fault System) are not considered active and the project sites are not located within areas 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 proposed project would not expose people or structures to potential substantial adverse effects related to liquefaction. ***No impact*** would occur.

iv) Landslides?

As more fully described above in the "Environmental Setting", both the Bear Mountains Fault Zone and the Melones Fault Zone (Foothills Fault System) are not considered active and the project sites are not considered to be at risk from landslides as a result of active faulting. Areas with steep slopes occur along the roadway shoulders of both bridges; however, construction activities would be conducted in accordance with the County's grading regulations, and water quality/erosion 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***, with no additional mitigation measures required.

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

Construction activities associated with the project would involve grading and excavation activities within the project sites. These activities could expose barren soils to sources of wind or water, resulting in the potential for erosion and sedimentation on and off the project sites. The County plans to complete construction in the dry season, such that any surfaces disturbed during construction would be paved or re-vegetated before the raining season, keeping the potential for erosion low. Furthermore, the County would ensure the construction contractor employ the appropriate erosion control BMPs to minimize the potential for offsite erosion and sedimentation in accordance with the construction specifications and with the National Pollutant Discharge Elimination Discharge (NPDES) General Permit for Storm Water Discharges associated with construction activity. Implementation of the erosion prevention measures/water quality best management practices provided under **Mitigation Measure BIO-5** and the vegetation habitat re-planting requirements provided under M**itigation Measure BIO-4** (more fully described in **Section 3.6** "**Biological Resources**") would serve to further minimize the proposed project's impacts to soil loss and substantial soil erosion. Consequently, this impact is ***less-than-significant*** with mitigation incorporated.

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?

The project sites are not located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposed project. The Caltrans Bridge Design Specifications require an assessment of the existing onsite soils and the proposed project would be constructed following the 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, as updated), creating substantial direct or indirect risks to life or property?

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***, with no additional mitigation measures required.

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?

Portable toilets would be used for construction workers. The proposed project would not require or include the construction of wastewater disposal systems of any kind. Thus, there would be ***no impact*** related to the ability of project site soils to support the use of septic systems.

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

None of the previous analyses of the area have identified the project sites 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 ***potentially significant*** impact. However, implementation of resource discovery and avoidance measures consistent with Public Resources Code Section 21083.2 (as described in **Mitigation Measure GEO-1**) would reduce this potentially significant impact to a ***less-than-significant*** level. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures GEO-1**.

Mitigation Measure 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 Mariposa 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.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

3.10 Greenhouse Gas Emissions

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VIII. GREENHOUSE GAS EMISSIONS.					
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?	☐	☐	☒	☐	☐

3.10.1 Environmental Setting

Greenhouse gases (GHGs) are global pollutants, unlike criteria air pollutants and toxic air contaminants. Global climate change can result in increased temperatures; changes in snow and rainfall patterns; and an increase in droughts, tropical storms, and heavy rain events. Listed below are the most prominent GHGs that have been identified as contributing to global climate change:

- Carbon dioxide (CO2)
- Methane (CH4)
- Nitrous oxide (N2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF6)

The State of California adopted the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) on September 27, 2006, to address the threat of global warming caused by the increase in GHG emissions. AB 32 requires a reduction of carbon emissions to 1990 levels by the year 2020. The 1990 emissions were estimated at 427 million metric tons CO2 equivalent.

In December 2008, the California Air Resources Board (CARB) approved the AB 32 Scoping Plan outlining the state's strategy to achieve the 2020 GHG emissions limit. The Scoping Plan estimated a reduction of 174 million metric tons CO2e from the transportation, energy, agriculture, forestry, and high climate-change-potential sectors, and proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. The Scoping Plan must be updated every 5 years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal.

In response to the 2030 GHG reduction target stipulated in Executive Order B-30-15 (see discussion below), CARB released the 2017 Climate Change Scoping Plan Update in January 2017 (CARB 2017).

The 2017 Climate Change Scoping Plan Update sets the groundwork to reach California's long-term climate goals set forth in Executive Orders S-3-05 and B-16-2012 (the latter of these ordered State agencies to facilitate the rapid commercialization of zero-emission vehicles, setting a target for the number of them on California roads and also set a goal for reduction of emissions from the transportation sector). The Climate Change Scoping Plan Update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan. SB 350 was passed in 2015 that requires 40 percent of California electricity sold to retail customers be generated by renewable resources by the end of 2024, 45 percent by 2027, and ultimately 50 percent by 2030.

3.10.2 Discussion

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

Project construction-related activities would generate a variety of greenhouse gases, such as carbon dioxide (CO2), methane (CH4), and nitrogen dioxide (N2O) from the exhaust of equipment and the exhaust of vehicles for employees, visitors, and construction hauling trips. The project would also result in the short-term generation of aerosols from diesel particulate matter exhaust. Aerosols are short-lived greenhouse gases, as they remain in the atmosphere for approximately one week. The project would emit nitrogen oxides (NOx) and reactive organic gases (ROG), which are ozone precursors. Ozone is a greenhouse gas. However, unlike the other greenhouse gases, ozone in the troposphere is relatively short-lived and is being reduced in the troposphere daily. Overall, these emissions are considered temporary or short-term.

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. Additionally, the proposed project would accommodate existing traffic and would not result in new sources of GHG emissions. ***No impact*** would occur.

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

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***, with no additional mitigation measures required.

3.11 Hazards and Hazardous Materials

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IX. HAZARDS AND HAZARDOUS MATERIALS.					
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?	☐	☒	☐	☐	☐

3.11.1 Environmental Setting

All project-related construction activities would include the use of equipment that would use fuels, oil and lubricants, and cleaning solvents. Petroleum products, such as gasoline, diesel fuel, oil, lubricants, and cleaning solvents would be used to fuel and maintain construction vehicles and equipment for construction of all project elements (including traffic detour, bridge removal, and new bridge construction). The routine use or reasonably foreseeable upset and accident conditions for the various hazardous materials that would be used during construction and demolition activities could result in

inadvertent releases of small quantities of hazardous materials, which could adversely affect construction workers or the environment.

Construction and demolition activities are required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, to reduce the potential for a release of construction-related fuels or other hazardous materials to affect stormwater and downstream receiving water bodies, and to respond to accidental spills, if any. State and federal regulations such as the Resource Conservation and Recovery Act of 1976, Toxic Substances Control Act of 1976, Hazardous and Solid Waste Act of 1984, and the Hazardous Materials Release Response Plans and Inventory Act require measures for the safe transportation, storage, handling, and disposal of hazardous materials used for construction, including implementation of a Hazardous Materials Business Plan, use of appropriate containers, and secondary containment to contain a potential release. As described in **Section 3.6** "**Biological Resources"** and **Section 3.12** "**Hydrology and Water Quality"**, construction contractors would be required to implement erosion control and construction waste containment measures to address construction related habitat and water quality impacts. Construction waste containment measures would include listing the hazardous materials (including petroleum products) proposed for use during construction and demolition, and describe spill prevention measures, equipment inspections, equipment and fuel storage, and protocols for responding immediately to spills.

3.11.2 Discussion

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

Hazardous materials present during project construction may include gasoline, diesel fuel, hydraulic oils, equipment coolants, and any generated wastes that may include these materials. Fueling of equipment and vehicle would be performed on-site. Construction equipment and vehicles would use a minimal amount of hazardous materials. Gasoline and diesel fuel would be stored in small quantities at the staging yards during construction. Although very few individuals live and work in the area, a hazard to the public or the environment could occur through the transport and use of gasoline and diesel fuel on the project site. Spill response and control would be addressed as part of the construction waste containment measures under **Mitigation Measure BIO-5**, **Section 3.6** "**Biological Resources**". Compliance with the spill control and response measures would reduce the risk to the public and environment from transport and use of hazardous materials. The impact to the public or the environment from use, disposal, or transport of hazardous materials during construction would be ***less-than-significant,*** with no additional mitigation measures required.

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?

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***, with no additional mitigation measures required.

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 existing or proposed school is within 0.25 mile of the project sites. The schools located nearest to the project sites are the Greeley Hill Elementary School and the Coulterville High School (10326 Fiske Road, Coulterville, CA) located over 3 miles northeast of the project sites. ***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?

A review of county, state, and federal databases listing hazardous material sites (including the State of California's EnviroStor database, 2020) determined that the project site is not located on a site included on a list of hazardous materials sites. The project would result in no impacts associated with emissions from hazardous materials sites. Consequently, ***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?

The Mariposa-Yosemite Airport, located at 5020 Macready Way, Mariposa, CA is the nearest airport to the project sites and is located 20 miles from the project site. The project sites are not located within an airport land use plan. The proposed project would have no impacts associated with airport hazards. Consequently, ***no impact*** would occur.

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

While not considered a high-volume roadway (current ADT at 120 vehicles), the project will require a short-term roadway detour at the Dogtown Road bridge sites during replacement of the existing bridge structures (and associated roadway approach work) to ensure construction is completed efficiently and with as short a construction period as possible. Implementation of the proposed project is considered to have a beneficial effect to local emergency response efforts as it will address the existing bridges narrow width which have contributed to difficulties in evacuating the area during past fire events. To minimize traveler delays and ensure residential circulation and access along Dogtown Road, during the construction period, the County will implement a traffic detour route and the circulation measures included under **Mitigation Measure TC-1** (see **Section 3.19** "**Transportation**") would minimize short-term construction-related roadway/access conflicts resulting from the project. Consequently, this impact is ***less-than-significant***, with no further mitigation required.

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

Heavy equipment used during project construction has the potential to start a fire on surrounding open space areas near the project site. Vegetation removal activities resulting from the project will help to 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-1** that would serve to further minimize wild land fire impacts. Consequently, this impact is ***less-than-significant*** with mitigation incorporated.

Mitigation Measure HAZ-1: Implement BMPs for Wildland Fire Prevention

The County shall ensure that the construction contractor will clear dried vegetation or other materials that could serve as fuel for combustion from construction or building areas. To the extent feasible, the contractor shall keep these areas clear of combustible materials to maintain a firebreak. 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.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

3.12 Hydrology and Water Quality

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

3.12.1 Environmental Setting

A *Water Quality Assessment Report (WQAR)* (Area West Environmental, Inc. 2020a, 2020b) and a *Location Hydraulic Study Report* (WRECO 2018a, 2018b) were prepared for each bridge project. The purpose of the reports are to provide information, to the extent possible, to address water quality and flood-related impacts and has been incorporated into the analysis below.

Climate and Precipitation

The region, in which the project sites are located, is characterized by hot dry summers and wet winters. Climate details in the study area are based on historical data collected by the Western Regional Climate

Center monitoring station at Sonora, located approximately 20 miles northeast of the project sites. The warmest month, on average, is July with an average high temperature in July of 94.4 °F. The coolest month on average is January, with an average low of 33.3 °F. Average annual rainfall is 31.91 inches, mostly occurring from October through May. Additionally, the average length of the growing season (i.e., number of "frost-free" days) for the area is 311 days.

Local and Regional Hydrology

The proposed project lies within the Upper Merced Subbasin, part of the San Joaquin Basin, which is comprised of the San Joaquin Valley north of the San Joaquin River (Watershed Boundary Dataset 2018). The project sites are located in the Maxwell Creek-Merced River watershed, and the Maxwell Creek subwatershed (see **Figure 3-6**; USGS Hydrologic Unit Code [HUC] 180400080602). Surface waters from the San Joaquin Basin drain into the San Joaquin River and into the Pacific Ocean via Suisun and San Francisco Bay (Central Valley RWQCB 2016).

Maxwell Creek originates approximately 6 miles southeast, upstream from the project sites at Buckhorn Peak. Maxwell Creek is an intermittent stream that is fed almost entirely by rainfall, which generally flows from November to July, depending on the water year. During rainfall years when Maxwell Creek does not flow, the creek likely retains water in pools during the summer and fall months.

Maxwell Creek proceeds downstream from the project sites approximately 2.7 miles, where it flows into a dammed pond located on private property. From the pond, the creek continues for approximately 4.1 miles, before draining into Lake McClure.

