Bucks Bar Road at North Fork Cosumnes River Bridge Replacement Project

Draft Environmental Impact Report

SCH#: 2015072043

Prepared For: El Dorado County Department of Transportation
2441 Headington Road, Placerville CA 95667

Prepared By: TYLin
1545 River Park Drive, Suite 201, Sacramento CA 95815

July 2024

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Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
ASR	Archeological Survey Report
APN	Assessor Parcel Number
AQMD	El Dorado County Air Quality Management District
BLM	Bureau of Land Management
BMPs	Best Management Practices
B.P.	Before Present
BSA	Biological Study Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
Cal-EPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDMG	California Division of Mines and Geology
CEQA	California Environmental Quality Act
CESA	California Endangred Species Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CGC	California Government Code
CIP	El Dorado County Capital Improvement Program
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent

County	El Dorado County Department of Transportation
County General Plan	El Dorado County General Plan
CRHR	California Register of Historic Resources
CRLF	California red-legged frog
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
dbh	Diameter At Breast Height
DPM	Diesel Particulate Matter
DPR	California Department of Parks and Recreation
DPS	Distinct Population Segment
Drainage Manual	County of El Dorado Drainage Manual
DWR	California Department of Water Resources
ECF	El Dorado County Fire Protection District
ED	Ephemeral Drainage
EDCTC	El Dorado County Transportation Commission
E.G.	For Example
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA Action Plan	Enviromentally Sensitive Area Action Plan
FESA	federal Endangered Species Act
^{o}F	Fahrenheit
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FLYF	Foothill yellow-legged frog
FR	Federal Register
FRAP	Fire and Resources Assessment Program
FTA	Federal Transit Administration
GPS	Global Positioning System
HEC-RAS	Hydrologic Engineering Centers River Analysis System
HBP	Highway Bridge Program
HWCA	Hazardous Waste Control Act
I.E.	That IS
ITP	Incidental Take Permit
LBS	Pounds
LTS	Less-Than-Significant Impact
LTSM	Less-Than-Significant Impact With Mitigation Incorporated
MBTA	Migratory Bird Treaty Act
MCAB	Mountain Counties Air Basin
MOA	Memorandum of Agreement

MOU	Memorandum of Understanding
mph	Miles Per Hour
MT	Metric Tons
MTIP	Metropolitan Transportation Improvement Program
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
MS4	Municipal Separate Storm Sewer Systems
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NI	No Impact
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice Of Preparation
NO_X	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NMFS	National Marine Fisheries Service (aka NOAA Fisheries)
NRHP	National Register of Historic Places
NWRC	Northwest Cultural Resource Consultants
NWSRS	National Wild and Scenic Rivers System
OHP	California Office of Historic Preservation
OHWM	Ordinary High-Water Mark
ORMP	Oak Resources Management Plan
OSHA	Occupational Safety and Health Administration
PFMC	Pacific Fishery Management Council
PG&E	Pacific Gas and Electric
PIO	Pioneer Fire Protection Protection District
PM	Particulate Matter
PM10	PM 10 microns in diameter or less
PM2.5	PM 2.5 microns in diameter or less
PPM	Parts per million
PPV	Peak Particle Velocity
PRC	Public Resources Code
PRDMP	Post Review Discovery Management Plan

Proposed Project	Bucks Bar Road at North Fork Cosumnes River - Bridge (No. 25C0003) Replacement Project
RCRA	Resource Conservation and Recovery Act of 1976
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SMAQMD	Sacramento Metropolitan Air Quality Management District
SB	Senate Bill
SHPO	State Historic Preservation Officer
SHRC	State Historical Resources Commission
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	Sulfur Dioxide
SCS	Sustainable Communities Strategy
SSBMI	Shingle Springs Band of Miwok Indians
State Water Board	State Water Resources Control Board
STU	Shovel Test Unit
SU	Signigicant and unavoidable impact cannot be mitigated to less than significant
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TACs	Toxic Air Contaminants
TCP	Traditional Cultural Property
TCR	Tribal Cultural Resource
TSM	Transportation System Management
UAIC	United Auburn Indian Community
$\mu g/m^3$	Micro Grams Per Cubic Meter
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	vehicle miles traveled
XPI	Extended Phase I
YR	Year

Executive Summary

ES.1 Introduction

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15123, this summary provides information about the environmental impact report (EIR) prepared by El Dorado County Department of Transportation (the County) for the proposed replacement of the Bucks Bar Road bridge (Proposed Project). It presents a description of the Proposed Project; summarizes the impacts and mitigation measures; identifies areas of known controversy, including issues raised by agencies and the public; and identifies unresolved issues.

ES.2 Project Description

The Proposed Project would replace the existing 70-foot-long bridge with a 120- to 130-foot-long, single-span steel girder bridge with a concrete deck (Exhibit ES-1). The Proposed Project would maintain a similar alignment across the river as the existing bridge, with widening occurring mostly to the east (upstream) at the abutments and downstream at midspan. With the guardrail, the bridge would be approximately 37 feet wide (33 feet clear width). The road profile and bridge deck would be raised approximately 5 feet to 8 feet above the existing bridge deck elevation. The abutments would be replaced with new abutments farther away from the river to minimize their height and reduce environmental impacts near and in the river. Abutments would be founded on spread footings embedded into the underlying rock. The approach road work would extend approximately 320 feet south and 350 feet north from the existing bridge.

To maintain some consistency with the existing roadway leading to and from the bridge, the approach roadway shoulder would generally include a 2- to 4-foot-wide paved area plus a 1-foot-wide graded area. A 3-foot-wide graded shoulder where metal beam guardrail is required and a 5-foot-wide paved shoulder is required next to locations with a concrete barrier or retaining wall. The County would seek design exceptions to limit the roadway to 3-foot-wide shoulders at all locations to minimize the overall project footprint and avoid environmental impacts. The rural nature of this roadway, the topography, and lack of shoulders along the entirety of Bucks Bar Road limit the presence of pedestrians and bicyclists; this supports design exceptions for a narrower shoulder.

The Proposed Project would require approximately 0.9 acre of right-of-way acquisition over five privately owned parcels (APN 093-131-05, APN 093-131-07, APN 093-131-12, APN 093-131-13, and APN 093-131-34 on Exhibit ES-1) for the roadway approach cut and fill, retaining walls, drainage culverts, possible utility relocation, and the bridge elements. Approximately 1.0 acre would be required beyond the permanent right-of-way for temporary construction easements during construction staging to provide access to the bridge and room for material and equipment staging. Approximately 0.3 acre of this temporary construction easement area may need to become a permanent easement for bridge, slope, and drainage maintenance (Exhibit ES-1).

Construction is anticipated to commence in 2025 and require approximately 12 months to complete. Construction activities would generally occur daily between 7 a.m. and 7 p.m., mostly on weekdays. Construction crews may arrive at the worksite earlier and leave later than the actual construction activity hours. Some night work may be required for activities, including but not limited to placing bridge girders, paving, and striping. Additional night work and work shifts could be required if the Proposed Project is delayed significantly by weather or other unanticipated events.

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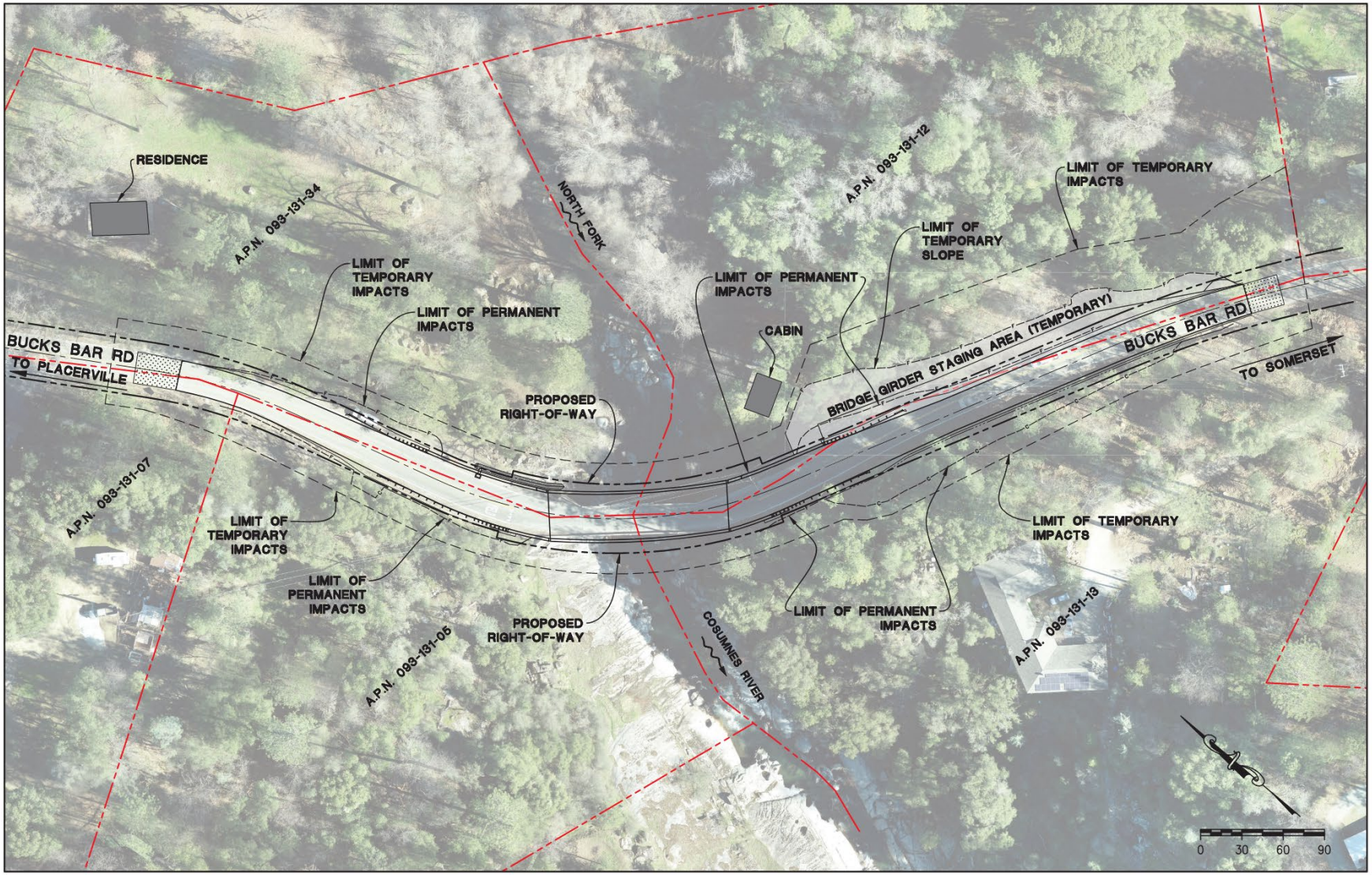

Exhibit ES-1 Vicinity Map

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The existing bridge must be removed before construction of the new bridge because the new bridge will be on nearly the same alignment as the existing bridge. A temporary bridge has been determined to not be feasible during demolition or construction, thereby requiring a long-duration closure of Bucks Bar Road for approximately 10 months. Proposed Project final plans would designate long-term detours and require the contractor to prepare a traffic control plan for the possibility of incidental work (e.g., site restoration, replanting, striping, and final grading) after Bucks Bar Road is reopened. A temporary bridge was determined to not be feasible during demolition or construction, thereby requiring a long term detour of traffic on Bucks Bar Road.

The Proposed Project has been designed to avoid impacts to the North Fork Cosumnes River channel. The contractor would install a temporary platform across the North Fork Cosumnes River to serve as a catchment to prevent debris from entering the river during the bridge removal and for access during the bridge removal activities. No heavy equipment or temporary structures are needed in the river for installation of the protective temporary platform, so species movements within the North Fork Cosumnes River would not be affected. Installation and removal may require construction personnel to walk in the river to support efficient placement and removal. The platform would be removed prior to high river flows. Construction would most likely start in late fall/early winter to minimize roadway closures during summer months.

Construction crews and equipment would approach the project site from both the north and south, depending on the element of work for that period. The roadway closure would affect through-traffic for up to apporoximately 10 months. At times when Bucks Bar Road would not be fully closed, traffic delays could result from equipment and materials mobilization, retaining wall construction, and final roadway tie-ins. Equipment and materials would be staged for construction within the existing Bucks Bar Road right-of-way and temporary construction easements. The staging areas established for the Proposed Project would avoid impeding residential access as much as possible. Parking for construction workers would be onsite within the staging areas. There would be no multi-day staging of vehicles or equipment on or along existing roadways outside of designated staging areas.

Emergency and public services and others using Bucks Bar Road would be detoured with signs posted in advance at both the Mount Aukum Road and Pleasant Valley Road intersections with Bucks Bar Road (Exhibit ES-2). Public outreach would occur prior to the road closure so that emergency and public services, school districts, the community, and business travelers would be aware of the closure, the planned closure duration, and the detour routes around the closure using both Mount Aukum Road and Pleasant Valley Road.

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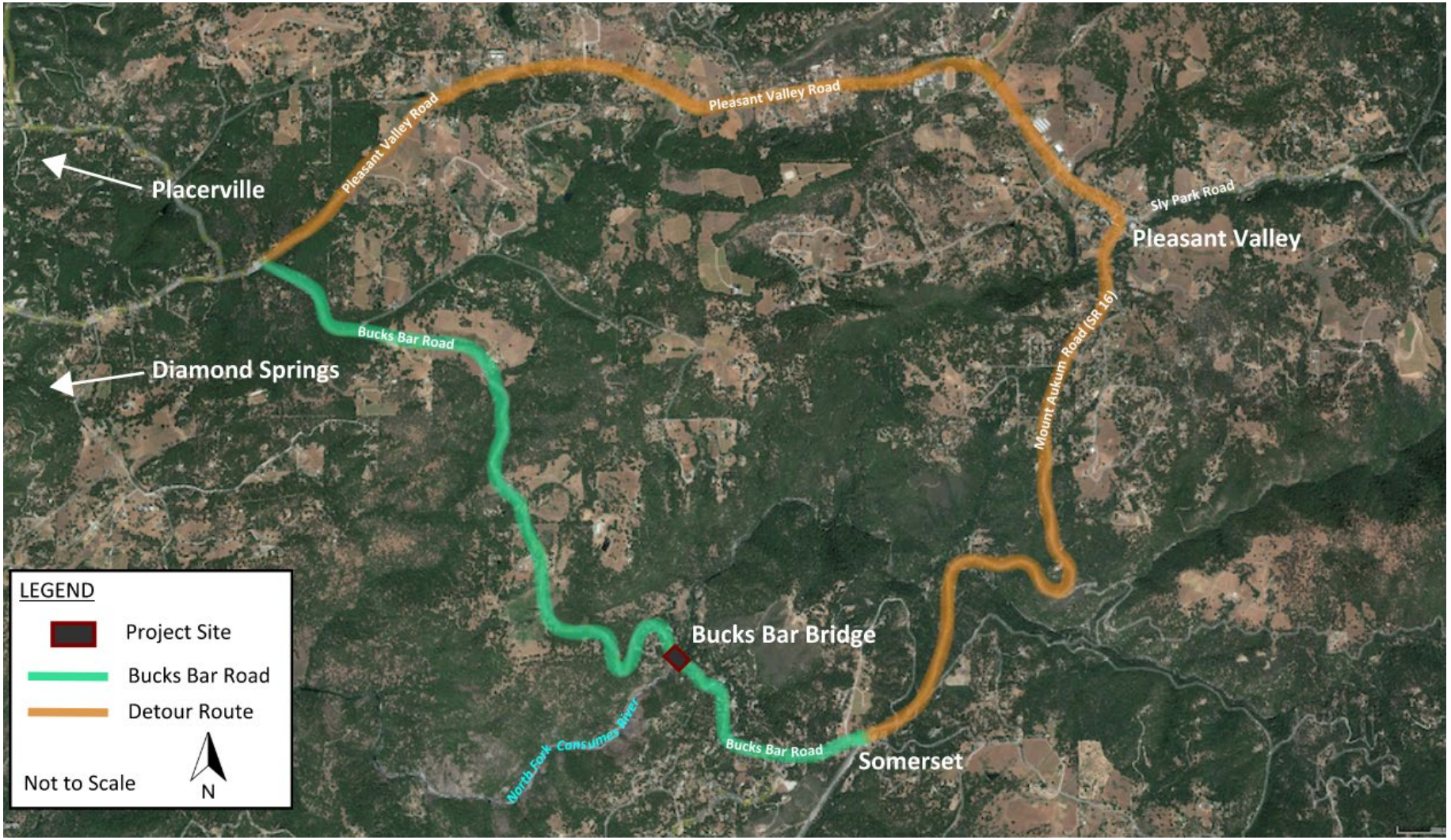

Exhibit ES-2 Detour Routes for Bucks Bar Road Closure During Construction

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ES.3 Areas of Known Controversy

State CEQA Guidelines Section 15123(b) requires that a summary section include a description of areas of controversy known to the lead agency, including issues raised by agencies and the public; and issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant impacts. Known areas of controversy on the Proposed Project includes:

- Impacts to Native American Tribal cultural resources (TCR) and archaeological resources,
- United Auburn Indian Community's objection to the 35-mph and 40-mph alternatives and preference that the Proposed Project be reduced to installation of either a stop-sign alternative or signalization alternative at the existing bridge, and
- The potential to close Bucks Bar Road at Bucks Bar Road Bridge during construction.

ES.4 Environmental Impact Report Process and Public Review

The County distributed a Notice of Preparation (NOP) of a Draft EIR for the Proposed Project on June 21, 2018 (Appendix A). The NOP was distributed for a 30-day comment period extended from June 25 through July 25 of 2018. During that time, a public meeting was held to gather public input on the scope of the EIR presented in the NOP. The public meeting was on July 9, 2018, in Somerset, California.

The County encourages public review of this EIR. This Draft EIR is being circulated for a 45-day public review period. During this time, written comments may be submitted to the following staff person for consideration in the Final EIR.

El Dorado County Department of Transportation
2441 Headington Road
Placerville, CA 95667
Attn: John Kahling
Email: john.kahling@edcgov.us

Following the close of the public comment period, the County will prepare a Final EIR that contains this Draft EIR plus technical clarifications and responses to significant environmental points raised in the public review and resource agency consultations. The Draft and Final EIR will be considered by the El Dorado County Board of Supervisors and, subsequently, a decision will be made to approve or deny the Proposed Project.

ES.5 Project Impacts and Mitigation Measures

As part of the scoping and environmental analyses carried out for the Proposed Project, environmental issues concerning agriculture and forestry, energy, land use and population, mineral resources, and recreation were considered, but no impacts were identified. As a result, there is no further analysis about these issues in this document.

The effects of the Proposed Project that, when compared to the significance criteria, would result in no impact, less-than-significant impact, potentially significant but would be reduced to less than significant with mitigation, and those impacts considered significant and unavoidable even with the implementation of mitigation are summarized in Exhibit ES-3 (located at end of this executive summary). When applicable, the proposed mitigation measures are listed in Exhibit ES-3, the details of which are available in Chapter 3, Impact Analysis.

ES.6 Other CEQA-Related Impact Conclusions

ES.6.1 Cumulative Impacts

Section 15130 of the CEQA Guidelines requires that an EIR consider a project's contribution to any significant cumulative impacts. Cumulative impacts are the incremental effects of a proposed project added to the impacts of other closely related past, present, and reasonably foreseeable future projects, which, together, are cumulatively considerable. The purpose of the cumulative impact analysis is to assess the Proposed Project's contribution in the context of the larger, cumulative impact.

All resource areas were analyzed for cumulative impacts. The Proposed Project would not contribute to a cumulative impact in the project region for the following resource areas.

- Air Quality
- Biological Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology, Water Quality, and Water Resources
- Noise and Vibration
- Public Services and Utility Service Systems
- Transportation
- Wildfire

The Proposed Project would impact aesthetics, cultural resources and tribal cultural resources within the project area. Notwithstanding routine maintenance of the bridge or the road near both ends of the bridge, the most recent past project in the project area was the construction of the existing 1940-1941 bridge. Mining activities and the construction of the existing bridge have resulted in incremental cumulative impacts to aesthetics, cultural resources, and tribal cultural resources. Beyond the Proposed Project there are no other present projects that would result in cumulatively considerable impacts. The current zoning and El Dorado County General Plan do not allow for reasonably foreseeable future projects that would overlap with the Proposed Project. The Proposed Project would result in direct impacts to aesthetic resources, cultural resources, and tribal cultural resources with the removal of the existing bridge. The Proposed Project could impact unknown archaeological resources. Mitigation measures are identified to address the direct impacts and the potential impacts to unknown resources. The County has determined that the mitigation proposed for the project in Section 3.4, Cultural Resources and Section 3.5, Tribal Cultural Resources, in addition to changing the alignment and altering the bridge design, ensures that the project's contribution to the cumulative condition of previously impacted resources is not cumulatively considerable. Therefore, no cumulatively significant impacts would occur that exceed the impacts already disclosed in Chapter 3 of this EIR.

The assessment of the Proposed Project's contribution to cumulative impacts is provided in Chapter 5, Other CEQA Considerations.

ES.6.2 Growth Inducement and Growth-Related Impacts

Section 15126.2 of the CEQA Guidelines provides guidance for analyzing the growth-inducing impacts of a project. The growth inducement analysis must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Projects that would remove obstacles to population growth could lead to

increased demand for existing community services. Growth in an area is not necessarily considered beneficial, detrimental, or of little significance to the environment. The secondary impacts associated with growth (e.g., air quality impacts from new construction) can be significant.

This Draft EIR concludes that the Proposed Project would not induce growth. Growth inducement and growth-related impacts are discussed in further detail in Chapter 5.

ES.6.3 Significant Irreversible Environmental Changes

The CEQA Guidelines Section 15126.2 requires the evaluation and discussion in EIRs of irreversible changes that would be caused by a proposed project. This Draft EIR analyzes the extent to which the Proposed Project would commit nonrenewable resources that future generations would likely be unable to reverse. Implementation of the Proposed Project would result in the short-term commitment of nonrenewable energy resources and natural resources, including sand and gravel, asphalt, and other resources during project construction as discussed in this Draft EIR.

The Proposed Project would result in a significant and unavoidable impact on historic resources and tribal cultural resources that are currently unknown and that might be discovered during construction. The Proposed Project would remove the existing bridge, which was listed in the California Register of Historical Resources (CRHR) on August 14, 2020, and was determined eligible for role it plays in the localized TCR landscape. This would be an irreversible, significant, and unavoidable impact. It is unavoidable because the existing bridge must be removed to allow for construction of the new bridge on the alignment of the existing bridge; this would allow the Proposed Project to optimize avoidance of Native American tribal cultural and archaeological resources revealed during the CEQA process.

During construction, the Proposed Project could inadvertently damage archaeological resources and features of the known TCR. However, it is not evident that irreversible damage would occur since the Proposed Project design and specifications include avoiding all known features, and measures are included to further avoid impacting unidentified features to the extent possible. Additionally, the Proposed Project includes a commitment to mitigate to the extent feasible, which includes developing of cultural resource management plans to implement measures prior to, during and after construction to protect features as well as measures to be implemented in the event post-review discoveries are made during construction. No other impacts identified would result in significant irreversible environmental changes. The Proposed Project's significant impacts are discussed in detail in Chapter 3 and its significant irreversible environmental changes are discussed in Chapter 5.

ES.7 Project Alternatives

The Draft EIR must examine a reasonable range of alternatives to the Proposed Project that could feasibly attain most of the project objectives and avoid or lessen any of the Proposed Project's significant environmental impacts (CEQA Guidelines 15126 [f]). As required by Section 15126.6 of the CEQA Guidelines, the range of alternatives must always include the No Project Alternative. The purpose of describing and analyzing a No Project Alternative is to allow decision-makers to compare the impacts of approving the Proposed Project with the impacts of not approving the Proposed Project. Two transportation system management alternatives (installing a stop sign or installing a signal to manage circulation on the existing one-lane bridge) were considered but eliminated for not meeting the purpose and need of the Proposed Project. The potential impacts of the following alternatives to the Proposed Project are examined in Chapter 4 (Alternatives Analysis) of this Draft EIR.

- No Project Alternative
- 35-mph Alternative
- 40-mph Alternative

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Exhibit ES-3. Executive Summary of CEQA Findings and Mitigation Measures

Resource Topic/CEQA Threshold Topic	Brief Description of Impact	Determination of Significance	Mitigation Measures
Aesthetics (Section 3.1)			
Would scenic vistas change?	Scenic character of the North Fork Cosumnes River would be temporarily affected during construction; North Fork Cosumnes River would be visually consistent with surroundings	LTS	No mitigation measures required.
Degrade scenic resources?	Bucks Bar Road is not a scenic highway.	NI	No mitigation measures required.
Degrade visual character or quality in non-urbanized areas?	There would be no visual impact from publicly accessible vantage points and no conflict with applicable zoning or other regulations;	NI	No mitigation measures required.
Create new source of light or glare?	Temporary construction lighting would not impact traveling public; No new permanent source of light.	LTS	No mitigation measures required.
Air Quality (Section 3.2)			
Conflict with air quality plan?	No short-term increases in pollutants are expected to exceed thresholds; With no increase in traffic capacity, there would be no change in long-term pollutants.	NI	No mitigation measures required.
Cumulatively considerable net increase in criteria pollutant?	No considerable net increase in criteria pollutant.	LTS	No mitigation measures required.
Impact sensitive receptors?	Nearby residents may experience increases in emissions during construction.	LTS	No mitigation measures required.

Resource Topic/CEQA Threshold Topic	Brief Description of Impact	Determination of Significance	Mitigation Measures
Objectionable odors?	Short-term odors during construction.	LTS	No mitigation measures required.
Biological Resources (Section 3.3)			
Adversely affect special-status species?	Potentially significant impacts on foothill yellow-legged frog (FYLF) (Impacts BIO-1), California red-legged frog (CRLF) (Impacts BIO-2), monarch butter fly (Impacts BIO-3), western pond turtle (Impacts BIO-4), birds of prey and migratory birds (Impacts BIO-5), and Special-status Plant Species including Brownish Beaked-rush and Grassland suncup(Impacts BIO-6).	LTSM	Mitigation Measure BIO-1: FYLF Mitigation Measure BIO-2: CRLF Mitigation Measure BIO-3: Monarch Butterfly Mitigation Measure BIO-4: Western Pond Turtle Mitigation Measure BIO-5: Birds of Prey and Migratory Birds Mitigation Measure BIO-5: Special-status Plant Species including Brownish Beaked-rush and Grassland suncup
Impact riparian and sensitive natural communities?	Seasonal wetland and ephemeral drainages within the Biological Study Area would not be impacted because the water features are outside of the construction footprint. Tree removal within canyon live oak-ponderosa pine forest and approximately 0.15 acre of permanent impact; no tree removal within alder riparian forest and permanent impact of approximately 0.1 acre, and no impacts on Central Valley Drainage Hardhead/Squawfish Stream or Central Valley Drainage Resident Rainbow Trout Stream.	LTS	No mitigation measures required.
Impacts on U.S. Waters or state waters or wetlands?	No impact on North Fork Cosumnes River or wetlands	NI	No mitigation measures required.

Resource Topic/CEQA Threshold Topic	Brief Description of Impact	Determination of Significance	Mitigation Measures
Impacts on wildlife movement and migration?	Potential to temporarily disrupt movement of native wildlife species during construction if within the project area.	LTS	No mitigation measures required.
Conflict with local policies and ordinances?	No conflict with tree protection/removal policies.	NI	No mitigation measures required.
Conflict with habitat conservation plan?	Not located in an area covered by a habitat or natural community conservation plan.	NI	No mitigation measures required.
Cultural Resources (Section 3.4)			
Adverse effect on historical resources?	Impact CUL-1: Would remove the existing bridge listed on the CRHR .	SU	Mitigation Measure CUL-1: Historic American Engineering Record (HAER)
Adverse effect on archaeological resources?	Impact TCR-2: Construction activities could cause the disturbance, relocation, or destruction of TCR (archaeological resources) that are currently unknown and would only be discovered once construction begins. In accordance with PRC section 21084.1, the Proposed Project could result in a "…substantial adverse change in the significance of an historical resource."	SU	Mitigation Measure TCR-1: Property Acquisition, Conservation Easement, or Endowment Funding, (TCR-1: Alternative: Ethnography Study Report) Mitigation Measure TCR-2: Avoid or Minimize Potential Effects on Unknown Tribal Cultural Resources Mitigation Measure TCR-3: Access to Area During Construction.
Disturb human remains?	Impact CUL-2: The implementation of the procedures outlined in the Health and Safety Code Section 7050.5[b] and PRC Section 5097.98, would minimize impacts; however, if Native American or other human remains are encountered the impact would be significant.	LTSM	Mitigation Measure CUL-2: Inadvertent Discovery of Human Remains

Resource Topic/CEQA Threshold Topic	Brief Description of Impact	Determination of Significance	Mitigation Measures
Tribal Cultural Resources (TCR) (Section 3.5)			
Substantial adverse change in the significance of a TCR listed or eligible for listing in the California Register of Historical Resources?	Impact TCR-1: The existing bridge, identified by UAIC as a TCR and determined eligible under Criterion A by the SHPO for the role it plays in the TCR, would be removed. There would be a change to the site's significance as defined by Criterion A as a result of the removal of the existing bridge.	SU	Mitigation Measure TCR-1: Property Acquisition, Conservation Easement, or Endowment Funding, (TCR-1: Alternative: Ethnography Study Report) Mitigation Measure CUL-1: Historic American Engineering Record (HAER)
	Impact TCR-2: Construction activities could cause the disturbance, relocation, or destruction of TCRs that are currently unknown and would only be discovered once construction begins. If such TCRs are discovered and cannot be avoided, then disturbing, relocating, or destroying these TCRs would have a substantial adverse change on the cultural landscape with cultural value to California Native American Tribes.	SU	Mitigation Measure TCR-2: Avoid or Minimize Potential Effects on Unknown Tribal Cultural Resources
	Impact TCR-3: It is possible that the ability to find additional information important in prehistory or history will be impacted by the temporary site access restriction during active construction.	LTSM	Mitigation Measure TCR-3: Access to Area During Construction.
Substantial adverse change in the significance of a TCR that is determined by the lead agency to be significant?	Impact TCR-1: The existing bridge, identified by UAIC as a TCR and determined eligible under Criterion A by the SHPO for the role it plays in the TCR, would be removed. There would be a change to the site's significance as defined by Criterion A as a result of the removal of the existing bridge.	SU	Mitigation Measure TCR-1: Property Acquisition, Conservation Easement, or Endowment Funding, (TCR-1: Alternative: Ethnography Study Report) Mitigation Measure CUL-1: Historic American Engineering Record (HAER)

Resource Topic/CEQA Threshold Topic	Brief Description of Impact	Determination of Significance	Mitigation Measures
	Impact TCR-2: Construction activities could cause the disturbance, relocation, or destruction of TCRs that are currently unknown and would only be discovered once construction begins. If such TCRs are discovered and cannot be avoided, then disturbing, relocating, or destroying these TCRs would have a substantial adverse change on the cultural landscape with cultural value to California Native American Tribes.	SU	Mitigation Measure TCR-2: Avoid or Minimize Potential Effects on Unknown Tribal Cultural Resources
	Impact TCR-3: It is possible that the ability to find additional information important in prehistory or history will be impacted by the temporary site access restriction during active construction.	LTSM	Mitigation Measure TCR-3: Access to Area During Construction.
Geology and Soils (Section 3.6)			
Vulnerable to seismicity?	Would be designed to withstand a seismically important event.	LTS	No mitigation measures required.
Cause soil erosion?	Adherence to regulatory requirements would result in less than significant impacts.	LTS	No mitigation measures required.
Vulnerable to unstable geologic unit?	Geologic units are not considered to be unstable.	NI	No mitigation measures required.
Vulnerable to expansive soils?	Soils in the project area are not considered to be expansive.	NI	No mitigation measures required.
Impact wastewater disposal systems?	Would not involve wastewater disposal.	NI	No mitigation measures required.
Impact paleontological resource?	No potential to contain significant paleontological resources.	NI	No mitigation measures required.
Greenhouse Gas Emissions (Section 3.7)			

Resource Topic/CEQA Threshold Topic	Brief Description of Impact	Determination of Significance	Mitigation Measures
Exceed greenhouse gas emissions?	Below de minimis level for construction and operations.	LTS	No mitigation measures required.
Conflict with greenhouse gas plan?	No conflict with greenhouse gas plan.	NI	No mitigation measures required.
Hazards and Hazardous Materials (Section 3.8)			
Result in use, transport, or disposal of hazardous materials?	Potential for spills during construction. No change in potential for hazardous materials during operation.	LTS	No mitigation measures required.
Potentially cause accidental release?	No record of previously present hazardous materials sites outside of existing bridge that might contain lead; the concrete abutments could possibly include asbestos-containing material.	LTS	No mitigation measures required.
Emit hazardous emissions within one-quarter (0.25) mile of a school?	No existing or proposed schools occur within 0.25 mile of the project area.	NI	No mitigation measures required.
Located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5?	No listed hazardous materials or waste sites occur within or near the project area.	NI	No mitigation measures required.
Located in an airport land use plan or within 2 miles of a public airport or public use airport?	Not located within 2 miles of a public airport or public use airport.	NI	No mitigation measures required.
Conflicts with emergency response plan?	Temporary closure of Bucks Bar Road requires a change in evacuation route plans.	NI	No mitigation measures required.

Resource Topic/CEQA Threshold Topic	Brief Description of Impact	Determination of Significance	Mitigation Measures
Exacerbate wildfire risks?	See wildfire impact description below (Section 3.13).	LTS	No mitigation measures required.
Hydrology, Water Quality, and Water Resources (Section 3.9)			
Water quality standard violations?	Revegetation measures and water quality requirements via Statewide General Permit for Discharges of Storm Water Associated with Construction Activity during construction would result in low risk of water quality violations.	LTS	No mitigation measures required.
Decrease groundwater supplies?	No withdrawals from an aquifer or groundwater table.	NI	No mitigation measures required.
Alter drainage and result in erosion?	Minor increase in impervious surface would provide negligible additional stormwater runoff compared with the existing bridge.	LTS	No mitigation measures required.
Creates risks of a flood hazard, tsunami, or within seiche zones, risk release of pollutants?	Short-term construction activities within flood zone with minimizing risk requirements. Improves convenance of the flows during the 100-year flood.	LTS	No mitigation measures required.
Conflict with water quality control plan or sustainable groundwater management plan?	Would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	NI	No mitigation measures required.
Noise (Section 3.10)			
Noise in excess of standards?	Temporary increase in noise during construction. No increase in traffic capacity and reduced noise from idling vehicles at yield signs.	LTS	No mitigation measures required.
Ground borne vibration/noise?	Temporary increase in vibratory noise during construction.	LTS	No mitigation measures required.