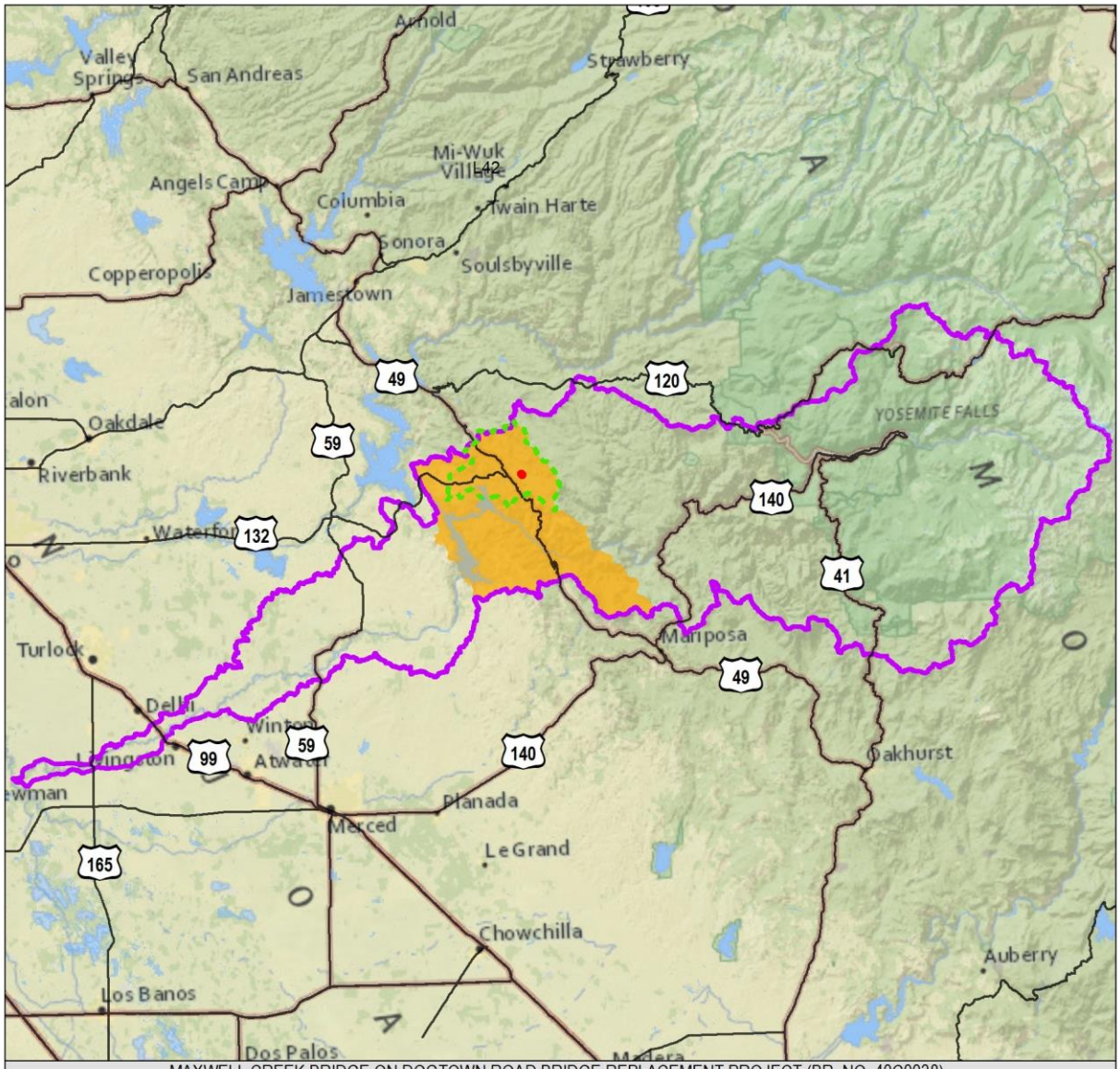
Lake McClure is a reservoir used for agricultural irrigation use in northern Merced County, managed by the Merced Irrigation District. Lake McClure is a multi-use area used for fishing, boating, swimming, and camping, and has a hydroelectric plant at the base of the dam. Lake McClure extends for approximately 12.3 miles, and then drains into the Merced River. The Merced River drains into the San Joaquin River approximately 60.4 miles downstream. The San Joaquin River flows north approximately 40.7 miles before the confluence with the portion of the San Joaquin River designated as a Traditional Navigable Water.

The proposed project is within the boundary of the 100-year floodplain for Maxwell Creek as indicated by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map. The boundary of a 100-year floodplain is used to demarcate flood hazards and indicates the geographic area having a one percent chance of being flooded in any given year.

Water Quality Conditions

Water quality conditions within Maxwell Creek are primarily dependent upon upstream precipitation and with no known sources of pollution upstream of the project sites; waters within the project sites are not listed on the Clean Water Act (CWA) Section 303(d) list of impaired waters (Central Valley RWQCB 2016). While Maxwell Creek is not under a Total Maximum Daily Load (TMDL) requirement, as regulated under the CWA, water eventually flows into Lake McClure which has a TMDL for mercury. Downstream from Lake McClure, both the Merced and San Joaquin Rivers have a number of TMDLs that include group A pesticides, water temperature, mercury, as well as toxicity (Central Valley RWQCB 2016).

Figure 3-6. Hydrologic Unit Watershed Map



Groundwater Hydrology

The project sites are not located within any designated groundwater basin or subbasin. However, the project sites are located in the Sierra Nevada foothills northeast of the San Joaquin Valley Turlock and San Joaquin Valley Merced groundwater subbasins, which are part of the San Joaquin Valley Groundwater Basin (California Department of Water Resources 2016).

Regulatory Framework Relating to Hydrology and Water Quality

Water quality is regulated according to the provisions of the CWA and the California Porter-Cologne Water Quality Control Act. California's State Water Resources Control Board (SWRCB) and RWQCB implement the 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 USACE regulates discharged or fills into waters of the United States under Section 404 of the CWA via the Nationwide Permit. The USACE 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.

3.12.2 Discussion

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

Construction Site Stormwater Runoff. Construction-related activities from the proposed project (including bridge removal, traffic detour, and bridge replacement) would occur in areas adjacent to and within Maxwell Creek could result in violations of water quality standards or waste discharge requirements. Construction could degrade water quality as a result of construction-related soil disturbance and discharge of construction stormwater. Additionally, fuels and other chemicals used during construction could also degrade the water quality of receiving waters if spilled and entrained into stormwater runoff or dewatering discharges.

The primary stormwater pollutant at construction sites is excess sediment. Excess sediment can cloud the water, which reduces the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas, and impede navigation in waterways. Sediment also transports other pollutants such as nutrients, metals, and oils and greases. Hazardous materials associated with construction equipment and practices, such as fuels, oils, antifreeze, coolants, and other substances, could also adversely affect water quality if released to surface waters.

Construction activities can impact a construction site's runoff sediment supply and transport characteristics both during and after the construction phase. Excess sediment could be mobilized anywhere earthwork occurs, including during establishment of the traffic detour, removal of the existing bridge structure, and placement of the new bridge abutments. Additionally, removal of any existing vegetation along the creek banks would expose underlying soils that were previously not as susceptible to erosion. Contact with loose bare soil could entrain sediments into the runoff causing sedimentation of the water which could impact water quality in receiving waters downstream.

As previously described above in **Sections 3.6** "**Biological Resources**" and **3.9** "**Geology and Soils**", the County would ensure the construction contractor employ the appropriate water quality and erosion control BMPs to minimize the potential for offsite erosion and sedimentation in accordance with the construction specifications and with the NPDES General Permit for Storm Water Discharges associated with construction activity. These BMPs (such as use of check dams and fiber rolls for reducing erosion on slopes and retaining sediment in stormwater) will be in accordance with Caltrans's Construction Site Best Management Practices Manual and would ensure no water quality standards or waste discharge requirements would be violated. Additionally, the project is subject to the water quality and erosion prevention provisions outlined under the Clean Water Act Sections 401 and 404 and a CDFW Streambed Alteration Agreement.

Prior to in-channel construction activities, the County will complete the Section 404 Clean Water Act Nationwide Permitting Process, complete RWQCB Section 401certification, and obtain a Streambed Alteration Agreement with California Department of Fish and Wildlife. Conditions of Approval outlined in the respective permits would help to alleviate any potential water quality impacts resulting from the proposed project activities occurring within Maxwell Creek. Additionally, the implementation of the erosion prevention measures/water quality best management practices provided under **Mitigation Measure BIO-5** and the vegetation habitat re-planting requirements provided under **Mitigation Measure BIO-4** (more fully described above under **Section 3.6** "**Biological Resources**") would serve to further minimize the project's impacts to water quality conditions. Consequently, this impact is ***less-than-significant***, with no further mitigation required.

Construction Dewatering. Construction dewatering at the project site would likely be required to create dry work areas for the traffic detour, excavations (new bridge abutment placement) and for work within the creek channel (existing bridge removal). Water pumped from dewatered areas could be redirected to the creek channel downstream of the work area. Sediment or other water pollutants originating from construction equipment or the surrounding disturbed land could be released with the dewatered water, degrading surface water quality. Discharged water could violate water quality standards or substantially degrade water quality.

Implementation of all permit requirements and habitat revegetation measures including riparian/native vegetation habitat re-planting requirements (see **Mitigation Measures BIO-4**, more fully described above) will be required to mitigate habitat and water quality impacts. Additionally, the implementation of best management practices to protect wildlife and habitats (**Mitigation Measures BIO-2, BIO-3, BIO-7,** and **BIO-10**, more fully described above) and the erosion prevention measures/water quality best management practices provided under **Mitigation Measure BIO-5** (also more fully described above) would serve to further minimize

impacts to waters of the U.S. and State. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures BIO-2** through **BIO-5, BIO-7,** and **BIO-10.**

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

The proposed project would not require the use of groundwater or substantially interfere with groundwater recharge. Replacement of the bridges would not result in new amounts of impervious surfaces that would affect local groundwater levels. Therefore, the proposed project would not substantially deplete groundwater supplies and would not affect groundwater recharge such that a net deficit would occur. Consequently, ***no impact*** would occur, with no mitigation required.

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;

The project sites drain into Maxwell 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 traffic detour and the new bridge. If dewatering is necessary, it would occur within the project sites (see **Figures 2-4** and **2-5**), 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 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.

As more fully described in the Location Hydraulic Study Report (WRECO 2018a, 2018b) prepared for the proposed project, a hydraulic analysis was performed using the HEC-RAS hydraulic model to determine the overall flood inundation effects resulting from implementation of the proposed project. At the Bridge #40C0038 location, the HEC-RAS hydraulic model results indicated that implementation of the proposed project would result in a maximum 1 foot increase in the water surface elevation upstream of the bridge from a 100-year storm. However, the design flows are still shown as being contained within the channel and would not affect nearby properties. At the Bridge #40C0039 location, the HEC-RAS hydraulic model results indicate that implementation of the proposed project would decrease the water surface elevation by 4.7 feet from a 100-year storm event. While these changes may alter the velocity of flows through the project site, resulting in erosion and siltation; the proposed project includes the placement of

rock slope protection along the abutments to prevent substantial erosion or siltation on- or off-site.

Implementation of the 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. Consequently, this impact is ***less-than-significant,*** with no mitigation required.

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

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 slight changes to water surface elevations from the slightly modified segment of Maxwell Creek through the project sites, 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 would ensure the project would not substantially increase the rate or amount of surface runoff that would result in flooding. Consequently, this impact is ***less-than-significant,*** with no mitigation required.

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

There are no existing or planned stormwater drainage systems surrounding the project area. As described above, the proposed project would not result in a significant increase in runoff. Furthermore, implementation of the 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. Consequently, this impact is ***less-than-significant,*** with no mitigation required.

iv) Impede or redirect flood flows?

See checklist Item "**ci**, **cii**, and **ciii**" above.

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

Tsunamis (seismic sea waves) are long-period waves that are typically caused by underwater seismic disturbances, volcanic eruptions, or submerged landslides. Low-lying coastal areas such as tidal flats, marshlands, and former bay margins that have been artificially filled but are still at or near sea level are generally the most susceptible to tsunami inundation. A seiche is caused by the oscillation of the surface of an enclosed body of water such as San Francisco Bay due to an earthquake or large wind event.

There are no bodies of water near the project sites capable of producing seiches. Areas surrounding the project sites 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?

See checklist Item "**a** and **b**" above.

3.13 Land Use and Planning

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XI. LAND USE AND PLANNING.					
Would the project:					
a) Physically divide an established community?	☐	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒	☐

3.13.1 Environmental Setting

According to the County's Land Use map, areas north of Dogtown Road are designated as "Natural Resources" and areas south of Dogtown Road are designated as "Residential" in the vicinity of the project sites (Mariposa County 2005). Land uses surrounding the proposed project sites consist of scattered low density residential uses, livestock grazing, and open space uses. Adjoining properties are predominantly undeveloped and interspersed with scattered rural residences and oak woodlands.

3.13.2 Discussion

a) Physically divide an established community?

The proposed project would replace an existing bridge along an already established transportation corridor. Designed to improve public safety and local circulation, the proposed project is considered to have a beneficial effect to local emergency response efforts as the existing bridges narrow width have contributed to difficulties in evacuating the area during past fire events. While small amounts of new right of way, adjacent to the existing bridges, would be required to accommodate the new bridge alignments, the proposed project would not physically divide an established community. Traffic detours at the project sites would be implemented during the construction period to minimize traveler delays and ensure residential circulation. Consequently, implementation of the proposed project would not physically divide an established community and improve public safety by replacing the existing bridges, resulting in a ***beneficial impact***.

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

The proposed project would require small amounts of new right of way; however, replacement of the existing bridges would occur predominately within the County's existing right-of-way and the proposed project would remain consistent with the existing site land use and surrounding land use designations, requiring no further change or amendment to the General Plan land use designation or zoning assigned by the County. Therefore, the proposed project would not conflict

with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. Consequently, ***No impact*** would occur.

3.14 Mineral Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XII. MINERAL RESOURCES.					
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?	☐	☐	☐	☒	☐

3.14.1 Discussion

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 mineral extraction activities exist on the project site and mineral extraction is not included as a part of the proposed project. Consequently, ***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?

See checklist Item "**a**" above.

3.15 Noise

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIII. NOISE.					
Would the project:					
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 in other 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 2 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?	☐	☐	☐	☒	☐

3.15.1 Environmental Setting

Terminology Used to Define Noise Conditions

Noise can be defined as unwanted and objectionable sound. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. The method commonly used to quantify environmental sounds consists of evaluating all frequencies of a sound in accordance with a filter that reflects the fact that human hearing is less sensitive at very low and very high frequencies compared to mid-range frequencies. This is called "A" weighting, and the dB level measurement is called the A-weighted sound level (dBA).

A-weighted sound level (dBA) is expressed on a logarithmic (power of 10) scale using a frequency-weighted pattern that duplicates the human ear's sensitivity to sound. A 70-dBA sound level is approximately twice as loud as a 60-dBA sound level and four times as loud as a 50-dBA sound level.

Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for many various sound level metrics, including the day/night sound level (Ldn) and the Community Noise Equivalent Level (CNEL), both of which represent how humans are more sensitive to sound at night. In addition, the equivalent continuous sound level (Leq) is the average sound energy of time-varying noise over a sample period and the (Lmax) is the maximum instantaneous noise level occurring over a sample period.

Existing Noise Conditions

Land uses surrounding the proposed project sites consist of scattered low density residential uses, livestock grazing, and open space uses. The existing noise environment in the immediate project area is dominated by song birds, farming/residential maintenance equipment, and sporadic vehicle traffic along Dogtown Road.

Sensitive Receptors. Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved for those uses. Residences, schools, day cares, rest homes, hospitals, and churches are generally more sensitive to noise than commercial and industrial land uses.

Residential structures are typically not located along Dogtown Road, but are set back on the properties, away from the roadway. The nearest residences to the Bridge #40C0038 project site are located 700 to 800 feet north and southwest of the bridge and the nearest residence to Bridge #40C0039 is roughly 200 feet north from the bridge site. Overviews of the project sites are shown above in **Figures 2-2** and **2-3**.

Local Noise Regulations

There are no State or federal standards that specifically address construction noise. Additionally, the Mariposa County General Plan does not specifically limit hours during which construction may occur; however, it is common practice to limit hours of construction activity to minimize construction noise impacts in residential areas during the early morning and late evening hours, and on weekends and holidays. Although not specifically stated in the County's General Plan Noise Element, it is also a standard requirement of many jurisdictions that all construction equipment by properly maintained and muffled to minimize noise generation at the source.

Some guidance on construction-related noise is provided by Section 14-8.02 of the Caltrans Standard Specifications document which suggests that construction equipment not exceed 86 dB (Lmax) at a distance of 50 feet from job site activities from 9 p.m. and 6 a.m.

Mariposa County does not have any established performance standards regarding groundborne vibration levels from construction activities. However, the Mariposa County General Plan Noise Element does include Implementation Measure 15.1a(3) which requires the County to implement standards that will reduce vibration from construction activities to a level that is less than perceptible at adjacent property lines. 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).

3.15.2 Discussion

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 in other applicable standards of other agencies?

Implementation of the proposed project would result in potential noise impacts from short-term construction activities. Regarding long-term or operational noise impacts, implementation of the proposed project would not result in added travel lanes along the project alignments, nor would it move travel lanes substantially closer to any sensitive receptor in the project vicinity. In addition,

implementation of the proposed project would not result in any increase in traffic volumes along the project alignments. As such, the project would not result in any new long-term operational noise sources, nor would it move existing operational noise sources (i.e., traffic) closer to existing sensitive land uses. No long-term or operational noise impacts are associated with the proposed project and this topic is not addressed further.

Construction such as clearing and grubbing (removal of trees), excavation, and staging location activities would temporarily increase noise levels in the vicinity of the proposed 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.

As previously described, residential structures are set back on the properties surrounding the bridge sites, with vegetation and topography shielding their views of or visibility from the project sites. The nearest sensitive receptor to these noise sources would be the residential property at the Bridge #40C0039 site, which is roughly 200 feet north from the project site. This structure would be located approximately 200 feet from the northwestern end of the bridge where foundation excavation would occur and 100 feet from the nearest staging location, located at the western edge of the project site.

During foundation excavation, the operation of an excavator and dump truck would generate a noise level of 66.1 dBA Leq at 200 feet and the tracked drill with concrete pumper and concrete truck would generate a noise level of 67.2 dBA Leq at 200 feet. During tree removal, a chainsaw would generate a noise level of 65 dBA Leq at 180/200 feet. At the staging location, a front-end loader, dump truck, and generator would generate a noise level of 74.3 dBA Leq at 100 feet.

Increases in ambient noise from these construction activities would be temporary and would not be expected to exceed Caltrans Standards (86 dB Lmax at a distance of 50 feet from job site activities). To ensure these project-related increases in ambient noise would not exceed applicable noise and land use standards, the noise reducing best management practices (limiting construction hours and maintaining standard equipment noise controls) pursuant to **Mitigation Measure NOS-1** will be implemented by the construction contractor. Consequently, this impact is ***less-than-significant*** with mitigation incorporated.

Mitigation Measure NOS-1: Construction Noise Reducing Best Management Practices

The County shall ensure the construction contractor implement the following construction noise reducing measures:

- The construction contractor shall ensure that all noise producing construction activities, including warming-up or servicing equipment and any preparation for construction, shall be limited to the hours between 7:00 a.m. and 6:00 p.m. The construction contractor shall locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise sensitive receptors nearest the project site during construction.

- The construction contractor shall ensure that all equipment will have sound control devices that are no less effective than those provided on the original equipment. Further, pavement breakers and jackhammers shall also be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof. In lieu of or in the absence of manufacturers' recommendations, the Director of Public Works shall have the authority to prescribe such means of accomplishing maximum noise attenuation as deemed to be in the public interest, considering the available technology and economic feasibility.

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

Construction activities such as excavation and roadway paving would temporarily increase groundborne vibration and/or groundborne noise levels in the vicinity of the project sites. The nearest vibration-sensitive land use from the proposed project construction sites is the adjacent residential property, located approximately 100 (staging area) to 200 feet from the boundary of the project footprint for the Bridge #40C0039 site. An on-site source of vibration during project construction would be a vibratory roller, which would be used for road compaction during modifications to Dogtown 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***, with no mitigation required.

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 2 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?

The Mariposa-Yosemite Airport, located at 5020 Macready Way, Mariposa, CA is the nearest airport to the project sites and is located 20 miles from the project site. The project sites are not located within an airport land use plan. The proposed project would have no impacts or expose workers to excessive airport noise levels. Consequently, ***no impact*** would occur.

3.16 Population and Housing

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIV. POPULATION AND HOUSING.					
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?	☐	☐	☐	☒	☐

3.16.1 Discussion

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)?

The proposed project would not directly or indirectly induce growth in the area. The new bridges would more efficiently and safely accommodate existing traffic volumes and are considered to have a beneficial effect to local emergency response efforts as the existing bridges narrow width have contributed to difficulties in evacuating the area during past fire events. The replacement bridges and roadway approaches would not provide an extension to new destinations beyond the current extent of the existing road. Construction is expected to last up to 6 months (24 weeks) utilizing a construction crew of 12 workers from the surrounding workforce. No additional housing or temporary lodging facilities would be required by construction workers commuting to the project site. Consequently, ***no impact*** would occur.

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

Replacing the existing bridges, within largely the same project footprint, would not involve the construction, displacement, or demolition of any existing housing structures. Consequently, ***no impact*** would occur.

3.17 Public Services

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XV. PUBLIC SERVICES.					
Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:					
Fire protection?	☐	☐	☐	☒	☐
Police protection?	☐	☐	☐	☒	☐
Schools?	☐	☐	☐	☒	☐
Parks?	☐	☐	☐	☒	☐
Other public facilities?	☐	☐	☐	☒	☐

3.17.1 Discussion

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:

Fire protection?
Police protection?
Schools?
Parks?
Other public facilities?

Implementing the proposed project would not create new housing or other structures and, therefore, would not require additional public services (including fire or police protection facilities, schools, or parks). Furthermore, the new bridges would more efficiently and safely accommodate existing traffic volumes and the proposed project is considered to have a beneficial effect to local emergency response efforts as the existing bridges narrow width have contributed to difficulties in evacuating the area during past fire events. Consequently, ***no impact*** would occur.

3.18 Recreation

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVI. RECREATION.					
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) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒	☐

3.18.1 Discussion

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?

As previously described, the proposed project does not include the development of any new residential uses or include other land development that would directly induce additional population growth affecting existing recreation facilities or opportunities. Employment opportunities from the construction phase of the project would not induce any additional population growth within the Town of Coulterville or Mariposa County. Therefore, the project would not cause physical deterioration of existing recreational facilities from increased usage or result in the need for new or expanded recreational facilities. Consequently, ***no impact*** would occur.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

See checklist Item "**a**" above.

3.19 Transportation

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVII. TRANSPORTATION.					
Would the project:					
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐	☐
b) 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?	☐	☒	☐	☐	☐

3.19.1 Discussion

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

As previously described, implementation of the proposed project would more efficiently and safely accommodate existing traffic volumes on Dogtown Road and is considered to have a beneficial effect to local emergency response and evacuation efforts as the existing bridges narrow width have contributed to difficulties in evacuating the area during past fire events. The replacement bridges would be built to meet current design standards and are being implemented as part of the Caltrans Local Highway Bridge Program, which is a federal- and state sponsored program that provides funding for projects that replace bridges that have been deemed structurally deficient or functionally obsolete.

While the proposed project would not conflict with federal transportation programs or local County circulation policies, construction of the project would require the temporary detour of Dogtown Road vehicle traffic at the project sites during the 5 to 6 month construction period, temporarily affecting local traffic accessing the neighborhood. As part of the project, the County and the construction contractor would route residential traffic around the bridge sites as shown in **Figures 2-4**, **2-5**, **2-6 (a-c)**, and **2-7 (a-c)** (see **Chapter 2**). Temporary traffic controls will also be implemented to ensure that the project would remain consistent with County requirements regarding traffic control. To minimize traveler delays and ensure residential circulation and access along Dogtown Road, during the construction period, the County will implementation the traffic detour and circulation controls included under **Mitigation Measure TC-1**. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures TC-1.**

Mitigation Measure TC-1: Prepare and Implement a Traffic Detour and Control Plan

- At least one week prior to the commencement of work, the County's contractor' will be required to provide changeable message signs at each end of Dogtown Road to notify drivers of the upcoming project and potential delays. The contractor shall provide an informational sign at the entry points of the project identifying a contact person and phone number for any concerns or questions.

- During project construction, the County's contractor shall use standard cones and barricades to protect the public from entering the construction work area. The contractor will also install advance warning signs to alert approaching motorists of the work zones consistent with the most recent edition of the California Manual of Traffic Control Devices (MUTCD) for sign placement, etc. Advance warning signs may be reflective signs, changeable message boards, cones and barricades. The contractor shall provide flaggers as needed to temporarily hold traffic for staging equipment or construction. The work will be limited to 8 a.m. to 5 p.m., with weekend work if approved by Public Works; no work shall occur on national holidays. Flagging and other means of traffic control will be required to allow for the movement of traffic through the work zone. Cones, signing and flagging for traffic control shall conform to the requirements of the MUTCD.

- Written notice to each affected homeowner along Dogtown Road shall be provided at least 2 weeks prior to the start of the construction phase.

Timing: Before and During construction.

Responsibility: County of Mariposa / Construction Contractor.

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

The proposed project does not include the development of any new residential uses or include other land development that would directly induce additional population growth or affect the existing "vehicle miles travelled" by residents or visitors within the area. Replacement of the existing bridges are considered a "Transportation Project" that would have no impact on vehicle miles travelled and therefore is presumed to result in a less than significant transportation impact consistent with CEQA Guidelines 15054.3(b)(2). Consequently, ***no impact*** would occur.

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 hazards due to design features would occur through implementation of the proposed project, as the replacement bridge structures and associated roadway approaches would conform to County and Caltrans design standards. Therefore, the proposed project would not substantially increase hazards due to a design feature or incompatible use. Consequently, ***no impact*** would occur.

d) Result in inadequate emergency access?

See checklist Item "**a**" above.

3.20 Tribal Cultural Resources

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

3.20.1 Discussion

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)?

Under PRC section 21080.3.1 and 21082.3, the County must consult with tribes traditionally and culturally affiliated with the project area that have requested formal notification and responded with a request for consultation. The parties must consult in good faith. Consultation is deemed concluded when the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource when one is present or when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed on during the consultation process must be recommended for inclusion in the environmental document.