Resource Topic/CEQA Threshold Topic	Brief Description of Impact	Determination of Significance	Mitigation Measures
	No ongoing vibratory impacts.		
Within an airport land use plan area or within 2 miles of a public airport expose people in the project area to excessive noise levels?	No airport within 2 miles.	NI	No mitigation measures required.
Public Services and Utility Service Systems (Section 3.11)			
New or physically altering governmental facilities?	Temporary road closure during construction would be manage through extensive public service coordination to minimize impacts. No change to governmental facilities.	LTS	No mitigation measures required.
Require or result in the relocation or construction of new or expanded water / wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications?	Relocating power and cable service prior to construction with no impact to service. No increase in demand on public utilities and would not result in the need for expanded wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities.	NI	No mitigation measures required.
Have sufficient water supplies?	Some water supplies needed during construction. No long-term increase in water use.	LTS	No mitigation measures required.
Determination by the wastewater treatment provider?	No increase or change to the wastewater treatment.	NI	No mitigation measures required.

Resource Topic/CEQA Threshold Topic	Brief Description of Impact	Determination of Significance	Mitigation Measures
Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure?	Landfills can accommodate bridge removal debris. No increase solid waste increase following construction.	LTS	No mitigation measures required.
Comply with regulations related to solid waste?	In compliance with solid waste regulations.	NI	No mitigation measures required.
Transportation (Section 3.12)			
Conflict with a program, plan, ordinance, or policy addressing the circulation system?	No transit, bicycle/pedestrian, or other transportation services planned or proposed. Project would fulfill transportation plans.	NI	No mitigation measures required.
Conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b) (VMT)?	No change in VMT.	NI	No mitigation measures required.
Increase design hazards?	Eliminates current hazard of one-lane bridge but does not meet geometric standard of 45 mph roadway; overall reduced transportation hazard.	NI	No mitigation measures required.
Inadequate emergency access?	Temporary road closure during construction would be managed through extensive public service coordination to minimize impacts. Improves long-term emergency access safety.	LTS	No mitigation measures required.
Wildfire (Section 3.13)			
Substantially impair an adopted emergency response plan?	Temporary road closure during construction would be manage through extensive public service coordination to minimize impacts.	LTS	No mitigation measures required.

Resource Topic/CEQA Threshold Topic	Brief Description of Impact	Determination of Significance	Mitigation Measures
	Improves long-term emergency response.		
Exacerbate wildfire risks?	Construction would involve the use of heavy equipment, welding, and other activities that have potential to ignite fires which would be address with implementation of a Fire Protection Plan during construction. Long-term would create wider fire break in localized area.	LTS	No mitigation measures required.
Require the installation or maintenance of associated infrastructure that may exacerbate fire risk?	No new exposure to a new or increased significant risk of loss, injury, or death involving wildland fires.	NI	No mitigation measures required.
Significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Reduced flood risk and fire risk remains same with or without the Proposed Project. Minor clearing of areas along shoulders for construction access would not result in soil instability issues.	LTS	No mitigation measures required.

Abbreviations:
CRHR = California Register of Historical Resources; LTS = Less-than-significant impact; LTSM = Less-than-significant impact with mitigation incorporated; NI = No Impact, includes beneficial effects; NRHP = National Register of Historic Places; SU = significant and impact cannot be mitigated to less- than- significant impact

Chapter 1 Introduction

1.1 Project Introduction

The El Dorado County, Department of Transportation (the County) proposes to replace the existing Bucks Bar Road bridge over the North Fork Cosumnes River. The existing bridge is located along Bucks Bar Road approximately 1.2 miles north of Mount Aukum Road and the unincorporated community of Somerset and 3.6 miles south of Pleasant Valley Road. Federal Highway Bridge Program[1] (HBP) funds have been made available to the County to replace the existing structure to improve roadway safety and comply with the American Association of State Highway and Transportation Officials (AASHTO) design guidelines, bridge and roadway standards used by Caltrans, and El Dorado County standards.

1.1.1 Purpose of this Environmental Impact Report

The Bucks Bar Road at North Fork Cosumnes River - Bridge (No. 25C0003) Replacement Project (Proposed Project) is funded by the Federal HBP and therefore requires compliance with both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The lead agency for NEPA is the California Department of Transportation (Caltrans) as assigned by the Federal Highway Administration. The County is the CEQA lead agency.

This draft environmental impact report (EIR) has been prepared according to CEQA (California Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3) to evaluate the potential environmental impacts associated with implementing the Proposed Project.

CEQA requires public agencies to consider the potential adverse environmental impacts of projects under their consideration. Adverse environmental impacts include both direct impacts and reasonably foreseeable indirect impacts. A discretionary project that would have a significant adverse impact on the environment cannot be approved without the preparation of an EIR.

According to Section 15002 of the CEQA Guidelines, the basic purposes of CEQA include the following.

- Inform government decision makers and the public about the potential significant environmental effects of proposed activities.
- Identify ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governing agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

[1] The Highway Bridge Program (HBP) is a safety program that provides federal aid to local agencies to replace and rehabilitate structurally deficient locally owned public highway bridges or complete preventive maintenance on bridges that are not deficient. More information is available at: https://dot.ca.gov/-/media/dot-media/programs/local-assistance/documents/lapg/g06.pdf

The County Board of Supervisors will review the Draft EIR to understand the Proposed Project's impacts before taking action. They will also consider other information and testimony that will arise during deliberations on the Proposed Project before making their decision.

1.2 Notice of Preparation

A Notice of Preparation (NOP) of an EIR was prepared for the Proposed Project and published for a 30-day public review and comment period that began on June 25, 2018, and ended on July 25, 2018 (Appendix A). Eleven comments from both public agency representatives and members of the general public were received via mail or email including a transmittal letter from the Office of Planning and Research.

The County held a public scoping meeting on July 9, 2018, at the Pioneer Park Community Center, 7640 Fairplay Road, Somerset, California, from 6:00 to 7:00 p.m. The scoping meeting included a presentation by County staff and consultants and was followed by a question-and-answer period. Comment cards were handed out to facilitate the receipt of written comments regarding the Proposed Project and the EIR. Approximately 30 individuals, including both public agency representatives and members of the general public, attended the meeting.

1.3 Scope of the Environmental Impact Report

After review of all relevant comments received during the NOP comment period on environmental issues, the County determined agricultural and forestry resources, energy, land use and population, mineral resources and recreation were not present or the potential for impacts were improbable and therefore not considered further in this evaluation. The County determined that the following 13 resource areas would be reviewed for potential environmental impacts.

• Aesthetics (Section 3.1)	• Hazards and Hazardous Materials (Section 3.8)
• Air Quality (Section 3.2)	• Hydrology and Water Quality (Section 3.9)
• Biological Resources (Section 3.3)	• Noise and Vibration (Section 3.10)
• Cultural Resources (Section 3.4)	• Public Services and Utility Service Systems (Section 3.11)
• Tribal Cultural Resources (Section 3.5)	• Transportation (Section 3.12)
• Geology and Soils (Section 3.6)	• Wildfire (Section 3.13)
• Greenhouse Gas Emissions (Section 3.7)	

1.4 Terminology Used to Describe Impacts

To assist the reader in understanding this Draft EIR, terms used are defined as follows.

- Proposed Project means the whole of an action that has the potential for resulting in a physical change in the environment, directly or ultimately.
- Environment means the physical conditions that exist in the area and would be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, and objects of historical or aesthetic significance. The environment includes both natural and human-made conditions.

- Impacts analyzed under CEQA must be related to a physical change. There are two types of possible impacts.
    - Direct or primary impacts that are caused by the Proposed Project and occur at the same time and place.
    - Indirect or secondary impacts that are caused by the Proposed Project and are later in time or farther removed in distance but still reasonably foreseeable, including growth-inducing impacts and other impacts related to induced changes in the pattern of land use, population density, or growth rate, and related impact on air and water and other natural systems, including ecosystems.
- Significant impact on the environment means a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by the Proposed Project, including land, air, water, minerals, flora, fauna, noise, and objects of historic or aesthetic significance.
- Mitigation can include any or all of the following.
    - Minimizing impacts by limiting the degree or magnitude of the action and its implementation
    - Rectifying the impact by repairing, rehabilitating, or restoring the affected environment
    - Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
    - Compensating for the impact by replacing or providing substitute resources or environments
- Avoidance is not included as a component of mitigation, because avoidance has been incorporated in the design and/or requirement of the Proposed Project before impacts are assessed. Chapter 4, Alternative Analysis, outlines the multiple iterations of design to reach the current design and articulates the avoidance considerations. Avoidance also includes regulatory requirements, specifications, and contract provisions that are required to be implemented during construction.
- Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The individual impacts may be changes resulting from a single project or separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

This Draft EIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows.

- No impact: no adverse physical changes to or impacts on the environment are anticipated.
- Less than significant impact: an impact that is adverse but does not exceed the defined thresholds of significance. Less-than-significant impacts do not require mitigation.
- Potentially significant impact: an environmental effect that may cause a substantial adverse change in the environment; however, additional information is needed regarding the extent of the impact to make the determination of significance. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

- Significant impact: an impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less-than-significant level.
- Significant and unavoidable impact: an impact that exceeds the defined thresholds of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

1.5 Organization of the Environmental Impact Report

The Draft EIR is organized in the following chapters.

- Executive Summary presents a brief summary of the Proposed Project; summarizes the impacts and mitigation measures; identifies areas of known controversy, including issues raised by agencies and the public; and identifies unresolved issues. The Executive Summary also summarizes the Proposed Project's growth-inducing impacts, cumulative impacts, significant and unavoidable impacts, and significant irreversible impacts.
- Chapter 1, Introduction, explains the purpose of this Draft EIR, defines terms used in the analysis, and discusses the environmental review process.
- Chapter 2, Project Description, describes the Proposed Project, including the project objectives, proposed bridge and roadway design, methodologies for construction, and required project approvals.
- Chapter 3, Impact Analysis, presents the analysis of potential construction and operation impacts of the Proposed Project for each environmental topic (e.g., aesthetics, air quality, noise). Each section is organized according to the following framework.
    - Existing Conditions
        - Regulatory Setting
        - Environmental Setting
    - Environmental Impacts
        - Methods of Analysis
        - Thresholds of Significance
        - Impacts and Mitigation Measures
- Chapter 4, Alternatives Analysis, presents alternatives to the Proposed Project. As allowed by CEQA, the impacts of these alternatives are evaluated at a more general and comparative level than the analyses contained in Chapter 3. Chapter 4 also presents alternatives considered but rejected and not analyzed further.
- Chapter 5, Other CEQA Considerations, presents the analysis of the Proposed Project's growth-inducing impacts, cumulative impacts analysis, and the identification of significant and irreversible, as well as significant and unavoidable, environmental changes.
- Chapter 6, List of Preparers, lists the EIR authors, technical specialists, members of the production team, and other key individuals who assisted in the preparation and review of this Draft EIR.
- Chapter 7, list of references and literature cited used during preparation of the Draft EIR.

- Attachments, Notice of Preparation, List of Project Specific Technical Studies, List of Confidential Reports Not for Public Review.

1.6 Environmental Review Process

1.6.1 Draft Environmental Impact Report Public Review and Opportunity for Public Comment

Reviewers of a Draft EIR should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the Proposed Project might be avoided or mitigated.

This Draft EIR is available for review and comment by the public, responsible agencies, organizations, and other interested parties for a 45-day period. Comments must be received either electronically or physically by 5 p.m. on the last day of the comment period. All comments or questions about the Draft EIR should be addressed to:

El Dorado County, Department of Transportation
2441 Headington Road
Placerville, CA 95667
Attn: John Kahling
Email: john.kahling@edcgov.us

1.6.2 Final Environmental Impact Report

After the close of the public review period for the Draft EIR, the County will prepare the Final EIR. The Final EIR will consist of the Draft EIR and the Final EIR and will include the comments received during the formal review period of the Draft EIR, responses to the comments received that relate to environmental issues, and revisions made to the Draft EIR in response to the comments in errata format. The Final EIR will also contain copies of the comments received during the formal review period.

The Final EIR and accompanying Draft EIR will be available to the County Board of Supervisors for consideration during their decision-making process to approve or deny the Proposed Project. The County will hold a public hearing during a noticed Board of Supervisors meeting before certifying the Final EIR, during which the public and agencies can provide additional comments.

1.7 Intended Uses of the Environmental Impact Report

This Draft EIR examines the potential impacts of the Proposed Project. The Final EIR will be considered by the County Board of Supervisors prior to taking their final action on the Proposed Project. The following state agencies expected to use the Final EIR in the future for permitting include those listed below:

- Central Valley Regional Water Quality Control Board
- California Department of Fish and Wildlife

Federal agencies, such as the U.S. Fish and Wildlife Service, may use this Draft EIR as reference for permitting purposes.

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Chapter 2 Project Description

El Dorado County Department of Transportation (the County) proposes to replace the existing Bucks Bar Road Bridge over the North Fork Cosumnes River. The Bucks Bar Road bridge over the North Fork Cosumnes River Replacement Project (Proposed Project) is approximately 12 miles southeast of U.S. Highway 50 in the Sierra Nevada foothills in a rural unincorporated part of southern El Dorado County, California. The existing bridge is approximately 1.2 miles north of Mount Aukum Road and the unincorporated community of Somerset and 3.6 miles south of Pleasant Valley Road (Exhibit 2-1). The closest city is Placerville about 7.5 miles northwest of the Proposed Project. The County has obtained Federal Highway Administration (FHWA) Highway Bridge Program funds to replace the existing structure to improve roadway safety and improve hydraulic capacity. The Proposed Project will comply with the American Association of State Highway and Transportation Officials (AASHTO) design guidelines and bridge and roadway standards used by the State of California, Department of Transportation (Caltrans) as applicable.

2.1 Project Location and Existing Conditions

The existing one-lane bridge requires southbound traffic to yield to northbound traffic on a two-lane rural and winding road (Exhibit 2-2). The roadway geometry leading to and from Bucks Bar Road bridge supports driving between 20 and 45 miles per hour (mph). The existing bridge is approximately 70 feet long and 18.5 feet wide and is composed of a reinforced concrete deck slab bridge supported by a reinforced concrete spandrel arch. Bucks Bar Road generally runs north-south and serves as a major collector, as defined by the California Road System – Functional Classification, linking Pleasant Valley Road to the north with Mount Aukum Road on the south end. This rural roadway is not a designated bicycle route. Bucks Bar Road carries between approximately 4,000 and 5,000 vehicles per day and is not a designated truck route (El Dorado County 2022). Overhead utilities within the project area include Pacific Gas and Electric (PG&E) power and AT&T Communications.

In the project area, the terrain is rocky and the topography is characterized as moderate to steep and sloped toward the North Fork Cosumnes River, with an approximate range in elevation from 1,620 feet above sea level directly under the bridge to approximately 1,680 feet. The bridge deck sits at approximately 1,665 feet. Surrounding vegetation consists of a live oak-ponderosa pine forest with mostly canyon live oak (*Quercus chrysolepis*); ponderosa pine (*Pinus ponderosa*) overstory with a manzanita shrub understory and in lesser abundance, willows (*Salix sp.*) within the riparian area adjacent to the North Fork Cosumnes River.

Existing land uses surrounding the project area include transportation (Bucks Bar Road), low-density residential, and natural lands. Three residential structures and a closed café are located within 600 feet of the bridge, but only one structure has clear visual access of the bridge. Land adjacent to the project area is zoned largely for residential uses, with one commercial site that holds a closed café. Lands farther north and south of the project area are zoned for rural land uses with limited residential development. The environment in and around the project area has been determined by the County, Caltrans, and the California Office of Historic Preservation to include a significant Tribal Cultural Resource (TCR) under California Environmental Quality Act (CEQA) and a Traditional Cultural Property (TCP) under the National Register of Historic Places (NRHP) (SHPO 2023).

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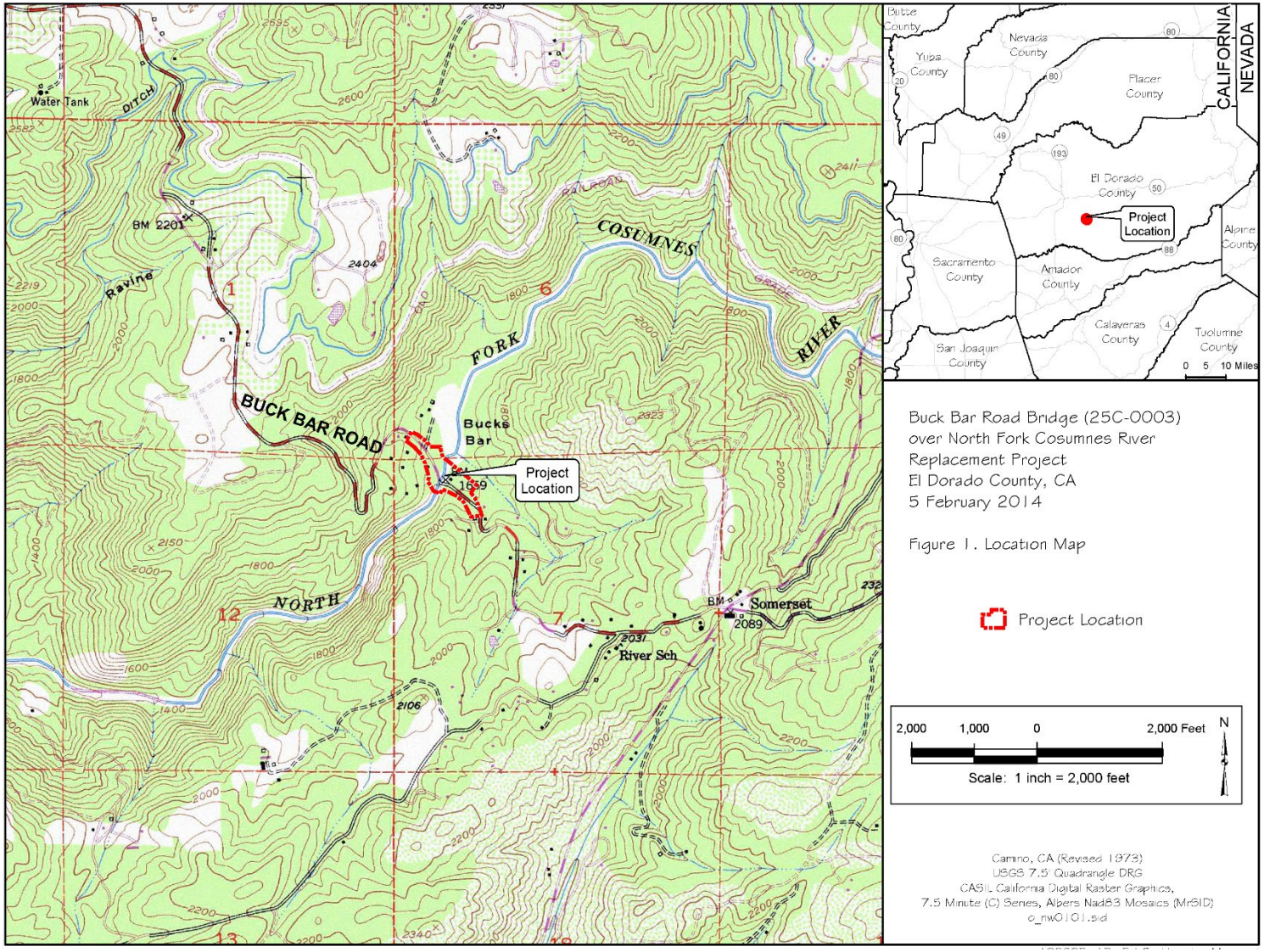

Exhibit 2-1 Vicinity Map

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View from Downstream	View from Upstream
	
View from Roadway towards Placerville	View of Vehicles Nearing Conflict at Bridge

Exhibit 2-2 Bucks Bar Road Existing Bridge

2.2 Background

The National Bridge Inventory and the Caltrans Bridge Inventory indicate that the Bucks Bar Road bridge was constructed in 1940, whereas the as-built plans and a newspaper article state that the bridge was built in 1941. The physical development of Bucks Bar Road may have begun as a Native American trail, before being used as a livestock trail and then a wagon trail (Mead & Hunt 2020). The El Dorado County Board of Supervisors voted in 1854 to award Daniel Hoag a franchise to operate a toll bridge at Bucks Bar, proposed for an earlier site adjacent and to the northeast of the current bridge crossing. It was not until 1857 that a passable road had been created and designated by El Dorado County (County) as a public right-of-way. The road provided access between two existing roads from Bartram's Mill (currently Gutenberger's Place), at the junction with Pleasant Valley Road in the north, to Somerset House (currently Somerset), at the junction with Mt. Aukum Road at the confluence of two other longer roads

(Sand Ridge Road and Grizzly Flat Road) that provided access to Somerset and adjacent communities (Mead & Hunt 2020). Bucks Bar Road, within the Proposed Project area has been straightened so that portions of the original road have been abandoned (Mead & Hunt 2020).

On August 14, 2020, the California Historic Preservation Commission added the Bucks Bar Road bridge to the California Register of Historic Resources (CRHR) for its association with the development of transportation in southern El Dorado County and because it represents a locally significant example of open-spandrel, reinforced concrete arch bridge design and is one of three such bridges located in El Dorado County.

As the Proposed Project has moved through the California Environmental Quality Act (CEQA) process, it has evolved to respond to information obtained during the preliminary design and environmental data gathering. Key events in the project development timeline are outlined in Exhibit 2-3.

Exhibit 2-3 Key Events Influencing Proposed Project Development

Date	Key Events in Proposed Project Development
2007	County received notification that rehabilitation or replacement of Bucks Bar Road bridge will be funded by the Highway Bridge Program.
October 2009	County and Caltrans executed Preliminary Environmental Study.
January 2010	Public meeting was held in Somerset to obtain input from the citizens on the topics of replacement versus widening, temporary detour and structure type.
April 2010	Feasibility Study recommended replacement over rehabilitation, including the construction of a new three-span bridge.
January 2011	Letters sent to initiate Native American tribe consultation with the following tribes: Shingle Springs Band of Miwok Indians; El Dorado Miwok Tribe; UAIC; and Wilton Rancheria and the Ione Band.
June 2013	Caltrans classified the bridge as functionally obsolete (re-affirmed classification from August of 2001).
January 2014	Public input was sought following a presentation about current condition of existing bridge structure, funding, detour options, and the project schedule.
March 2014	County selects 40-mph alignment as preferred alignment, with new bridge located approximately 60 feet upstream from existing bridge.
September 2014 to present	Consultations with Native American Tribes.
November 2015	The County decided not to adopt the CEQA IS/MND based on what the County learned about the project site through the CEQA process.
February 2016 – April 2017	County retained Pacific Legacy, a cultural resource management firm.
April 2017	County requested a time extension from FHWA.
June 2017	Kickoff meeting held with cultural resource management firm.
February 2018	*Draft Ethnographic and National Register Evaluation Report, CA-ELD-49 at Bucks Bar Road Bridge* (25C0003) (Ethnographic Report) sent to Tribes (confidential and not for public disclosure).
March 2018	FHWA approves the County's time extension request.
February 2020	County requested second time extension from FHWA.
August 2020	California State Historic Resources Commission adds Bucks Bar Bridge to the California Register of Historic Places.
October 2020	Historical Resources Evaluation Report signed by Caltrans.

Date	Key Events in Proposed Project Development
November 2020	Draft Archaeological Study Report and Ethnographic Report sent to Caltrans for review (confidential and not for public disclosure).
November 2020	Ethnographic Report signed by Caltrans.
December 2020	FHWA approves County's time extension request.
January 2021	Historic Properties Survey Report (HPSR) sent to Caltrans for concurrence.
February 2021	County changes Proposed Project from 40-mph Alternative to 30-mph Alternative.
March 2021	Caltrans sent HPSR to California Office of Historic Preservation for concurrence.
February 2023	State Historic Preservation Officer (SHPO) concurred with Caltrans that CA-ELD-49/Pulak was eligible for listing on the National Register of Historic Places.
May 2023	SHPO concurred with Caltrans that the Bucks Bar Road bridge is individually eligible for listing on the NRHP for the role it plays as part of CA-ELD-49/Pulak.

The County evaluated project alternatives alignments, which are outlined in Chapter 4, Alternatives Analysis, of this Draft EIR. Through extensive study and consultation, the Proposed Project has been continually refined, primarily to avoid Native American cultural resources to the extent possible while still meeting the Proposed Project purpose and objectives and current federal, state, and local roadway standards.

2.3 Project Purpose and Objectives

The purpose of the Proposed Project is as follows:

- Meet AASHTO, Caltrans, and County design standards to address current:
  - Rural major collector roadway standards
  - Hydraulic capacity requirements (i.e., adequate clearance at the bridge to allow a 100-year storm event to pass)
  - Seismic design standards to withstand a credible seismic event

In addition, the County has formulated the following Proposed Project objectives:

- Objective 1. Replace the existing hydraulically deficient and functionally obsolete bridge with a new bridge consistent with current design practices and provide a safer and more reliable transportation facility that would accommodate two lanes of vehicular travel in keeping with the corridor's functional classification.
- Objective 2. Minimize impacts on archaeological and cultural resources by selecting a project alignment that would directly avoid or minimize impacts on these features to the extent feasible while meeting all other project goals.

2.3.1 Project Need Issues

The following outlines the range of issues concerning the Bucks Bar Road bridge that guided the development of the Proposed Project purpose and objectives.

2.3.1.1 Traffic Safety

The roadway approaches are influenced by the hilly terrain, which limits sight distance and vehicle speeds to a range of 20 to 40 mph. The rural major collector roadway design speed standard for the County is 45 mph. The curves entering and exiting the bridge each have an approximate 150-foot radius, which limits the design speed to 16 mph based on stopping sight distance. The one-lane bridge is signed

to alert travelers, but sight distance does not meet AASHTO standards. The road descends to the bridge from both directions with grades of 3.6 percent and 6.6 percent from the north and south approaches, respectively. The bridge deck has a slight crown along the centerline for drainage of less than 1 percent (Dokken 2010).

The 19-foot bridge width from barrier wall to barrier wall only accommodates a single lane and requires southbound vehicles to yield to northbound travelers until the bridge is clear. The typical approach roadway sections accommodate two 12-foot-wide lanes with 2 to 5-foot-wide shoulders on the outside edge, for a total roadway width of between 28- to 34-feet. The roadway abruptly narrows at both approaches between non-standard height wingwall barriers with no curb to redirect vehicle wheels for swerving vehicles. The AASHTO standard for this road type with approximately 4,000 to 5,000 average daily trips is 11-foot-wide lanes with 6-foot-wide shoulders.

2.3.1.2 Obsolete Bridge

In 2001 and again in 2013, Caltrans classified the Bucks Bar Road bridge as functionally obsolete because of the narrow bridge deck roadway width (Caltrans 2001, 2013). The bridge railings, lane transitions to bridge deck, approach concrete rails, and approach guardrails do not meet current federal or Caltrans roadway and bridge standards. The Caltrans bridge inspection report from June 2013 indicates that the deck geometry is "…*basically intolerable requiring high priority of replacement.*" The Final Feasibility Report for the Bucks Bar Road Bridge completed by Dokken Engineering in 2010 found that in general the existing bridge was in very good condition. However, many of the sub-structural support elements (arch ribs, spandrel columns, and north thrust block foundation) would require retrofitting to meet current seismic standards due to inadequate reinforcement and rebar cover (Dokken 2010). A typical lifecycle for a bridge is 75 to 100 years. The existing bridge is currently 83-84 years old.

2.3.1.3 Hydraulic Conveyance Restricted

The most recent hydraulic analysis demonstrated that the existing bridge does not allow for passage of either the 100-year storm event or the 50-year storm event (WRECO 2022). Current FHWA and Caltrans standards require that bridge superstructures must be designed to pass or freely clear the design flood plus freeboard or the base flood without freeboard (WRECO 2022). The County and nearby residents observed the bridge being overtopped during a major storm in 1997 and near flooding in 2006, 2017, and 2022. During the storm event on and around December 31, 2022, the bridge was not overtopped, however, as illustrated in Exhibit 2-4 debris was caught within the bridge substructure. The arch substructure is located within the 100-year floodplain. County post-storm event inspections have determined that this lower substructure can catch debris during high-flow events, thereby further restricting hydraulic flows.

2.3.1.1 Accident Data

According to accident data for Bucks Bar Road, 17 accidents with 10 injuries and no fatalities occurred between postmile 1.0 and 1.4 from January 1, 2011, to August 2021 (El Dorado County 2021). The accident data for the area within approximately 500 hundred feet on either side of the bridge included five rear-ends, two overturned vehicles, one broadside collision, and six side-swiped or hit objects, and three more accidents involving a motorcycle. Accident types closest to the bridge included sideswipe of another vehicle or hit objects. Accidents near the bridge are likely attributable to the abrupt presence of a one-lane bridge on a two-lane road, and limited sight distance that requires vehicles to stop and/or yield where conditions do not meet normal driver expectations.

Exhibit 2-4 Bucks Bar Road December 2022 Storm Event

2.4 Project Description

Chapter 4 describes the development and range of alternatives considered, the evaluation of the alternatives, and the identification of the Proposed Project. The Proposed Project's operational and construction phases are described below.

2.4.1 Proposed Project

The Proposed Project would replace the existing bridge on the existing alignment and would be designed to be consistent with the most recent AASHTO design guidelines. The decision to replace the bridge at its current position was driven by objectives to minimize impacts to archaeological and cultural resources, property acquisition, and other environmental impacts while providing a safe, modern roadway and improved hydraulics. However, this alignment would require design exceptions regarding design speed and shoulder width.

The Proposed Project design speed is 30 mph. While the geometry of Bucks Bar Road between Pleasant Valley Road and Mount Aukum Road does not accommodate a consistent speed of 45-mph, the Proposed Project would nonetheless need apply for a design exception on the decision to utilize this lower design speed. Also, for a road of this type and with this amount of traffic, AASHTO requires 6-foot-wide shoulders, while the County requires 6-foot-wide paved and 3-foot-wide graded shoulders for new roadways. To maintain some consistency with the existing roadway leading to and from the bridge, the roadway shoulder would generally include a 2- to 4-foot-wide paved area plus a 1-foot-wide graded area. A 3-foot-wide graded shoulder would be provided where metal beam guardrail is required, and a 5-foot-wide paved shoulder would be provided next to locations with a concrete barrier or retaining wall. The County would seek an exception to limit the roadway to 3-foot-wide shoulders to minimize the overall project footprint to avoid environmental impacts. The rural nature of this roadway, the

topography, and lack of shoulders limits the presence of pedestrians and bicyclists; this supports an exception for a narrower shoulder. The Proposed Project cross section of the bridge is shown in Exhibit 2-5.

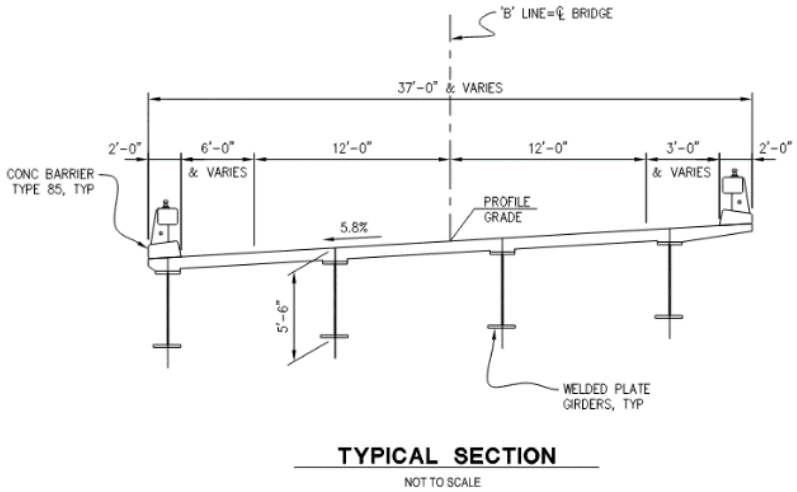

Exhibit 2-5 Proposed Project Typical Bridge Cross Section

The Proposed Project would replace the existing 70-foot-long bridge with a 120- to 130-foot-long, single-span steel girder bridge with a concrete deck (Exhibit 2-6 and Exhibit 2-7). Exhibit 2-6 illustrates the Proposed Project on an aerial of the project area and Exhibit 2-7 illustrates the locations of right-of-way acquisition, permanent easements, and anticipated construction easements.

The Proposed Project would maintain a similar alignment across the river as the existing bridge, with widening occurring mostly to the east (upstream) at the abutments and downstream at midspan. This alignment would minimize changes and disturbances in the setting. With the guardrail, the bridge would be approximately 37 feet wide (33 feet clear width, Exhibit 2-5). The road profile and bridge deck would be raised approximately 5 feet to 8 feet above the existing bridge deck elevation. The existing abutments would be replaced with new abutments farther away from the river to minimize their height and reduce environmental impacts near and in the river. Abutments would be founded on a spread footing embedded into the underlying rock. Rock slope protection is not anticipated at the abutment areas because these areas would be located above normal high water flow level and the exposed dense rock is not prone to scour concerns. The road approach conformation work would extend approximately 320 feet south and 350 feet north from the existing bridge.

During final design, a licensed engineer would prepare a foundation report in accordance with Caltrans standards. This report would outline site-specific recommendations regarding foundation support for the proposed structural elements; grading activities; soil corrosivity; soil expansion; drainage control; and evaluations of seismic hazards, liquefaction, and ground settlement in accordance with all applicable requirements of the State of California, including the Caltrans Seismic Design Criteria. The report would include stability analyses of final design of the approach embankment and retaining walls based on geotechnical exploration and recommendations. The Proposed Project's final plans and specifications will meet all requirements included in the design-level geotechnical report.