As previously described above under **Section 3.7** "**Cultural Resources**", the NAHC was contacted and a list of Native American contacts was provided as part of the Section 106 process. The NAHC also reported that no recorded Sacred Land was within or adjacent to the project sites. Section 106 letters to the NAHC list of contacts were sent in March 2018. Follow-up

voicemails and emails were sent to Native American Contacts on November 7, 2018. The North Fork Mono Tribe Chairman replied that the proposed project is outside of their territory. No other response was received by any of the Native American contacts. AB 52 consultation letters were sent in July 2020 as part of the CEQA process, with no additional responses provided to date. **Table 3-6**, shown above in **Section 3.7** "**Cultural Resources**", provides a summary of Native American consultation activities to date.

While no responses or tribal resources have been received or identified to date, portions of the proposed project area may be sensitive for the presence of tribal cultural resources. Implementation of the proposed project is not considered to result in an adverse change in the significance of a known tribal cultural resource pursuant to Public Resources Code 21074. However, while unlikely, construction of the proposed project could result in the inadvertent discovery of undocumented tribal cultural resources such as Native American archaeological sites, Native American human remains and associated objects and materials, features, sacred places or objects with value to a Tribe that is culturally or traditionally affiliated with the proposed project, and the disturbance or destruction of these resources. Therefore, the proposed project could result in a ***potentially significant*** impact on tribal cultural resources. To ensure no adverse effects to tribal cultural resources, implementation of resource avoidance measures provided in **Mitigation Measures CUL-1** and **CUL-2** (more fully described above in **Section 3.7 "Cultural Resources"**) would reduce the impact to less than significant. Therefore, the proposed project would have a ***less-than-significant*** impact with mitigation incorporated.

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a 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 PRC Section 5024.1.

See checklist Item "**a**" above.

3.21 Utilities and Service Systems

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIX. UTILITIES AND SERVICE SYSTEMS.					
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 that 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?	☐	☐	☐	☒	☐

3.21.1 Discussion

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?

The proposed project would not generate any new housing, businesses, or other changes that would increase the demand for utilities or related service systems beyond their current capacity. Therefore, the proposed project would not require or result in the construction of new or upgraded utility systems. Consequently, ***no impact*** would occur.

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

See checklist Item "**a**" above.

c) Result in a determination by the wastewater treatment provider that 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?

See checklist Item "**a**" above.

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?

See checklist Item "**a**" above.

e) Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?

See checklist Item "**a**" above.

3.22 Wildfire

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XX. WILDFIRE.					
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?	☐	☐	☒	☐	☐

3.22.1 Discussion

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

While not considered a high-volume roadway (current ADT estimated at 120 vehicles), the proposed project will require a short-term roadway detour at the bridge sites during replacement of the existing bridge structures (and associated roadway approach work) to ensure construction is completed efficiently and with as short a construction period as possible. To minimize traveler delays and ensure residential circulation and access along Dogtown Road, during the construction period, the County will implementation the traffic detour route and the circulation control measures included under **Mitigation Measure TC-1** (see **Section 3.19** "**Transportation**") would ensure adequate emergency response and evacuation routes are maintained. Consequently, this impact is ***less-than-significant***, with mitigation incorporated.

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?

Heavy equipment used during project construction has the potential to start a fire on surrounding open space areas near the project site. However, implementation of **Mitigation Measure HAZ-1** (more fully described above in **Section 3.11** "**Hazards and Hazardous Materials**") would reduce the potential for construction-related 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. Consequently, this impact is ***less-than-significant*** with mitigation incorporated.

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?

As more fully described above in Chapter 2 "Project Description", the proposed project will not require the relocation of any existing utilities at the sites. Consequently, ***no impact*** would occur.

e) 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?

See checklist Item "**c**" in **Section 3.12** "**Hydrology and Water Quality**" and **Section 3.23** "**Mandatory Findings of Significance**".

3.23 Mandatory Findings of Significance

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.					
Would the project:					
a) 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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐	☐
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐	☐
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒	☐

3.23.1 Discussion

a) Would 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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

As discussed in the Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards, Hydrology and Water Quality, and Tribal Cultural Resources sections, any potentially significant impacts related to the quality of the environment, plant, fish, or wildlife habitat or populations, special-status species, and important historical or cultural resources would be reduced to a less-than-significant level through implementation of avoidance and minimization measures and by incorporating mitigation measures. No known cultural resources would be affected by the proposed project and if unidentified resources are encountered during construction, mitigation measures are in place to ensure that impacts would be ***less than significant***.

b) Would the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Considering the surrounding rural nature of the County, past, present, and future projects are likely to be consistent with the developed nature of the surrounding area and would likely be focused on similar infrastructure (i.e., bridge replacement and flood protection) improvements or small-scale residential/commercial development projects. However, their impacts would not substantially interact with the proposed project's impacts with the exception of regional construction-related impacts such as short-term air quality/GHG emissions, erosion and water quality impacts.

Construction of the proposed project would result in temporary and short-term impacts that would be primarily limited to the project site and immediate vicinity. Although impacts related to resources such as air quality, greenhouse gas emissions, traffic, erosion, and water quality would contribute to regional impacts, these impacts would not make a cumulatively considerable incremental contribution to any significant cumulative impact resulting from other past, present, and reasonably foreseeable future projects in the project vicinity. This result is due to the relatively small size of the proposed project, the confined nature of construction-related impacts over a relatively short 5- to 6-month construction period, and implementation of the following mitigation measures that are proposed to avoid, minimize, rectify, reduce, eliminate, and/or compensate for any potentially significant impacts:

- Measure BIO-1: Conduct Preconstruction Species Surveys
- Measure BIO-4: Restore Temporarily Disturbed Areas
- Measure BIO-5: Implement Water Quality Best Management Practices
- Measure BIO-7: Restrict In-Stream Work to Low-Flow Period
- Measure BIO-11: Rescue Stranded Aquatic Life
- Measure BIO-12: Avoid the Spread of Invasive Plant Species
- Measure CUL-1: Discovery of Cultural Resources during Ground-Disturbing Activities
- Measure CUL-2: Accidental Finding of Human Remains
- Measure GEO-1: Avoid and Minimize Impacts to Paleontological Resources
- Measure HAZ-1: Implement BMPs for Wildland Fire Prevention
- Measure NOS-1: Construction Noise Reducing Best Management Practices
- Measure TC-1: Prepare and Implement a Traffic Detour and Control Plan

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***.

Consequently, the proposed project would not result in any cumulatively considerable incremental contribution to significant cumulative impacts resulting from the projects listed above or any other past, present, or probable future projects in the area.

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

As discussed throughout this IS, construction and operation of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly. The proposed project is being implemented for the specific purpose of restoring circulation and public safety. Furthermore, mitigation measures are provided as necessary to reduce the proposed project's potentially significant effects on air quality, biological resources, cultural resources, geology and soils, hazards, hydrology and water quality, and tribal cultural resources to less-than-significant levels. Thus, construction and operation of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly and would improve the quality of life for humans by improving recreational opportunities and access to surrounding recreational areas. There would be ***no impact***.

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Appendix A. Biological Resources

As more fully described in **Section 3.6** "**Biological Resources**", this Appendix includes the following background information from each Natural Environment Study prepared for the proposed project:

- A complete list of special-status plants and animals that are known to occur or have potential to occur in the project region, which includes the listing status, preferred habitat, and potential for occurrence in the BSA for each species.

- A table that lists all inventoried trees (including a description of tree health and dbh or Diameter at breast height).

Bridge #40C0038

Table 3-4. Special-status Plant Species with the Potential to Occur in the Vicinity of the Project

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Rawhide Hill onion *Allium tuolumnense*	--/--/1B.2	Tuolumne County.	Cismontane woodland with serpentinite soils. 985 – 1,970 feet amsl.	March - May	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.
Big-scale balsamroot *Balsamorhiza macrolepis* var. *macrolepis*	--/--/1B.2	Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Solano, Sonoma, Tehama, and Tuolumne counties.	Chaparral, cismontane woodland, valley and foothill grasslands; sometimes on serpentinite soils. 140 - 5,100 feet amsl.	March - June	Absent	Suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are 10 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 5.1 miles southwest of the BSA.
Hoover's calycadenia *Calycadenia hooveri*	--/--/1B.3	Calaveras, Madera, Merced, Mariposa, and Stanislaus counties.	Rocky cismontane woodland and valley and foothill grassland. 210 - 985 feet amsl.	July - September	Absent	No suitable habitat for this species is present within the BSA. The BSA is above this species' elevational range. This species was not observed during surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Succulent owl's-clover *Castilleja campestris* ssp. *succulenta*	FT/SE/1B.2	Fresno, Madera, Merced, Mariposa, San Joaquin, and Stanislaus counties.	Vernal pools, often with acidic soil. 165 – 2,460 feet amsl.	April - May	Absent	No suitable habitat (vernal pools) for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Small's southern clarkia *Clarkia australis*	--/--/1B.2	Calaveras, Madera, Mariposa, and Tuolumne counties.	Cismontane woodlands and lower montane coniferous forests. 2,630 - 6,810 feet amsl.	May - August	Absent	No suitable habitat for this species is present within the BSA. The BSA is below this species' elevational range. This species was not observed during surveys conducted within the species' identification period. There are 3 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 2.6 miles southwest of the BSA.
Mariposa clarkia *Clarkia biloba* ssp. *australis*	--/--/1B.2	Mariposa and Tuolumne counties.	Serpentinite soils in chaparral and cismontane woodlands. 990 - 4,790 feet amsl.	April - July	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are 71 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 2.2 miles northeast of the BSA.
Beaked clarkia *Clarkia rostrata*	--/--/1B.3	Merced, Mariposa, Stanislaus, and Tuolumne counties.	Cismontane woodland, valley and foothill grassland. 195 – 1,640 feet amsl.	April - May	Absent	Suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are 63 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 4.5 miles south of the BSA (along the shore of Lake McClure).
Mariposa cryptantha *Cryptantha mariposae*	--/--/1B.3	Calaveras, Mariposa, Stanislaus, and Tuolumne counties.	Serpentinite and rocky soils in chaparral. 820 – 2,130 feet amsl.	April - June	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 3.9 miles southeast of the BSA.

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Red Hills cryptantha *Cryptantha spithamaea*	--/--1B.3	Calaveras, Mariposa, and Tuolumne counties.	Sepentinite soils, sometimes streambeds, and sometimes openings in chaparral and cismontane woodlands. 900 – 1,500 feet amsl.	April - May	Absent	Suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are 2 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 3.1 miles northwest of the BSA.
Yellow-lip pansy monkeyflower *Diplacus pulchellus*	--/--/1B.2	Calaveras, Mariposa, and Tuolumne counties.	Vernally mesic soils, often disturbed or clay, in lower montane coniferous forests, meadows, and seeps. 1,970 – 6,560 feet amsl.	April - July	Absent	Suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are 3 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 2.4 miles northeast of the BSA.
Dwarf downingia *Downingia pusilla*	--/--/2B.2	Amador, Fresno, Merced, Napa, Placer, Sacramento, San Joaquin, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties.	Vernal pools and valley and foothill grasslands with mesic soils. 3 – 1,460 feet amsl.	March - May	Absent	Suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.
Tuolumne button-celery *Eryngium pinnatisectum*	--/--/1B.2	Amador, Calaveras, Sacramento, Sonoma, and Tuolumne counties.	Mesic soils in cismontane woodlands, lower montane coniferous forests, and vernal pools. 230 – 3,000 feet amsl.	May - August	Absent	Suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 8.5 miles northwest of the BSA.

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Spiny-sepaled button-celery *Eryngium spinosepalum*	--/--/1B.2	Contra Costa, Fresno, Kern, Madera, Merced, San Luis Obispo, Stanislaus, Tulare, and Tuolumne counties.	Vernal pools and valley and foothill grasslands. 260 – 3,195 feet amsl.	April - June	Absent	Suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.
Slender-stemmed monkeyflower *Erythranthe filicaulis*	--/--/1B.2	Mariposa and Tuolumne counties.	Vernally mesic soils in cismontane woodlands, lower montane coniferous forests, meadows and seeps, and upper montane coniferous forests. 2,950 – 5,740 feet amsl.	April - August	Absent	No suitable habitat for this species is present within the BSA. The BSA is below this species' elevational range. This species was not observed during surveys conducted within the species' identification period. There are 9 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 3.4 miles east of the BSA.
Parry's horkelia *Horkelia parryi*	--/--/1B.2	Amador, Calaveras, El Dorado, Mariposa, and Tuolumne counties.	Ione formation and other soils in chaparral and cismontane woodland. 260 – 3,510 feet amsl.	April - September	Absent	Suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are 12 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 2.7 miles east of the BSA.
Congdon's lomatium *Lomatium congdonii*	--/--/1B.2	Calaveras, Mariposa, and Tuolumne counties.	Serpentinite soils on chaparral and cismontane woodlands. 985 – 6,890 feet amsl.	March - June	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 6.3 miles northwest of the BSA.

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Shaggyhair lupine *Lupinus spectabilis*	--/--/1B.2	Mariposa and Tuolumne counties.	Serpentinite soils in chaparral and cismontane woodlands. 850 – 2,700 feet amsl.	April - May	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are 24 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 1.2 miles south of the BSA.
Layne's ragwort *Packera layneae*	FT/SR/1B.2	Butte, El Dorado, Tuolumne, and Yuba counties.	Serpentine or gabbroic, rocky soils in chaparral, cismontane woodlands. 650 – 3,560 feet amsl.	April - August	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.
Eel-grass pondweed *Potamogeton zosteriformis*	--/--/2B.2	Contra Costa, Lake, Lassen, Modoc, and Shasta counties.	Marshes and swamps (assorted freshwater). 0 – 6,100 feet amsl.	June - July	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Hartweg's golden sunburst *Pseudobahia bahiifolia*	FE/SE/1B.1	Fresno, Madera, Merced, Stanislaus, Tuolumne, and Yuba counties.	Often acidic, clay soils in cismontane woodlands and valley and foothill grasslands. 50 – 490 feet amsl.	March - April	Absent	No suitable habitat for this species is present within the BSA. The BSA is above this species' elevational range. This species was not observed during surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.
California beaked-rush *Rhynchospora californica*	--/--/1B.2	Butte, Marin, Napa, and Sonoma counties.	Bogs and fens, lower montane coniferous forests, meadows and seeps, and marshes and freshwater swamps. 140 – 3,310 feet amsl.	May - July	Absent	Suitable habitat for this species is present within the BSA. This species was not observed during surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Brownish beaked-rush *Rhynchospora capitellata*	--/--/2B.2	Butte, El Dorado, Mariposa, Nevada, Plumas, Sonoma, Tehama, Trinity, and Yuba counties.	Mesic soils in lower montane coniferous forests, meadows and seeps, marshes and swamps, and upper montane coniferous forests 145 – 6,560 feet amsl.	July – August	Absent	Suitable habitat for this species is present within the BSA. This species is perennial and would have been detectable during surveys. This species was not observed during surveys. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 9.8 miles northeast of the BSA.
Red Hills ragwort *Senecio clevelandii* var. *heterophyllus*	--/--/1B.2	Tuolumne County.	Serpentinite seeps in cismontane woodland. 850 – 1,260 feet amsl.	May - July	Absent	No suitable habitat for this species is present within the BSA. The BSA is above this species' elevational range. This species was not observed during surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.

[1] Status explanations:

-- = no listing.

Federal
FT = listed as threatened under the federal Endangered Species Act.

State
SE = listed as endangered under the California Endangered Species Act.
SR = listed as rare under the California Endangered Species Act.

California Native Plant Society
1B = List 1B species: rare, threatened, or endangered in California and elsewhere.
2B = List 2B species: rare, threatened, or endangered in California but more common elsewhere.
0.1 = Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2 = Moderately threatened in California (20%-80% occurrences threatened/ moderate degree and immediacy of threat)

[2]Rationale includes an effects determination under the FESA for all federally listed species
Source: USFWS 2020, CDFW 2020, and CNPS 2020

Table 3-5. Special-status Wildlife with the Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Amphibians					
California tiger salamander *Ambystoma californiense*	FT/ST	Central Valley, including Sierra Nevada foothills up to 1,500 feet and Coastal regions from Butte County south to Santa Barbara County.	Breeds in temporary ponds formed from rain associated with annual grassland. May also occur in hardwood forest, but less common. Adult life is mostly subterranean in burrows, rock cracks and other structures. Seasonal movements associated with breeding are usually up to 1.25 miles.	Absent	No suitable habitat for this species is present within the BSA. The BSA is outside this species' known range. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Limestone salamander *Hydromantes brunus*	--/ST, FP	Limited to areas along the Merced River and its tributaries in Mariposa County from 836 – 2,624 feet amsl.	Occurs in mixed chaparral habitats, sometimes in limestone rock outcrops on north and east facing slopes. Active on the surface from November – March. May seek refuge under logs, rocks and other surface objects. May also use limestone caverns, talus, or large rock fissures outside of the surface activity pattern.	Absent	No suitable habitat for this species is present within the BSA. The BSA is outside this species' known range. This species has a very limited range and is endemic only to steep north and east-facing slopes along the lower Merced River Canyon and its immediate tributaries. While Maxwell Creek is a tributary to Merced River, the BSA is separated from the Merced River Canyon by mountain terrain. This species was not observed during the wildlife surveys. There are 4 CNDDB records within a 10-mile radius of the BSA, the nearest located approximately 2.7 miles east of the BSA.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Foothill yellow-legged frog *Rana boylii*	--/SCT, SSC	Throughout North and South Coast Ranges south to the Transverse Range, across northern California to the west slope of the Cascade Range, and south through the foothills of the Sierra Nevada to Tehachapi Creek, Kern County, up to 6,370 feet amsl.	Forest streams and rivers with sunny, sandy, and rocky banks, deep pools, and shallow riffles. Spends most of its time along streams, but may move up to 165 feet from the edge of aquatic habitat.	Habitat Present	Suitable breeding (rocky streams) and dispersal habitat for this species is present within the BSA in Maxwell Creek. This species was not observed during the wildlife surveys. There are 5 CNDDB records within a 10-mile radius of the BSA, the nearest located approximately 2.0 miles west of the BSA.
California red-legged frog *Rana draytonii*	FT/SSC	Along the coast and coastal mountain ranges of California from Marin County to San Diego County, and in the Sierra Nevada from Tehama County to Fresno County. Usually occurs below 4,000 feet amsl.	Permanent and semi-permanent aquatic habitats, such as creeks and cold water ponds, with emergent and submergent vegetation; may aestivate in rodent burrows or cracks during dry periods.	Habitat Present	Suitable breeding and dispersal habitat for this species is present within the BSA in Maxwell Creek. Breeding habitat in Maxwell Creek occurs where pools are deep enough to support breeding habitat for this species. Emergent vegetation in the creek is very limited, which consists primarily of roots from trees and other vegetation growing out of rocky bedrock and cobble. Additionally, there are several ponds within 1 mile of the BSA that could provide breeding habitat for this species. This species was not observed during the wildlife surveys. There are no CNDDB record within a 10-mile radius of the BSA. However, there is a non-CNDDB occurrence from 1992 located approximately 1.7 miles from the BSA (Barry and Fellers 2013). ***May effect, not likely to adversely affect.***

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Sierra Nevada yellow-legged frog *Rana sierrae*	FE/ST	Occurs in the Sierra Nevada from Plumas County to Fresno County from 4,500 – 12,000 feet amsl.	Streams, lakes, ponds in montane riparian, lodgepole pine, subalpine conifer and wet meadow habitats. Tadpoles may require two over-wintering periods to complete aquatic development which requires overwintering bodies of water that will not freeze during the winter (not less than 5.6 feet). Adults typically do not move more than 82 feet from aquatic habitat, but may move up to 984 feet between lakes in high alpine landscapes (USFWS 2016).	Absent	No suitable habitat for this species is present within the BSA. The BSA is outside this species' known range. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Western spadefoot *Spea hammondii*	--/SSC	Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California	Shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.	Habitat Present	Suitable breeding and dispersal habitat for this species is present within the BSA in Maxwell Creek. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Reptiles					
Western pond turtle *Actinemys marmorata*	--/SSC	Populations extend throughout the coast and central valley of California.	Thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation, below 6,000 feet amsl. Require soil up to 4 inches deep for egg-laying. Females will travel overland up to approximately 325 feet to lay eggs.	Habitat Present	Suitable habitat for this species is present within the BSA in Maxwell Creek. This species was observed approximately 1.3 mile southwest of the BSA during the California red-legged frog habitat assessment in Blacks Creek. Blacks Creek is a tributary to Maxwell Creek. Additionally, there are 5 CNDDB records within a 10-mile radius of the BSA.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Birds					
Tricolored blackbird *Agelaius tricolor*	--/SE	Largely endemic to California; permanent residents in the Central Valley from Butte County to Kern County; at scattered coastal locations from Marin County south to San Diego County; breeds at scattered locations in Lake, Sonoma, and Solano Counties; rare nester in Siskiyou, Modoc, and Lassen Counties. Sacramento-San Joaquin Valleys and low foothills of coast ranges and Sierra Nevada	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields; nesting habitat must be large enough to support 50 pairs; probably requires water at or near the nesting colony; requires large foraging areas, including marshes, pastures, agricultural wetlands, dairies, and feedlots, where insect prey is abundant.	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Golden eagle *Aquila chrysaetos*	--/FP	Foothills and mountains through-out California; uncommon nonbreeding visitor to lowlands such as the Central Valley. Concentrated in the Central Valley and coastal valleys.	Cliffs and escarpments or tall trees for nesting; annual grasslands, chaparral, and oak wood-lands with plentiful medium and large-sized mammals for prey.	Present	Suitable foraging habitat for this species is present within the BSA in Maxwell Creek. This species was observed on April 5, 2018 in flight above the BSA. Nesting habitat is present in tall trees that overlook the BSA, but it is unlikely to nest in the BSA. Golden eagle occurrences are not recorded by CNDDB.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Burrowing owl *Athene cunicularia*	--/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast. Central and southern costal habitats and Central Valley.	Annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent upon burrowing mammals (especially California ground squirrel) for burrows and other refugia, such as culverts.	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Bald eagle *Haliaeetus leucocephalus*	FD/SE, FP	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and the Lake Tahoe Basin. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County.	In western North America, nests and roosts in coniferous forests are usually within 1 mile of a lake, reservoir, stream, or the ocean. Prefers ponderosa pine with open branch work in stands with less than 40% canopy.	Habitat Present	Suitable foraging habitat for this species is present within the BSA. While large coniferous trees are located in the BSA along Maxwell Creek, this species is more likely to occur nesting closer to large reservoirs in the area, which are stocked with fish. This species or stick nests were not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
California spotted owl *Strix occidentalis occidentalis*	--/SSC	Sierra Nevada from Lassen County south to northern Kern County; occurs in localized areas of the Transverse and Peninsular Ranges of southern California.	Mature forests with permanent water and suitable nesting trees and snags; in southern California, nearly always associated with oak and oak-conifer habitats.	Habitat Present	Suitable nesting and foraging habitat for this species is present within the BSA. This species could nest in the blue oak – foothill pine woodlands in the BSA. This species was not observed during the wildlife surveys. There are known records of this species within two miles of the BSA to the east along Dogtown Road.
Great gray owl *Strix nebulosa*	--/SE	Permanent resident in the Sierra Nevada in portions of Tuolumne, Mariposa, Madera, and Fresno counties from 4,500 – 7,500 feet amsl.	Associated with old-growth coniferous forests usually associated with meadows: red fir, Jeffrey pine, and lodge pole pine dominates. Nesting typically occurs in broken top snags of dead trees including oak trees, usually 24 inch diameter at breast height for nesting. Does not build nests, but may use old hawk or eagle nests. Forages in meadows.	Absent	No suitable habitat for this species is present within the BSA. The BSA is dominated by a blue oak – foothill pine woodland, which does not provide habitat for this species. This species was not observed during the wildlife surveys. There are 3 CNDDB records within a 10-mile radius of the BSA, the nearest located approximately 6.2 miles northeast of the BSA.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Least Bell's vireo *Vireo bellii pusillus*	FE/SE	Breeds from California, where range has severely contracted from historic distribution in Tehama County, south through Central Valley, coastal Santa Clara County, San Diego County, and Owens Valley, Death Valley, and scattered oases in Mojave Desert to south Nevada.	Wide variety of shrubs and small trees for habitat and nest-building; usually dense, low, shrubby vegetation characteristic of early successional stages in riparian areas, brushy fields, young second-growth forest or woodland, scrub oak, coastal chaparral, and mesquite brushlands.	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during the wildlife surveys. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 6.8 miles southwest of the BSA.
Mammals					
Pallid bat *Antrozous pallidus*	--/SSC	Occurs throughout California except for the high Sierra Nevada.	Deserts, grasslands, shrubland, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting, may also roost in bridges.	Habitat Present	Suitable roosting and foraging habitat for this species is present within the BSA. Rocky outcrops and the bridge structure with open areas for foraging provide habitat for this species in the BSA. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Ringtail *Bassariscus astutus*	--/FP	Sierra Nevada, Coast Ranges, and the Central Valley; upper and middle portions of the Sacramento River, Feather River, and Bobelaine Sanctuary in Yuba County.	Riparian forests, chaparral, brushlands, oak woodlands, and rocky hillsides with crevices and tree hollows 3 inches in diameter or greater. Avoids open space and moves from tree to tree or along structures. Omnivorous and will feed on berries such as toyon or mistletoe leaves and berries and will vary depending on the seasons and food availability.	Habitat Present	Suitable habitat for this species is present within the BSA. The BSA is dominated by a blue oak – foothill pine woodlands, which provides habitat for this species. Fruit bearing shrubs and vines and small mammal prey provide forage for this species. Dead trees with cavities in the BSA also provide refugia for this species, in addition to rocky outcrops that dominate the landscape. This species was not observed during the wildlife surveys. Ringtail occurrences are not recorded by CNDDB.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Townsend's big-eared bat *Corynorhinus townsendii*	--/SSC	Klamath Mountains, Cascades, Sierra Nevada, Central Valley, Transverse and Peninsular Ranges, Great Basin, and the Mojave and Sonora Deserts.	May roost in caves, mines, tunnels, or other man-made structures. Mesic habitats; gleans insects from brush or trees and feeds along habitat edges. This species is extremely sensitive to disturbance, and a single visit may result in abandonment of the roost.	Absent	No suitable roosting habitat for this species is present within the BSA. Townsend's big eared bat is very sensitive to human disturbance, therefore the bridge and rocky outcrops located along Dowgtown Road, a busy rural residential road, would not represent roosting habitat for this species. This species was not observed during the wildlife surveys. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 7.9 miles northeast of the BSA.
Western mastiff bat *Eumops perotis californicus*	--/SSC	Occurs along the eastern San Joaquin Valley from El Dorado County, through Kern County; also found along the south Coast, Peninsular, and Transverse Ranges, from San Francisco to the Mexico border.	Roosts and breeds in deep, narrow rock crevices; may also use crevices in trees, buildings, and tunnels; forages in a variety of semiarid to arid habitats.	Absent	No suitable roosting habitat for this species is present within the BSA. The forest within the BSA is dense and this species prefers more open sites with higher roosting sites that it can take flight from. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Western red bat *Lasiurus blossevillii*	--/SSC	Breeding range extends from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts. Winter range includes western lowlands and coastal regions south of San Francisco Bay.	Roosts in foliage at tops of trees in forests and woodlands, from sea level up through mixed conifer forests. Roosts primarily in trees, but occasionally in shrubs often in habitats adjacent to streams or meadows.	Habitat Present	Suitable roosting and foraging habitat for this species is present within the BSA. Riparian trees along the creek represent roosting habitat for this species. This species was not observed during the wildlife surveys. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 3.7 miles northeast of the BSA
Sierra Nevada red fox *Vulpes vulpes necator*	FC/ST	Throughout high elevations of the Sierra Nevada from Tulare County northward to Sierra County, and from Mount Shasta and Lassen Peak westward to the Trinity Mountains in Trinity County. Elevational range is generally between 4,000 feet and 12,000 feet.	High elevation barren, conifer and shrub habitats; montane meadows; subalpine woodlands and fell-fields. May hunt in forest openings, meadows, and barren rocky areas. Dens are likely to be in talus slopes and rock slides; may use earthen dens, or boulder piles.	Absent	No suitable habitat for this species is present within the BSA. The BSA is outside this species' known range. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Fish					
Kern Brook lamprey *Entosphenus hubbsi*	--/SSC	Kern and Merced Counties. Considered to be extirpated from Merced County.	Silty backwaters of large rivers in the foothills regions. Prefers low gradient streams in water that rarely exceeds 25 degrees Celsius in the summer.	Absent	No suitable habitat for this species is present within the BSA. The BSA occurs outside this species' known range. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Delta smelt *Hypomesus transpacificus*	FT/SE	Sacramento River–San Joaquin River Delta.	Euryhaline (fresh and brackish water) estuary channels; spawning habitats consist of side channels and sloughs in the middle reaches of the Delta.	Absent	No suitable habitat for this species is present within the BSA. The BSA does not occur within the Delta region. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA. ***No effect.***