The Proposed Project would require approximately 0.9 acre of right-of-way acquisition over five privately owned parcels (assessor parcel number {APN} 093-131-05, APN 093-131-07, APN 093-131-12, APN 093-131-13, and APN 093-131-34 on Exhibit 2-6 and Exhibit 2-7) for the roadway approach cut and fill, retaining walls, drainage culverts, possible utility relocation, and the bridge elements. Approximately 1 acre would be required beyond the permanent right-of-way for temporary construction easements

during construction staging to provide access to the bridge and room for equipment and material staging. Approximately 0.3 acre of this temporary construction easement area may need to become a permanent easement for bridge, slope, and drainage maintenance (Exhibit 2-6 and Exhibit 2-7).

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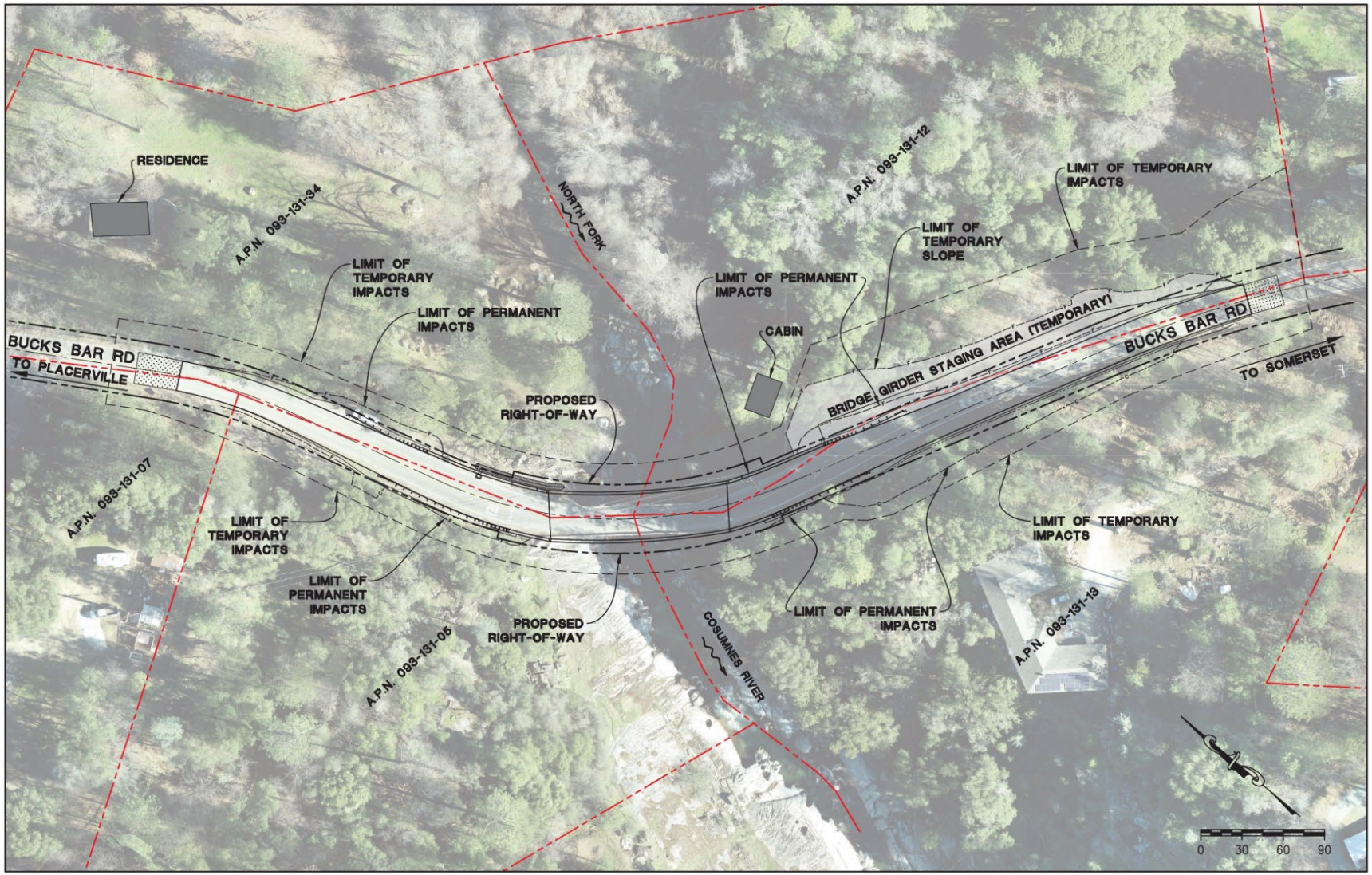

Exhibit 2-6 Plan View of Proposed Project on Bucks Bar Road

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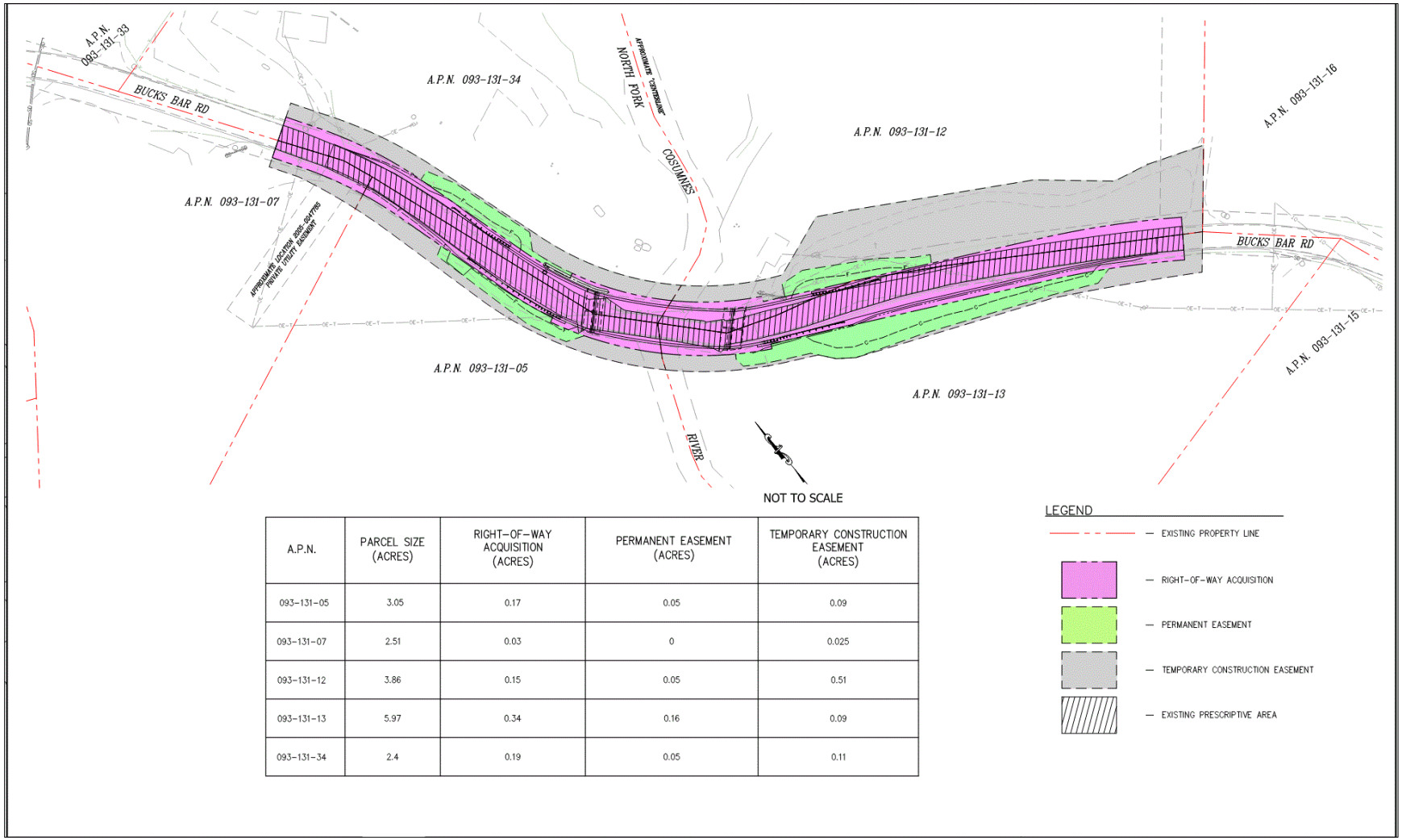

A.P.N.	PARCEL SIZE (ACRES)	RIGHT-OF-WAY ACQUISITION (ACRES)	PERMANENT EASEMENT (ACRES)	TEMPORARY CONSTRUCTION EASEMENT (ACRES)
093-131-05	3.05	0.17	0.05	0.09
093-131-07	2.51	0.03	0	0.025
093-131-12	3.86	0.15	0.05	0.51
093-131-13	5.97	0.34	0.16	0.09
093-131-34	2.4	0.19	0.05	0.11

Exhibit 2-7 Proposed Project Right-of-Way and Easements

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2.4.2 Construction

Construction is anticipated to commence in 2025 and require approximately 12 months to complete. Construction activities would generally occur daily between 7 a.m. and 7 p.m. mostly on weekdays. Construction crews may arrive at the worksite earlier and leave later than the actual construction activity hours. Some night work may be required for activities, including but not limited to placing bridge girders, paving, and striping. Construction would include requirements to install protective measures to avoid debris from entering the North Fork Cosumnes River during removal of the existing bridge (see Section 3.9, Hydrology and Water Quality). Construction would most likely start immediately following fire season and before the rainy season in early to late fall/early winter. Bridge construction would generally follow three phases including mobilization, bridge removal and site preparation. Details regarding the construction activities included in each phase are described below.

2.4.2.1 Mobilization

- Providing advance notice of long-term road closure, and then closing the road.
- Conducting preconstruction biological surveys as required.
- Removing trees and vegetation while mitigating for protected nesting birds.
- Installing water pollution control measures around the construction site.
- Installing protective fencing or barriers to delineate environmentally sensitive areas to be protected.
- Permanently relocating utilities to south of the bridge (if utilities are not relocated by their owners prior to the start of construction).
- Grading, slope rounding, clearing, and grubbing temporary and permanent impact areas.

2.4.2.2 Existing Bridge Removal and Site Preparation

- Building a temporary debris catchment structure below the existing bridge above the North Fork Cosumnes River channel to prevent debris from entering the waterway and managing construction waste removal to limit spoil piles, dust, and debris with onsite dump trucks, as necessary.
- Removing the existing bridge. The contractor will be required to use a registered civil engineer to create a bridge removal plan that will be reviewed and approved by the County prior to the start of any bridge removal.
- Remove the catchment structure prior to rainy season.
- Exposing and relocating fill materials behind existing abutments and from between existing wingwalls and then removing abutments and wingwalls with existing concrete and steel reinforcing (rebar) cut off just below level of existing ground.
- Preparing site for construction of new footings for abutments.

2.4.2.3 New Bridge Construction

- Completing construction of cast-in-place reinforced concrete abutments and wingwalls.
- Backfilling abutments.
- Constructing retaining walls as needed to support the portions of the road that need to be raised to meet the higher elevation of the new bridge.
- Installing steel girders.
- Constructing reinforced concrete bridge deck

- Installing drainage systems that include opportunities for ground infiltration of storm drain runoff from road and bridge.
- Restoring approach roadway with paving and striping.
- Installing steel or concrete barrier railing along the edge of the shoulder on the bridge and wingwalls and at appropriate locations.
- Restoring temporarily impacted areas within the temporary construction easements, which would include regrading the areas to drain and installing erosion control comprised of native plants appropriate for the area.

2.4.3 Staging and Circulation During Construction

Equipment and materials would be staged for construction within the existing Bucks Bar Road right-of-way and temporary construction easements, as shown on Exhibit 2-6 and Exhibit 2-7. The staging areas established for the Proposed Project would avoid impeding residential access as much as possible. Parking for construction workers would be on site within the staging areas. There would be no multi-day staging of vehicles or equipment on or along existing roadways outside of designated staging areas. Equipment likely to be used during construction is listed below:

- Hand tools
- Jackhammer
- Portable grinder
- Backhoe
- Dump trucks
- Gas operated asphalt concrete saw and wet vacuums
- Backhoe/forklift/excavator
- Compactor
- Water trailer tank
- Auger/ crane/ pile driver
- Large cranes for setting girders
- Concrete truck
- Concrete pump
- Semi-truck to carry in supplies and equipment
- Asphalt truck
- Paver
- Asphalt drum roll
- Storage containers to secure equipment and materials

Since the proposed bridge is planned to be built at the same location as the existing bridge, the existing bridge must be removed prior to the construction of the proposed bridge. A temporary bridge was determined to not be feasible during demolition or construction, thereby requiring a long-duration closure of Bucks Bar Road. Proposed Project final plans would designate long-term detours and require the contractor to prepare a traffic control plan for the possibility of incidental work requiring traffic control (e.g., site restoration, replanting, striping, and final grading) after Bucks Bar Road is reopened. Construction crews and equipment would approach the project site from both the north and south, depending on the element of work for that period. The roadway closure would affect through traffic for

an estimated 10 months. At times when Bucks Bar Road would not be fully closed, traffic delays could result from equipment and materials mobilization, retaining wall construction, and final roadway tie-ins.

Emergency and public services and others using Bucks Bar Road would be detoured with signs posted in advance at both the Mount Aukum Road and Pleasant Valley Road intersections with Bucks Bar (Exhibit 2-8). Public outreach would occur prior to the road closure so that the emergency and public services, community, and business travelers would be aware of the closure, the planned closure duration, and the detour routes around the roadway closure using both Mount Aukum Road and Pleasant Valley Road.

Motorists who use Bucks Bar Road to get from Pleasant Valley Road to Mount Aukum Road (an approximate 4.9-mile segment with an average travel time of approximately 10 minutes) would be detoured east on Pleasant Valley Road to Mount Aukum Road (State Route [SR] 16) and then south to Somerset. This detour route between the Pleasant Valley Road/Bucks Bar Road intersection and the Mount Aukum Road/Bucks Bar Road intersection in Somerset is approximately 8.4 miles long and takes approximately 12 minutes to traverse. This detour would add approximately two minutes of travel time from the Pleasant Valley Road/Bucks Bar Road intersection to Somerset compared to the use of Bucks Bar Road. These distances and travel times are the same for travel in either direction of Bucks Bar Road.

Residents closest to the north side of the Proposed Project (such as those on Bucks Bar Circle) who want to get to Somerset would have to drive north on Bucks Bar Road to Pleasant Valley Road, then east on Pleasant Valley Road, and then south on Mount Aukum Road to Somerset. This would change a 4-minute, 1.3-mile drive from Bucks Bar Circle to Somerset to an 18-minute, 11.8-mile drive.

People from residences closest to the south side of the project site (such as those on Yosemite Place) who want to get to the intersection of Bucks Bar Road and Pleasant Valley Road would have to drive south on Bucks Bar Road to Mount Aukum Road, then north to Pleasant Valley Road, then west to the intersection of Bucks Bar Road and Pleasant Valley Road. This would change a 7-minute, 3.8-mile drive from Yosemite Place to the intersection of Bucks Bar Road and Pleasant Valley Road to a 15-minute, 9.4-mile drive.

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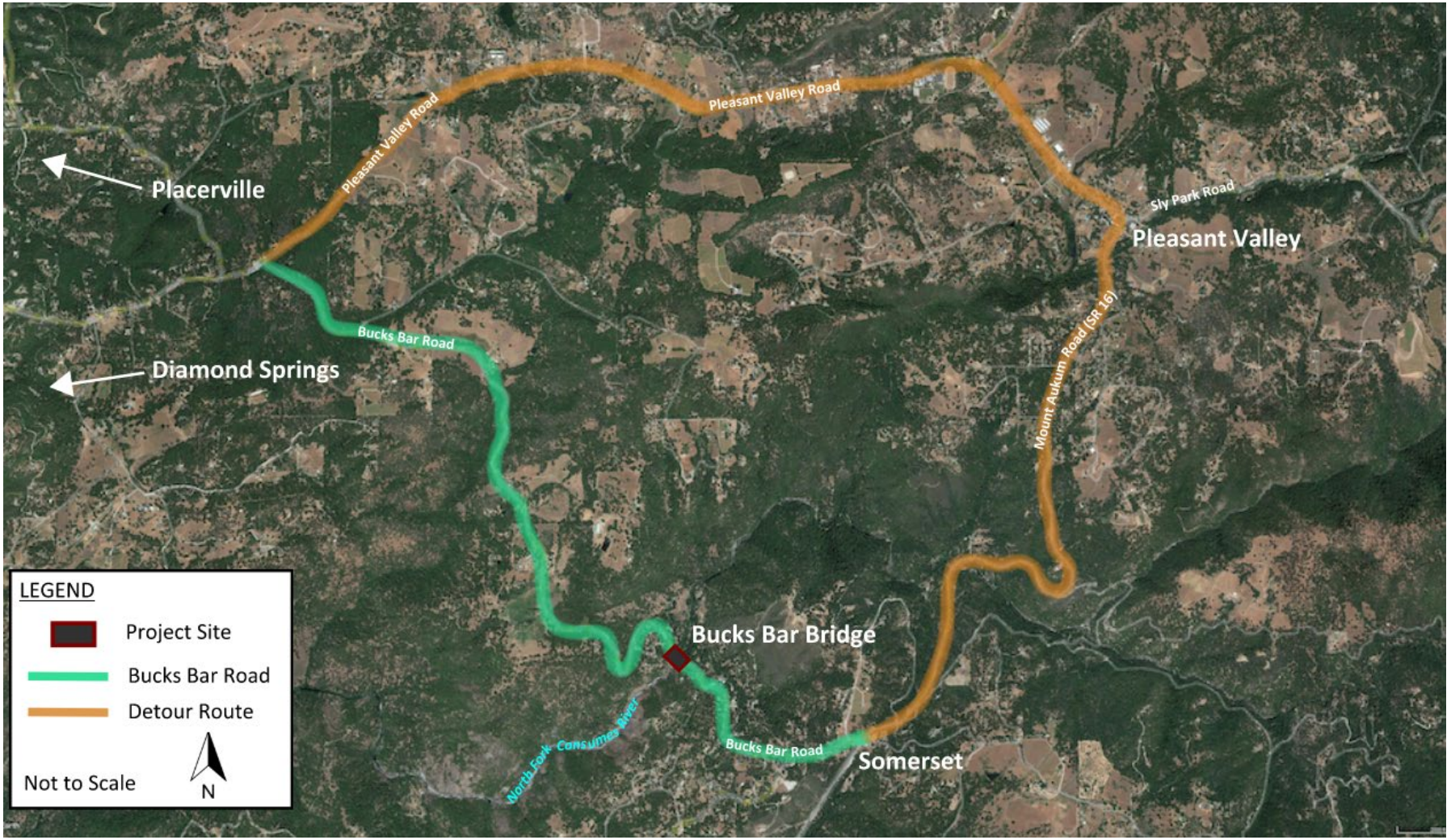

Exhibit 2-8 Detour Routes for Bucks Bar Road Closure During Construction

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2.4.4 Special Provisions for Construction

The County oversees construction contracts and construction activities. Construction complies with all applicable rules, regulations, and ordinances associated with Proposed Project activities and for implementing construction-related mitigation measures. The Proposed Project would be constructed in accordance with the Public Contract Code of the State of California; the State of California Department of Transportation Standard Plans and Standard Specifications; and the Contract, Project Plans, and Project Special Provisions under development by the County.

In addition to the environmental mitigation commitments detailed in Chapter 3, Impact Analysis, the following are a combination of standard and project-specific procedures and pertinent best management practices (BMPs) and requirements applicable to Proposed Project construction.

- The County will continue to refine the Proposed Project to avoid and minimize impacting archaeological and cultural resources.
- The County will provide advance notice and information to public service departments and community members regarding the long-term closure of Bucks Bar Road and associated detours a minimum of 1 month in advance of the start of the road closure. Communication methods may include but not be limited to the use of social media, portable message signs, email notifications, website notices, newspaper notices, and direct mailings.
- Construction will follow BMPs consistent with the current Caltrans Stormwater Quality Handbooks to protect water quality and minimize the potential for siltation and downstream sedimentation.
- Wherever applicable, during night construction, light and glare screening measures will be used within the construction areas, including, but not limited to the use of downward cast lighting.
- The County or its construction contractors will conduct early coordination with local school districts, utility service providers, law enforcement, and emergency service providers to ensure minimal disruption to service during construction.
- Construction will remain in compliance with El Dorado County Ordinance Code Section 130.37.020(1) pertaining to construction noise.
- Contract provisions require an asbestos and lead-based paint survey prior to demolition of the existing bridge. The asbestos survey would be performed by an EPA-accredited asbestos professional or other qualified professional. The lead-based paint survey would be performed by a California Department of Health Services Lead Inspector/Assessor or other qualified professional.
- Contract provisions would require the existing yellow striping and pavement marking materials be handled in accordance with Caltrans Standard Specification 14-11.12 (Removal of Yellow Traffic Stripe and Pavement Marking With Hazardous Waste Residue) or current Caltrans Standard Specification.
- Contract provisions would require asbestos-containing material be handled in accordance with Caltrans Standard Specification 14-11.16 (Asbestos Containing Construction Materials in Bridges) or current Caltrans Standard Specification.
- All disturbed areas that result in exposed soil will be restored by a combination of revegetation with native plants and hydroseeding with an appropriate native seed mix. The County will utilize native plants and native seed mix as recommended by Tribes if the plants and seeds are native

to the area/elevation and have data showing germination rates aligned with permitting agency requirements.

- El Dorado County Sheriff's Office of Emergency Services will develop an evacuation and sheltering plan to be implemented during construction in the event of a wildfire that blocks ingress/egress for Bucks Bar Road (See Section 3.13 Wildfire for more details).
- The County's contractor will prepare and submit a Fire Protection Plan as required by the California Division of Occupational Safety and Health (better known as Cal/OSHA) for CAL FIRE to review, revise if necessary, and receive approval of before the start of job site activities. Measures in the Fire Protection Plan at a minimum include the following:
    - A designated fire foreman and other key personnel responsible for implementing the approved plan. Include roles, responsibilities, and contact information for all personnel identified in the plan.
    - Measures and BMPs used to prevent and extinguish fires caused directly or indirectly by job site activities. Identify how these measures and BMPs would be implemented and enforced through the use of administrative protocols such as Hot Work Permits and Activity Hazard Assessments.
    - Emergency vehicle access routes to enter, exit, and get to locations throughout the site.
    - Fire patrol routes within/adjacent to the site and the locations where fire suppression materials would be stored.
    - Monitoring plan to ensure fire prevention safety and effectiveness as work progresses on the project and during each project stage.
    - Obtain the phone numbers of the nearest fire suppression agencies, including ECF and PIO, CAL FIRE unit headquarters, U.S Forest Service ranger district office, and U.S. Department of Interior Bureau of Land Management (BLM) field office. Post the names and phone numbers at a prominent place at the job site.
    - During construction, fires occurring within and near the project area would be reported immediately by dialing 911 to the nearest fire suppression agency using the emergency phone numbers retained at the job site.

2.5 Approvals & Permits

Exhibit 2-9 presents the required approvals, as well as permits/ agreements that may be required for the Proposed Project.

Exhibit 2-9 Required Permits/Approvals

Agency	Permit/ Aprroval
Federal Highway Administration (Caltrans serving as FHWA)	National Environmental Policy Act decision Section 106 of the National Historic Preservation Act of 1966 Compliance Section 4(f) of the U.S. Department of Transportation Act of 1966 Compliance
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement
California State Water Resources Control Board	General Permit for Storm Water Discharges associated with Construction and Land Disturbance Activities

Chapter 3 Impact Analysis

This chapter contains an evaluation of the environmental impacts of the Proposed Project for compliance with CEQA.

Resources Considered in this Environmental Impact Report

For each resource analyzed, their respective section outlines the project area's existing conditions and Proposed Project's impacts relative to the resource. Each section describes the pertinent study area, the applicable regulations followed, the thresholds of significance, and the impacts of the Proposed Project relative to these thresholds.

The following sections examine the temporary, permanent, direct, and indirect effects on the physical environment for each resource. If impacts are determined to be potentially significant, mitigation measures are proposed. Then each section offers a conclusion of whether there is no impact, or if the impact would be reduced to less than significant with the application of the mitigation measure (with the statement that the impact would be less than significant with mitigation), or if the mitigation cannot reduce the impact (with a conclusion of significant and unavoidable impacts).

Based on the project description presented in Chapter 2 and the County's understanding of the environmental issues associated with the Proposed Project, the following resources are analyzed in detail in Sections 3.1 through 3.13 of this chapter.

- 3.1 Aesthetics
- 3.2 Air Quality
- 3.3 Biological Resources
- 3.4 Cultural Resources
- 3.5 Tribal Cultural Resources
- 3.6 Geology and Soils
- 3.7 Greenhouse Gas Emissions
- 3.8 Hazards and Hazardous Materials
- 3.9 Hydrology, Water Quality, and Water Resources
- 3.10 Noise
- 3.11 Public Services and Utility Service Systems
- 3.12 Transportation
- 3.13 Wildfire

Pursuant to CEQA Guidelines Section 15065(a), the Mandatory Findings of Significance were considered in the selection of the resource topics listed above, and potential significance discussions are included within each applicable section.

Resources Considered but Determined Not to be Relevant

Consistent with CEQA Guidelines Sections 15128 and 15143, as part of the scoping and environmental analyses carried out for the Proposed Project, the following environmental issues outlined below were considered, but no significant impacts were identified. As a result, because the implementation of the

Proposed Project would not result in impacts, there is no further discussion about these issues in this document.

- **Agriculture and Forestry Resources:** The project area does not contain areas identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance and therefore conversion of such lands to transportation use is not possible. Similarly, there are no areas associated with forest land or timberland or that are zoned as either Forest Land or Timberland in the project area. The Proposed Project would have no effect on lands subject to the California Timberland Productivity Act of 1982 (CA Government Code Sections 51100 et seq.).
- **Energy**. The Proposed Project would not result in additional lighting or other uses of electricity; therefore, there would be no effect on local or regional energy supplies. Project construction would result in short-term increased energy requirements through the use of fuels for construction equipment and vehicles, including workers vehicles traveling to and from the site for approximately 12 months, but would have a negligible impact on energy supplies. The energy use associated with construction and operation of the Proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
- **Land Use and Planning/Population and Housing**. The Proposed Project would replace the existing bridge on the same alignment without adding capacity or new access points; therefore, the Proposed Project would not result in the physical division of an established community. The Proposed Project requires the sliver acquisition along the roadway from five residential properties, but the conversion to transportation related uses would not change the land use nor usefulness of the properties as currently zoned and would not displace existing people or housing. The Proposed Project would not change the ability or inability to build or intensify existing land uses or result in forcing a rezoning classification. The Proposed Project is consistent with the applicable state and local goals and policies because the overall character of the project area would not change, and the Proposed Project would improve safety for motorists by replacing the existing one-lane bridge with a two-lane bridge, which is the intent of the El Dorado General Plan goals and policies. The replacement of the bridge would not induce unplanned population.
- **Mineral Resources**. There are no locally important mineral resource recovery sites identified in the General Plan, specific plan, or other land use plan within the project area. The bridge replacement would not affect the availability or accessibility to extract known mineral resources during the operation or construction phase.
- **Recreation**. There are no recreational facilities nor public access to the North Fork Cosumnes River in the project area. The nearest publicly accessible recreation facility is the Cosumnes River Gorge[2], which is approximately 2,000 feet downstream of the bridge on land owned by the Bureau of Land Management. While Cosumnes River Gorge is a popular spot for rock climbing and is used as a put-in location for whitewater rafting, there is no access to this recreational area from within the project area, nor would the construction affect access to this recreational facility (Dreamflows 2021; McQuoid 2021). Furthermore, the Proposed Project would not result in increased use of the Cosumnes River Gorge, given lack of connection to the recreational area from the portion of Bucks Bar Road that would be impacted by the Proposed Project.

[2] A climbing area used to be on privately owned land, and the property owner permitted access. In 2004, the American River Conservancy purchased the land and transferred ownership to the Bureau of Land Management.

Organization of Each Resource Section

For each resource topic, their respective section in this chapter presents following information:

- **Existing Conditions**
    - Regulatory Setting—Pertinent federal, state, and local policies, regulations, and standards are described.
    - Environmental Setting—Provides an overview of the existing site and project area conditions.
- **Environmental Impacts**
    - Methods for Analysis—Describes the technical methodology for impact assessment. If models were used to assess impacts, they are described in this section, as are other technical tools.
    - Thresholds of Significance—Presents the thresholds used to determine the significance of the impacts as No impact, Less than Significant, Less than Significant with Mitigation, or Significant and Unavoidable. The significance conclusions are noted at the end of each impact discussion and are defined in Section 1.5, Terminology Used to Describe Impacts, in Chapter 1.
- **Impacts and Mitigation Measures:** CEQA requires that each public agency mitigate or avoid the significant impacts of any project it approves or implements (CEQA Guidelines Section 15126.4). This Draft EIR recommends feasible mitigation measures consistent with CEQA Guidelines to reduce impacts of the Proposed Project. CEQA Guidelines Section 15370 defines mitigation as follows:
    - Avoiding the impact altogether by not taking a certain action or part of an action
    - Minimizing the impact by limiting the degree or magnitude of the action and its implementation
    - Rectifying the impact by repairing, rehabilitating, or restoring the affected environment
    - Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
    - Compensating for the impact by replacing or providing substitute resources or improvements to the environment

Where mitigation is not available or feasible to reduce the impact to a less than significant level, the impact is identified as significant and unavoidable.

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3.1 Aesthetics

3.1.1 Existing Conditions

3.1.1.1 Regulatory Setting

This section summarizes regulations related to Aesthetics that are applicable to the Proposed Project.

Federal

National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires federal agencies to undertake an assessment of the environmental effects of their proposed actions prior to making decisions. Visual impacts are included among those environmental effects.

Federal-aid Highway Act of 1970

Title 23 of the United States Code (USC), Section 109(h) requires that final decisions on project development be made in the best overall public interest and take into consideration socio-economic, engineering, and environmental factors, specifically including aesthetic values. FHWA satisfies the requirements in 23 USC 109(h) through the NEPA procedures described in 23 CFR 771. To address this requirement, the environmental review considers the resources nominated or eligible for the National Scenic Byways Program, National Scenic Areas, National Monuments, National Trails System, and rivers eligible or nominated as a Wild and Scenic River. There are no resources within the Proposed Project area meet those consideration criteria.

National Historic Preservation Act

Section 106 of the National Historic Preservation Act of 1966 requires that federal agencies consider the effects of their projects on historic properties included in, or eligible for inclusion in, the National Register of Historic Places. Regulations implementing Section 106 (36 CFR Part 800) lay out the comprehensive process by which historic properties are identified, impacts analyzed, and any adverse effects are addressed in consultation with the state and/or Tribal Historic Preservation Officer, Tribes, and other interested parties. Adverse effects occur when a project “may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.” Since both direct and indirect impacts on historic properties are considered, visual impacts are often a key area of analysis under Section 106. Where visual impacts on historic properties can affect the cultural setting, those impacts are assessed as part of the Section 106 consultation through cultural resources technical studies.

Sections 4(f) and 6(f)

Section 4(f) of the Department of Transportation Act of 1966 restricts the “use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historic sites” for federally funded highway projects. FHWA's regulations for complying with Section 4(f) are in 23 CFR part 774, and the coordination requirements are detailed in 23 CFR 774.5.

Public parks and recreation areas that were established or improved with funds available through the Land and Water Conservation Fund Act are protected under Section 6(f) of that Act. Section 6(f) is administered by the U.S. Department of the Interior and the states pursuant to regulations in 36 CFR part 59. Recreational enjoyment includes the visual environmental conditions where the outdoor recreation is taking place.

State

State Scenic Highway Program

California's Scenic Highway Program was created by the California legislature in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of land adjacent to those highways. When a city or county nominates an eligible scenic highway for official designation, it must adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program.

There are no roadways within the Proposed Project area that are designated in state plans as a scenic roadway or as an eligible corridor worthy of protection for maintaining and enhancing scenic viewsheds (Caltrans 2019).

California Environmental Quality Act

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

Local

El Dorado County General Plan

The El Dorado County General Plan (County General Plan) Land Use Element and Conservation and Open Space Element (El Dorado County 2004) include goals, objectives, and policies that are in place to maintain the rural and open character of the county, minimize the visual impacts of grading and vegetation removal, encourage conforming earthworks to natural contours, and protect native plants and trees.

General Plan Policy 2.6.1.1 requires the preparation of scenic corridor ordinance. A public review draft scenic ordinance was released by the Planning Commission in 2008. While El Dorado County has not yet adopted a scenic corridor ordinance, this aesthetics evaluation considers the intent of the scenic corridor ordinance to minimize impacts on the scenic resources of the natural environment found in El Dorado County.

3.1.1.2 Environmental Setting

The Proposed Project is located in a rural setting approximately one mile northwest of the community of Somerset in the unincorporated portion of southern El Dorado County at an elevation ranging from of 1,620 feet to 1,680 feet above sea level. The Proposed Project site includes unpaved/ruderal areas, paved two-lane Bucks Bar Road, the North Fork Cosumnes River surrounded by mixed oak and conifer forest, and minor riparian vegetation along the river's edge. At the bridge, a small canyon for the North Fork Cosumnes River opens up to a shallow river upstream (east of the bridge), and downstream from the bridge, the canyon narrows (referred to as the Cosumnes River Gorge) with granite rock on either side and the river descends steeply. The North Fork Cosumnes River is not identified as a Wild and Scenic River (CNRA 2020 & NWSRS 2022). Rural residential uses occur adjacent to the project area.

The existing bridge is aesthetically compatible with the natural area and historic events of the region. There are two other concrete arch-open spandrel bridges in El Dorado County. The existing open-arch spandrel bridge was listed on California Register of Historical Resources in 2020. The determination for listing the bridge was based on California Register Criterion 3, which is defined as a resource that "embodies the distinctive characteristics of a type, period, region, or method of construction." The

bridge was designed and built by a small local construction firm led by Hector Williamson and is an example of bridges built in the early twentieth century. The nomination for listing in the California Register of Historical Resources quotes a local historian on the aesthetics of the bridge as follows:

> "*Viewed from below, the structure is a graceful dual arch resting on huge granite outcroppings on each side of the river. The bridge incorporates the original, 1915, masonry and concreate approaches and pieces of the old, covered bridge that remain as sturdy as they were 73 years ago*."

Bucks Bar Road is viewed daily by motorists using the roadway for commuting and accessing recreational areas outside of the vicinity, tourists visiting the nearby wineries, and residential viewers within and adjacent to the project area. Motorists are the largest viewer group of the existing bridge structure because the roadway does not include pedestrian or bicycle facilities nor is the terrain and narrow shoulder hospitable for bicycling or walking.