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
San Joaquin roach *Lavinia* (*Hesperoleucus*) *symmetricus* ssp. 1	--/SSC	Tributaries of the San Joaquin River, south of the Cosumnes River.	Freshwater fish that is adapted to warm water in intermittent or seasonal streams. Populations can become dense in isolated pools. Tolerant of low dissolved oxygen and large range of temperatures. Intolerant of saline water.	Habitat Present	Suitable habitat for this species is present within the BSA. Warm water fish species were observed in Maxwell Creek, which include Sacramento sucker and Central California roach. Maxwell Creek is a warm water stream with intermittent flow and pools, which is ideal habitat for this species. There are 2 CNDDB record a within a 10-mile radius of the BSA, the nearest located approximately 7.8 miles northwest of the BSA.

[1] **Status explanations:**

-- = no listing.

Federal
FE = listed as endangered under the federal Endangered Species Act.
FT = listed as threatened under the federal Endangered Species Act.
FD = removed from federal Endangered Species Act list

State
SE = listed as endangered under the California Endangered Species Act.
ST = listed as threatened under the California Endangered Species Act.
FP = designated as a fully protected species under the CFGC.
SC = State candidate threatened.
SSC = State species of special concern.

[2]Rationale includes an effects determination under the FESA for all federally listed species
Source: USFWS 2020 and CDFW 2020.

Appendix E. Tree Survey Datasheets

Tree Survey Data Sheet

Project: Dogtown Bridge #38	**Surveyor(s):** Patrick Martin and Callen Keller	**Date:** 5/09/2018
Weather: Sunny, 80 degrees, calm	**Location:** Coulterville, CA	**Time:** 0800 to 1630

Tree #	**Tree Species**	**DBH (inches)**	**Riparian** Yes/No	**Impact** Removed/Trimmed	**Tree Notes:** Trunk (Single or Multi-trunk)	**Notes** (Include tree health and nests or cavities for wildlife)
T-1	Blue oak *(Quercus douglasii)*	1,3,3	N	Removed	Multi-trunk	Healthy.
T-2	Blue oak *(Quercus douglasii)*	4,4,2	N	Removed	Multi-trunk	Healthy.
T-3	Black elderberry *(Sambucus nigra)*	3,2,2,1	N	Removed	Multi-trunk	Healthy.
T-4	Interior live oak (*Quercus wislizeni*)	14,5	N	Trimmed	Multi-trunk	Healthy.
T-5	Interior live oak (*Quercus wislizeni*)	19	N	Trimmed	Single	Healthy.
T-6	Interior live oak (*Quercus wislizeni*)	16,8	N	Trimmed	Multi-trunk	Healthy.
T-7	Blue oak *(Quercus douglasii)*	3,2,2	N	Trimmed	Multi-trunk	Healthy.
T-8	Interior live oak (*Quercus wislizeni*)	4,2	N	Trimmed	Multi-trunk	Healthy.
T-9	Interior live oak (*Quercus wislizeni*)	6,6,4,2	N	Trimmed	Multi-trunk	Healthy.
T-10	Interior live oak (*Quercus wislizeni*)	23	N	Trimmed	Single	Healthy.
T-11	Oregon ash (*Fraxinus latifolia*)	28	Y	Trimmed	Single	Healthy, rooted on bank of the creek bank.
T-12	Oregon ash (*Fraxinus latifolia*)	7	N	Trimmed	Single	Healthy.
T-13	Goodding's willow *(Salix gooddingii)*	6	N	Trimmed	Single	Healthy.
T-14	Interior live oak (*Quercus wislizeni*)	3,4,2	N	Trimmed	Multi-trunk	Healthy, growing in large clump with other trees.
T-15	Interior live oak (*Quercus wislizeni*)	19,3,5,6	N	Trimmed	Multi-trunk	Healthy, growing in large clump with other trees.

Tree #	**Tree Species**	**DBH (inches)**	**Riparian** Yes/No	**Impact** Removed/Trimmed	**Tree Notes:** Trunk (Single or Multi-trunk)	**Notes** (Include tree health and nests or cavities for wildlife)
T-16	Goodding's willow *(Salix gooddingii)*	10,12,21,18,16,16,11	N	Trimmed	Multi-trunk	Healthy, growing in large clump with other trees.
T-17	Oregon ash (*Fraxinus latifolia*)	8	N	Trimmed	Single	Healthy.
T-18	Goodding's willow *(Salix gooddingii)*	10	N	Trimmed	Single	Healthy.
T-19	Gray pine (*Pinus sabiniana*)	6	N	Trimmed	Single	Healthy.
T-20	Goodding's willow *(Salix gooddingii)*	10	Y	Trimmed	Single	Healthy, rooted on bank of the creek bank.
T-21	Interior live oak (*Quercus wislizeni*)	2,2,1,1	N	Removed	Multi-trunk	Healthy.
T-22	Interior live oak (*Quercus wislizeni*)	5,5,3	N	Trimmed	Multi-trunk	Healthy.
T-23	Goodding's willow *(Salix gooddingii)*	14	Y	Trimmed	Single	Healthy.
T-24	Fremont cottonwood *(Populus fremontii)*	6	Y	Trimmed	Single	Healthy.
T-25	Goodding's willow *(Salix gooddingii)*	6	Y	Trimmed	Single	Healthy.
T-26	Goodding's willow *(Salix gooddingii)*	11,12,10,16,8	Y	Trimmed	Multi-trunk	Healthy.
T-27	Goodding's willow *(Salix gooddingii)*	11	Y	Trimmed	Single	Healthy.
T-28	Goodding's willow *(Salix gooddingii)*	13	Y	Trimmed	Single	Healthy.
T-29	Goodding's willow *(Salix gooddingii)*	19,19,16,9	Y	Removed	Multi-trunk	Healthy.
T-30	Blue oak *(Quercus douglasii)*	8	N	Removed	Single	Healthy.

* Trees not physically tagged in field. Tree # refers to inventory # used when marking locations with GPS unit.



MAXWELL CREEK BRIDGE ON DOGTOWN ROAD BRIDGE REPLACEMENT PROJECT (BR. NO. 40C0038)

Trees

Impact Area

Permanent Impact

Temporary Impact

N

0 50 100 feet

Data Source:
- Google Earth Imagery, May 2, 2017
- Area West Environmental, Inc. 2018; Date: 6-5-18

D:\AWE\17-010 Bridge 40C0038\mxd\NES\NES_Trees.mxd

Bridge #40C0039

Table 3-4. Special-status Plant Species with the Potential to Occur in the Vicinity of the Project

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Rawhide Hill onion *Allium tuolumnense*	--/--/1B.2	Tuolumne County.	Cismontane woodland with serpentinite soils. 985 – 1,970 feet amsl.	March - May	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during protocol-level surveys conducted within the species' identification period. There is 1 CNDDB record within a 10-mile radius of the BSA, which is located approximately 9.37 miles northwest of the BSA.
Big-scale balsamroot *Balsamorhiza macrolepis* var. *macrolepis*	--/--/1B.2	Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Solano, Sonoma, Tehama, and Tuolumne counties.	Chaparral, cismontane woodland, valley and foothill grasslands; sometimes on serpentinite soils. 140 - 5,100 feet amsl.	March - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are 10 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 5.33 miles southwest of the BSA.
Hoover's calycadenia *Calycadenia hooveri*	--/--/1B.3	Calaveras, Madera, Merced, Mariposa, and Stanislaus counties.	Rocky cismontane woodland and valley and foothill grassland. 210 - 985 feet amsl.	July - September	Absent	No suitable habitat for this species is present within the BSA. The BSA is above this species' elevational range. This species was not observed during protocol-level surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Succulent owl's-clover *Castilleja campestris* ssp. *succulenta*	FT/SE/1B.2	Fresno, Madera, Merced, Mariposa, San Joaquin, and Stanislaus counties.	Vernal pools, often with acidic soil. 165 – 2,460 feet amsl.	April - May	Absent	No suitable habitat (vernal pools) for this species is present within the BSA. This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Small's southern clarkia *Clarkia australis*	--/--/1B.2	Calaveras, Madera, Mariposa, and Tuolumne counties.	Cismontane woodlands and lower montane coniferous forests. 2,630 - 6,810 feet amsl.	May - August	Absent	No suitable habitat for this species is present within the BSA. The BSA is below this species' elevational range. This species was not observed during protocol-level surveys conducted within the species' identification period. There are 2 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 3.59 miles southeast of the BSA.
Mariposa clarkia *Clarkia biloba* ssp. *australis*	--/--/1B.2	Mariposa and Tuolumne counties.	Serpentinite soils in chaparral and cismontane woodlands. 990 - 4,790 feet amsl.	April - July	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during protocol-level surveys conducted within the species' identification period. There are 69 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 2.42 miles northeast of the BSA.
Beaked clarkia *Clarkia rostrata*	--/--/1B.3	Merced, Mariposa, Stanislaus, and Tuolumne counties.	Cismontane woodland, valley and foothill grassland. 195 – 1,640 feet amsl.	April - May	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are 68 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 4.75 miles south of the BSA (along the shore of Lake McClure).