The road's winding nature, the area's diverse terrain, and existing vegetation limit views of the adjacent landscape. For motorists, views of the project area are typically only available from a short distance away. Specifically, motorists are afforded a view from either end of the project area when yielding to traffic coming from Somerset or when crossing the bridge from either direction. Due to the curve of the road, the upstream face of the bridge is slightly visible from both directions on Bucks Bar Road.

There are about ten residences within a 0.25 mile of the bridge, but only the cabin located southeast of the bridge (see Chapter 2, Project Description, for more details) has a direct view of the existing bridge. The other residences are set back from the road and are surrounded by mature vegetation, or views of the bridge are blocked due to the topography of the project area so that views of the project area are mostly restricted to the driveway ingress/egress at Bucks Bar Road or by walking within the property to open-space areas where there are gaps in vegetation.

Within the Proposed Project area there are no County designated or historically publicly accessible trails or access down to the river nor is the reach of the river recognized as navigable for kayaks or canoes[3].

All the identified viewers are moderate to highly sensitive viewers. A change in setting is likely to be noticeable and concerning to these viewers.

The project site is not located on a highway or route that is designated or eligible for designation as a state scenic highway (Caltrans 2019). Table 5.3-1 of the General Plan EIR identifies multiple scenic views and resources in the County (El Dorado County 2003); however, it does not include Bucks Bar Road. Table 5.3-1 identifies the North Fork Cosumnes River as a 'scenic view,' which includes elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually middle ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor (El Dorado County 2003).

[3] The California State Lands Commission completed a study regarding the navigability of the Cosumnes River in 1991. The report determined that: "The North Fork of the river between its junction with the main river upstream for four miles can be navigated at times," which is approximately 20 miles downstream of Bucks Bar Road bridge.

3.1.2 Environmental Impacts

3.1.2.1 Methods of Analysis

The potential visual impact from the Proposed Project was analyzed using the Visual Impact Assessment Guide (Checklist) provided in Caltrans' Standard Environmental Reference. Analysis of potential visual effects of the Proposed Project included review and evaluation of the following:

- El Dorado County General Plan and General Plan Environmental Impact Report
- Google Earth aerial and street level photographs
- Project description and proposed land uses and zoning

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. These impacts can be beneficial or detrimental. A generalized visual impact assessment process is illustrated in Exhibit 3-1 below:

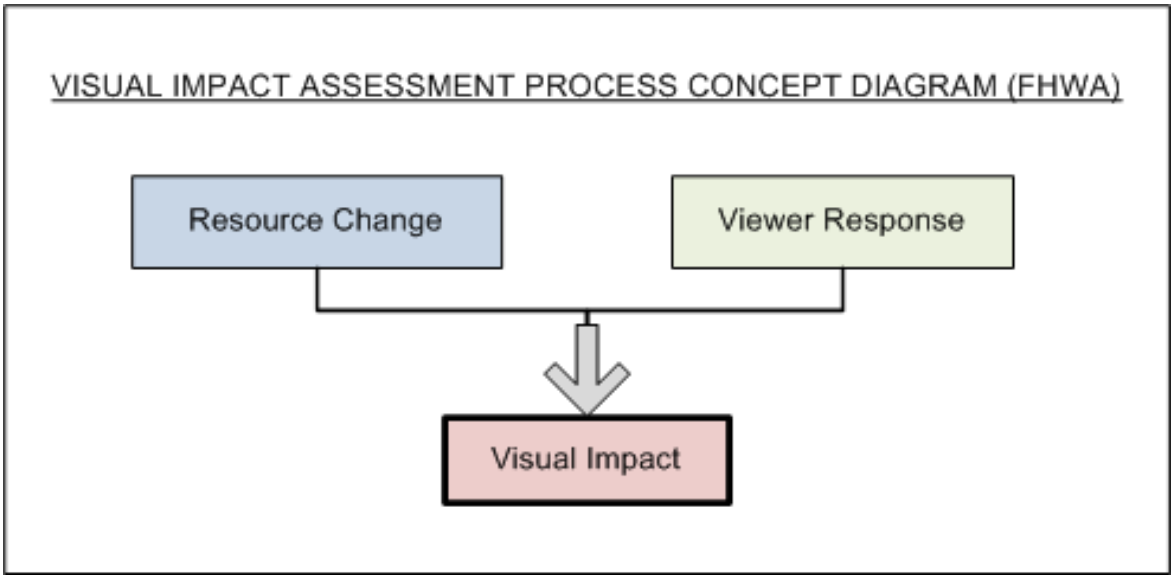


Exhibit 3-1. Illustration of Generalized Visual Impact Assessment Process

Exhibit 3-2 provides a reference for determining levels of visual impact by combining resource change and viewer response.

Exhibit 3-2. Visual Impact Ratings Using Viewer Response and Resource Change

		Viewer Response (VR)				
		Low (L)	Moderate-Low (ML)	Moderate (M)	Moderate-High (MH)	High (H)
Resource Change (RC)	Low (L)	L	ML	ML	M	M
	Moderate-Low (ML)	ML	ML	M	M	MH
	Moderate (M)	ML	M	M	MH	MH
	Moderate-High (MH)	M	M	MH	MH	H
	High (H)	M	MH	MH	H	H

Table Source: FHWA 1981.

The impact assessment considers the level of change and the viewer's sensitivity in determining the visual impact.

3.1.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would be considered to have a significant impact if it would result in any of the conditions listed below:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway.
- 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?
- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

3.1.2.3 Impacts and Mitigation Measures

The Proposed Project would not have a substantial adverse effect on a scenic vista. (Less than Significant)

Scenic views are elements of the broader "viewshed," such as mountain ranges, valleys, and ridgelines. A scenic vista refers to the view of an area that is visually or aesthetically pleasing.

From Bucks Bar Road, scenic vistas—including views of the bridge, views of the river below, and views of lands adjacent to the roadway—would be changed by the Proposed Project.

The new bridge would replace the existing concrete open-arch spandrel bridge with a single-span steel girder bridge with a concrete deck. The archaeological and TCR site predates the existing bridge and therefore a change in bridge type continues a pre-existing change in setting for the TCR. However, there are some beneficial changes with the Proposed Project design.

The replacement bridge would be approximately 18 feet wider (from existing 19 feet to 37 feet) and raised up to eight feet higher than the existing bridge. The higher bridge, without the arch and spandrels under the deck, allows more sun and increased visibility of the river's natural setting. The vast majority of the project area remains on private property and is not accessible without permission.

Because the replacement bridge is as wide as the road, the driver's existing acute angle of the bridge façade would no longer be accessible. The new bridge would include short concrete barriers on either side of the bridge topped with a tubular steel railing. This type of barrier is referred to as a "see-through concrete barrier on a concrete curb." The low barrier includes a gap between the curb and rail, which allows the user to 'see through' the barrier and therefore enhances views toward the river for drivers. Exhibit 3-3 conceptually illustrates the barrier for the Proposed Project.

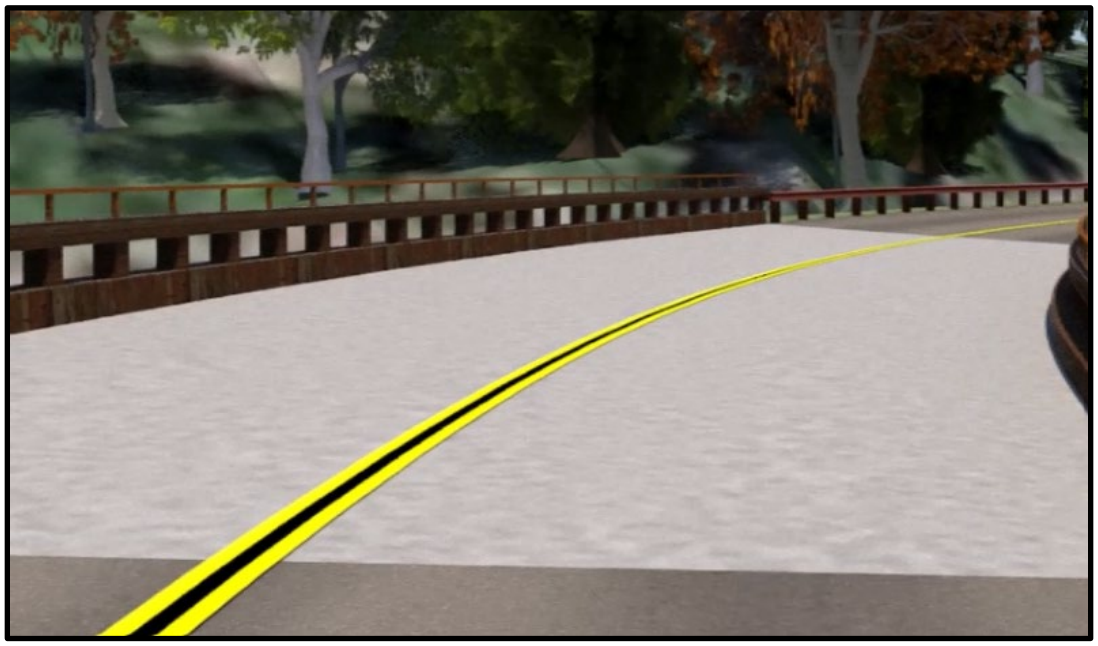


Exhibit 3-3. Conceptual Bridge Railing

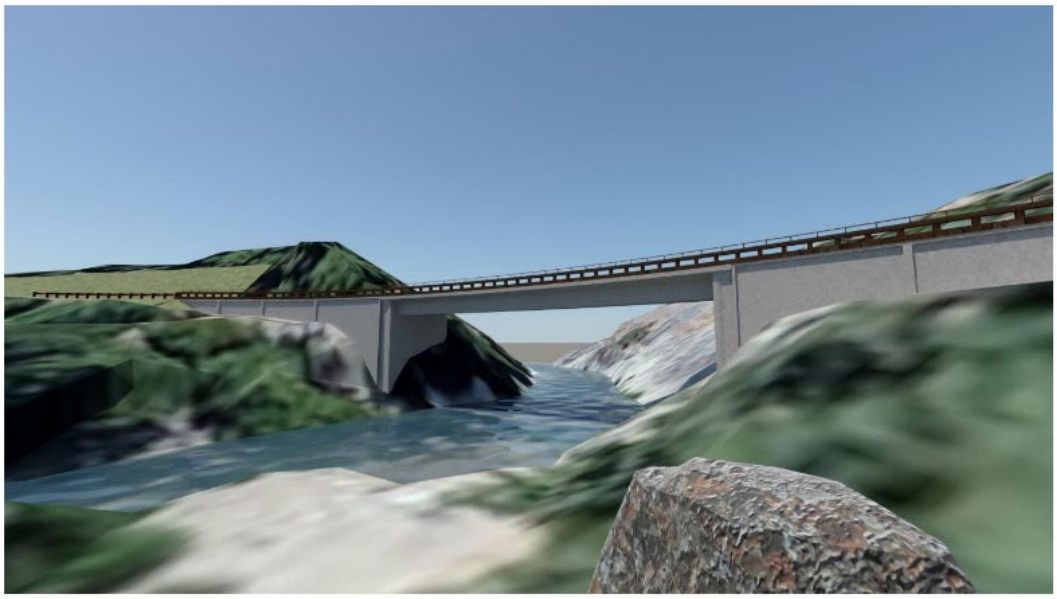
The Proposed Project would require the removal of vegetation and up to 51 trees. Vegetation removal would result in more open views toward the bridge and the North Fork Cosumnes River. Exhibit 3-4 demonstrates the current bridge and the Proposed Project from upstream and a slightly elevated

perspective. The Proposed Project bridge deck would extend about 11 feet further upstream in the center of the curve and about 6 feet further downstream than the existing bridge deck but would not result in significant changes to existing shading effects on areas adjacent to the bridge. Given the location of the Proposed Project, hills on either side block the suns rays in the morning and afternoon and shade the project area. While the bridge would be wider by about 18 feet, the span would be lifted up to 8 feet higher and the arch and spandrels in the existing bridge would not be present which would allow more light to pass under the new bridge than passes under the existing bridge. The single span design would nearly double the size of the opening under the new bridge thus opening the natural canyon around the waterway. This allows for the additional spread of light, where the current bridge limits light from the southern exposure with abutments and spandrel frame. Exhibit 3-5 provides an illustration of the Proposed Project and the Proposed Project overlain on the current bridge to demonstrate the change in the opening of the bridge (existing trees have been removed for clarity).

Existing

Proposed

Exhibit 3-4. Existing Bucks Bar Road Bridge and Visual Simulation of Proposed Project with view looking downstream



Proposed Project

Proposed Project Overlain on Existing Bridge

Exhibit 3-5. Visual Simulation of Proposed Project and Proposed Project overlain on Existing Bridge looking downstream

The scale of the Proposed Project would appear consistent with the two-lane roadway but larger than the existing bridge. The drivers' and nearby residents' views toward the bridge would reveal a larger opening toward the river and a more minimalist bridge structure design.

From the drivers' perspective, the Proposed Project would result in a moderate change in visual character, but due to the short duration of the view, the change would not likely be noticeable. Exhibit 3-6 demonstrates the view from the drivers' perspective from the current bridge and from the Proposed Project. The visual change would expand the bridge deck width by approximately 18 feet, which is

consistent with the width of Bucks Bar Road. The bridge deck would also be higher by up to 8 feet. Trees would be removed as shown on Exhibit 3-15 (Preliminary Tree Removal) allowing a more open view than current exists. The existing barriers on the bridge would go from solid concrete to an open railing with enhanced visibility to the surrounding landscape (see example railing image in Exhibit 3-3). The bridge would conform to the roadway which is likely to be unremarkable to the driver. The more noticeable change would be the broader visibility from tree removal near the bridge site. With a consistent bridge width to the roadway, it may relax the driver to have slight views into the river area, whereas before the bridge railing was solid and the drivers were required to focus on limited access on the bridge.

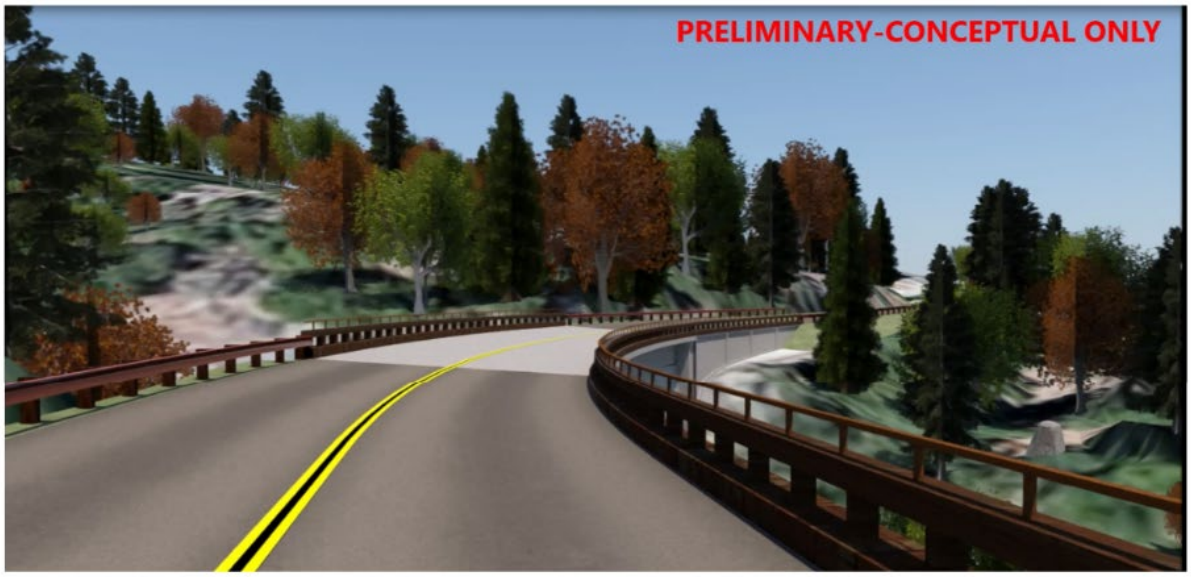
Other than the cabin located on the upstream south side of the river, nearby residents would still not view the bridge area even with the proposed tree removal due to topography and the number of remaining trees. The cabin would experience change due to tree removal and a larger view of the North Fork Cosumnes River. The Proposed Project would result in a moderately low visual change for residential viewers. When project construction is complete, the scenic view of the new bridge and North Fork Cosumnes River would be visually consistent with the existing baseline conditions and with other transportation infrastructure in the project vicinity.

According to Exhibit 3-2 above, moderately low resource change with a moderate to high viewer sensitivity would result in a moderate visual impact change or in other words, a less than significant visual impact.

The scenic character of the North Fork Cosumnes River would be temporarily affected during project construction. The area of temporary impact is estimated to be less than two acres in size. The Proposed Project has been designed to avoid and minimize potential impacts on wetlands, steep slopes, the North Fork Cosumnes River, and trees to the extent possible. Views of the river upstream and downstream of the bridge would not change during operation.

Activities during construction that may obstruct or alter the scenic resources include protective fencing, removal of trees, removal of the bridge, presence of construction equipment, and a temporary catchment structure under bridge to protect the river from debris. These changes would not be visible to most viewers because the roadway would be closed for the majority of the construction period. The property around the nearby cabin, which offers the most direct visual access, is proposed as a staging area during construction and therefore unlikely to have occupants during construction. Only two residences may have small views of the construction activities coming and returning from their driveway and turning away from the site in both directions. The residents at the property that abuts the river on the upstream north corner are blocked by vegetation, and the property on the downstream southside of Bucks Bar Road are elevated topographically above the Proposed Project and cannot easily look down upon the project area. The changes to the visual character during construction would be hardly viewable, except for night-time construction lighting. The duration of any night-time work would be short-term and is a less than significant impact. No mitigation is required.

Existing



Proposed

Exhibit 3-6. Drivers Perspective from the Existing Bucks Bar Road Bridge and Visual Simulation of Proposed Project

The Proposed Project would not substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway. (No Impact)

Bucks Bar Road is not a state designated scenic highway (Caltrans 2019). No impact on a scenic highway is possible with the Proposed Project and therefore no mitigation is required.

The Proposed Project is located in a non-urbanized area and would not 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). The Proposed Project is not located in an urbanized area, and therefore would not conflict with applicable zoning and other regulations governing scenic quality. (No Impact)

As discussed above under the potential for the Proposed Project to have a substantial adverse effect on a scenic vista, the removal of the existing bridge would result in a change to the visual character of the area. Because the bridge is replaced in generally the same location views of the river would remain unchanged for drivers. Additionally, there are no publicly available vantage points. Drivers would have short period drive-by views of a new structure and therefore not considered a publicly accessible vantage point.

The Proposed Project would not conflict with applicable zoning and other regulations governing scenic quality.

There would be no visual impact from publicly accessible vantage points and no conflict with applicable zoning or other regulations, and therefore no mitigation is required.

The Proposed Project would not result in the creation of a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. (Less than Significant)

The Proposed Project would not introduce any new permanent source of light or glare; therefore, no mitigation is required.

Project construction would generally occur Monday through Friday between 7 a.m. and 7 p.m. with the potential for night-time work to expedite the schedule and reduce the duration of the road closure. This schedule may require the need for high-intensity lighting for nighttime construction which would be directed downward to the extent possible. However, such lighting would not result in significant impacts because sensitive residential receptors would either not be occupied during construction or are at a great enough distance or are not within visual sight of the construction area. Construction lighting would be shielded and directed away from residences and impacts would be less than significant visual impact and therefore, no mitigation is required.

3.2 Air Quality

Transportation projects can affect air quality during both construction and operation. Construction impacts result from earthmoving and construction equipment that generate both dust and exhaust emissions. Operation impacts can occur because of motor vehicle exhaust and changes in traffic volumes. Section 3.7, Greenhouse Gas Emissions, discusses greenhouse gases and climate change.

3.2.1 Existing Conditions

3.2.1.1 Regulatory Setting

This section summarizes federal, state, and local regulations related to Air Quality that are applicable to the Proposed Project.

Federal Regulations

Clean Air Act and National Ambient Air Quality Standards

Enacted in 1963 and last amended in 1990, the federal Clean Air Act (CAA) establishes federal air quality standards—known as national ambient air quality standards (NAAQS)—and specifies future dates for achieving compliance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The SIP must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones.

Transportation Conformity

The conformity requirement is based on CAA Section 176(c), which prohibits the U.S. Department of Transportation and other federal agencies from funding, authorizing, or approving plans, programs or projects that do not conform to the SIP for attaining the NAAQS. Transportation conformity applies to highway and transit projects and takes place on two levels: the regional—or, planning and programming level—and the project level.

The Proposed Project is exempt from air quality conformance under 40 CFR 93.126. Projects that are exempt are generally air quality neutral. The Proposed Project would correct, improve, and eliminate a potentially hazardous feature (Table 2 Safety, 40 CFR 93.126). The Proposed Project is a non-capacity increasing project and would not interfere with an approved SIP.

State Regulations

California Clean Air Act

The California Clean Air Act (CCAA) established a statewide air pollution control program and requires all air districts in the state to achieve and maintain California ambient air quality standards (CAAQS) by the earliest practical date. Unlike the federal CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than the NAAQS.

California Air Resources Board (CARB) and local air districts bear responsibility for achieving California's air quality standards, which are to be achieved through district-level air quality management plans that would be incorporated into the SIP prepared by the CARB.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

Toxic Air Contaminant Regulation

California regulates toxic air contaminants (TACs) primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Hot Spots Act). In the early 1980s, CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Act created California's program to reduce exposure to air toxics. The Hot Spots Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. CARB has also approved a comprehensive Diesel Risk Reduction Plan to reduce emissions from both new and existing diesel-fueled engines and vehicles (CARB 2000). The goal of the plan was to reduce diesel particulate matter (DPM) emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020.

Local Regulations

Sacramento Area Council of Governments Regional Transportation Plan

The Sacramento Area Council of Governments (SACOG) is the Metropolitan Planning Organization for the Sacramento region, including the western slope of El Dorado County. SACOG adopted the 2020 *Metropolitan Transportation Plan/Sustainable Communities Strategy* (MTP/SCS) in November 2019 (SACOG 2019). The MTP/SCS provides a long-range framework to minimize transportation impacts on the environment, improve regional air quality, protect natural resources, and reduce greenhouse gas emissions.

El Dorado County Air Quality Management District

As described above under the CCAA, the El Dorado County Air Quality Management District (AQMD) is required to develop an air quality plan for nonattainment criteria pollutants within the air district. Air districts within the Sacramento Federal Nonattainment Area, including portions El Dorado County, have adopted the *Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan*, which was last updated in 2018. This plan outlines how the region continues to meet federal progress requirements and demonstrates that the Sacramento Region will meet ozone NAAQS.

The El Dorado County AQMD develops and adopts rules to regulate sources of air pollution in El Dorado County. The rules most pertinent to the Proposed Project are briefly described below.

- **Rule 205 (Nuisance):** Prohibits the discharge of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons.
- **Rule 207 (Particulate Matter [PM]):** Limits the quantity of PM through concentration limits.
- **Rule 215 (Architectural Coatings):** Defines the quantities of reactive organic compounds permitted for use in new construction.
- **Rule 223 (Fugitive Dust):** Reduces the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions.

- **Rule 223-1 (Fugitive Dust – Construction):** Requires a Fugitive Dust Control Plan be prepared and submitted to the El Dorado County AQMD prior to ground-disturbing activities. Pursuant to Rule 610, the El Dorado County AQMD charges a fee to review the Fugitive Dust Control Plan required by Rule 223-1.
- **Rule 223-2 (Fugitive Dust – Asbestos Hazard Mitigation):** Reduces the amount of asbestos particulate matter entrained in the ambient air as a result of any construction or construction-related activities that disturbs or potentially disturbs naturally occurring asbestos by requiring actions to prevent, reduce, or mitigate asbestos emissions.
- **Rule 224 (Cutback and Emulsified Asphalt Paving Materials):** Limits emissions of reactive organic gases (ROGs) from the use of cutback and emulsified asphalt paving materials, paving, and maintenance operations.
- **Rule 233 (Stationary Internal Combustion Engines):** Limits emissions of nitrogen oxides (NOx) and carbon monoxide (CO) from stationary internal combustion engines. (This rule applies to any stationary internal combustion engine rated at more than 50-brake horsepower, operated on any gaseous fuel or liquid fuel, including liquid petroleum gas, gasoline, or diesel fuel.)

El Dorado County General Plan

The Public Health, Safety, and Noise Element of the County General Plan (El Dorado County 2004) includes goals, objectives, and policies regarding air quality to minimize public exposure to toxic or hazardous air pollutants and air pollutants that create unpleasant odors.

3.2.1.2 Environmental Setting

Regional Climate and Meteorology

The Proposed Project area is in the Mountain Counties Air Basin (MCAB). The San Francisco Bay Area Air Basin and the Sacramento Valley Air Basin are to the west, and the San Joaquin Valley Air Basin is to the south. Climate in the MCAB relates to elevation and proximity to the Sierra Ridge. Precipitation is greater and temperatures are lower at higher elevations. Summer temperatures are typically characterized by high temperatures ranging between highs in the 80s Fahrenheit (^{o}F) and lows under 60 ^{o}F, and winter temperatures characterized by rainstorms and snow with temperatures ranging between 50 and 30 ^{o}F. Because of its proximity to the Sacramento Valley, the MCAB and El Dorado County are prone to receiving pollutant transport from the more populated and traffic-heavy areas.

Criteria Pollutants of Concern

The federal and state governments have established NAAQS and CAAQS, respectively, for six criteria pollutants: ozone, CO, lead, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and PM, which consists of PM 10 microns in diameter or less (PM10) and PM 2.5 microns in diameter or less (PM2.5). Ozone and NO_2 are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and lead are considered local pollutants that tend to accumulate in the air locally. PM is both a local and a regional pollutant.

The primary criteria pollutants of concern in the study area are ozone (including reactive organic gases (ROGs) and NO_X), CO, and PM. Principal characteristics surrounding these pollutants are described below.

Ozone

Ozone, or smog, is a photochemical oxidant that is formed when ROG and NO_X (both byproducts of the internal combustion engine) react with sunlight. Ozone poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Ozone is a respiratory irritant that can cause ear, nose, and throat irritation and increases susceptibility to respiratory infections. Additionally, ozone has been tied to crop damage, typically in the form of stunted growth and premature death. It is also an oxidant that causes extensive damage to plants through leaf discoloration and cell damage. Ozone can also act as a corrosive, resulting in property damage such as the degradation of rubber products.

Reactive Organic Gases

ROGs are compounds made up primarily of hydrogen and carbon atoms. Internal combustion from motor vehicle use is the major source of hydrocarbons. Other sources of ROG are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROG, but rather by reactions of ROG to form secondary pollutants such as ozone.

Nitrogen Oxides

NO_X are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone and react in the atmosphere to form acid rain. The two major forms of NO_X are nitric oxide (NO) and NO_2. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown irritating gas formed by the combination of NO and oxygen. NO_X acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Carbon Monoxide

CO is a colorless, odorless toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel. In the region, high CO levels are of greatest concern during the winter, when periods of light winds combine with the formation of ground-level temperature inversions from evening through early morning. These conditions trap pollutants near the ground, thus reducing the dispersion of vehicle emissions. Moreover, motor vehicles exhibit increased CO emission rates at low air temperatures. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation.

Particulate Matter

PM consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of particulates are now generally considered: inhalable coarse particles, or PM10, and inhalable fine particles, or PM2.5. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading. Both PM10 and PM2.5 can adversely affect the human respiratory system, especially in those who are naturally sensitive or susceptible to breathing problems.

Existing Air Quality Conditions

The CARB collects ambient air quality data through a network of air monitoring stations throughout the state. In El Dorado County, there are three stations that record ozone levels and one station that records PM10 levels. There are no monitoring stations in El Dorado County that collect CO, PM2.5, or NO_2 data.

The closest ozone monitoring station is the Placerville-Gold Nugget Way station (station number 060170010), which is approximately 8.3 miles northwest of the project area. The PM10 monitoring station is in the Lake Tahoe Air Basin portion of El Dorado County. Given the distinct meteorological conditions in the Lake Tahoe Air Basin that can influence pollutant concentrations, PM10 data from the Sacramento-Branch Center Road monitoring station in Sacramento County[4] are used as representative data for the project area. The Sacramento-Branch Center Road station is approximately 35 miles west of project area and located in the Sacramento Valley Air Basin immediately west of the MCAB.

Exhibit 3-7 summarizes ozone and PM10 levels for the last 3 years for which complete data are available (2020–2022). As shown in Exhibit 3-7, in 2020 and 2022 there were several days where the standard was exceeded for both ozone and PM10.

Exhibit 3-7. Ambient Criteria Air Pollutant Monitoring Data (2020–2022)

Pollutant Standards	2020	2021	2022
Ozone			
Maximum 1-hour concentration (ppm)	0.127	0.090	0.062
Maximum 8-hour concentration (ppm)	0.101	0.080	0.057
Number of days standard exceeded			
CAAQS 1-hour (>0.09 ppm)	4	0	0
CAAQS 8-hour (>0.070 ppm)	20	10	0
NAAQS 8-hour (>0.075 ppm)	10	3	0
Particulate matter (PM10)			
National maximum 24-hour concentration (μg/m^3)	201.0	57.0	55.0
State maximum 24-hour concentration (μg/m^3)	203.0	58.0	54.0
National annual average concentration (μg/m^3)	33.2	24.2	21.8
State annual average concentration (μg/m^3)	*	24.8	22.3
Number of days standard exceeded			
NAAQS 24-hour (>150 μg/m^3)	7.7	0	0
CAAQS 24-hour (>50 μg/m^3)	*	25.4	6.0

Source: CARB 2024a.

CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; ppm = parts per million; μg/m^3 = micrograms per cubic meter

* There were insufficient (or no) data available to determine the value.

Attainment Status

Local monitoring data are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS. The four designations are defined as follows:

- Nonattainment—assigned to areas where monitored pollutant concentrations consistently violate the standard in question.
- Maintenance—assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.
- Attainment—assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.

[4] Sacramento County is in the Sacramento Valley Air Basin, which borders the MCAB to the west.

- Unclassified—assigned to areas were data are insufficient to determine whether a pollutant is violating the standard in question.

NAAQS and CAAQS attainment status for the El Dorado County portion of MCAB is summarized in Exhibit 3-8.

Exhibit 3-8. Federal and State Attainment Status for El Dorado County

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-hour)	Nonattainment	Nonattainment
CO	Unclassified/Attainment	Unclassified
PM10	Unclassified	Nonattainment
PM2.5	Nonattainment	Unclassified
NO_2	Unclassified/Attainment	Attainment
SO_2	Unclassified/Attainment	Attainment
Lead	Unclassified/Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen sulfide	(No federal standard)	Attainment
Visibility-reducing particles	(No federal standard)	Unclassified

Source: CARB 2024b

CO = carbon monoxide; NO2 = nitrogen dioxide; PM2.5 = particulate matter less than 2.5 microns; PM10 = particulate matter less than 10 microns; SO2 = sulfur dioxide

Toxic Air Contaminants

TACs are pollutants that can result in an increase in mortality or serious illness or that can pose a present or potential hazard to human health. Certain population groups, including children, older adults, and people with health problems, are more sensitive to air pollution. Health effects of TACs can include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases that lead to death. TACs are emitted from a variety of sources, including on-road vehicles, gas stations, and dry-cleaning facilities. The primary TACs of concern associated with the Proposed Project are DPM emitted from diesel engines and naturally occurring asbestos, which is not in the project area. DPM exposure has been reduced over the years through using cleaner-burning diesel fuel and other technologies that reduce particle emissions as well as the introduction of alternative fuels.

Sensitive Receptors

El Dorado County AQMD defines a sensitive receptor as people or facilities that generally house people (such as schools, hospitals, clinics, elderly housing, and residences), which can experience adverse effects from unhealthful concentrations of air pollutants. The Proposed Project area is largely rural, with only a few nearby residences.

Odors

Although offensive odors rarely cause physical harm, they can be unpleasant and lead to considerable distress among the public. This distress often generates citizen complaints to local governments and air districts. Land uses associated with odor complaints typically include sewage treatment plants, landfills, recycling facilities, and manufacturing facilities.

3.2.2 Environmental Impacts

3.2.2.1 Methods of Analysis

The Proposed Project would not generate new vehicle trips on Bucks Bar Road and therefore would not increase operational emissions. As noted above in Section 3.2.1.1, Regulatory Setting, the Proposed Project has been identified as exempt from project-level conformity requirements under 40 CFR 93.126; therefore, no conformity analysis is required.

The analysis is focused on construction-related emissions. Construction emissions were estimated using the California Air Pollution Control Officers Association (CAPCOA) California Emissions Estimator Model (CalEEMod) Version 2022.1.1.24. CalEEMod quantifies ozone precursors, criteria pollutants, and greenhouse gas emissions from the construction and operation of new land use development and linear projects in California.

3.2.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would have a significant impact related to air quality if it would meet any of the following criteria.

- Conflict with or obstruct implementation of the applicable air quality plan?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?
- Expose sensitive receptors to substantial pollutant concentrations?
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The El Dorado County AQMD has not yet adopted PM2.5 and PM10 significance thresholds for land use development projects (El Dorado County AQMD 2002). The adopted Sacramento Metropolitan AQMD (SMAQMD) thresholds for PM2.5 and PM10 are being used here (SMAQMD 2020). El Dorado County AQMD and SMAQMD CEQA thresholds for criteria pollutants are presented in Exhibit 3-9 below.

Exhibit 3-9. Thresholds for Criteria Pollutants.

Criteria Pollutant	Construction	Operations
Reactive Organic Gases (ROG)	82 pounds per day [a]	82 pounds per day [a]
Nitrogen Oxides (NO_X)	82 pounds per day	82 pounds per day [a]
Carbon Monoxide (CO)	NA For Construction	CAAQS
Fine Particulates (PM2.5)	82 pounds/day and 15 tons/year [b]	82 pounds/day and 15 tons/year [b]
Particulates (PM10)	80 pounds/day and 14.6 tons/year [b]	80 pounds/day and 14.6 tons/year [b]

Source: El Dorado County Air Quality Management District 2002 (El Dorado County AQMD 2002) and SMAQMD (2020).

[a] During construction, this threshold can be combined to obtain a total ozone threshold of 164 pounds per day. With the combined threshold, construction emissions of one pollutant may be in excess of 82 pounds per day; however, as long as the combined total is below 164 pounds per day, the EDAQMD considers the impact to be less than significant.

[b] From Sacramento Metropolitan AQMD, Guide to Air Quality Assessment in Sacramento County (2020).

3.2.2.3 Impacts and Mitigation Measures

The Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. (No Impact)

The Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan (updated 2018) is a regional plan that has been prepared jointly by air districts in the Sacramento region, including the MCAB of El Dorado County. The purpose of the plan is to demonstrate how the region will reduce emissions to meet CAA reasonable further progress requirements and demonstrate attainment of the 2008 ozone NAAQS of 75 parts per billion (SMAQMD 2018). The plan proposes an attainment year of 2027.

In addition, the Proposed Project is identified SACOG's 2023–2026 Metropolitan Transportation Improvement Program (MTIP) (SACOG 2022) and 2020 MTP/SC) (SACOG 2019). The federally required MTIP is a short-term listing of surface transportation projects that receive federal funds, are subject to a federally required action, or are regionally significant. Only projects included in the MTP may be incorporated into the MTIP. The MTIP derives all its projects either directly or indirectly from the MTP. Projects included in the MTIP are required to conform to the SIP for the region and would therefore not conflict with or obstruct SIP implementation. The Proposed Project is listed as ELD19321 and grouped with other bridge rehabilitation and reconstruction projects within El Dorado County. The Proposed Project would be exempt from the air quality conformity requirement and is identified as a project that would correct, improve, or eliminate a hazardous location or feature.

The Proposed Project would not conflict or obstruct the implementation of the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan because it would not result in exceedances of thresholds as shown; therefore, there would be no impacts, and no mitigation is required.

The Proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard. (Less Than Significant)

The County is in nonattainment status for both federal and state ozone standards, federal PM 2.5 standard, and the state PM10 standard. Construction activities would result in short-term increases in emissions from the use of heavy equipment that generate dust, exhaust, and tire-wear emissions and from paints and coatings. Project construction would create short-term increases in ROG, NOx, and PM10 emissions from vehicle and equipment operation.

Construction-related impacts on air quality would be greatest when multiple pieces of equipment are operating simultaneously and generating exhaust emissions. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soil. These emissions would predominantly occur during grading and earthmoving activities. Emissions would vary day-to-day, depending on the nature and magnitude of construction activity and local weather conditions.

Emissions associated with construction were estimated using CalEEMod Version 2022.1.1.24 (Appendix B). Assumptions on the type of construction equipment and use duration used in the CalEEMod were based on similar County Road and bridge projects. Other project assumptions used in the CalEEMod include a 12-month (251 working days) construction schedule starting in 2025. The assumptions used in CalEEMod are conservative; therefore, the Proposed Project emissions would likely be lower. Modeled daily construction emissions are shown in Exhibit 3-10 below.

Exhibit 3-10 Estimated Daily Project Construction Emissions

Project Phases	ROG lbs/day	NOx lbs/day	CO lbs/day	Exhaust PM10 lbs/day	Exhaust PM2.5 lbs/day
Maximum lbs/day	1.1	1.5	11.7	0.1	0.1
Significance Threshold	82	82	N/A	80	82
Significant?	**No**	**No**	**N/A**	**No**	**No**

Notes: Data entered to emissions model: Project Start Year – 2025; Project Length (days) – 251; Total Project Area (acres) – 2.25;.

CO = carbon monoxide; NOx = nitrogen oxides; PM2.5 = particulate matter less than 2.5 microns; PM10 = particulate matter less than 10 microns; ROG = reactive organic gases

As shown in Exhibit 3-10, the Proposed Project would not exceed significance thresholds for non-attainment criteria pollutants.

During mobilization and removal of the existing bridge, fugitive dust would be generated. There are no thresholds of significance for fugitive dust emissions, but construction would implement best management practices (BMPs) consistent with Caltrans and El Dorado County AQMD rules. Implementation of the BMPs and rules would result in a less than significant impact related to fugitive dust emissions, and no mitigation is required.

As noted, the Proposed Project is exempt from conformity under 40 CFR 93.126 and is also identified as exempt in the SIP. The Proposed Project would correct, improve, and eliminate a potentially hazardous feature (Table 2 Safety, 40 CFR 93.126). The Proposed Project is a non-capacity increasing project and would not interfere with an approved SIP. Projects that are exempt from conformity are generally air quality neutral. During operation, vehicle emissions would likely decrease compared to using the existing bridge because southbound vehicles would no longer be required to yield and idle and instead travel at a consistent speed through the project area. Roadway traffic volumes would not change because capacity is not increased, and it is anticipated that the new bridge would result in a negligible beneficial change to regional emissions.

Construction emissions related to non-attainment-criteria pollutant emissions and fugitive dust would be less than significant and no mitigation is required.

The Proposed Project would not expose sensitive receptors to substantial pollutant concentrations. (Less Than Significant)

The nearest sensitive receptors are residential properties. There are four residential properties within less than 600 feet of the Proposed Project. The nearest residential receptor is about 50 feet from the roadway and a portion of this property would be used for staging during construction. The next closest residence is approximately 200 feet away, with the others much farther away. There are no parks nearby, and the nearest schools are about 4 miles away. Construction activities would result in short-term increases in emissions from the use of heavy equipment that generate dust, exhaust, and tire-wear emissions and from paints and coatings. Additionally, there would be a small increase in vehicle emissions due to the increased driving distance required by the use of the detour. The increase in emissions during construction would be temporary and limited in geographic scope and impacts would be less than significant.

DPM, identified as a TAC by CARB in 1998, would be generated by construction equipment that uses diesel fuel. DPM is a subset of PM2.5, and most PM2.5 is from the combustion of fuels (e.g., diesel and gasoline). DPM typically occurs in a single area for a short period of time. The maximum PM2.5

emissions, used to represent DPM emissions, would occur during mobilization, removal of the existing bridge, and site preparation. As shown in Exhibit 3-10, PM2.5 emissions would not exceed the significance threshold. Construction would last for up to 12 months, with most of the construction occurring in the bridge area. The increases in emissions would be temporary and localized and would not expose sensitive receptors to substantial pollutant concentrations. Impacts during construction would be less than significant, and there would be no impacts during operations of the completed project ; therefore, no mitigation is required.

The Proposed Project is not located within an area known to contain naturally occurring asbestos or an area "more likely to contain naturally occurring asbestos" (California Department of Conservation 2000; El Dorado County 2005).

Operations of the completed project would not expose sensitive receptors to substantial pollutant concentrations because the Proposed Project would have no effect on traffic volumes. The Proposed Project would not induce growth or cause an increase in vehicle miles traveled. There would be no impacts during operation, and no mitigation is required.

The Proposed Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (Less Than Significant)

Construction activities would involve the use of construction equipment and asphalt paving, which would emit odors; however, this would be temporary and transitory and end when construction is complete. Operation of the Proposed Project would not generate odors. Land uses that typically generate odors include wastewater treatment plants, landfills or transfer stations, refineries, and composting facilities, none of which are associated with the Proposed Project. The impact would be less than significant because of the limited number of sensitive receptors in the project area and the short-term nature of the emissions. No mitigation is required.

3.3 Biological Resources

Transportation projects can result in habitat loss and fragmentation and influence the presence of wildlife and biodiversity in the surrounding area. Minimizing and avoiding habitat loss and fragmentation helps to ensure sustainability of the biological resources in the area. The information in this section is based upon the Natural Environment Study that was reviewed and approved by Caltrans in September 2019. The Natural Environment Study includes a larger area that addressed areas potentially affected by the other alternatives under consideration. This section only addresses the temporary and permanent impact areas associated with the Proposed Project.

3.3.1 Existing Conditions

3.3.1.1 Regulatory Setting

This section summarizes the regulations related to biological resources that are applicable to the Proposed Project.

Federal Regulations

Federal Endangered Species Act

The federal Endangered Species Act (FESA) defines "take" (Section 9) and prohibits taking of a federally listed endangered or threatened animal where take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such contact" without an Incidental Take Permit (16 USC 1532, 50 CFR 17.3). For plants, this statute prohibits removing, possessing, maliciously damaging, or destroying any listed plant under federal jurisdiction and removing, cutting, digging up, damaging, or destroying any listed plant in knowing violation of state law (16 USC 1538).

Migratory Bird Treaty Act

All migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Part 21). Any construction-related disturbance that causes direct injury, death, nest abandonment, or forced fledging of migratory birds is restricted under the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a take of the species under federal law.

Federal Magnuson-Stevens Fishery Conservation and Management Act

Under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), Essential Fish Habitat (EFH) for the Pacific coast salmon fishery includes waters and substrates necessary for salmon production to support a long-term sustainable salmon fishery and salmon contributions to a healthy ecosystem. The geographic extent of freshwater EFH is specifically defined as all currently viable waters and most of the habitat historically accessible to salmon within a U.S. Geological Survey hydrologic unit (PFMC 1999). Consultation with the National Oceanic and Atmospheric Administration (NOAA) Fisheries is required by federal agencies undertaking, permitting, or funding activities that may adversely affect EFH.

Executive Order 13112 - Invasive Species

Executive Order (EO) 13112 is a directive aimed at preventing the introduction and spread of invasive species as a result of federal agency actions. EO 13112 directs federal agencies to use relevant programs and authorities to prevent the introduction of invasive plants and animals, control existing populations

of such species, monitor populations of such species, and provide for the restoration of native species. The Federal Highway Administration is ordered to not authorize, fund, or carry out projects that are likely to cause or promote the introduction or spread of invasive species.

The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) prohibits anyone, without a permit issued by the Secretary of the Interior, from taking bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines take as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

Clean Water Act

Section 404 of the Clean Water Act (CWA) establishes a permit program administered by the U.S. Army Corp of Engineers (USACE) that regulates discharge of dredged or fill materials into waters of the U.S., including wetlands. Under Section 401 of the CWA, applications for a federal permit or license for any activity that could result in a discharge to a water body require a State Water Quality Certification to ensure that the proposed activity complies with state water quality standards.

State Regulations

California Endangered Species Act

The California ESA (CESA) prohibits take of wildlife and plants listed as threatened or endangered by the California Fish and Game Commission. ‘Take’ is defined under California Fish and Game Code Section 86 as any action or attempt to ‘hunt, pursue, catch, capture, or kill.’ CESA allows exceptions for take that occurs during otherwise lawful activities. Fish and Game Code Section 2081 describes the requirements for incidental take applications under CESA. Incidental take of state-listed species may be authorized if an applicant submits a plan that minimizes and mitigates the impacts of a take and makes financial assurance for the mitigation. Incidental take applications require a fee.

Lake and Streambed Alteration Agreement (CA Fish and Game Code Section 1600)

Fish and Game Code Section 1600 requires any person, government agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the bed, channel or bank of any river, stream, or lake, or proposing to use any material from a streambed, to first notify the California Department of Fish and Wildlife (CDFW) of such proposed activity.

Native Plant Protection Act (California Fish and Game Code Section 1900-1913)

The Native Plant Protection Act prohibits the taking, possessing, or sale within the state, of any plants with a state designation of rare, threatened, or endangered. An exception to this prohibition in the Act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFW and give that state agency at least 10 days to come and retrieve the plants before they are disturbed or destroyed. Fish and Game Code Section 1913 exempts from take prohibition “the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way.”

Nesting Birds and Birds of Prey (California Fish and Game Code Section 3503, 3503.5)

Fish and Game Code Section 3503 protects all nesting native birds. Fish and Game Code Section 3503.5 protects all birds in the orders Falconiformes and Strigiformes (collectively known as birds of prey). Birds of prey include raptors, falcons, and owls. It is unlawful to take, possess, or needlessly destroy the nest

or eggs of any native bird or bird of prey, except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto.

Fully Protected Species (California Fish and Game Code Section 3511, 4700, 5050)

CDFW's classification of "fully protected" species was the state's initial effort in the 1960s to identify and protect animals that were rare or faced possible extinction. Lists of fully protected species were created for birds (Section 3511) mammals (Section 4700) reptiles and amphibians (Section 5050), and fish (Section 5515). The Fish and Game Code states that fully protected species, "… may not be taken or possessed at any time. No provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species."

Take Prohibition (California Fish and Game Code Section 86, 2080)

Fish and Game Code Section 86 defines 'take' and Section 2080 prohibits 'taking' of a species listed as threatened or endangered under California ESA (CA Fish and Game Code Section 2080) or otherwise fully protected, as defined in California Fish and Game Code Section 3511, 4700, and 5050.

Senate Bill 1334 (SB 1334) - The Oak Woodlands Conservation Act.

Senate Bill SB 1334 is an act to add Section 21083.4 to the Public Resources Code (PRC) relating to oak woodlands conservation. California PRC Section 21083.4 requires each county in California to implement an oak woodland protection policy to mitigate for the loss of oak woodlands resulting from approved projects within their jurisdiction. In this policy, oak trees are defined as all native species of oaks larger than 5 inches dbh (diameter at breast height, or 4.5 feet above grade). At least one of four mitigation alternatives for significant conversions of oak woodlands are required in this regulation: (1) conserve oak woodlands through the use of a conservation easement; (2) plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees (planting maintenance must last for seven years, and mitigation plantings shall not fulfill more than one-half the mitigation requirement for the project; this alternative may also be used to restore former oak woodlands); (3) contribute funds to the Oak Woodlands Conservation Fund, as established under Section 1363 (a) of the Fish and Game Code; and (4) other mitigation measures developed by the County.

Porter-Cologne Water Quality Control Act

California Water Code Section 13260 requires "any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." Under the Porter-Cologne Act definition, waters of the state are "any surface water or groundwater, including saline waters, within the boundaries of the state." Although all waters of the United States that are within the borders of California are also waters of the state, the reverse is not true. California retains authority to regulate discharges of waste into any waters of the state, regardless of whether the Corps has concurrent jurisdiction under Clean Water Act Section 404.

Local Regulations

El Dorado County Oak Resources Management Plan

In 2017 the *El Dorado County Oak Resources Management Plan* (ORMP) was adopted to replace the 2008 Oak Woodland Management Plan. The Oak Resources Conservation Ordinance was also adopted in 2017 to implement the ORMP (El Dorado County 2017a and 2017b). The ORMP defines mitigation requirements for impacts to oaks and oak resources and outlines El Dorado County's strategy for oak woodland conservation. The ORMP functions as the oak resources component of the County's biological resources mitigation program identified in the County General Plan Policy 7.4.2.8 (El Dorado County

2004b). The mitigation measures identified in the ORMP are more stringent than state law, and the ORMP also requires mitigation of individual oak trees and greater mitigation for Heritage Trees[5]. The ORMP provides three options to mitigate impacts to individual native oak tree/heritage trees:

1. In-lieu fee payment for individual oak tree removal
2. Replacement planting onsite within an area subject to a Deed Restriction or Conservation Easement
3. Replacement planting offsite within an area subject to a Conservation Easement or acquisition in fee title

Certain actions are exempt from mitigation requirements, including "County Road Projects: Road widening and alignment projects necessary to increase capacity, protect public health, and improve safe movement of people and goods in existing public rights-of-way, as well as acquired right-of-way necessary to complete the project, where the new alignment is dependent on the existing alignment are exempt from the mitigation requirements included in the ORMP." (El Dorado County 2017b).

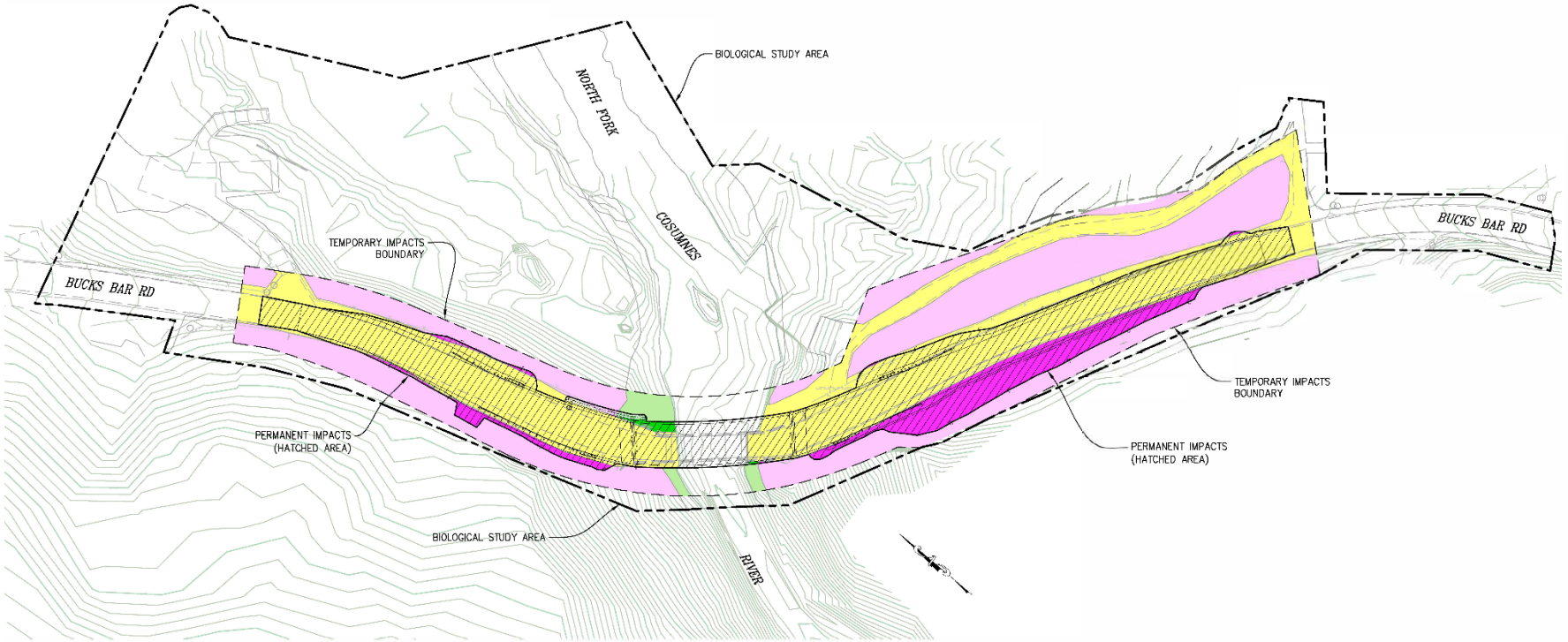
3.3.1.2 Environmental Setting

The defined 2019 Biological Study Area (BSA) included the areas that would be temporarily impacted, including the temporary construction easements, staging area, and areas permanently impacted by property acquisition. In addition, the BSA includes areas adjacent to the Proposed Project footprint (Exhibit 3-11). The 2019 Natural Environment Study included a larger area that addressed areas potentially affected by the other project alternatives previously under consideration. The BSA includes the North Fork Cosumnes River, oak and pine woodlands on the surrounding slopes, Bucks Bar Road, and the rural residential areas.

Previous Studies

Potential impacts to biological and wetlands resources were evaluated in the Proposed Project's 2011 Natural Environment Study (NES) (Dokken Engineering 2011) and updated in the 2015 NES Addendum (Sycamore Environmental 2015). Subsequent changes to the Proposed Project resulted in a new NES in 2019 that has been reviewed and approved by Caltrans (Sycamore Environmental 2019). The 2019 NES reviewed information in the previous NES documents and, where needed, updated to reflect the latest conditions.

[5] Heritage Tree: Any live native oak tree of the genus Quercus, including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof, with a single main trunk measuring 36 inches dbh or greater, or with a multiple trunk with an aggregate trunk diameter measuring 36 inches or greater.



LAND COVER TYPE	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)
CANYON LIVE OAK–PONDEROSA PINE FOREST	1.0	0.20
ALDER RIPARIAN FOREST	0.15	0.10
NORTH FORK COSUMNES RIVER	0	0
DISTURBED/RUDERAL	–	–
SEASONAL WETLAND	0	0
EPHEMERAL DRAINAGES	0	0

Note: Areas identified in Yellow indicate areas of hardscape including paved areas and driveways.

Exhibit 3-11. Proposed Project Impact Area

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Special-status species addressed in the 2019 NES include those listed (or candidate or proposed) under the federal or state endangered species acts, under the California Native Plant Protection Act, and as a California species of special concern or fully protected by the CDFW, or that those that are California Rare Plant Rank 1 or 2 (CNPS 2017). Special-status natural communities in the 2019 NES are waters, wetlands, riparian communities, and any natural community ranked S1, S2, or S3 by CDFW (2010), and oak woodlands subject to the ORMP and the Oak Conservation Resources Ordinance.

The following sources of information were obtained and reviewed during preparation of the 2019 NES:

- An official letter and list were obtained from the USFWS Sacramento Field Office on November 26, 2018, and September 17, 2019 (updated June 2024). The updated list identifies federally listed, candidate, or proposed species that potentially occur in, or could be affected by, the Proposed Project.
- An official list of federally listed species, designated critical habitat, and EFH present on the Camino USGS topographic quad was generated on September 17, 2019, from the NMFS West Coast Region California Species List December 2016 KMZ layer in Google Earth.
- The California Natural Diversity Database (CNDDB) was queried for known occurrences of special-status species in or near the Proposed Project area on September 17, 2019 (updated June 2024).
- The California Native Plant Society (CNPS) inventory of rare and endangered plants was queried on September 17, 2019 (updated June 2024), for known occurrences of special-status plant species in or near the Proposed Project area.

The CNDDB tracks other species that have not been designated by CDFW as a California species of special concern; these species were not evaluated as special-status species in the 2019 NES. California Rare Plant Rank 3 or 4 plant species are either more common or more information is needed; these species were not evaluated as special-status species in the 2019 NES. Updated species lists from USFWS, CNDDB, and CNPS records were obtained in May-June 2024.

Physical Conditions

The site of the Proposed Project is in the Sierra Nevada, at an elevation ranging from of approximately 1,620 feet to 1,680 feet above sea level. The Proposed Project is within the Upper Cosumnes watershed hydrologic unit (hydrologic unit code 18040013). The project site is in a rural setting in unincorporated El Dorado County and includes unpaved/ruderal areas, paved portions Bucks Bar Road, a segment of the North Fork Cosumnes River, and riparian and upland forest habitat.

Mapped soil units present include Acidic Rock Land, Chaix very rocky coarse sandy loam 9–50 percent slopes, and Shaver coarse sandy loam 9–15 percent slopes (NRCS 2024). Acidic Rock Land occurs in canyons and includes residuum weathered from granite and/or residuum weathered from rhyolite; runoff is very high. Chaix very rocky coarse sandy loam 9–50 percent slopes occur on mountain slopes and are composed of residuum from granite; these soils are well drained, and runoff is medium. Shaver coarse sandy loam 9-15 percent slopes occur on mountain slopes and canyons; these soils are well drained, and runoff is low (NRCS 2024).

Land Cover Types

The term land cover type refers to vegetation communities, water features, and ruderal or disturbed areas. Land cover types present in the project area are listed in Exhibit 3-12.

Exhibit 3-12. Land Cover Types

Biological Community	Vegetation Alliance/Association [a] and CDFW Alliance & Association Code [b]	Rarity Rank [c]	Acreage
Natural Communities			
Canyon Live Oak-Ponderosa Pine Forest	(*Quercus chrysolepis-Pinus ponderosa* Association (71.050.18))	G5-S5	3.06
Alder Riparian Forest	*Alnus rhombifolia* Alliance (61.420.00)	G4-S4	0.37
Waters			
North Fork Cosumnes River	N/A	--	0.60
Seasonal Wetland	N/A	--	0.01
Ephemeral Drainages	N/A	--	0.003
Other Land Cover Types			
Disturbed/Ruderal	N/A	--	1.44
		Total:	**5.48**

[a] Vegetation alliances based on descriptions and classification methods in Sawyer et al. (2009).

[b] Alliance codes from CNPS (2024).

Canyon Live Oak-Ponderosa Pine Forest

Canyon live oak-ponderosa pine forest is the dominant community in the project area. Canyon live oaks (*Quercus chrysolepis*) are the dominant tree in this community southeast, southwest, and northwest of the Bucks Bar Road bridge. Ponderosa pines (*Pinus ponderosa*) occur in lesser abundance. Northeast of the bridge, canyon live oaks and ponderosa pines are co-dominant. The canyon live oak-ponderosa pine alliance has a rarity rank of S5 and not considered a sensitive natural community by CDFW. Certain native oaks in this community are protected by El Dorado County and are discussed further below. The canyon live oak-ponderosa pine forest occurs in the upland portions of the project area.

Alder Riparian Forest

Alder riparian forest occurs in a narrow strip along both banks of the North Fork Cosumnes River. Vegetation in this community is classified as montane riparian under the El Dorado County General Plan Environmental Impact Report (EIR) (El Dorado County 2004a). Montane riparian is considered a sensitive natural community in the County General Plan EIR (2004b). The alder riparian forest would be classified as white alder (*Alnus rhombifolia*) association by Klein et. al (2007). The alder riparian forest is part of the stream zone protected by Fish and Game Code Section 1600. Alder riparian forest vegetation overhangs the North Fork Cosumnes River and is dominated by white alder, Oregon ash (*Fraxinus latifolia*) and willow (*Salix* spp.) in the overstory, and periwinkle (*Vinca major*) and Himalayan blackberry (*Rubus armeniacus*) in the understory. Vegetation in this community is interspersed with large granite rocks.

North Fork Cosumnes River

The North Fork Cosumnes River is mapped as a perennial river on the USGS Camino quad map and is identified as Riverine, Upper Perennial, Unconsolidated Bottom (R3UBH) on the National Wetlands Inventory (NWI) map (USFWS 2024). The North Fork Cosumnes River watershed begins in the Sierra Nevada Mountains northeast and outside the project area and is tributary to the Mokelumne River. The riverbed consists of granite bedrock, medium and large boulders, rock, and cobble. Emergent vegetation is limited to non-existent. The North Fork Cosumnes River was flowing during all field surveys and site visits.

Ephemeral Drainages

Two ephemeral drainages (ED 1 and ED 2) occur in the larger BSA. A short segment of ED 1 occurs on the south side of the river, east of the bridge. The majority of ED 1 occurs outside the BSA to the southeast. ED 2 occurs on the north side of the river, east of the bridge. Both drainages empty into the North Fork Cosumnes River in the BSA. ED 2 drains through the seasonal wetland before reaching the river. ED 1 and ED 2 were dry during the surveys. Both these features are located outside the current Proposed Project limits and would not be affected by the Proposed Project.

Seasonal Wetland

A seasonal wetland abuts the north side of the North Fork Cosumnes River, east of the existing bridge in the larger BSA. The seasonal wetland occurs where ED 2 flattens out before draining into the river. Dominant vegetation in the seasonal wetland consists of common velvet grass (*Holcus lanatus*). Other hydrophytic vegetation present includes cocklebur (*Xanthium strumarium*), common scouring rush (*Equisetum hyemale* ssp. *affine*), soft rush (*Juncus effusus*), Himalayan blackberry, and bent grass (*Agrostis* sp.). The seasonal wetland is located outside the current Proposed Project limits and would not be affected by the Proposed Project.

Disturbed/Ruderal

This land cover includes paved areas, buildings, landscaping, bare ground, and other disturbed areas and accounts for approximately 26 percent of the BSA.

Special-Status Species

Data received in 2019 from USFWS, CNDDB, NMFS, and CNPS records were used to compile a table of regional species and habitats of concern (Exhibit 3-13), which provides a general habitat description for each species and a rationale as to why habitat is either present or absent. Exhibit 3-12 has been updated to reflect recent (June 2024) search of the sources listed above (Appendix C). Since the approval of the updated 2019 NES the listing status of FYLF and western pond turtle have changed. The previously unlisted FYLF is now listed as federal endangered in the Project area and western pond turtle has been proposed for listing as threatened. The monarch butterfly has also been listed as a candidate species. Exhibit 3-13 has been updated to reflect these changes.

Special-Status Plant Species

The 2011 NES included results from a survey and habitat assessment for the following special-status plant species: Nissenan manzanita (*Arctostaphylos nissenana*), Red Hills soaproot (*Chlorogalum grandiflorum*), Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*), Parry's horkelia (*Horkelia parryi*), and oval-leaved viburnum (*Viburnum ellipticum*). None of these plant species were encountered during the focused botanical survey in 2011 or during the January 27, 2015; June 14, 2017; and March 8 and July 27, 2018 biological surveys associated with the 2019 NES.

Rare plant surveys in forested habitats, like those in the project area, are typically valid for a period of 3-5 years (CDFW 2018, USFWS 2000). Sites with survey results older than this typically require updated surveys to address any newly listed plants and verify that site conditions have not changed substantially from the time of the previous survey.

Special-Status Wildlife Species

The 2011 NES evaluated foothill yellow-legged frog (FYLF), California red-legged frog (CRLF), northern goshawk, pacific fisher (West Coast Distinct Population Segment [DPS]), and western pond turtle. Additional evaluation has determined that the BSA is outside the known range of the pacific fisher (West Coast DPS), and no further evaluation is necessary. Based on the January 27, 2015; June 14, 2017; and

March 8, 2018 biological field surveys, the BSA does not provide nesting habitat for northern goshawk because of the high level of human disturbance and because the BSA is below the elevation range of this species; therefore, no further evaluation is necessary.

Since the approval of the updated 2019 NES the listing status of FYLF and western pond turtle have changed. The previously unlisted FYLF is now listed as federal endangered in the Project area and western pond turtle has been proposed for listing as threatened. The monarch butterfly has also been listed as a candidate species. Exhibit 3-13 has been updated to reflect these changes.

Revisions to the mitigation measures for CRLF and FYLF were made based on updated information and described for each species in Section 3.3.1.2. The mitigation measures for CRLF, FYLF, and the North Fork Cosumnes River also protect western pond turtle. The 2011 NES did not evaluate for potential impacts to migratory birds and birds of prey. The updated 2019 NES includes an evaluation and mitigation for migratory birds and birds of prey.