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Mariposa cryptantha *Cryptantha mariposae*	--/--/1B.3	Calaveras, Mariposa, Stanislaus, and Tuolumne counties.	Serpentinite and rocky soils in chaparral. 820 – 2,130 feet amsl.	April - June	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during protocol-level surveys conducted within the species' identification period. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 4.63 miles southeast of the BSA.
Red Hills cryptantha *Cryptantha spithamaea*	--/--1B.3	Calaveras, Mariposa, and Tuolumne counties.	Sepentinite soils, sometimes streambeds, and sometimes openings in chaparral and cismontane woodlands. 900 – 1,500 feet amsl.	April - May	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are 2 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 2.07 miles northwest of the BSA.
Yellow-lip pansy monkeyflower *Diplacus pulchellus*	--/--/1B.2	Calaveras, Mariposa, and Tuolumne counties.	Vernally mesic soils, often disturbed or clay, in lower montane coniferous forests, meadows, and seeps. 1,970 – 6,560 feet amsl.	April - July	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are 3 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 2.75 miles northeast of the BSA.
Dwarf downingia *Downingia pusilla*	--/--/2B.2	Amador, Fresno, Merced, Napa, Placer, Sacramento, San Joaquin, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties.	Vernal pools and valley and foothill grasslands with mesic soils. 3 – 1,460 feet amsl.	March - May	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Tuolumne button-celery *Eryngium pinnatisectum*	--/--/1B.2	Amador, Calaveras, Sacramento, Sonoma, and Tuolumne counties.	Mesic soils in cismontane woodlands, lower montane coniferous forests, and vernal pools. 230 – 3,000 feet amsl.	May - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 7.59 miles northwest of the BSA.
Spiny-sepaled button-celery *Eryngium spinosepalum*	--/--/1B.2	Contra Costa, Fresno, Kern, Madera, Merced, San Luis Obispo, Stanislaus, Tulare, and Tuolumne counties.	Vernal pools and valley and foothill grasslands. 260 – 3,195 feet amsl.	April - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.
Slender-stemmed monkeyflower *Erythranthe filicaulis*	--/--/1B.2	Mariposa and Tuolumne counties.	Vernally mesic soils in cismontane woodlands, lower montane coniferous forests, meadows and seeps, and upper montane coniferous forests. 2,950 – 5,740 feet amsl.	April - August	Absent	No suitable habitat for this species is present within the BSA. The BSA is below this species' elevational range. This species was not observed during protocol-level surveys conducted within the species' identification period. There are 9 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 4.21 miles east of the BSA.
Parry's horkelia *Horkelia parryi*	--/--/1B.2	Amador, Calaveras, El Dorado, Mariposa, and Tuolumne counties.	Ione formation and other soils in chaparral and cismontane woodland. 260 – 3,510 feet amsl.	April - September	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are 11 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 3.64 miles east of the BSA.

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Congdon's lomatium *Lomatium congdonii*	--/--/1B.2	Calaveras, Mariposa, and Tuolumne counties.	Serpentinite soils on chaparral and cismontane woodlands. 985 – 6,890 feet amsl.	March - June	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during protocol-level surveys conducted within the species' identification period. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 5.19 miles northwest of the BSA.
Shaggyhair lupine *Lupinus spectabilis*	--/--/1B.2	Mariposa and Tuolumne counties.	Serpentinite soils in chaparral and cismontane woodlands. 850 – 2,700 feet amsl.	April - May	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during protocol-level surveys conducted within the species' identification period. There are 26 CNDDB record within a 10-mile radius of the BSA, the nearest located approximately 2.52 miles southeast of the BSA.
Layne's ragwort *Packera layneae*	FT/SR/1B.2	Butte, El Dorado, Tuolumne, and Yuba counties.	Serpentine or gabbroic, rocky soils in chaparral, cismontane woodlands. 650 – 3,560 feet amsl.	April - August	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.
Eel-grass pondweed *Potamogeton zosteriformis*	--/--/2B.2	Contra Costa, Lake, Lassen, Modoc, and Shasta counties.	Marshes and swamps (assorted freshwater). 0 – 6,100 feet amsl.	June - July	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during protocol-level surveys. There are no CNDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status[1] Federal/State/ CNPS	Distribution within California	Habitat Association	Identification Period	Species Present/ Absent	Rationale
Hartweg's golden sunburst *Pseudobahia bahiifolia*	FE/SE/1B.1	Fresno, Madera, Merced, Stanislaus, Tuolumne, and Yuba counties.	Often acidic, clay soils in cismontane woodlands and valley and foothill grasslands. 50 – 490 feet amsl.	March - April	Absent	No suitable habitat for this species is present within the BSA. The BSA is above this species' elevational range. This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.
California beaked-rush *Rhynchospora californica*	--/--/1B.2	Butte, Marin, Napa, and Sonoma counties.	Bogs and fens, lower montane coniferous forests, meadows and seeps, and marshes and freshwater swamps. 140 – 3,310 feet amsl.	May - July	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.
Brownish beaked-rush *Rhynchospora capitellata*	--/--/2B.2	Butte, El Dorado, Mariposa, Nevada, Plumas, Sonoma, Tehama, Trinity, and Yuba counties.	Mesic soils in lower montane coniferous forests, meadows and seeps, marshes and swamps, and upper montane coniferous forests 145 – 6,560 feet amsl.	July – August	Absent	This species is perennial and would have been detectable during surveys. This species was not observed during protocol-level surveys. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 9.83 miles northeast of the BSA.
Red Hills ragwort *Senecio clevelandii* var. *heterophyllus*	--/--/1B.2	Tuolumne County.	Serpentinite seeps in cismontane woodland. 850 – 1,260 feet amsl.	May - July	Absent	No suitable habitat for this species is present within the BSA. The BSA is above this species' elevational range. This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.

[1] Status explanations:

-- = no listing.

Federal
FT = listed as threatened under the federal Endangered Species Act.
FE = listed as endangered under the federal Endangered Species Act.

State
SE = listed as endangered under the California Endangered Species Act.
SR = listed as rare under the California Endangered Species Act.

California Native Plant Society
1B = List 1B species: rare, threatened, or endangered in California and elsewhere.
2B = List 2B species: rare, threatened, or endangered in California but more common elsewhere.
0.1 = Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2 = Moderately threatened in California (20%-80% occurrences threatened/ moderate degree and immediacy of threat)

[2]Rationale includes an effects determination under the FESA for all federally listed species
Source: USFWS 2020, CDFW 2020, and CNPS 2020

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Table 3-5. Special-status Wildlife with the Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Amphibians					
California tiger salamander *Ambystoma californiense*	FT/ST	Central Valley, including Sierra Nevada foothills up to 1,500 feet and Coastal regions from Butte County south to Santa Barbara County.	Breeds in temporary ponds formed from rain associated with annual grassland. May also occur in hardwood forest, but less common. Adult life is mostly subterranean in burrows, rock cracks and other structures. Seasonal movements associated with breeding are usually up to 1.25 miles.	Habitat Absent	No suitable habitat for this species is present within the BSA. The BSA is outside this species' known range. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Limestone salamander *Hydromantes brunus*	--/ST, FP	Limited to areas along the Merced River and its tributaries in Mariposa County from 836 – 2,624 feet amsl.	Occurs in mixed chaparral habitats, sometimes in limestone rock outcrops on north and east facing slopes. Active on the surface from November – March. May seek refuge under logs, rocks and other surface objects. May also use limestone caverns, talus, or large rock fissures outside of the surface activity pattern.	Habitat Absent	No suitable habitat for this species is present within the BSA. The BSA is outside this species' known range. This species has a very limited range and is endemic only to steep north and east-facing slopes along the lower Merced River Canyon and its immediate tributaries. While Maxwell Creek is a tributary to Merced River, the BSA is separated from the Merced River Canyon by mountain terrain. This species was not observed during the wildlife surveys. There are 4 CNDDB records within a 10-mile radius of the BSA, the nearest located approximately 7.71 miles east of the BSA.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Foothill yellow-legged frog *Rana boylii*	--/SCT, SSC	Throughout North and South Coast Ranges south to the Transverse Range, across northern California to the west slope of the Cascade Range, and south through the foothills of the Sierra Nevada to Tehachapi Creek, Kern County, up to 6,370 feet amsl.	Forest streams and rivers with sunny, sandy, and rocky banks, deep pools, and shallow riffles. Spends most of its time along streams, but may move up to 165 feet from the edge of aquatic habitat.	Habitat Present	Suitable breeding (rocky streams) and dispersal habitat for this species is present within the BSA in Maxwell Creek. This species was not observed during the wildlife surveys. There are 5 CNDDB records within a 10-mile radius of the BSA, the nearest located approximately 4.65 miles south of the BSA.
California red-legged frog *Rana draytonii*	FT/SSC	Along the coast and coastal mountain ranges of California from Marin County to San Diego County, and in the Sierra Nevada from Tehama County to Fresno County. Usually occurs below 4,000 feet amsl.	Permanent and semi-permanent aquatic habitats, such as creeks and cold water ponds, with emergent and submergent vegetation; may aestivate in rodent burrows or cracks during dry periods.	Habitat Present	Suitable breeding and dispersal habitat for this species is present within the BSA in Maxwell Creek. Breeding habitat in Maxwell Creek occurs where pools are deep enough to support breeding habitat for this species. Emergent vegetation in the creek is very limited, which consists primarily of roots from trees and other vegetation growing out of rocky bedrock and cobble. Additionally, there are several ponds within 1 mile of the BSA that could provide breeding habitat for this species. This species was not observed during the wildlife surveys. There are no CNDDB record within a 10-mile radius of the BSA. However, there is a non-CNDDB occurrence from 1992 located approximately 1.7 miles from the BSA (Barry and Fellers 2013). ***May effect, not likely to adversely affect.***