Exhibit 3-13. Special-Status Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Fish						
Hypomesus transpacificus	Delta smelt	T, CH	E	Euryhaline (tolerant of a wide salinity range) species that is confined to the San Francisco Estuary, principally in the Delta and Suisun Bay. Currently found only from the San Pablo Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties. Can be washed into San Pablo Bay during high-outflow periods, but do not establish permanent populations there (Moyle 2002).	A	There is no habitat in the project area for this species. The Proposed Project is not located within critical habitat for this species (USFWS 2018).
Amphibians						
Rana boylii	Foothill yellow-legged frog	E	E, SSC	Occurs in woodland and forest areas near streams and rivers, especially near riffles where there are exposed rocks. Requires permanent streams in which to reside (CWHR 2017 accessed 2024).	HP	Potential to occur. For more information see Section 3.3.2.3.
Rana draytonii	California red-legged frog	T, CH	SSC	Inhabits quiet pools of streams, marshes, and occasionally ponds with dense, shrubby, or emergent vegetation. Requires permanent or nearly permanent pools for larval development (CWHR 2017 accessed 2024; USFWS 2010). The range of CRLF extends from near sea level to approximately 5,200 feet, though nearly all sightings have occurred below 3,500 feet. CLRF was probably extirpated from the Central Valley floor before 1960 (USFWS 2002).	HP	A USFWS habitat assessment was conducted to further assess site potential for the species. The USFWS concurred that the project described in the 2011 NES was not likely to adversely affect CRLF. The Proposed Project is not located within critical habitat for this species (USFWS 2018). Potential to occur. For more information see Section 3.3.2.3.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Rana sierrae	Sierra Nevada yellow-legged frog	E, CH	T	Occurs in the Sierra Nevada from Plumas County to Fresno County, north of the ridge dividing the middle and south forks of the Kings River, and east of the Sierra Nevada crest. Elevations range in the Sierra extends from 4,500 feet to over 11,980 feet. Associated with streams, lakes, and ponds in montane riparian, lodgepole pine, sub-alpine conifer, and wet meadow habitat types. Always encountered within a few feet of water (CWHR 2017 accessed 2024).	A	The Proposed Project is below the elevation range of this species. There is no habitat for this species in the project area. The Proposed Project site is not located within critical habitat for this species (USFWS 2018).
Insects						

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Danaus plexippus	Monarch butterfly	C	--	Monarch butterfly is found throughout most of California in open habitats that support milkweed (*Asclepias* spp.) and nectar plants, including grasslands, fields, meadows, chaparral, coastal scrub, weedy areas, marshes, and roadsides. Western monarchs overwinter at sites primarily along 620 miles of the Pacific coast from Mendocino County, California to Baja California, Mexico. Most of the California coastal overwintering sites are within 1.5 miles of the Pacific Ocean or San Francisco Bay (Xerces Society et al. 2024a). Adult monarch butterflies during breeding and migration require a diversity of blooming nectar resources, which they feed on throughout their migration routes and breeding grounds (spring 10 through fall). Monarchs also need milkweed (for both oviposition and larval feeding) embedded within this diverse nectaring habitat (USFWS 2020).	HP	Potential to occur. For more information see Section 3.3.2.3.
Reptiles						

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Emys marmorata	Western pond turtle	P	SSC	Prefers aquatic habitats with abundant vegetative cover and exposed basking sites such as logs. Associated with permanent or nearly permanent water in a wide variety of habitat types, normally in ponds, lakes, streams, irrigation ditches, or permanent pools along intermittent streams (CWHR 2017 accessed 2024).	HP	Potential to occur. For more information see Section 3.3.2.3.
Birds						
Accipiter atricapillus	American goshawk	--	SSC	Breeds in the North Coast Ranges, Sierra Nevada, Klamath, Cascade, Warner Piños, San Jacinto, San Bernardino, and White mountains. Remains in breeding areas year-round. Prefers dense, mature conifer and deciduous forest, interspersed with meadows, other openings, and riparian areas. Usually nests near water on north-facing slopes in dense vegetation near openings (CWHR 2017 accessed 2024). In the westside ponderosa pine zone, northern goshawks nest as low as 2,500 feet. Stands with nests consistently have larger trees, greater canopy cover, and more open understories than stands lacking nests (Shuford and Gardali 2008). Goshawks generally do not nest near areas of human habitation or paved roads (Bosakowski and Smith 1997). Nesting sites are of concern to CDFW (2019).	A	The Proposed Project area does not provide nesting habitat due to the high level of human disturbance. The Proposed Project area is below the elevation range of this species.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Agelaius tricolor	Tricolored blackbird	--	T, SSC	Forages on ground in cropland, grassland, and on pond edges. Nests near freshwater, preferably in emergent marsh densely vegetated with cattails or tules, but also in thickets of willow, blackberry, and wild rose. Highly colonial; nesting area must be large enough to support a minimum colony of about 50 pairs (CWHR 2017 accessed 2024). Range of this species includes the Sacramento and San Joaquin valleys, the foothills of the Sierra Nevada south to Kern County, the coastal slope from Sonoma County south to the Mexican border, and sporadically, the Modoc Plateau (Shuford and Gardali 2008). Nesting colonies are of concern to CDFW (2019).	A	There is no habitat for this species in the project area. The Proposed Project area is outside the geographic range of this species.
Riparia riparia	Bank swallow	--	T	Found primarily in riparian and lowland habitats in California west of the deserts during the spring/fall period. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured sandy soils, into which it digs nesting holes. Approximately 75% of breeding population in California occurs along banks of the Sacramento and Feather rivers in the northern Central Valley. Other colonies are known from the central coast from Monterey to San Mateo counties., and northeastern CA in Shasta, Siskiyou, Lassen, Plumas, and Modoc counties. Colonial breeder, with 10 to 1,500, typically 100–200, nesting pairs (CWHR 2017 accessed 2024). Nesting sites are of concern to CDFW (2019).	A	The Proposed Project site does not contain vertical cliffs with fine-textured sandy soil. There is no habitat for this species in the Proposed Project area.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Strix nebulosa	Great gray owl	--	E	Inhabits the Sierra Nevada from Plumas County south to Yosemite from 4,500 to 7,500 feet. Most recent records from the Merced and Tuolumne river drainages of Yosemite National Park. Breeds in old-growth red fir, mixed conifer, or lodgepole pine habitats, always in the vicinity of wet meadows (CWHR 2017 accessed 2024). Nesting sites are of concern to CDFW (2019).	A	The Proposed Project is below the elevation range of this species. There is no habitat for this species in the Proposed Project area.
Strix occidentalis	California spotted owl	P	SSC	The range of California spotted owl occurs from the southern Cascade Range of northern California south along the west slope of the Sierra Nevada and in mountains of central and southern California nearly to the Mexican border. As a breeder in the Sierra Nevada, this species occurs at elevations ranging from about 1,000 feet in Fresno County to 7,923 feet in Tulare County. This owl breeds and roosts in forests and woodlands with large old trees and snags, dense canopies (≥70% canopy closure), multiple canopy layers, and downed woody debris. Large, old trees are the key component. Predominant habitats occupied in the Sierra Nevada are Sierran mixed-conifer, white fir, montane hardwood-conifer, and montane hardwood forests. Less often found in red fir forest, ponderosa pine forest, blue oak-gray pine woodland, and valley foothill riparian forests (Shuford and Gardali 2008).	A	The Proposed Project site does not contain the large, old trees required by this species.
Mammals						

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Aplodontia rufa californica	Sierra Nevada mountain beaver	--	SSC	Uncommon in the Sierra Nevada. Occurs in dense riparian-deciduous and open brushy stages of most forest types. Typical habitat in the Sierra Nevada is montane riparian. Frequent open- and intermediate-canopy coverage with a dense understory near water. Deep, friable soils and a cool, moist microclimate are required for burrowing. Feed on vegetative parts of plants, mostly thimbleberry, salmonberry, blackberry, dogwood, salal, ferns, lupines, willows, and grasses. Vegetation is stored near a burrow entrance or in underground chambers. Burrows are in deep soils in dense thickets, preferably near a stream or spring (CWHR 2017 accessed 2024).	A	There is no habitat for this species in the Proposed Project area, which is outside the known range of this species.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Pekania (=Martes) pennanti	Fisher, West Coast DPS/ Northern California ESA	--	SSC	Uncommon permanent resident of the Sierra Nevada, Cascades, Klamath Mountains, and the North Coast Ranges (CWHR 2017 accessed 2024). Occurs above 3,200 feet in the Sierra Nevada and Cascades (Jameson and Peeters 2004). Today, fisher distribution in California is represented by two populations: northwestern California and the southern Sierra Nevada. Fisher apparently no longer inhabit the area between the Pit River in the northern Sierra Nevada/Cascades to the Merced River in the southern Sierra Nevada, a separation of approximately 270 miles. There is little empirical evidence that fisher previously inhabited the gap in the Sierra Nevada (CDFW 2010). Occurs in intermediate to large-stages of coniferous forests and deciduous-riparian habitats with high percent canopy closure. Canopy closure must be greater than 50% to be suitable habitat. Dens in a variety of protected cavities, brush piles, logs, or under an upturned tree. Hollow logs, trees, and snags are especially important. Mostly nocturnal and crepuscular, some diurnal activity (CWHR 2017 accessed 2024).	A	There is no habitat for this species in the Proposed Project area. The Proposed Project occurs outside the current known range of this species.
Plants						

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Arctostaphylos nissenana	Nissenan manzanita	--	--/ 1B.2	Perennial evergreen shrub found on highly acidic rocky (slate and shale) soils and is often associated with closed-cone conifer forest and chaparral from about 1,476 to 3,608 feet (Durham 2009; CNPS 2017). Known from approximately 13 occurrences in El Dorado and Tuolumne counties. Blooms February through March (CNPS 2017).	A	There is no habitat for this species in the Proposed Project area. Nissenan manzanita is an evergreen shrub that is identifiable year-round. This species was not observed in the Proposed Project area during the surveys conducted in January, March, and April 2011; January 2015; June 2017; or March and July 2018.
Calochortus clavatus var. *avius*	Pleasant Valley mariposa-lily	--	--/ 1B.2	Perennial bulbiferous herb found in openings in mixed conifer and ponderosa pine forest, usually on ridge tops and south-facing slopes on Josephine silt loam and volcanic from 1,000 to 5,904 feet (Durham 2009 and CNPS 2017). Known from Amador, Calaveras, El Dorado, Mariposa, and Placer counties. Presumed extirpated from Mariposa County. Blooms May through July (CNPS 2017).	A	Soils in the Proposed Project area are not volcanically derived or of Josephine silt loam. There is no habitat for this species in the Proposed Project area.
Calystegia vanzuukiae	Van Zuuk's morning-glory	--	--/ 1B.3	A perennial rhizomatous herb found in gabbro or serpentine soils in chaparral or cismontane woodland from 1,640 to 3,870 feet. Known from El Dorado and Placer counties. Blooms from May through August (CNPS 2017).	A	There are no gabbro or serpentinite soils in the Proposed Project area.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Camissonia lacustris	Grassland suncup	--	--/ 1B.2	Annual herb found in chaparral, cismontane woodland, lower montane coniferous forest, and valley foothill grassland on granitic, gravely, serpentine soils from 590-4,005 feet elevation. Known from El Dorado, Fresno, Lake, Mariposa, and Tuolumne counties. Blooms from March-June (CNPS 2024).	HP	The Proposed Project area provides potential habitat for this species. There is one CNDDB record for this species located in the project area. The record is from 1956. This species was not observed in the Proposed Project area during the surveys conducted in January, March, and April 2011; January 2015; June 2017; or March and July 2018.
Carex cyrtostachya	Sierra arching sedge	--	--/ 1B.2	Perennial herb found in mesic lower montane coniferous forest, meadows and seeps, marshes and swamps, and riparian forest margins from 2,000 to 4,460 feet. Known from Butte, El Dorado, and Yuba counties. Blooms May through August (CNPS 2017).	A	The Proposed Project area is below the elevation range of this species.
Chlorogalum grandiflorum	Red Hills soaproot	--	--/ 1B.2	Perennial bulbiferous herb found on serpentine, gabbroic, or other soils in chaparral, cismontane woodland, and lower montane coniferous forest from 803 to 5,543 feet. Known from Amador, Butte, Calaveras, El Dorado, Placer, and Tuolumne counties. Blooms May through June (CNPS 2017).	A	There are no serpentine or gabbroic soils in the Proposed Project area. Red Hills soaproot leaves are evident and identifiable in early spring. This species was not observed in the Proposed Project area during the surveys conducted in January, March, and April 2011; January 2015; June 2017; or March and July 2018.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Diplacus pulchellus	Yellow-lip pansy monkeyflower	--	--/ 1B.2	Annual herb found on vernally mesic often disturbed clay soils in lower montane coniferous forest and meadows and seeps from 1,970 to 6,560 feet elevation. Known from Calaveras, El Dorado, Mariposa, and Tuolumne counties. Blooms April through July (CNPS 2024).	A	The Proposed Project area is outside the elevation range of this species. This species was not observed during the April 2011 survey conducted during the evident and identifiable period. This species was not observed in the Proposed Project area during the surveys conducted in January, March, and April 2011; January 2015; June 2017; or March and July 2018.
Horkelia parryi	Parry's horkelia	--	--/ 1B.2	Perennial herb found on stony, disturbed, slightly acidic soils in open chaparral and cismontane woodland from 262 to 3,509 feet (Durham 2009, CNPS 2017). Known from Amador, Calaveras, El Dorado, Mariposa, and Tuolumne counties. Blooms April through September (CNPS 2017).	A	There is no habitat for this species in the Proposed Project area. This species was not observed during the April 2011 survey conducted during the evident and identifiable period. This species was not observed in the Proposed Project area during the surveys conducted in January, March, and April 2011; January 2015; June 2017; or March and July 2018.
Juncus digitatus	Finger rush	--	--/ 1B.1	Annual herb found in openings in cismontane woodland and lower montane coniferous forest and vernal pools (xeric) from 2,165 to 3,600 feet elevation. Known from Nevada and Shasta counties. Blooms April through June (CNPS 2024).	A	The Proposed Project area is outside the elevation and geographic range of this species.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Lewisia serrata	Saw-toothed lewisia	--	--/ 1B.1	Perennial herb restricted to steep, nearly vertical cliffs in inner gorges of perennial streams and rarely near seeps and intermittent streams. Occurs between 2,800 and 4,800 feet in American Rubicon rivers watersheds (Durham 2009). Known from 11 occurrences in El Dorado and Placer counties. Blooms May through June (CNPS 2017).	A	The Proposed Project area is outside the elevation range of this species.
Lupinus constancei	Lassics lupine	E	E/ 1B.1	A low growing perennial herb that typically bloom in July, but may bloom as early as late May. Only found near the summits of remote mountains in northern California called the Lassics, which have unique serpentine-influenced soils. The Lassics are located in Humboldt and Trinity Counties within the Six Rivers National Forest. There are two known populations of Lassics lupine occupying a combined area of approximately 1.6 hectares (4 acres) (USFWS 2024).	A	The Proposed Project area is located outside the geographic range of this species.
Packera (=Senecio) layneae	Layne's butterweed (ragwort)	T	R/ 1B.2	Perennial herb found in rocky areas with serpentine or gabbroic soils in chaparral and cismontane woodland from 650 to 3,300 feet. Known from Butte, El Dorado, Placer, Tuolumne, and Yuba counties. Blooms April through August (CNPS 2017).	A	The Proposed Project area does not contain serpentine or gabbroic soils. There is no habitat for this species in the BSA.
Phacelia stebbinsii	Stebbins' phacelia	--	--/ 1B.2	Annual herb found in cismontane woodland, lower montane coniferous forest, and meadows and seeps from 2,000 to 6,593 feet (CNPS 2017). Found on dry, open, rocky sites (bedrock outcrops, rubble, or talus) on ledges or moderate to steep slopes and on damp, mossy inner gorges (Durham 2009). Known from El Dorado, Nevada, and Placer counties. Blooms May through July (CNPS 2017).	A	The Proposed Project area is outside the elevation range for this species. The closest CNDDB record for this species is 15 miles northeast of the Proposed Project area.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Rhynchospora capitellata	Brownish beaked-rush	--	--/ 2B.2	Perennial herb found on mesic soils of upper and lower montane coniferous forest, meadows and seeps, and marshes and swamps from 147 to 6,560 feet. Known from Butte, El Dorado, Mariposa, Nevada, Plumas, Tehama, Trinity, and Yuba counties. Presumed extirpated from Sonoma Co. Blooms July through August (CNPS 2017).	HP	Potential to occur. For more information see Section 3.3.2.3.
Viburnum ellipticum	Oval-leaved viburnum	--	--/ 2B.3	Perennial deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forest from 705 to 4,592 feet. Known from Alameda, Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Lake, Mendocino, Napa, Placer, Shasta, Solano, Sonoma, and Tehama counties. Blooms May through June (CNPS 2017).	A	There is no habitat for this species in the Proposed Project area. Oval-leaved viburnum is a perennial that is identifiable year-round. This species was not observed in the Proposed Project area during the surveys conducted in January, March, and April 2011; January 2015; June 2017; or March and July 2018.
Natural Communities						
Central Valley drainage hardhead/ squawfish stream		--/ --	--	Hardhead occur in low- to mid-elevation streams in the main Sacramento-San Joaquin drainage and in the Russian River. Their range extends from the Kern River in Kern County in the south, to the Pit River in Modoc County in the north. In the Sacramento drainage, the hardhead is present in most large tributary streams as well as in the Sacramento River. They prefer clear, deep (>32 inches) pools and runs with sand-gravel-boulder substrates and slow velocities. Hardhead are always found in association with Sacramento pikeminnow (squawfish) and usually Sacramento sucker. They tend to be absent	HP	Potential to occur. For more information see Section 3.3.2.3.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
				from streams where introduced species, especially centrarchids (sunfish), predominate and from human-altered streams. They are most characteristic of low- to mid-elevation streams with deep pools, slow runs, and undercut banks, and overhanging vegetation. They are most abundant in lightly disturbed, tree-lined reaches that also contain other native fish (Moyle 2002).		
Central Valley drainage resident rainbow Trout stream		--/ --	--	Rainbow trout occur in low order (high elevation) cold streams with a high gradient. These streams are dominated by rainbow trout and often riffle sculpin (Moyle and Ellison 1991).	HP	Potential to occur. For more information see Section 3.3.2.3.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Sacramento-San Joaquin Foothill/ Valley Ephemeral Stream		--/ --	--	Low elevation streams that flow primarily in response to winter and spring rainfall. Found in oak woodland/ valley grassland areas. Some water may be present in semi-permanent bedrock pools. Streams have a distinct succession of invertebrates and may be important spawning areas for Pacific treefrogs (*Pseudacris regilla*) and newts (*Taricha* spp.) (Moyle and Ellison 1991).	A	Under the CNDDB classification, ephemeral streams support the larval development of some aquatic invertebrates and amphibians. Under the Corps definition, ephemeral streams flow only for a few hours or days after precipitation events and hence cannot support such larval development. A stream defined by CNDDB as "ephemeral" would be classified as "intermittent" or even "perennial" under the Corps definition. The ephemeral channels adjacent to the Proposed Project area follow the Corps classification and hence do not meet the criteria of a Sacramento-San Joaquin foothill/valley ephemeral stream. The North Fork Cosumnes River does not meet the criteria of a Sacramento-San Joaquin foothill/valley ephemeral stream.

Scientific Name	Common Name	Federal Status	State Status [a]	General Habitat Description	Habitat Present (HP)/ Absent (A) [c]	Potential to Occur and Rationale
Sphagnum Bog		--/ --	--	Low-growing herbaceous perennials and low shrubs are the dominant vegetation types. The growing season extends from spring through fall at lower elevations and along the coast. Fens occur in cold, highly acidic, permanently waterlogged soils that are low in available nutrients. Incomplete decomposition of peat is common. Found scattered in the North Coast Ranges and Klamath Ranges from Sonoma County to Oregon. Elevations range from 1,000 to 6,000 feet in the northern extent and 5,000 to 9,000 feet in the southern extent (Holland 1986).	A	This community type does not occur in the BSA.

[a] Status: Endangered (E); Threatened (T); Proposed (P); Candidate (C), Delisted (D), Fully Protected (FP); Rare (R); State Species of Special Concern (SSC); Proposed Critical Habitat (PCH); Critical Habitat (CH) – Critical habitat has been designated for this species.

[b] CA Rare Plant Rank (CNPS): 1A = Presumed Extinct in CA; 1B = Rare or Endangered in CA and elsewhere; 2 = R/E in CA and more common elsewhere; 3 = More information is needed about this plant species (review list); 4 = Limited distribution (watch list).

CRPR Decimal Extensions: .1 = Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat); .2 = Fairly endangered in California (20-80% occurrences threatened); .3 = Not very endangered in California (<20% of occurrences threatened or no current threats known).

[c] Absent [A] = No habitat present and no further work needed. Habitat Present [HP] = Habitat is or may be present and the species may be present.

3.3.2 Environmental Impacts

3.3.2.1 Methods of Analysis

Potential impacts to biological resources were evaluated based on potential changes to existing biological communities resulting from Proposed Project activities, including:

- Vegetation/tree removal
- Grading, excavating, and fill placement during construction
- Runoff of materials into sensitive biological resource areas (e.g., wetlands and streams)

3.3.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- 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 Game or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?
- 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?
- 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?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

3.3.2.3 Impacts and Mitigation Measures

Exhibit 3-11 shows Proposed Project impact areas in relation to biological resources in the Proposed Project area. Impact findings, including significance and available mitigation, are discussed below.

The Proposed Project would not 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 Game or U.S. Fish and Wildlife Service. (Less Than Significant with Mitigation)

Special-Status Wildlife Species. The Proposed Project site provides marginal habitat for special-status wildlife species. There is no critical habitat in the Proposed Project area, and the Proposed Project would not affect critical habitat. The Proposed Project would not result in the take of state-listed species or species proposed for listing.

Since approval of the updated 2019 NES the federal ESA (FESA) listing status for FYLF and western pond turtle have changed, and the monarch butterfly has been listed as a federal candidate species. Prior to the change in FESA status for FYLF, western pond turtle, and monarch butterfly, CRLF was the only federal listed species with the potential to occur in the Proposed Project area. Informal consultation with USFWS on 29 September 2011 concluded that the Project may affect, but is not likely to adversely affect CRLF. To date no formal Section 7 FESA consultation with USFWS regarding federal listed species has been conducted. The Federal funding component for the Project requires compliance with FESA. Under its NEPA Assignment, Caltrans will determine what actions are needed to address FESA compliance.

Foothill Yellow-Legged Frog. In 2019, the California Fish and Game Commission listed FYLF in the East/Southern Sierra, Central Coast, and South Coast clades as endangered under CESA, and the Feather River and Northern Sierra clades as threatened under CESA. The Proposed Project is within the boundaries of the East/Southern Sierra clade. On 28 September 2023 the USFWS listed four FYLF distinct population segments (DPS) under FESA. The Project occurs within the boundaries of the Sierra Nevada DPS for FYLF (includes the Sierra Nevada Mountains south of American River sub-basin south to Transverse Range). FYLF within the Sierra Nevada DPS are listed as endangered.

FYLFs can be found in partly shaded, shallow streams and rocky riffles in a variety of habitats. The species requires some cobble-sized substrate for egg laying and a water source persisting for at least 15 weeks for larval metamorphosis. There are recorded occurrences of the FYLF in the region, the nearest being approximately 2 miles from the project area. No FYLF were observed during the 2011, 2015, 2017, and 2018 surveys. The North Fork Cosumnes River in the Proposed Project area provides potential habitat for FYLF.

The Proposed Project is not anticipated to result in permanent impacts to the North Fork Cosumnes River. The Proposed Project has been designed to avoid impacts to the North Fork Cosumnes River channel. The contractor would install a temporary platform across the North Fork Cosumnes River to serve as a catchment to prevent debris from entering the river during the bridge removal and for access during the bridge removal activities. No heavy equipment or temporary structures are needed in the river for installation of the protective temporary platform and species movements within the North Fork Cosumnes River would not be affected. Installation and removal may require construction personal to walk in the river to support efficient placement and removal. The platform would be removed prior to high river flows.

FYLF have not been observed in the Proposed Project area. The Proposed Project has been designed to avoid impacts to the North Fork Cosumnes River. While unlikely, it is possible that FYLF could occur in the Proposed Project area. If present, individuals could be harassed, injured, or killed by construction activities. Take of FYLF would be a significant impact. **Impacts to FYLF are identified as potentially significant (Impact BIO-1)**. With the implementation of **Mitigation Measure BIO-1**, **Impact BIO-1** will be reduced to less than significant. Avoidance and minimization measures to protect North Fork Cosumnes River will also protect FYLF.

Mitigation Measure BIO-1: FYLF

- Prior to construction activities, the County will coordinate with CDFW to determine if a 2081(b) CESA Incidental Take Permit (ITP) is needed.
- A preconstruction survey for FYLF shall be conducted by two qualified biologists within 48 hours prior to the start of construction activities within the riparian and aquatic habitat in the BSA. The survey methodology will be based on Peek et al. (2017) Visual Encounter Survey Protocol for *Rana Boylii* in lotic environments, or the most current guidelines at the time of the survey.

- Environmental awareness training will be conducted prior to the onset of project work for construction personnel to brief them on how to recognize FYLF and what to do should any FYLF be found in the work area.
- A qualified biologist will be present to monitor for FYLF during work adjacent to the river, including but not limited to any clearing activities in the riparian habitat and installation and removal of the debris catchment structure.
- If the FYLF is found at any time during project work, construction within 50 ft will stop and USFWS will be contacted immediately for further guidance.

California Red-Legged Frog. A Habitat Assessment for CRLF was prepared by HydroTerra Consulting in April 2011. The Habitat Assessment determined that the Proposed Project area does not provide suitable breeding habitat for CRLF due to the high velocity of the river during most of the year and the lack of emergent vegetation. Potential breeding habitat might be present within 1 mile of the Proposed Project site. The Proposed Project site does contain potential upland and dispersal habitat. Caltrans, acting as the federal lead agency for the Proposed Project, submitted the original NES and Habitat Assessment to USFWS on August 3, 2011, requesting informal consultation regarding the Proposed Project's potential to affect CRLF. On September 29, 2011, USFWS responded with a letter of concurrence that the Proposed Project is not likely to adversely affect CRLF. No CRLF were observed during the 2011, 2015, 2017, and 2018 surveys.

The Proposed Project is not anticipated to result in permanent impacts to the North Fork Cosumnes River. The Proposed Project has been designed to avoid impacts to the North Fork Cosumnes River channel. The contractor would install a temporary platform across the North Fork Cosumnes River to serve as a catchment to prevent debris from entering the river during the bridge removal and for access during the bridge removal activities. No heavy equipment or temporary structures are needed in the river for installation of the protective temporary platform therefore, species movements within the North Fork Cosumnes River would not be affected. Installation and removal may require construction personal to walk in the river to support efficient placement and removal. The platform would be removed prior to high river flows.

CRLF have not been observed in the Proposed Project area. The Proposed Project has been designed to avoid impacts to the North Fork Cosumnes River and upland habitats. While unlikely, it is possible that CRLF could occur in the Proposed Project area. If present, individuals could be harassed, injured, or killed by construction activities. Take of CRLF would be a significant impact. **Impacts to CRLF are identified as potentially significant (Impact BIO-2)**. With the implementation of **Mitigation Measure BIO-2**, **Impact BIO-2** will be reduced to less than significant. Avoidance and minimization measures to protect North Fork Cosumnes River will also protect CRLF.

Mitigation Measure BIO-2: CRLF

- If the CRLF is found at any time during project work, construction within 50 feet will stop and USFWS will be contacted immediately for further guidance.
- Staging areas as well as fueling and maintenance activities will be a minimum of 100 feet from riparian or aquatic habitats. The contractor will prepare a spill prevention and cleanup plan.
- The contractor will administer BMPs to control erosion consistent with the required stormwater pollution prevention plan (SWPPP) (see Chapter 2, Project Description, Special Provisions, and Section 3.9, Hydrology Resources for more information on SWPPP).
- Environmental awareness training will be given to construction personnel by a USFWS-approved biologist to brief them on how to recognize CRLF. Construction personnel will also be informed

that if a CRLF is encountered in the work area, construction will cease and the USFWS will be called for guidance before any construction activities are resumed.

- Plastic monofilament netting (erosion control matting) or similar material containing netting will not be used at the project area because the CRLF or other animals could become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding components.
- A litter control program will be instituted at the entire project site. All workers will ensure that food scraps, paper wrappers, food containers, cans, bottles, and other trash from the study area are deposited in covered or closed trash containers.

Monarch butterfly: The monarch butterfly is a candidate for federal listing and is not state listed. Monarch habitat includes breeding, migratory, and overwintering habitats. Breeding habitat essentially features native milkweeds to provide food for larvae and other flowers to provide nectar for adults but may also include trees or shrubs for shading and roosting (Western Association of Fish and Wildlife Agencies 2019). Western monarchs overwinter at sites primarily along 620 miles of the Pacific coast from Mendocino County, California to Baja California, Mexico. Most of the California coastal overwintering sites are within 1.5 miles of the Pacific Ocean or San Francisco Bay (Xerces Society et al. 2024a). Monarch butterfly is found throughout most of California in open habitats that support milkweed (*Asclepias* spp.) and nectar plants, including grasslands, fields, meadows, chaparral, coastal scrub, weedy areas, marshes, and roadsides. Adult monarch butterflies during breeding and migration require a diversity of blooming nectar resources, which they feed on throughout their migration routes and breeding grounds (spring through fall). Monarchs need milkweed (primarily *Asclepias* spp.) for both oviposition and larval feeding, embedded within this diverse nectaring habitat (USFWS 2020). Adult females lay eggs singly on milkweed species which the caterpillars rely upon for energy and protective toxins called cardenolides. Milkweeds are critical for successful development of the caterpillar into an adult butterfly (Xerces Society et al. 2024a).

A search of the Western Monarch Milkweed Mapper database was conducted to determine known observations of monarch in the Project vicinity (Xerces Society et al. 2024b). There are no records for breeding monarch butterfly within 10 miles of the Project area. There is one record from 2017 of an adult monarch sited approximately 2.75 miles southwest of the Project area (Xerces Society et al. 2024b).

Overwintering habitat does not occur in the Project area. No milkweed (*Asclepias* spp.) or other genera in the milkweed family, that would provide breeding habitat, were not observed in the Project area during focused botanical surveys conducted in 2011 and 2018. Plants observed in the Project area provide nectaring opportunities for migrating monarchs (if present). While unlikely, it is possible milkweed species suitable as breeding habitat for monarch butterfly could have colonized the Project area since the last botanical survey.

Project clearing and grubbing of vegetation to prepare the site for construction would temporarily disturb nectaring habitat. As noted in Chapter 2, all disturbed areas that would result in exposed soil would be restored by a combination of compost application, revegetation with native plants, and hydroseeding with an appropriate native seed mix. If present, individuals could be harassed, injured, or killed by collision with construction equipment or the removal of milkweed plants if occupied by monarch butterfly eggs. Take of monarch butterfly would be a significant impact. **Impacts to monarch butterfly are identified as potentially significant (Impact BIO-3)**. With the implementation of **Mitigation Measure BIO-3**, **Impact BIO-3** will be reduced to less than significant.

Mitigation Measure BIO-3: Monarch butterfly

- A qualified biologist will conduct a survey for milkweed species (monarch breeding host plant) in areas to be used for construction and staging as well as a 20 foot buffer (if accessible). If no milkweed species are detected, then no further avoidance or minimization is needed.
- If milkweed weed species are identified they will be mapped and inspected for the presence of monarch butterfly eggs, larvae, or chrysalides (pupa, protective covering). If no monarch butterfly eggs, larvae, or chrysalides are found on the milkweed, then no further avoidance or minimization is needed.
- If monarch butterfly eggs, larvae, or chrysalides are found a minimum 10 foot radius avoidance buffer will be established around the occupied plant with flagging and or temporary fencing. The avoidance buffer will remain in place until such time as the qualified biologist determines that eggs, larvae, or chrysalides are no longer occupying the plant(s) or USFWS has provided further direction.

Western Pond Turtle. The western pond turtle is not a state listed species but is a federal proposed threatened species and a CDFW Species of Special Concern. The western pond turtle is a fully aquatic turtle, inhabiting ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. There are recorded occurrences of the turtle in the region, the nearest being approximately 3.5 miles from Proposed Project. Western pond turtles were not observed during the 2011, 2015, 2017, and 2018 surveys. There is a low chance for the turtles to occur within the Proposed Project area. If present individuals could be harassed, injured, or killed by construction noise, vibrations, and equipment. Take of western pond turtle would be a significant impact. **Impacts to western pond turtle are identified as potentially significant (Impact BIO-4)**. With the implementation of **Mitigation Measure BIO-4** as well as **Mitigation Measure BIO-1** and **Mitigation Measure BIO-2**, **Impact BIO-4** will be reduced to less than significant.

Mitigation Measure BIO-4: Western Pond Turtle

- A preconstruction survey for western pond turtle will occur within 48 hours prior to the start of construction activities within the riparian and aquatic habitat in the project area.
- A qualified biologist will be present during grubbing and clearing activities in the riparian and aquatic habitat in the project area to monitor for western pond turtle.
- If the western pond turtle is found at any time during project work, construction within 50 feet will stop until a qualified biologist determines the species has moved out of the project impact area or until USFWS is contacted and has provided further guidance.

Birds of Prey and Migratory Birds. The BSA provides potential nesting habitat for birds of prey and birds listed by the MBTA of 1918 (16 USC 703-711). All migratory bird species are protected by the MBTA. Any disturbance that causes direct injury, death, nest abandonment, or forced fledging of migratory birds, is restricted under the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a take of the species under federal law. Cliff swallow nests were observed under the existing bridge during the field surveys. However, construction is anticipated to begin prior to nesting season and therefore, existing nests would be removed prior to nesting season and the existing bridge is likely to be removed prior to nesting season. A **disturbance that causes direct injury, death, nest abandonment, or removal of active nests would result in take of birds of prey or migratory birds and is identified as a potentially significant impact (Impact BIO-5).** With the implementation of **Mitigation Measure BIO-5**, impacts to birds of prey and birds listed by the MBTA will be reduced to less than significant.

Mitigation Measure BIO-5: Birds of Prey and Migratory Birds

Under the MBTA, nests that contain eggs or unfledged young are not to be disturbed during the breeding season. Nesting or attempted nesting by migratory birds and birds-of-prey is anticipated from February 15 to September 1.

- **Swallow.** In California, bridge-nesting swallows typically arrive in mid-February, increase in numbers until late March, and remain until October. Nesting begins in April, peaks in June, and continues into August. Measures will be taken to prevent establishment of cliff swallow nests prior to construction. Techniques to prevent nest establishment include using exclusion devices, removing and disposing of partially constructed and unoccupied nests of migratory or nongame birds on a regular basis to prevent their occupation, or performing any combination of these. The following measures will be implemented:
    - The contractor will visit the site daily and remove partially completed nests using either hand tools or high-pressure water; and/or
    - Hang netting from the bridge before nesting begins. If this technique is used, netting should be in place from late February until project construction begins.
- **Birds of Prey and Birds Protected by the Migratory Bird Treaty Act**
    - If construction begins outside the February 15 to September 1 breeding season, there will be no need to conduct a preconstruction survey for active nests.
    - Trees scheduled for removal should be removed during the non-breeding season from September 2 to February 14. Vegetation removal includes vegetation within the stream zone. Within the riparian community, vegetation will be removed using hand tools, including chain saws and mowers, and may be trimmed several inches above the ground with the roots left intact to prevent erosion.
    - If construction or vegetation removal begins between February 15 and September 1, a biologist will conduct a survey for active bird of prey nests and rookeries within 500 feet of the project area and for active nests of all other MBTA-protected birds within 250 feet of the project area from publicly accessible areas within 2 weeks prior to construction. The measures listed below will be implemented based on the survey results.

    No Active Nests Found:

- If no active nest of a bird of prey, MBTA bird, or other CDFW-protected bird is found, then no further avoidance and minimization measures will be necessary unless one such bird is subsequently found during construction between February 15 and September 1, in which case the applicable measures below under Active Nests Found will be implemented.

    Active Nests Found:

- If an active nest of a bird of prey, MBTA bird, or other CDFW-protected bird is discovered that could be adversely affected by construction activities, or an injured or killed bird is found, immediately:
    1) Stop all work within a 100-foot radius of the discovery.
    2) Notify the Engineer.
    3) Do not resume work within the specified radius of the discovery until authorized.

- The biologist shall establish a minimum 500-foot Environmentally Sensitive Area around the nest if the nest is of a bird of prey or is a rookery, and a minimum 100-foot Environmentally Sensitive Area around the nest if the nest is of an MBTA bird other than a bird of prey.

  Species Protection Areas:

Identification	Location
Bird of prey or rookery	500-foot no disturbance buffer
MBTA protected bird (not bird of prey)	100-foot no disturbance buffer

- Activity in the Environmentally Sensitive Area will be restricted as follows:
  1. Do not enter the Environmentally Sensitive Area unless authorized.
  2. If the Environmentally Sensitive Area is breached, immediately:
     a. Secure the area and stop all operations within 100 feet of the Environmentally Sensitive Area boundary.
     b. Notify the Engineer.
  3. If the Environmentally Sensitive Area is damaged, the County determines what efforts will be necessary to remedy the damage and who performs the remedy.
- No construction activity will be allowed in the Environmentally Sensitive Area until the biologist determines that the nest is no longer active, or unless monitoring determines that a smaller Environmentally Sensitive Area will protect the active nest.
- The Environmentally Sensitive Area may be reduced if the biologist monitors the construction activities and determines that no disturbance to the active nest is occurring. Reduction of the Environmentally Sensitive Area depends on the species of bird, the location of the nest relative to the project site, project activities during the time the nest is active, and other project-specific conditions.
- Between February 15 and September 1, if additional trees or shrubs need to be trimmed and/or removed after construction has started, a survey will be conducted for active nests in the area to be affected. If an active nest is found, the measures identified above under Active Nests Found will be implemented.

Special-status Plant Species. The Proposed Project area provides suitable habitat for brownish beaked-rush and grassland suncup. The March 2018 surveys were conducted outside of the evident and identifiable period for brownish beaked-rush. The March 2018 surveys did not include the Proposed Project area on the south side of the river due to access restrictions. Rare plant surveys are typically valid for a period of 3-5 years (CDFW 2018, USFWS 2000). Sites with survey results older than this typically require updated surveys to address any newly listed plants and verify that site conditions have not changed substantially from the time of the previous survey. Although no special-status plants have been observed, there is the potential to dig up, bury, grub, or otherwise maim or injure special-status plants including brownish beaked-rush and grassland suncup. **Impacts to special-status plants are identified as potentially significant (Impact BIO-6)**. With the implementation of **Mitigation Measure BIO-6**, **Impact BIO-6** will be reduced to less than significant.