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Sierra Nevada yellow-legged frog *Rana sierrae*	FE/ST	Occurs in the Sierra Nevada from Plumas County to Fresno County from 4,500 – 12,000 feet amsl.	Streams, lakes, ponds in montane riparian, lodgepole pine, subalpine conifer and wet meadow habitats. Tadpoles may require two over-wintering periods to complete aquatic development which requires overwintering bodies of water that will not freeze during the winter (not less than 5.6 feet). Adults typically do not move more than 82 feet from aquatic habitat, but may move up to 984 feet between lakes in high alpine landscapes (USFWS 2016).	Habitat Absent	No suitable habitat for this species is present within the BSA. The BSA is outside this species' known range. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Western spadefoot *Spea hammondii*	--/SSC	Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California	Shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.	Habitat Present	Suitable breeding and dispersal habitat for this species is present within the BSA in Maxwell Creek. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Reptiles					
Western pond turtle *Actinemys marmorata*	--/SSC	Populations extend throughout the coast and central valley of California.	Thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation, below 6,000 feet amsl. Require soil up to 4 inches deep for egg-laying. Females will travel overland up to approximately 325 feet to lay eggs.	Habitat Present	Suitable habitat for this species is present within the BSA in Maxwell Creek. This species was observed approximately 1.3 mile southwest of the BSA during the California red-legged frog habitat assessment in Blacks Creek. Blacks Creek is a tributary to Maxwell Creek. Additionally, there are 5 CNDDB records within a 10-mile radius of the BSA, the nearest located approximately 7.60 miles west of the BSA.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Birds					
Tricolored blackbird *Agelaius tricolor*	--/SE	Largely endemic to California; permanent residents in the Central Valley from Butte County to Kern County; at scattered coastal locations from Marin County south to San Diego County; breeds at scattered locations in Lake, Sonoma, and Solano Counties; rare nester in Siskiyou, Modoc, and Lassen Counties. Sacramento-San Joaquin Valleys and low foothills of coast ranges and Sierra Nevada	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields; nesting habitat must be large enough to support 50 pairs; probably requires water at or near the nesting colony; requires large foraging areas, including marshes, pastures, agricultural wetlands, dairies, and feedlots, where insect prey is abundant.	Habitat Absent	No suitable habitat for this species is present within the BSA. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Golden eagle *Aquila chrysaetos*	--/FP	Foothills and mountains through-out California; uncommon nonbreeding visitor to lowlands such as the Central Valley. Concentrated in the Central Valley and coastal valleys.	Cliffs and escarpments or tall trees for nesting; annual grasslands, chaparral, and oak wood-lands with plentiful medium and large-sized mammals for prey.	Habitat Present	Suitable foraging habitat for this species is present within the BSA in Maxwell Creek. This species was observed on April 5, 2018 in flight above the BSA. Nesting habitat is present in tall trees that overlook the BSA, but it is unlikely to nest in the BSA. Golden eagle occurrences are not recorded by CNDDB.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Burrowing owl *Athene cunicularia*	--/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast. Central and southern costal habitats and Central Valley.	Annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent upon burrowing mammals (especially California ground squirrel) for burrows and other refugia, such as culverts.	Habitat Absent	No suitable habitat for this species is present within the BSA. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Bald eagle *Haliaeetus leucocephalus*	FD/SE, FP	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and the Lake Tahoe Basin. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County.	In western North America, nests and roosts in coniferous forests are usually within 1 mile of a lake, reservoir, stream, or the ocean. Prefers ponderosa pine with open branch work in stands with less than 40% canopy.	Habitat Present	Suitable foraging habitat for this species is present within the BSA. While large coniferous trees are located in the BSA along Maxwell Creek, this species is more likely to occur nesting closer to large reservoirs in the area, which are stocked with fish. This species or stick nests were not observed during the wildlife surveys. There is 1 CNDDB record within a 10-mile radius of the BSA, which is located approximately 9.84 miles west of the BSA.
California spotted owl *Strix occidentalis occidentalis*	--/SSC	Sierra Nevada from Lassen County south to northern Kern County; occurs in localized areas of the Transverse and Peninsular Ranges of southern California.	Mature forests with permanent water and suitable nesting trees and snags; in southern California, nearly always associated with oak and oak-conifer habitats.	Habitat Present	Suitable nesting and foraging habitat for this species is present within the BSA. This species could nest in the blue oak – foothill pine woodlands in the BSA. This species was not observed during the wildlife surveys. There are known records of this species within two miles of the BSA to the east along Dogtown Road.
Great gray owl *Strix nebulosa*	--/SE	Permanent resident in the Sierra Nevada in portions of Tuolumne, Mariposa, Madera, and Fresno counties from 4,500 – 7,500 feet amsl.	Associated with old-growth coniferous forests usually associated with meadows: red fir, Jeffrey pine, and lodge pole pine dominates. Nesting typically occurs in broken top snags of dead trees including oak trees, usually 24 inch diameter at breast height for nesting. Does not build nests, but may use old hawk or eagle nests. Forages in meadows.	Habitat Absent	No suitable habitat for this species is present within the BSA. The BSA is dominated by a blue oak – foothill pine woodland, which does not provide habitat for this species. This species was not observed during the wildlife surveys. There are 4 CNDDB records within a 10-mile radius of the BSA, the nearest located approximately 5.91 miles northeast of the BSA.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Least Bell's vireo *Vireo bellii pusillus*	FE/SE	Breeds from California, where range has severely contracted from historic distribution in Tehama County, south through Central Valley, coastal Santa Clara County, San Diego County, and Owens Valley, Death Valley, and scattered oases in Mojave Desert to south Nevada.	Wide variety of shrubs and small trees for habitat and nest-building; usually dense, low, shrubby vegetation characteristic of early successional stages in riparian areas, brushy fields, young second-growth forest or woodland, scrub oak, coastal chaparral, and mesquite brushlands.	Habitat Absent	No suitable habitat for this species is present within the BSA. This species was not observed during the wildlife surveys. There is 1 CNDDB record within a 10-mile radius of the BSA, located approximately 6.64 miles southwest of the BSA.
Mammals					
Pallid bat *Antrozous pallidus*	--/SSC	Occurs throughout California except for the high Sierra Nevada.	Deserts, grasslands, shrubland, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting, may also roost in bridges.	Habitat Present	Suitable roosting and foraging habitat for this species is present within the BSA. Rocky outcrops and the bridge structure with open areas for foraging provide habitat for this species in the BSA. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Ringtail *Bassariscus astutus*	--/FP	Sierra Nevada, Coast Ranges, and the Central Valley; upper and middle portions of the Sacramento River, Feather River, and Bobelaine Sanctuary in Yuba County.	Riparian forests, chaparral, brushlands, oak woodlands, and rocky hillsides with crevices and tree hollows 3 inches in diameter or greater. Avoids open space and moves from tree to tree or along structures. Omnivorous and will feed on berries such as toyon or mistletoe leaves and berries and will vary depending on the seasons and food availability.	Habitat Present	Suitable habitat for this species is present within the BSA. The BSA is dominated by a blue oak – foothill pine woodlands, which provides habitat for this species. Fruit bearing shrubs and vines and small mammal prey provide forage for this species. Dead trees with cavities in the BSA also provide refugia for this species, in addition to rocky outcrops that dominate the landscape. This species was not observed during the wildlife surveys. Ringtail occurrences are not recorded by CNDDB.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Townsend's big-eared bat *Corynorhinus townsendii*	--/SSC	Klamath Mountains, Cascades, Sierra Nevada, Central Valley, Transverse and Peninsular Ranges, Great Basin, and the Mojave and Sonora Deserts.	May roost in caves, mines, tunnels, or other man-made structures. Mesic habitats; gleans insects from brush or trees and feeds along habitat edges. This species is extremely sensitive to disturbance, and a single visit may result in abandonment of the roost.	Habitat Absent	No suitable roosting habitat for this species is present within the BSA. Townsend's big eared bat is very sensitive to human disturbance, therefore the bridge and rocky outcrops located along Dogtown Road, a busy rural residential road, would not represent roosting habitat for this species. This species was not observed during the wildlife surveys. There are 2 CNDDB records within a 10-mile radius of the BSA, the nearest located approximately 8.52 miles northeast of the BSA.
Western mastiff bat *Eumops perotis californicus*	--/SSC	Occurs along the eastern San Joaquin Valley from El Dorado County, through Kern County; also found along the south Coast, Peninsular, and Transverse Ranges, from San Francisco to the Mexico border.	Roosts and breeds in deep, narrow rock crevices; may also use crevices in trees, buildings, and tunnels; forages in a variety of semiarid to arid habitats.	Habitat Absent	No suitable roosting habitat for this species is present within the BSA. The forest within the BSA is dense and this species prefers more open sites with higher roosting sites that it can take flight from. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Western red bat *Lasiurus blossevillii*	--/SSC	Breeding range extends from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts. Winter range includes western lowlands and coastal regions south of San Francisco Bay.	Roosts in foliage at tops of trees in forests and woodlands, from sea level up through mixed conifer forests. Roosts primarily in trees, but occasionally in shrubs often in habitats adjacent to streams or meadows.	Habitat Present	Suitable roosting and foraging habitat for this species is present within the BSA. Riparian trees along the creek represent roosting habitat for this species. This species was not observed during the wildlife surveys. There are 2 CNDDB records within a 10-mile radius of the BSA, the nearest located approximately 8.17 miles northwest of the BSA
Sierra Nevada red fox *Vulpes vulpes necator*	FC/ST	Throughout high elevations of the Sierra Nevada from Tulare County northward to Sierra County, and from Mount Shasta and Lassen Peak westward to the Trinity Mountains in Trinity County. Elevational range is generally between 4,000 feet and 12,000 feet.	High elevation barren, conifer and shrub habitats; montane meadows; subalpine woodlands and fell-fields. May hunt in forest openings, meadows, and barren rocky areas. Dens are likely to be in talus slopes and rock slides; may use earthen dens, or boulder piles.	Habitat Absent	No suitable habitat for this species is present within the BSA. The BSA is outside this species' known range. This species was not observed during the wildlife surveys. There is 1 CNDDB record within a 10-mile radius of the BSA, which is located approximately 9.28 miles northeast of the BSA.

Common Name Scientific Name	Legal Status[1] Federal/State	Distribution within California	Habitat Requirements	Habitat Present/ Absent	Rationale
Fish					
Kern Brook lamprey *Entosphenus hubbsi*	--/SSC	Kern and Merced Counties. Considered to be extirpated from Merced County.	Silty backwaters of large rivers in the foothills regions. Prefers low gradient streams in water that rarely exceeds 25 degrees Celsius in the summer.	Habitat Absent	No suitable habitat for this species is present within the BSA. The BSA occurs outside this species' known range. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA.
Delta smelt *Hypomesus transpacificus*	FT/SE	Sacramento River–San Joaquin River Delta.	Euryhaline (fresh and brackish water) estuary channels; spawning habitats consist of side channels and sloughs in the middle reaches of the Delta.	Habitat Absent	No suitable habitat for this species is present within the BSA. The BSA does not occur within the Delta region. This species was not observed during the wildlife surveys. There are no CNDDB records within a 10-mile radius of the BSA. ***No effect.***
San Joaquin roach *Lavinia Hesperoleucus symmetricus* ssp. *1*	--/SSC	Tributaries of the San Joaquin River, south of the Cosumnes River.	Freshwater fish that is adapted to warm water in intermittent or seasonal streams. Populations can become dense in isolated pools. Tolerant of low dissolved oxygen and large range of temperatures. Intolerant of saline water.	Habitat Present	Suitable habitat for this species is present within the BSA. Warm water fish species were observed in Maxwell Creek, which include Sacramento sucker and Central California roach. Maxwell Creek is a warm water stream with intermittent flow and pools, which is ideal habitat for this species. There are 2 CNDDB record a within a 10-mile radius of the BSA, the nearest located approximately 7.82 miles northwest of the BSA.

[1] Status explanations:

-- = no listing.

Federal
FE = listed as endangered under the federal Endangered Species Act.
FT = listed as threatened under the federal Endangered Species Act.
FD = removed from federal Endangered Species Act list

State
SE = listed as endangered under the California Endangered Species Act.
ST = listed as threatened under the California Endangered Species Act.
FP = designated as a fully protected species under the CFGC.
SC = State candidate threatened.
SSC = State species of special concern.

[2]Rationale includes an effects determination under the FESA for all federally listed species identified on the IPaC species list.
Source: USFWS 2020 and CDFW 2020.

Appendix E. Tree Survey Datasheets

Tree Survey Data Sheet

Project: Dogtown Bridge #39	**Surveyor(s):** Patrick Martin and Callen Keller	**Date:** 5/10/2018
Weather: Sunny, 80 degrees, calm	**Location:** Coulterville, CA	**Time:** 0800 to 1630

Tree #	**Tree Species**	**DBH (inches)**	**Riparian** Yes/No	**Impact** Removed/Trimmed	**Tree Notes:** Trunk (Single or Multi-trunk)	**Notes** (Include tree health and nests or cavities for wildlife)
T-1	Interior live oak (*Quercus wislizeni*)	13,9	N	Trimmed	Multi-trunk	Healthy.
T-2	Oregon ash (*Fraxinus latifolia*)	6,6	Y	Trimmed	Multi-trunk	Healthy, rooted on bank of the creek bank.
T-3	Oregon ash (*Fraxinus latifolia*)	2,5,5	Y	Trimmed	Multi-trunk	Healthy, rooted on bank of the creek bank.
T-4	Blue oak *(Quercus douglasii)*	20	N	Trimmed	Single	Healthy.
T-5	California juniper *(Juniperus californica)*	13,13,15,4	N	Trimmed	Multi-trunk	Healthy.
T-6	Oregon ash (*Fraxinus latifolia*)	2	Y	Trimmed	Single	Healthy, rooted on bank of the creek bank.
T-7	Goodding's willow *(Salix gooddingii)*	5,2,1,1	Y	Removed	Multi-trunk	Healthy, rooted on bank of the creek bank.
T-8	Interior live oak (*Quercus wislizeni*)	7,3	N	Removed	Multi-trunk	Bad healthy.
T-9	Interior live oak (*Quercus wislizeni*)	9,4	N	Removed	Single	Bad healthy.
T-10	Interior live oak (*Quercus wislizeni*)	9	N	Removed	Single	Healthy.
T-11	Interior live oak (*Quercus wislizeni*)	18	N	Removed	Single	Healthy.
T-12	Interior live oak (*Quercus wislizeni*)	7	N	Removed	Single	Healthy.
T-13	Blue oak *(Quercus douglasii)*	9	N	Removed	Single	Healthy.
T-14	Interior live oak (*Quercus wislizeni*)	3,2,2,1	N	Trimmed	Single	Healthy.
T-15	Goodding's willow *(Salix gooddingii)*	10	Y	Trimmed	Single	Broken top, rooting in the creek.

Tree #	**Tree Species**	**DBH (inches)**	**Riparian** Yes/No	**Impact** Removed/Trimmed	**Tree Notes:** Trunk (Single or Multi-trunk)	**Notes** (Include tree health and nests or cavities for wildlife)
T-16	Interior live oak (*Quercus wislizeni*)	3,2,2,2	N	Trimmed	Single	Healthy.
T-17	Interior live oak (*Quercus wislizeni*)	5,5,4,3,2	N	Trimmed	Multi-trunk	Healthy.
T-18	Interior live oak (*Quercus wislizeni*)	5,4,2	N	Trimmed	Multi-trunk	Healthy.
T-19	Gray pine (*Pinus sabiniana*)	25	N	Trimmed	Single	Healthy.
T-20	Blue oak *(Quercus douglasii)*	30	N	Trimmed	Single	Healthy.
T-21	Blue oak *(Quercus douglasii)*	14	N	Trimmed	Single	Healthy.
T-22	Gray pine (*Pinus sabiniana*)	4	N	Removed	Single	Healthy.
T-23	Interior live oak (*Quercus wislizeni*)	7	N	Trimmed	Single	Healthy.
T-24	Interior live oak (*Quercus wislizeni*)	4	N	Trimmed	Single	Healthy.
T-25	Gray pine (*Pinus sabiniana*)	14	N	Removed	Multi-trunk	Healthy.
T-26	Interior live oak (*Quercus wislizeni*)	3,3,1	N	Removed	Multi-trunk	Healthy.
T-27	Interior live oak (*Quercus wislizeni*)	2,2	N	Removed	Multi-trunk	Healthy.

* Trees not physically tagged in field. Tree # refers to inventory # used when marking locations with GPS unit.


T-4
Dogtown Road
T-5
T-6
T-7
T-15
T-3
T-2
Maxwell Creek
T-17
T-18
T-19
T-12
T-8
T-16
T-11
T-10
T-9
T-1
T-25
T-13
T-14
T-26
T-27
T-24
T-23
T-22
T-21
T-20
MAXWELL CREEK BRIDGE ON DOGTOWN ROAD BRIDGE REPLACEMENT PROJECT (Br. No. 40C0039)
Trees
Impct Area
Permanent Impacts
Temporary Impacts
N
0
50
100
feet
Data Source:
-Google Earth Imagery, May 2, 2017
- Area West Environmental, Inc. 2018; Date: 6-5-18

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