Mitigation Measure BIO-6: Special-status Plant Species including Brownish Beaked-rush and Grassland suncup

- A properly timed survey for special status plant including brownish beaked-rush and grassland suncup will be conducted prior to initial construction activities. The survey will be conducted in accordance with standard survey protocols (CDFW 2018; CNPS 2001), as applicable. The County will coordinate with the culturally affiliated consulting Native American tribes regarding the timing of the pre-construction botanical survey and invite the culturally affiliated consulting Native American tribes to participate.
- If no sensitive plant species are detected during the botanical survey, no further avoidance and minimization efforts will be required.
- If special status plant species are identified, they will be included in an Environmentally Sensitive Area non-disturbance buffer, which will be determined by a qualified botanist. The plant(s) will be clearly delineated using high-visibility orange fencing, which will be installed prior to initial vegetation clearing. Vehicles will not be allowed to park in, nor will equipment be stored in, the Environmentally Sensitive Area, nor will oil, gasoline, or other substances storage be permitted. No vegetation removal or ground-disturbing activities will be permitted in the Environmentally Sensitive Area. The Environmentally Sensitive Area fencing will remain in place throughout the duration of project construction and will be regularly inspected and maintained.
- If rare plant populations cannot be protected in place, the County or its designee will prepare a transplantation/propagation plan for the relocation of the rare plant(s). Rare plant relocation will occur in a suitable area of the project area. The transplantation/propagation plan will be sent to CDFW.

The Proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service. (Less Than Significant).

Canyon live oak-ponderosa pine forest, alder riparian forest, and the North Fork Cosumnes River are considered sensitive natural communities in the Proposed Project area and are listed in Exhibit 3-14. The seasonal wetland and the two ephemeral drainages are not located within the current Proposed Project footprint and would not be impacted by the Proposed Project. Central Valley Drainage Hardhead/Squawfish Stream, and Central Valley Drainage Resident Rainbow Trout Stream are also considered sensitive natural communities.

Exhibit 3-14. Land Cover Acreages and Project Impacts

Land Cover Type	Acreage inside Biological Study Area	Temporary Impact (acre)	Permanent Impact (acre)
Canyon Live Oak-Ponderosa Pine Forest	3.06	1.0	0.20
Alder Riparian Forest	0.37	0.15	0.10
North Fork Cosumnes River	0.60	0	0
Seasonal Wetland	0.01	0	0

Ephemeral Drainages	0.003	0	0
Total:	**5.48**	**1.25**	**0.17**

[a] Previously disturbed community, thus no impacts are calculated.

Canyon Live Oak-Ponderosa Pine Forest. Approximately 3.06 acres of canyon live oak-ponderosa pine forest occurs in the BSA. Exhibit 3-14 provides information on the temporary and permanent impacts, and Exhibit 3-11 illustrates the area of impacts. Temporary impacts include the temporary construction easement and staging area required for construction, and the permanent impact is associated with the additional right-of-way required for the widening of the bridge. Within the canyon live oak-ponderosa pine forest up to 51 trees may need to be removed by the proposed project including 26 oaks, 22 pines, 2 cedars and 1 apple tree (Exhibit 3-15). As design progresses, efforts would continue to minimize the need to remove trees to the extent possible. The final tree removal determination would be made by the County.

As described in Section 3.3.1.1, Local Regulations, the Proposed Project would be a county road safety project and exempt from the mitigation requirements identified in the ORMP and Oak Resources Conservation Code (Section 130.39.050). However, the County is dedicated to preserving as many trees as possible to uphold the intent of the Oak Resources Conservation Code and maintain the privacy of the residences and the rural woodland ambiance. Therefore, while the Proposed Project is exempt from mitigation for the replacement of oak trees, the County plans to coordinate with property owners on tree replacement opportunities as part of the Proposed Project. Tree removal along the roadway would be less than significant to the Canyon live oak-pine forest habitat, and no mitigation is required.

Alder Riparian Forest. The area of alder riparian forest that would be impacted by the Proposed Project occurs in a narrow strip along both banks of the North Fork Cosumnes River in the project area. Exhibit 3-14 provides information on the temporary and permanent impact areas that would be affected by the Proposed Project. The permanent impact areas are associated with the widened bridge. There would be no trees removed and thus a less than significant impact to the alder riparian forest community, and no mitigation is required.

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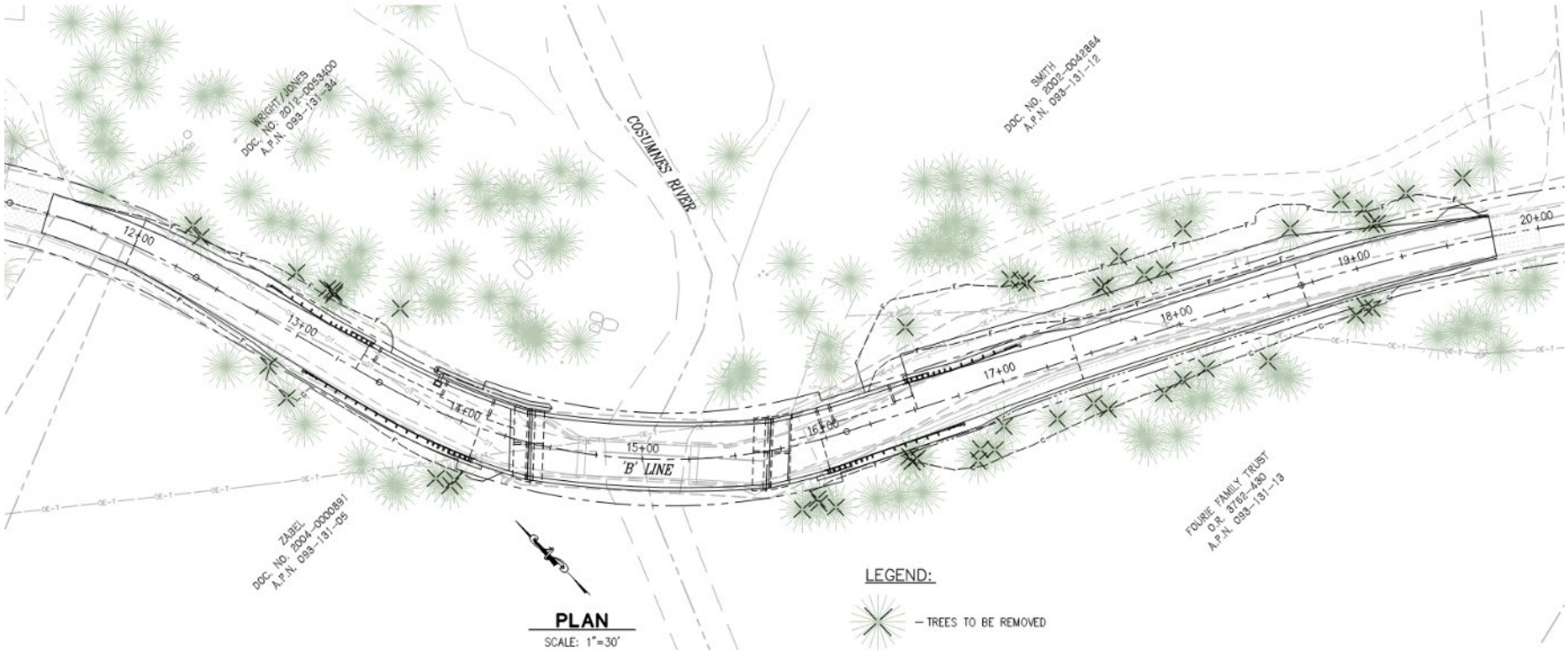

Exhibit 3-15. Preliminary Tree Removal

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Central Valley Drainage Hardhead/Squawfish Stream and Central Valley Drainage Resident Rainbow Trout Stream. Based on the CNDDB record, Central Valley Drainage Hardhead/Squawfish Stream occurs in the Proposed Project area along the North Fork Cosumnes River. This record extends along the Cosumnes River from Latrobe Road west of Highway 49, upstream and east of the Proposed Project. The record includes the lower reaches of the North and Middle Fork of the Cosumnes River to County Road E-16/Mount Aukum Road, located approximately 2 river miles east of the Proposed Project. Squawfish and Sacramento suckers are present throughout the reach. The only report of hardhead is 1 mile below Highway 49 outside of the Proposed Project area.

Rainbow trout occur in low order (high elevation) cold streams with a high gradient. These streams are dominated by rainbow trout and often riffle sculpin (Moyle and Ellison 1991). The closest CNDDB record for Central Valley Drainage Resident Rainbow Trout Stream is approximately 3 miles (approximately 4 river miles) east of the Proposed Project area in Camp Creek, a tributary to the North Fork Cosumnes River. Rainbow trout were not observed in the project area during the biological surveys; however, they could occur in the North Fork Cosumnes River in the Proposed Project area.

The Proposed Project has been designed to avoid impacts to the North Fork Cosumnes River channel. The contractor will install a temporary platform spanning the North Fork Cosumnes River to serve as a catchment to prevent debris from entering the river during the bridge removal and for access during the bridge removal activities. Installation of the protective temporary platform below the existing bridge would occur in late fall/early winter, immediately following the high fire risk season. No heavy equipment or temporary structures are needed in the river channel for installation of the protective temporary platform. Installation may require construction personal to walk in the river to support efficient placement and removal. The platform would be removed prior to high river flows. Construction would continue through the winter and into spring, with no need for in-water work. As part of the contract provisions described in Chapter 2, BMPs consistent with the current Caltrans Stormwater Quality Handbooks to protect water quality and minimize the potential for siltation and downstream sedimentation would be implemented; this consists of the contractor preparing an SWPPP, which will outline measures that address the risks of working during the rainy season. With the implementation of BMPs, impacts would be less than significant, and no mitigation is required.

The proposed bridge would not require permanent support elements below or within the ordinary high-water mark of the North Fork Cosumnes River, and no impacts are anticipated during operation. No mitigation is required.

The Proposed Project would not 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. (No Impact)

The Proposed Project has been designed to minimize impacts to potential waters of the U.S., including wetlands as defined by Section 404 of the Clean Water Act and which encompasses the North Fork Cosumnes River, seasonal wetlands, and ephemeral drainages. As recorded in Exhibit 3-11, there would be no temporary or permanent impacts on the seasonal wetland or ephemeral drainages.

The Proposed Project has been designed to avoid impacts to the North Fork Cosumnes River channel. The contractor will install a temporary platform spanning the North Fork Cosumnes River to serve as a catchment to prevent debris from entering the river during the bridge removal and for access during the bridge removal activities. Installation of the protective temporary platform below the existing bridge would occur in late fall/early winter, immediately following the high fire risk season. No heavy equipment or temporary structures are needed in the river channel for installation of the protective temporary platform. Installation may require construction personal to walk in the river to support efficient placement and removal. The platform would be removed prior to high river flows. Construction would continue through the winter and into spring, with no need for in-water work. As part of the

contract provisions described in Chapter 2, BMPs consistent with the current Caltrans Stormwater Quality Handbooks to protect water quality and minimize the potential for siltation and downstream sedimentation would be implemented; this consists of the contractor preparing an SWPPP, which will outline measures that address the risks of working during the rainy season.

As noted in Chapter 2, all disturbed areas that would result in exposed soil would be restored by a combination of compost application, revegetation with native plants, and hydroseeding with an appropriate native seed mix. The proposed bridge would not require permanent supports below or within the ordinary high-water mark of the North Fork Cosumnes River, and no impacts would occur during operation. The Proposed Project has been designed to avoid impacts to wetlands the North Fork Cosumnes River, no impact will occur and no mitigation is required.

The Proposed Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (Less Than Significant)

The parcels in the project area are located within an El Dorado County-designated Important Biological Corridor (El Dorado County 2004b). The intent of the Important Biological Corridor designation is to provide continuous corridors of vegetation and to provide connectivity between areas of more extensive natural vegetation or greater environmental protection. Construction of the Proposed Project could temporarily disrupt movement of native wildlife species that occur in or adjacent to the Proposed Project.

Daytime construction activities would result in minimal disruption of nocturnal wildlife movement, and construction during daylight hours is exempt from El Dorado County noise standards. If required, nighttime construction activities would be allowed consistent with the requirements in Section 130.37.020(1) of Chapter 130.37, Noise Standards, in the El Dorado County Ordinance Code. The sparse and spread-out residential development provides ample space for wildlife to easily avoid the construction site. Although construction disturbance may temporarily hinder wildlife movements within the Proposed Project site, the impact would be less than significant due to its short-duration.

The Proposed Project would replace the existing bridge in generally the same location and would not significantly affect vegetation corridors designated by the Important Biological Corridor or conflict with the intent of the Important Biological Corridor overlay.

The Proposed Project has been designed to avoid impacts to the North Fork Cosumnes River channel. The contractor would install a temporary platform across the North Fork Cosumnes River to serve as a catchment to prevent debris from entering the river during the bridge removal and for access during the bridge removal activities. No heavy equipment or temporary structures are needed in the river for installation of the protective temporary platform therefore, species movements within the North Fork Cosumnes River would not be affected. Installation and removal may require construction personal to walk in the river to support efficient placement and removal. The short duration of this potential activity limits its possible effects to wildlife movements. The platform would be removed prior to high river flows. Impacts would be less than significant, and no mitigation is required.

The Proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (No Impact)

The Proposed Project would not conflict with local policies or ordinances that protect biological resources. The ORMP and Oak Conservation Resource Ordinance identify oak trees where mitigation is required if removed. However, as discussed above under Section 3.3.1.1, Local Regulations, the Proposed Project is exempt from the mitigation requirements and therefore would not conflict with the ordinance. Although mitigation is not required for the removal of approximately 27 oak trees with a dbh of at least 6 inches, the County would coordinate with property owners on replacement of trees

removed as a result of the Proposed Project. In addition, tree removal would be minimized to the maximum extent possible. The final tree removal determination would be made by the County. There would be no impact associated with conflicting local policies or ordinances, and no mitigation is required.

The Proposed Project is consistent with the County General Plan polices on protecting biological resources, including Goal 7.4 (Wildlife and Vegetation Resources), Objective 7.4.2 (Identify and Protect Resources), and Policy 7.4.2.9 (Important Biological Corridor). The Proposed Project would be constructed in the same general location as the existing Bucks Bar Road bridge and avoid impacts to biological resources in the larger BSA. There would be no impact, and no mitigation is required.

The Proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (No Impact)

The Proposed Project is not located in an area covered by an adopted Habitat Conservation Plan or Natural Community Conservation Plan. In 2017, El Dorado County adopted updated biological resources policies and implementation measures within the General Plan and the ORMP. The Proposed Project would not conflict with the mitigation requirements of the ORMP. There would be no impact, and no mitigation is required.

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3.4 Cultural Resources

This section provides information on the regulatory and environmental setting and analyzes the potential for impacts on cultural resources and, where applicable, mitigation measures to reduce impacts on cultural resources. In this section, cultural resources consist of historic-period and indigenous archaeological sites and built environment resources.

Archaeological resources consist of the physical remains of past human activity that have been preserved in the ground but no longer take the form of a standing structure (e.g., a house or building) and can date to the indigenous or historic period. Built environment resources consist of buildings, structures, objects, sites, or districts. Tribal Cultural Resources (TCR) can include culturally modified and natural places and features. According to PRC Section 21074, a TCR consists of a site, feature, place, or 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. TCRs are addressed in Section 3.5, Tribal Cultural Resources. Built environment resources must be at least 50 years of age or older to qualify as cultural resources[6].

3.4.1 Existing Conditions

3.4.1.1 Regulatory Setting

Federal

National Historic Preservation Act

Archaeological and built environment resources (buildings and structures) are protected through the National Historic Preservation Act (NHPA of 1966, as amended (54 USC 300101 et seq.) and its implementing regulations: Protection of Historic Properties (36 CFR Section 800).

Prior to implementing an *undertaking* (e.g., issuing a federal permit), federal agencies (such as the U.S. Army Corps of Engineers) are required by Section 106 of the NHPA to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (NRHP). NHPA Section 101(d)(6)(A) allows properties of traditional religious and cultural importance to a Tribe to be determined eligible for inclusion in the NRHP. Under the NHPA, a find is significant if it meets the NRHP listing criteria under 36 CFR Part 60.4, as stated below.

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history, or
>
> b. that are associated with the lives of persons significant in our past, or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or

[6] National Bulletin 15, How to Apply the National Register Criteria for Evaluation, and California Code of Regulation, Title 14, Chapter 11.5 Section 4852(d)(2) provides information on the criteria including the age of the historical resource being at least 50 years old.

d. that have yielded, or may be likely to yield, information important in prehistory or history.

Federal review of projects is normally referred to as the Section 106 process, which involves step-by-step procedures that are described in detail in the implementing regulations (36 CFR Section 800) and summarized here.

- Establish a federal undertaking.
- Delineate the Area of Potential Effects (APE).
- Identify and evaluate historic properties in consultation with the SHPO and interested parties.
- Assess the effects of the undertaking on properties that are eligible for inclusion in the NRHP.
- Consult with the SHPO, other agencies, and interested parties to develop an agreement that addresses the treatment of historic properties and notify ACHP.
- Proceed with the project according to the conditions of the agreement.

The Proposed Project would use federal Highway Bridge Program funds from the FHWA and is subject to Section 106 of NHPA as described above.

State

The State of California implements the NHPA through its statewide comprehensive cultural resource preservation programs. The California Office of Historic Preservation (OHP), an office of the California Department of Parks and Recreation (DPR), implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historical Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the state's jurisdiction.

California Environmental Quality Act

CEQA, as codified in PRC Sections 21000 et seq. and implemented via the State CEQA Guidelines (14 California Code of Regulations [CCR] Section 15000 et seq.), is the principal statute governing the environmental review of projects in the state. To be considered a historical resource, a resource must be at least 50 years old. In addition, the State CEQA Guidelines define a *historical resource* as listed below.

a. A resource listed in the CRHR.

b. A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g).

c. Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The CRHR is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The CRHR criteria are based on NRHP criteria (PRC Section 5024.1[b]). Certain resources are determined by CEQA to be automatically included in the CRHR, including California properties formally eligible for or listed in the NRHP. To be eligible for listing in the CRHR as a historical resource, a prehistoric or historic-period resource must be significant at the local, state, and/or federal level under one or more of the following criteria.

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 [14 CCR Section 4852(b)].

For a resource to be eligible for the CRHR, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. A resource that does not retain sufficient integrity to meet the NRHP criteria may still be eligible for listing in the CRHR.

CEQA requires lead agencies to determine if a proposed project would have a significant effect on important historical resources or unique archaeological resources. If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083.2 regarding unique archaeological resources. A *unique archaeological resource* is an archaeological artifact, object, or site that 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.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC Section 21083.2[g]).

The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (14 CCR Section 15064[c][4]).

Assembly Bill (AB) 52

Assembly Bill 52 (AB 52) is an updated CEQA guideline that states that a project that could result in adverse changes to the significance of a tribal cultural resource is considered a project that could result in a significant effect on the environment. Tribal cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe and that are included in the CRHR or in a local register of historical resources or that are determined to be eligible for listing in the CRHR. Tribal cultural resources also include resources that the lead agency, at its discretion, chooses to identify as significant. AB 52 requires that lead agencies consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project and that tribal cultural resources are considered in determining project impacts and mitigation.

Consultation is concluded when either of the following occurs:

- The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists to a tribal cultural resource; or
- A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code Section 21080.3.2, subd. (b)).

Discovery of Human Remains

Section 7050.5 of the California Health and Safety Code requires that, in accordance with subsection (b), in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the California Government Code (CGC], that the remains are not subject to the provisions of Section 27491 of the CGC. Also, in accordance with subsection (c), if the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) (California Health and Safety Code Section 7050.5). Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony.

If the human remains are determined to be Native American in origin, after notification the NAHC will follow the procedures outlined in PRC Section 5097.98. These procedures include the immediate notification of the most likely descendant form the deceased Native American, if possible, and with the permission of the landowner or their authorized representative, allow the descendants to inspect the discovery site and make recommendations for treatment of the remains within 48 hours after the NAHC notification. The immediate vicinity where the Native American remains are located shall not be damaged or disturbed until the landowner has discussed and conferred with the most likely descendants regarding their recommendations as prescribed in PRC Section 5097.98.

Local

El Dorado County General Plan

To protect cultural resources, the Conservation and Open Space Element of the County General Plan (El Dorado County 2004) includes the following goal and policies to protect cultural resources:

- Goal 7.5, *Cultural Resources*, addresses preservation of El Dorado County's important resources through protection of cultural heritage, and includes implementing Policies 7.5.1.1 (Establishing a Cultural Resources Ordinance), 7.5.1.3 (Conducting cultural resource studies (historic, prehistoric, and paleontological resources) prior to approval of discretionary projects), and 7.5.1.6 (Forming a Cultural Resources Preservation Commission to aid in the protection and preservation of the County's important cultural resources).

3.4.1.2 Environmental Setting

This section relies on the expertise from Tremaine & Associates; Pacific Legacy, Inc.; Northwest Cultural Resource Consultants (NWCRC); and Mead & Hunt. The team includes Kim Tremaine, Ph.C. of Tremaine & Associates; Dorothea Theodoratus, Ph.D.; Robert Jackson, M.A.; and Kathleen McBride, M.A. of Pacific Legacy; Jennifer Whiteman, M.A. of NWCRC; and Chad Moffett, M.A., Brian Matuk, M.S., and Timothy Smith, M.A. of Mead & Hunt. Ms. Tremaine is a qualified archaeologist and meets Caltrans Professionally Qualified Staff requirements in prehistoric archaeology. Dr. Theodoratus, Ms. McBride, and Ms. Whiteman meet the qualifications for ethnography in Appendix II of the National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties (NPS 1998). Mr. Moffett, Mr. Matuk, and Mr. Smith all meet the qualifications of the *Secretary of the Interior's Standards for Professional Qualification* in history and architectural history. For the Proposed Project, the following reports have been prepared by the cultural resources team:

- Draft Archaeological Survey Report and Extended Phase I Investigation Report Bucks Bar Road over North Fork Cosumnes River Bridge (25C0003) Replacement Project (Tremaine & Associates, 2021a) (confidential and not for public disclosure)
- *Ethnographic and National Register Evaluation Report, CA-ELD-49 at Bucks Bar Road Bridge (25C0003), El Dorado County, CA* (Ethnographic Report). Federal Project No.: BRLS-5925(051). (Pacific Legacy, Inc., 2020) (confidential and not for public disclosure)
- Historic Property Survey Report Bucks Bar Road over North Fork Cosumnes River Bridge (25C0003) Replacement Project (Tremaine & Associates, 2021b)
- Historic Resource Evaluation Report Bucks Bar Road Bridge (25C0003) over North Fork Cosumnes River Replacement Project (Mead & Hunt, Inc., 2020)

Ethnographic Background

The Proposed Project area lies on the territorial boundary between the Northern Sierra Miwok and the Foothill Nisenan. Detailed information regarding these groups is presented in Section 3.5.1.2 of Section 3.5, Tribal Cultural Resources.

Precontact Archaeology

Defining cultural chronology for this region of the Sierra Nevada has been problematic for researchers due in part to environmental conditions that have discouraged preservation of organic remains appropriate for radiocarbon dating, and the lack of localized, intensive, research-oriented studies. As a result, chronologies have historically been borrowed from adjacent regions and applied to findings in the central Sierra Nevada region. However, studies by various researchers in the last 20 years have provided enough data to begin to develop and refine the North-Central Sierran cultural historical taxonomic framework (Maniery 1993; Shapiro and Jackson 1996; Boyd 1998; Jackson and Ballard 1999; Rosenthal and Waechter 2002; Rosenthal and McGuire 2004).

Pleistocene/Holocene Transition

Archaeological evidence for human use of central California during the late Pleistocene and early Holocene, 12000-7000 Before the Present (B.P.), is scarce; however, archaeological remains of this period have been identified (Johnson 1967; Peak and Crew 1990; Treganza and Heizer 1953). The economy of the California residents during the late Pleistocene is thought to be based on the hunting of large Pleistocene mammals, which became extinct at the Pleistocene-Holocene transition. During the early Holocene, research explains that the subsistence pattern of the people of California was centered on wetlands that provided large game, bird, fish, and vegetal resources. Researchers hypothesize that most groups were nomadic but some, who lived close to lakes or to the coast, might have been more sedentary (Moratto 1984).

Archaic Pattern and Period

The Archaic Pattern and Period (7000-3200 B.P.) is marked by the widespread appearance of hand stones and milling slabs throughout California. This technological innovation is assumed to represent an expanded subsistence base with increased use of seeds and vegetal items. At the very least, the appearance of milling equipment indicates an increase in the milling of seeds. This period, however, is not abundantly represented in the north-central Sierra Nevada region (Jackson and Ballard 1999).

Early Sierran Period

The Early Sierran Period (3200-1400 B.P.) is associated with the use of dart points, milling slabs, and hand stones in the western Sierra. Mortar and pestle use is uncommon during this period. The terminus of this period is coincident with a dramatic decline in obsidian production and the introduction of the

bow and arrow. The regular appearance of obsidian hydration rind thicknesses within this range at several major sites in the region during the Early Sierran Period, and their low frequency at many of the smaller (and poorly sampled) sites in the region, suggests that prime locations served as seasonal base camps for Early Sierran land use. Use of prime locations (abundant freshwater and nearby plant resources at logistically advantageous locations) may have provided small and extended families regular and abundant resources available within a few hours of the project site. Researchers suggest an increased focus and reliance on acorns and deer during the closing centuries of the Early Sierran Period, primarily with milling slabs and hand stones (Jackson and Ballard 1999). This timing places the beginnings of an acorn-based economy at approximately 2000 B.P., generally consistent with other regional findings.

Middle Sierran Period

This Middle Sierran Period (1400-600 B.P.) of human land use in the western Sierra witnessed the introduction of bow and arrow technology and a California-based projectile point series (Tuluwat Series, previously known as Gunther Series), the first extensive use of mortar and pestle technology in the American River watershed, extensive use of the landscape, and a substantial intra-period change in obsidian production. The beginning of this period at about 1400 B.P. witnessed a dramatic regional decrease in obsidian use, possibly reflecting a disruption in the exchange of obsidian from east to west. Whether this disruption resulted from population movements (internal or external) or some environmentally spurred event or conditions is unknown.

The inception of the Middle Sierran Period was coincident with the widespread and apparently rapid appearance of the bow and arrow throughout California and western Great Basin in general, and Tuluwat Series projectile points throughout northern California specifically. Tuluwat Series points are a California phenomenon, with very little evidence of western Great Basin use. As such, it appears to reflect a northern and western origin, whether by adoption of a technology or influx of a population. The significant decrease in Bodie Hills obsidian production, coincident with the widespread occurrence of a California projectile point type, may argue more for a population change than the adoption of a new technology. By the end of the Middle Sierran Period, acorn use is associated with a technological tool assemblage that includes boulder and bedrock mortar features, pitted stones, and the use of hand stones as pestles and with milling slabs.

Late Sierran Period

The Late Sierran Period (600–150 B.P.) was characterized by a widespread, intensive, and specialized use of the western slope of the Sierra. Acorn use was intensive, with an apparent reduced focus on seeds and large and small fauna (e.g., rabbits and deer). Most archaeological sites in the western Sierran have some evidence of Late Sierran Period use. The Late Sierran Period exhibits complex obsidian hydration patterning. A spike in Bodie Hills obsidian tool manufacture at 600 B.P. heralds its beginning, with termination during the mid- nineteenth century. This period witnessed the introduction of Desert Series projectile points, particularly the Desert Side-notched form in the western Sierra. The use of Tuluwat Series points appears to have discontinued, although use of the small corner-notched points continued during the initial centuries of the Late Sierran Period.

Historical Background

Placerville, the nearest populated city during the 1800s, is only 8 miles northwest of the Bucks Bar Road bridge. As Placerville grew during the 1850s, it became a transportation and trade center for the central region of the Sierra Nevada foothills. Placerville was not evolving into a mining town, such as Grass Valley or Jackson, but rather a center for services and supplies. In 1853, Placerville persuaded El Dorado County to declare the wagon road over the Sierra Nevada to Nevada Territory as a public thoroughfare.

Placerville initially relied on private capital to maintain the road but eventually operated it as a private toll road beginning in 1858.

Diamond Springs is 6 miles northwest of the Bucks Bar Road bridge. Historically, it was just another well-watered rest stop on the Carson Emigrant Trail until a Missouri pioneer unearthed a 25-pound gold nugget there around 1851. The discovery was enough to convince 200 Missouri natives who had been camping in Diamond Springs to stay on and erect the town's first clapboard buildings.

On the south side of the North Fork Cosumnes River, southeast of Diamond Springs, a gold mining camp existed. Historic maps available for examination include a General Land Office Survey Plat from 1870 and United States Geological Survey maps from 1893, 1952, and 1973.

The El Dorado County Board of Supervisors voted in 1854 to award Daniel Hoag a franchise to operate a toll bridge at Bucks Bar, proposed for an earlier site adjacent and to the northeast of the current bridge crossing. It was not until 1857 that a passable road had been created and designated by El Dorado County as a public right-of-way. The toll road and toll bridge operated as the Bucks Bar Turnpike and Bridge Company. Several bridges constructed between 1854 and 1869 were lost to floods. The state deeded the road to El Dorado County in 1889. The road remained in use and could be forded during summer and fall.

The California Door Company used Bucks Bar Road between 1891 to 1904 to transport goods from the California Door Company to Diamond Springs, according to local historian George Peabody (Peabody 1989). In 1915, a new bridge was constructed across the river on the current alignment (Mead & Hunt 2020). Bucks Bar Road was realigned beginning at the current intersection of Bucks Bar Road and Bucks Bar Circle south to the bridge location. The relocation of the road up the hill slope required blasting of the granitic hillside.

These discoveries of gold, subsequent settlements, and the dangerous crossing fueled the need for a permanent bridge structure over the North Fork Cosumnes River. The Bucks Bar Road bridge was to serve the traffic between various settlements within the foothills who wished to partake in the booming economy. The 1940/ 1941 bridge was built to replace the previous 1915 covered bridge. Neither bridge appears to have fostered additional development in the area, although the bridge crossing allowed for improved travel within the region (Mead & Hunt 2020).

Mining is documented through local mining claims at Bucks Bar as early as 1854. It is highly likely, however, that placer mining took place at this location at the earliest arrival of individuals looking to make their fortune in the California Gold Rush. In the late 1850s, Sow Eng and Hop Yun purchased a mining claim about ¼ mile east of the current bridge at Bucks Bar and developed the claim by constructing a dam and ditch to facilitate washing of placer gravels (Peabody 1989). Later, the ditch water was reportedly used to turn a water wheel to operate a small stamp mill and run water through sluices (Mead & Hunt 2020).

The Horseshoe Dredging Company conducted a placer gravel mining operation upstream of the bridge in the 1920s and 1930s. California Division of Mines and Geology (CDMG) shows the approximate location of mining operation #709 on Plate 2 of the 2001 CDMG Mineral Land Classification of El Dorado County (CDMG 2001). The mining operation was described as occurring in a modern channel with gravel 8 to 16 feet thick. The 1987 Mineral Land Classification of the Camino and Mokelumne Hill 15-Minute Quadrangles, El Dorado, Amador, and Calaveras Counties, California (CDMG 1987) makes the following statement about the mining operation: “Placer. Gravels 8-16 ft deep. Dragline worked in 1936 and 1928 by Horseshoe Dredging Co.”

Mining operations appear to have extended from the east side of the bridge to approximately 1,700 feet upstream. On the north side of the river, the mining disturbance extended up to 400 feet from the river; on the south side, the disturbance extended up to 200 feet from the river. On the two parcels that abut

the south side of Bucks Bar Road, there was a band of shrubs and trees adjacent to the road. Both of these upstream parcels include portions that have been mined.

3.4.1.3 Existing Cultural Resources

Efforts to locate cultural resources consisted of archival research, a records search, consultation with the NAHC and Native American representatives, as well as historical societies and other interested parties, pedestrian surveys, and Extended Phase I (XPI) testing (subsurface testing).

Consistent with 36 CFR 800.16(d), the APE represents the area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties if any such properties exist. The APE encompasses the entire County right-of-way, temporary construction easements, and acquisition of right-of-way. Caltrans approved an initial APE in May 2015, prior to the commencement of the ethnographic studies. Caltrans approved a final, revised APE on September 24, 2020, based on refinements of the Proposed Project design. The APE is approximately 5.38 acres and encapsulates the maximum area needed for the construction of the Proposed Project (project footprint). The maximum horizontal extent of the APE is roughly 1,700 feet long aligned with Bucks Bar Road and 300 feet wide. The APE encompasses both sides of the river.

Records Search and Archival Research

On September 18, 2014, Tremaine & Associates requested a records search at the North Central Information Center (NCIC) located at California State University, Sacramento to identify previous sites and surveys present within a 0.5-mile radius of the APE (Records Search No. ELD-14-73). The results were provided to Tremaine & Associates on October 7, 2014. A subsequent records search update was conducted in January 2019 (Records Search No. ELD18-116). In addition to the official records and maps for archaeological sites and studies, the following sources were reviewed:

- Directory of Properties in the Historic Property Data File for El Dorado County
- Archaeological Determinations of Eligibility
- California Historical Resources
- Caltrans State and Local Bridge Surveys
- California Place Names
- Historic Spots in California
- How about That! An Anthology of Historical Stories
- Handbook of the Indians of California
- California Archaeology
- Handbook of North American Indians, Volume 8: California

Previous Studies and Previously Recorded Sites

The Archaeological Survey Report (ASR) documents that four previous studies conducted between 1989 and 2006 were identified by the NCIC as occurring within 0.5-mile of the APE, although the records search only identified one previous study within the APE.

Five cultural resources have been recorded within the 0.5-mile radius of the APE. A December 2018 records search update did not reveal additional resources. A copy of a site record for CA-ELD-50 was requested, even though it was known to be outside the search radius, at the behest of Native Americans who wanted some evaluation of the relationship of that site with the Proposed Project area.

P-09-5428

P-09-5428 is the Bucks Bar Bridge (No. 25C0003), which was determined not eligible for listing in the NRHP in the 2004 Caltrans report *Caltrans Historic Bridges Inventory Update: Concrete Arch Bridges, Volume I* (JRP 2004). The County retained Mead & Hunt to reevaluate the bridge for eligibility for listing on the NRHP (Mead & Hunt 2020). On August 14, 2020, the bridge was listed in the California Register of Historic Resources (California Register) by the State Historical Resources Commission (SHRC), based on an updated draft nomination (Mikesell 2019). See Section 3.4.1.6, Findings, for more information.

CA-ELD-48

CA-ELD-48 is recorded as an archaeological resource. As originally recorded in 1956, the resource measures 50 feet by 75 feet. The 1956 site record indicates that Native Americans may have lived at or used the location in the early 20th century.

CA-ELD-49/*Pulak*

Researchers originally recorded archaeological site CA-ELD-49/*Pulak* in 1956. At that time, very few surface artifacts were identified. In 2011, a qualified archaeologist working with Dokken Engineering re-recorded the site and extended the boundaries.

CA-ELD-50

In 1956, this site's location was plotted based upon anecdotal evidence. The site record does not identify who reported this information.

3.4.1.4 Correspondence

Native American Consultation

The County has been consulting with the Native American tribes in accordance with AB 52. Per NAHC, goals of the AB 52 Native American Consultation are:

- To discuss mandatory and discretionary topics requested by tribe, particularly significance of tribal cultural resources, avoidance, preservation in place, and/or mitigation measures;
- To achieve resolution on those topics; and
- If resolution is not possible, to document why and what efforts were made.

Native American consultation for the Proposed Project has been extensive. Outreach for the Proposed Project was originally initiated in January of 2011 during the early planning phase, then re-initiated in August of 2014 and again in May 2022. Consultation efforts continue throughout the preparation of this Draft EIR in providing advanced review and discussion of Draft EIR sections and mitigation. Native American consultation key milestones are recorded in chronological order in Exhibit 3-16 below.

Initial Outreach

On August 27, 2014, a sacred lands search and consultant list was requested from the NAHC by Tremaine & Associates. On September 2, 2014, a response from the NAHC was received stating that their search of the sacred land file failed to indicate the presence of Native American cultural resources in the immediate project area. The NAHC provided a list of Native American individuals/organizations who may have knowledge of cultural resources in the project area. On September 3 and 4, 2014, Caltrans mailed letters and project maps to representatives of the following:

- Shingle Springs Band of Miwok Indians (SSBMI)
- Ione Band of Miwok Indians (Ione Band)
- Nashville- El Dorado Miwok

- Washoe Tribe of Nevada and California
- Randy Yonemura (Ione Band of Miwok)
- April Wallace Moore (Nisenan- Southern Maidu)
- El Dorado Indian Council
- El Dorado Miwok (the El Dorado Miwok are not listed with the NAHC)

Additional correspondence performed by Tremaine & Associates on behalf of the County included emails and telephones calls in September of 2014. These efforts included providing Proposed Project information and offering Tribal representatives to attend a County-led field review. In August 2015, the United Auburn Indian Community (UAIC) became involved in the Proposed Project and requested copies of cultural documentation and provided their comments.

Native American Responses

In September 2014, three Native American groups responded to County correspondence (Ione Band, El Dorado Miwok, and El Dorado Indian Council) stating that they had concerns about the Proposed Project and wanted to be included in future consultations. These groups requested copies of all surveys, cultural resource reports, and environmental impact reports.

Tremaine & Associates provided the requested information and contacted each representative via telephone to discuss the Proposed Project and the Tribes' concerns and inform them of the field review opportunities.

Field Reviews

From September 2014 through October 2015, a series of field reviews provided avenues for consultation, site-specific cultural insights, and opportunities to clarify the risk and type of project impacts. Field reviews during this time period involved representatives of the following tribes: SSBMI, Ione Band, El Dorado Indian Council, and the El Dorado Miwok Tribe.

Stated concerns by Tribal members during the field visits included the possibility that the cultural site extended northward and connected with CA-ELD-48 on the adjacent property as well as possibly beneath the current road prism under existing boulder rubble.

Exhibit 3-16 records various field visits and Proposed Project coordination events.

Exhibit 3-16. Early Coordination Events with Native Americans

Date	Event	Primary Discussion issues
September 23, 2014	Field review	Discussed ground disturbance and avoidance measures for minimizing impacts to cultural resources and other environmental impacts (e.g., possible endangered species, black oaks, and revegetation plan).
November 2014	A representative from the El Dorado Miwok Tribe acted as monitor overseeing geotechnical boring exploration	Explorations did not result in impacts to or finding of culturally significant features.
March 2015	Meeting to discuss the findings of the XPI testing	Provided updates regarding the XPI findings.

		Reviewed design modifications that would be made and measures to avoid/minimize cultural impacts to specific features. Discussed determination of eligibility of the cultural site and possible Proposed Project design changes to minimize impacts.
April 2015	Circulated a Draft Environmentally Sensitive Area (ESA) Action Plan	No written comments were received until receipt of the letter from UAIC's attorney on November 16, 2015.
October 2015	Field meeting to include the UAIC in Proposed Project discussions and review site features.	Discussed possible impact to the tribal cultural features due to implementation of the Proposed Project.

In November of 2015, the County stopped the Initial Study/Mitigated Negative Declaration it had prepared for the Proposed Project's CEQA compliance based on what the County learned about the project site through the CEQA process.

Preparation and Review of the Ethnographic Study and Cultural Reports

The County identified Pacific Legacy Associates as the firm with appropriate qualifications to initiate an ethnographic study in May 2017. The findings of this study were used to conduct a Phase 2 evaluation of CA-ELD-49/*Pulak*, considering its eligibility as a TCR pursuant to AB 52 (Chapter 532, Section 4, 21074 (a). It was also evaluated as a TCP, pursuant to Section 106 of the NHPA. The Ethnographic Report concluded that the site met the criteria of eligibility as a TCP under Section 106 of the NHPA (Pacific Legacy 2020). The Ethnographic Report also recommended the site as a TCR under AB 52 (Pacific Legacy 2020). The TCRs are addressed under Section 3.5, Tribal Cultural Resources. A list of studies pertaining to, cultural resources, archeological resources and tribal cultural resources associated with the Proposed Project is included in Appendix D (Confidential Reports Not for Public Disclosure).

After the preparation of the draft Ethnographic Report in 2018, additional field surveys were conducted with Tribal representatives present to record additional features identified during the consultation process. California Department of Parks and Recreation (DPR) forms were prepared, and the draft ASR/XPI report was updated. A revised draft copy was sent to Tribal consultants in August 2018 requesting review and comments.

Since August 2018, the County has corresponded with and held field meetings with UAIC to discuss the revised draft ASR/XPI report as well as the Ethnographic Report, the Proposed Project, an archaeological map and a draft TCP map, and details of the cultural features and mapping. Meetings occurred in October 2018, March 2019, May 2019, and again on April 19, 2020. On September 4, 2020, UAIC replied to the County with comments on the draft Historical Resources Evaluation Report and requested that the County distribute the revised draft ASR/XPI Report and Ethnographic Report to tribal representatives at the Ione Band, Wilton Rancheria, and SSBMI. The County met at the project location with the SSBMI's Executive Director on September 4, 2020. The County sent emails with the link to download the revised ASR/XPI report and the Revised Ethnographic Report to the Tribal representatives on September 8, 2020.

Other Consultation Activities

Consultation activities in 2021 involved discussions between the County and the affiliated consulting Native American tribes regarding project design and an on-alignment design. A site visit was held on 19 April 2021 for the purpose of discussing project alternatives. The County responded to various information requests from the UAIC regarding cultural resources surveys and project alternatives..

During 2022 consultation activities included the County sending advanced draft environmental impact report (EIR) chapters to the UAIC for review and comment. The County also sent UAIC a link to the draft ESA Action Plan and PDRMP. Virtual meetings were held 14 November 2022 and 8 December 2022 to discuss the comments on the draft EIR received from UIAC.

In 2023 and 2024 the County hosted nine intertribal meetings to provide updates on the project, discuss the timing of the CEQA EIR, discuss the existing bridge and the alternatives considered, discuss mitigation measures and options, and hear the concerns of the UAIC. On 22 August 2023 the County provided the affiliated consulting Native American tribes with the revised ESA Action Plan and PDRMP.

Historical Society Consultation

Tremaine & Associates contacted relevant preservation groups within El Dorado County to inquire about the local history of the APE. This consultation began on August 27, 2014, with letters to the Heritage Association of El Dorado County, the El Dorado County Historical Society, and the El Dorado County Historical Museum. A second consultation request was made to these three preservation groups on May 22, 2020 (Mead & Hunt 2020). Based on a phone call with the El Dorado County Historical Museum in September 2020, there was no additional information regarding the history.

3.4.1.5 Fieldwork

Built Environment

Mead & Hunt, Inc. conducted field survey work for built environment resources in the APE in 2020. The field survey work was completed by architectural historians who met the qualifications of the *Secretary of the Interior's Standards for Professional Qualification* in history and architectural history. The field survey was completed on May 15 and June 5, 2020. High-resolution digital images of the historic era resources were taken, and descriptive information based on visual observations were made to evaluate the architectural integrity. The information collected was used to complete the DPR 523 forms.

Pedestrian Survey

Pedestrian surveys of the project area started in 2011 when the initial APE was surveyed by an archaeologist. The pedestrian survey included the entire APE on both sides of the North Fork Cosumnes River.

During pedestrian surveys of the APE, ground visibility was fair on the north side of the river. Ground at the far north end of the APE was covered by a gravel driveway and sparsely covered in grass. Ground nearest the river was covered in duff from the conifer overstory. Ground visibility on the south side of the river was poor. Ground visibility was obscured by the existing cabin and walkway located at the top of the south bank as well as the private driveway to the cabin. The private driveway corridor was observed to be located on modified ground surrounded by thick vegetation at the toe of the Bucks Bar Road fill prism. It was observed that Bucks Bar Road, the fill slope down to the driveway, and the driveway itself occur on artificial fill overlaying granitic rocks.

The APE was reexamined by an archaeologist during monitoring of geotechnical borings between November 4 and 6, 2014. Noted disturbances to the terrain during the November 2014 survey included construction for the existing Bucks Bar Road along the western boundary of the APE and the construction of an earlier wagon road (narrow swale) that cuts through directly below the current Bucks Bar Road roadway prism. These modifications to the landscape may have impacted the integrity of the site. Evidence of blasting along the rock face on the upslope side of the current road is apparent. Rubble from the blast tumbled downslope.

During a field visit with Tribal representatives on March 17, 2015, the Tribal representatives identified a feature. Additional features were recorded, and an updated site record was prepared. The DPR forms

were subsequently updated following the ethnographic study to include more features identified by Tribal representatives. Recordation of additional features identified by Tribal representatives (Kim Petree and Joe Speck from the El Dorado Miwok Tribe) was completed on June 22, 2018.

An additional site visit occurred on July 17, 2019, with Tribal representatives, archaeologists from Tremaine & Associates and Pacific Legacy, a geologist, and County representatives.

Geotechnical Monitoring

Between November 4 and 6, 2014, three geotechnical bores were completed. During the boring work, a Tribal Monitor was on site and ensured that ground disturbance around the boring sites was as minimal as possible to avoid impacts on the features. The core samples were documented, and the recovered sediments examined for cultural resources.

Extended Phase I Testing

XPI subsurface testing for the Proposed Project was conducted on January 26 and 27 and February 2, 2015. The objectives of the XPI testing were to determine the following:

- Whether subsurface cultural deposits were present
- Whether the adjacent archaeological site extends into the APE

Methods utilized included the excavation of ten 50-centimeter x 50-centimeter shovel test units (STUs), with auger bores placed in the bottom of the units. All recovered sediments were screened through 0.25-inch mesh.

Site Recordation

The site was originally recorded in 1956. The record was subsequently updated in November 2014, and again in June 2018 and May 2019 when additional features were identified during the development of the ethnographic study and reporting. In July 2019, the County and UAIC arranged for the County to perform a survey to map features identified in a letter from UAIC in May 2019. The survey updated the locations of Tribal features for inclusion in the draft cultural resource reports.

3.4.1.6 Findings

Built Environment Resources

Three built environment resources were determined to meet preliminary historical criteria, being at least 50 years old and evaluated within the APE to determine the eligibility for listing in the National Register (Mead & Hunt 2020). Originally, the Bucks Bar Bridge (Bridge No. 25C0003), the Elmira Hutton Cabin, and the abandoned segment of Bucks Bar Road were recommended not eligible for listing in the NRHP.

The Elmira Hutton Cabin and the abandoned segment of Bucks Bar Road were not recommended eligible and not considered Historical Resources for the purposes of CEQA.

On August 14, 2020, the Bucks Bar Bridge was listed in the California Register by the SHRC based on an updated draft nomination written by Stephen Mikesell, dated July 30, 2019, and is considered a Historical Resource for the purposes of CEQA. In February 2023 the SHPO concurred with Caltrans that CA-ELD-49/Pulak was eligible for listing on the National Register of Historic Places. The August 13, 2020, draft SHRC staff report for the nomination of the Bucks Bar Bridge to the CRHR states:

> "*The property is eligible for the California Register of Historical Resources under Criterion 1 for its association with the development of transportation in southern El Dorado County, ending in 1970 when transportation patterns shifted due to El Dorado County's wine boom, and Criterion 3 as a*

locally significant example of open-spandrel reinforced concrete arch bridge design. The bridge retains a high degree of historic integrity in all aspects."

The August 13, 2020, draft SHRC staff report concludes that:

"*While the Bucks Bar Bridge is relatively modest in size, scale, and significance, in no way equal to the grandest and most dramatic bridges in California, it meets the minimum requirements for listing in the California Register, a program designed to identify and recognize properties of this sort. The Commission finds that the Bucks Bar Bridge is eligible for listing in the California Register of Historical Resources based on this information, the historical or cultural significance of the resource is identified, and that the overriding significance of the resource justifies listing the resource in the California Register over the objections of the local government.*"

Archaeological Resources

CA-ELD-49/*Pulak* consists of notable features and archeological resources. The resource is also identified as a TCP under Section 106 NHPA and a TCR under AB 52 (Pacific Legacy 2020) (see Section 3.5, Tribal Cultural Resources, for further discussion).

An XPI investigation revealed no evidence of cultural deposit. Subsequently, Tremaine & Associates conducted 10 STUs. No artifacts were found in the 10 STUs.

No indication of a substantial cultural deposit was found that could be attributed to either CA-ELD-49/*Pulak*.

3.4.2 Environmental Impacts

3.4.2.1 Methods of Analysis

This Draft EIR analyzes whether the Proposed Project would have the potential to adversely affect existing cultural resources. The identified resources within the APE have been examined for their significance and the potential for the Proposed Project to result in impacts on that significance[7]. CEQA requires an assessment of a project's potential effects on significant historical resources (i.e., those that are listed or eligible for listing in the CRHR or in a local register or survey that meets the requirements of PRC Sections 5020.1[k] and 5024.1[g]). This assessment entails the following steps:

- Identify potential historical resources.
- Evaluate the significance of identified historical resources.
- Evaluate the anticipated effects of a project on all significant historical resources.

Under CEQA, only effects on significant resources are considered potentially significant, so only those impacts require detailed analysis.

[7] It has been common practice for many CEQA practitioners to provide performance-based mitigation for cultural resources, stipulating that further evaluation and treatment of resources would be performed in the future. The 2011 decision from the Madera Oversight Coalition, Inc. v. County of Madera and Tesoro Viejo, Inc. (2011 [199 Cal. App.4th 48, 81]) case determined this practice to be unacceptable under CEQA and required evaluation of cultural resources subject to CEQA to be performed at a level sufficient to characterize the resources prior to EIR certification, instead of waiting until preconstruction or construction stages of a project. Additionally, the case determined that if preservation of the resource in the place it is located is not employed, which is the preferred mitigation under CEQA (14 CCR Section 15126.4[b][3]), the EIR should disclose why that is not feasible. Cultural resources evaluations in this EIR have been completed consistent with the Madera Oversight decision.

3.4.2.2 California Register of Historic Resources Criteria

The criteria for the National Register are nearly identical to the California Register. To qualify for listing in the CRHR and to be considered a historical resource for the purposes of CEQA, a resource must meet one or more of the criteria set forth in PRC 5024.1 and the CCR (CCR Title 14, Chapter 11.5, Section 4850 et seq). Criteria include the following:

- **Criteria 1:** Association with events that have made a significant contribution to broad patterns of local or regional history.
- **Criteria 2:** Association with the lives of persons important to local, California, or national history.
- **Criteria 3:** Embodies the distinctive characteristics of a type, period, or region, has high artistic value, or is the work of master.
- **Criteria 4:** Has potential to yield information important to prehistory or history.

3.4.2.3 Thresholds of Significance

In accordance with Appendix G of the state CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?
- Cause a substantial adverse change in the significance of an archaeological[8] resource pursuant to Section 15064.5?
- Disturb any human remains, including those interred outside of formal cemeteries.

3.4.2.4 Impacts and Mitigation Measures

The Proposed Project would cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5. (Significant and Unavoidable Impact)

The Proposed Project would remove and replace the Bucks Bar Road bridge, which was listed in the CRHR on August 14, 2020. PRC Section 21084.1 states in part "A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. For purposes of this section, an historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources…". In accordance with PRC Section 21084.1, the Proposed Project would result in a "…substantial adverse change in the significance of an historical resource…" by removing the existing bridge, which is listed in the CRHR. Therefore, the Proposed Project would have a significant effect on the environment. **The removal of the existing Bucks Bar Bridge is identified as significant and unavoidable (Impact CUL-1).**

Mitigation of significant impacts must lessen or eliminate the physical impact that a project would have on the historical resource. This is often accomplished through redesign of a project to eliminate objectionable or damaging aspects of the project. The County has committed to implementation of **Mitigation Measure CUL-1** to reduce impacts. The demolition of a historic structure listed or eligible for listing on the CRHR cannot be mitigated to less than significant. Even with the implementation of **Mitigation Measure CUL-1**, **Impact CUL-1** would remain a significant and unavoidable impact.

[8] For this evaluation of impacts on archeological resources, the TCR is not included and evaluated as part of the archaeological resource that CEQA refers to in this impact evaluation.

Mitigation Measure CUL-1: Historic American Engineering Record (HAER)

The HAER documentation preserves important information about historical engineering. The following lists the steps to be taken in the development of the HAER documentation for the Proposed Project:

- Prior to the start of construction, the County's architectural historian in consultation with the SHPO shall prepare a HAER consistent with the National Park Service latest guidelines to determine the level of and procedures for completing the documentation of the existing bridge.
- The County/Caltrans will ensure that all recordation documentation activities are performed or directly supervised by architects, historians, photographers, and/or other professionals meeting the qualification standards in the Secretary of Interior's Professional Qualification Standards (Appendix A of 36 CFR 61).
- Upon receipt of the SHPO concurrence of level and procedures for HAER documentation, the County/Caltrans will make archival, digital, and bound library-quality copies of the documentation and provide them to the appropriate parties and the California State Library.
- The County/Caltrans will notify SHPO that the documentation is complete, and all copies distributed will include the completion of the documentation in the annual report. All field surveys will be completed prior to the start of construction.

The Proposed Project would cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5. (Significant and Unavoidable Impact)

CA-ELD-49/*Pulak* is eligible for both the NRHP and CRHR as a TCP and TCR respectively and is recognized as a TCR under AB 52 and incorporates archaeological resources. TCRs are addressed in Section 3.5, Tribal Cultural Resources.

Although the County has undertaken extensive efforts to avoid and minimize impacts to all identified features within the APE, including but not limited to re-designs of the Proposed Project as resources were identified, the Proposed Project still has the potential to impact unidentified features. Through field reviews, surveys, and XPI investigations, experts and cultural representatives have documented that, over time, contributing features have been disturbed, covered, or lost under both natural and man-made actions.

The Proposed Project design includes retaining walls to minimize the footprint, avoids in-water work, and fencing would be included to separate the construction zone from known features. Fencing would use above-ground foundation supports where possible soil disturbance could impact an identified feature. However, the archeological resources not previously identified could either be disturbed, temporarily relocated, or destroyed either directly or indirectly after construction starts. Direct impact would consist of damage to the resource or movement of the resource from its original position. Indirect impacts may result from shifts in the site during construction resulting in changes in visual, shadow, and/or geotechnical condition through ground vibration on features not already identified. In accordance with PRC section 21084.1, the Proposed Project could result in a "…substantial adverse change in the significance of an historical resource." Therefore, the Proposed Project could have a substantial adverse change to resources with cultural value to a California Native American Tribe. **The substantial adverse change to resources with cultural value to a California Native American Tribe is identified as significant and unavoidable (Impact TCR-2).** This significant impact cannot be mitigated to less than significant, even with the implementation of mitigation (**Mitigation Measure TCR-1, Mitigation Measure TCR-2 and Mitigation Measure TCR-3**). See Section 3.5, Tribal Cultural Resources, for more

details on this evaluation and the description of **Mitigation Measure TCR-1, Mitigation Measure TCR-2 and Mitigation Measure TCR-3**.

The Proposed Project has the potential to result in the disturbance of human remains, including those interred outside of formal cemeteries. (Potentially Significant Impact)

No known human remains were found within the APE during the field surveys, including the pedestrian survey, geotechnical monitoring, and XPI testing. However, there is the possibility of accidental discoveries of human remains during construction-related, ground-disturbing activities.

The implementation of the procedures outlined in the Health and Safety Code Section 7050.5[b] and PRC Section 5097.98, would minimize impacts, however, if Native American or other human remains are encountered the impact would be significant (Impact CUL-2). Implementation of **Mitigation Measure CUL-2** will reduce potential impacts to less than significant.

Mitigation Measure CUL-2: Inadvertent Discovery of Human Remains

Provisions of state and local law applicable to the intentional excavation and the inadvertent discovery of human remains or cultural items on non-federal lands will be complied with, pursuant the provisions of the California Health and Safety Code (Sections 7050.5–7054.1, and 8100) and the Public Resources Code (PRC) Sections 5097.90–99 shall apply. The pertinent excerpts include:

1. Per California Health and Safety Code 7050.5(b): In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.
2. Per California Health and Safety Code 7050.5(c): If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.
3. Per PRC Section 5097.98(a): Whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants

shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

4. Per PRC Section 5097.98(b in part): Upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section, with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.
5. Native American human remains, associated grave goods, and items associated with Native American human remains that are subject to California PRC Section 5097.98 will not be subjected to scientific analysis, handling, testing or field or laboratory analysis without written consent from the most likely descendant. If human remains are present, treatment shall conform to the requirements of state law under California Health and Safety Code Section 7050.5 and PRC Section 5097.87, unless the discovery occurs on federal land. The County will comply with other related state laws, including the requirements of PRC Section 5097.9 (et seq).

3.5 Tribal Cultural Resources

This section identifies the regulatory and environmental setting for and discusses potential impacts to tribal cultural resources. According to PRC Section 21074, a TCR consists of a site, feature, place, or 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.

The County initiated consultation with Native American Tribes in 2011 prior to the adoption of AB 52, however the County is fulfilling AB 52 consultation obligations with Native American Tribes with expressed interest in the Proposed Project. This section is based on information obtained through consultation with the culturally affiliated consulting Native American tribes and an Ethnographic and National Register Evaluation Report (Ethnographic Report [Confidential Report – Not for Public Disclosure]) (Pacific Legacy 2020) prepared for the Proposed Project. The results of these reports are summarized below and do not include confidential information for protection of culturally sensitive resources.

The County has consulted with several California Native American Tribes on several portions of this Draft EIR, including SSBMI, Ione Band, UAIC, Wilton Rancheria, and El Dorado Miwok.

3.5.1 Existing Conditions

3.5.1.1 Regulatory Setting

Federal

National Historic Preservation Act

Archaeological and built environment resources (buildings and structures) are protected through the National Historic Preservation Act (NHPA of 1966, as amended (54 USC 300101 et seq.) and its implementing regulations: Protection of Historic Properties (36 CFR Section 800).

Prior to implementing an *undertaking* (e.g., issuing a federal permit), federal agencies (such as the U.S. Army Corps of Engineers) are required by Section 106 of the NHPA to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (NRHP). NHPA Section 101(d)(6)(A) allows properties of traditional religious and cultural importance to a Tribe to be determined eligible for inclusion in the NRHP. Under the NHPA, a find is significant if it meets the NRHP listing criteria under 36 CFR Part 60.4, as stated below.

> "*The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:*
>
> *a. that are associated with events that have made a significant contribution to the broad patterns of our history, or*
>
> *b. that are associated with the lives of persons significant in our past, or*
>
> *c. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or*
>
> d. *that have yielded, or may be likely to yield, information important in prehistory or history*"

Federal review of projects is normally referred to as the Section 106 process, which involves step-by-step procedures that are described in detail in the implementing regulations (36 CFR Section 800) and summarized here.

- Establish a federal undertaking.
- Delineate the Area of Potential Effects (APE).
- Identify and evaluate historic properties in consultation with the SHPO and interested parties.
- Assess the effects of the undertaking on properties that are eligible for inclusion in the NRHP.
- Consult with the SHPO, other agencies, and interested parties to develop an agreement that addresses the treatment of historic properties and notify ACHP.
- Proceed with the project according to the conditions of the agreement.

The Proposed Project would use federal Highway Bridge Program funds from the FHWA and is subject to Section 106 of NHPA as described above.

State

The State of California implements the NHPA through its statewide comprehensive cultural resource preservation programs. The California Office of Historic Preservation (OHP), an office of the California Department of Parks and Recreation (DPR), implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historical Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the state's jurisdiction.

California Environmental Quality Act

CEQA, as codified in PRC Sections 21000 et seq. and implemented via the State CEQA Guidelines (14 California Code of Regulations [CCR] Section 15000 et seq.), is the principal statute governing the environmental review of projects in the state. To be considered a historical resource, a resource must be at least 50 years old. In addition, the State CEQA Guidelines define a *historical resource* as listed below.

a. A resource listed in the CRHR.

b. A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g).

c. Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The CRHR is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The CRHR criteria are based on NRHP criteria (PRC Section 5024.1[b]). Certain resources are determined by CEQA to be automatically included in the CRHR, including California properties formally eligible for or listed in the NRHP. To be eligible for listing in the CRHR as a historical resource, a prehistoric or historic-period resource must be significant at the local, state, and/or federal level under one or more of the following criteria.

    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 [14 CCR Section 4852(b)].

For a resource to be eligible for the CRHR, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. A resource that does not retain sufficient integrity to meet the NRHP criteria may still be eligible for listing in the CRHR.

CEQA requires lead agencies to determine if a proposed project would have a significant effect on important historical resources or unique archaeological resources. If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083.2 regarding unique archaeological resources. A *unique archaeological resource* is an archaeological artifact, object, or site that 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.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC Section 21083.2[g]).

The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (14 CCR Section 15064[c][4]).

Assembly Bill 52

AB 52, which took effect July 1, 2015, amended the Native American Historic Resource Protection Act to require consultation with Native American Tribes that are traditionally and culturally affiliated with the geographic area in which a project requiring CEQA review is proposed if those Tribes have requested to be informed of such proposed projects. PRC Sections 21080.3.1, 21080.3.2, and 21080.2.3, require that lead agencies undertaking a CEQA review must, upon written request of a California Native American Tribe, begin consultation prior to the release of a draft EIR or notice of intent to adopt a negative declaration or mitigated negative declaration. The changes to the CEQA Guidelines Appendix G (Initial Study) as required by AB 52 were approved by the Office of Administrative Law on September 26, 2016. The changes introduced the TCR as a class of cultural resources as well as additional considerations relating to Native American consultation into CEQA that require lead agencies to consider whether projects will affect TCRs. PRC Section 21074 states:

(a) Tribal cultural resources" are either of the following:

1) Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe that are either of the following:

A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

(b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Recognizing that California Native American Tribes are experts in their TCR and heritage, AB 52 amended CEQA to require lead agencies to initiate consultation with Tribes at the commencement of the CEQA process to identify TCRs. Furthermore, when a substantial adverse change to a TCR is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures. Consultation is concluded when either of the following occurs:

- The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists to a tribal cultural resource; or
- A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code Section 21080.3.2, subd. (b)).

Local

El Dorado County General Plan

The Conservation and Open Space Element of the El Dorado County General Plan (El Dorado County 2004) includes the following goal and policies to protect TCRs.

- Goal 7.5, Cultural Resources, addresses preservation of El Dorado County's important resources through protection of cultural heritage, and includes implementing Policies 7.5.1.1, 7.5.1.3, and 7.5.1.6.
- Policy 7.5.1.1 requires that the appropriate Native American monitors (in accordance with guidance from the NAHC) are notified regarding projects involving significant ground-disturbing activities that could affect significant resources.

3.5.1.2 Environmental Setting

The following information has been summarized from the following documents:

- *Ethnographic and National Register Evaluation Report, CA-ELD-49 at Bucks Bar Bridge* (No. 25C0003) (Ethnographic Report) (Pacific Legacy 2020; Confidential Report – Not for Public Disclosure)
- *Archaeological Survey and Extended Phase I Investigation Report* (Tremaine 2021; Confidential Report – Not for Public Disclosure)

Area of Potentials Effects

Consistent with 36 CFR 800.16(d), the APE represents the area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties if any such properties exist. The APE encompasses the entire County right-of-way, temporary construction easements, and acquisition of right-of-way. Caltrans approved an initial APE in May 2015, prior to the commencement of the ethnographic studies. Caltrans approved a final, revised APE on September 24, 2020, based on refinements of the Proposed Project design. The APE is approximately 5.38 acres and encapsulates the maximum area needed for the construction of the Proposed Project (project footprint). The maximum horizontal extent of the APE is roughly 1,700 feet long aligned with Bucks Bar Road and 300 feet wide. The APE encompasses both sides of the river.

Cultural Context

The cultural context found in Section 3.4.1.2 documents the indigenous background for the western Sierra Nevada foothills supported by the findings and information discovered through field work and consultation with Native American Tribes which is applicable for understanding the TCR evaluated in this section.

Ethnographic/Ethnohistoric Context

This summary of the extensive ethnographic and ethnohistoric information available for Native American people with affiliations to the Bucks Bar Bridge area is taken from the Ethnographic Report (Pacific Legacy 2020).

The Proposed Project lies on the territorial boundary between the Northern Sierra Miwok and the Foothill Nisenan. The ethnographer Hugh Littlejohn derived ethnic boundaries from his Native consultant from Placerville (Pacific Legacy 2020). The Nisenan "…did not extend any further south than Pleasant Valley, which is about three miles north of the North Fork of the Cosumnes, or than Nashville, which is on the North Fork [of the Cosumnes River]" (Littlejohn 1928).

Prior to the disruptions of the mid-nineteenth century, this area was inhabited by the Northern Sierra Miwok. Before Sutter and the Gold Rush, "the Northern Miwok probably held the entire drainage of the Upper Cosumnes River including the North Fork… The Foothill Nisenan probably controlled only the American River drainage…" (Bennyhoff 1977).

Prehistorically, the Miwok fully capitalized upon their territory following a semi-sedentary life way of seasonally mobile foraging, residing at established locations during most of the year but occupying temporary encampments during part of the year to acquire different resources across a range of altitudes and environments. Villages in the foothills and mountains were usually located on high ground between rivers.

Permanent settlements were located below the snow line, on ridges, and near water sources. Semi-permanent settlements above this elevation may have been revisited seasonally for many years. Researchers identified two types of Miwok villages: principal villages with a dance house and burial grounds, where the head chief resided, and subsidiary villages (Merriam 1907). The names of principal villages dominated the surrounding countryside and were applied to the village, the inhabitants, the subsidiary village inhabitants, and the tribelet territory (Merriam 1907, Levy 1978). Each tribelet established several settlements along with seasonal camps used annually during resource procurement forays (Levy 1978). Each village was independent and had its own territory with hunting grounds, fish streams, and food gathering ranges (the latter divided into individual or family sections) (Barrett 1908). Despite inadequate data on Northern Sierra Miwok settlements, researchers estimate the indigenous population of this group at "probably 2,000 persons" (Levy 1978).

The growth and production of many wild plants were managed by pruning and prescribed burning, which removed underbrush and encouraged the growth of edible grasses, seed-producing plants, and other useful plant resources like basketry materials (Levy 1978; Lightfoot and Parrish 2009). The annual controlled fires destroyed seedlings but did not harm established oak trees. Annual burning in August aided in the growth "of seed-bearing annuals and ample forage for deer, antelope, and tule elk" (Levy 1978).

Subsistence technology included the use of groundstone tools such as mortars and pestles for processing acorns and other resources. Acorns were pounded "with pestles in holes in granite exposures; on flat slabs laid on or sunk into the ground without basketry hopper; and . . . [ground] by crushing and rubbing on similar slabs" (Kroeber 1925). Twined and coiled basketry was manufactured using willow and redbud and were used for a variety of purposes, including seed processing, cooking, serving, food storage, as burden carriers, traps, cradles, and hats. Wooden poles were used to dislodge acorns, nuts, and pinecones; digging sticks were used to gather edible roots; and baskets and beating sticks were used for seed gathering.

Bows and arrows, traps, snares, spears, and nets were the principal tools employed in hunting. Flaked and ground stone tools included knives, arrow and spear points, club heads, arrow straighteners, scrapers, rough cobble and shaped pestles, bedrock mortars, grinding stones (metates), pipes, and charms. Wood, bone, and antler also were used for a variety of hunting tools and weapons such as bows, arrow shafts and points, fish hooks, hide preparation tools, and tools employed in the manufacture of stone tools. Ornamental items, such as beads, were manufactured from shell, bone, and minerals such as magnesite (Barrett 1917; Beals 1933; Levy 1978; Wilson and Towne 1978).

The Nisenan, Miwok, and neighboring Tribes participated in a widespread trade network that provided social and economic opportunities (Davis 1961). There are many trails across Miwok territory, mostly for harvesting, hunting, and trade (Conratto 1973). Trade items with neighboring groups included salt, food, and other items, both practical and ornamental. The Miwok and Nisenan frequently interacted as trading partners at ceremonial gatherings and in armed conflict primarily due to perceived territorial encroachment. Most interactions among the Miwok and Nisenan were civil and friendly in nature. Researchers documented that residents from a Nisenan village on the Middle Fork of the Cosumnes River intermarried with Miwok to the south (Hudson 1982). However, hostilities were also recorded (Beals 1933; Littlejohn 1928). According to researchers, the last fight between the Nisenan and Miwok, in which the Nisenan appear to have won, was at Sloughhouse on the Cosumnes River. These pre-contact alliances and networks were important in the survival and resistance of the Miwok and Nisenan during the Spanish Mission, Sutter, and Rancho periods as well as in the reformulation of Tribal communities that followed in the late nineteenth century.

Nisenan movement into the Bucks Bar area was first prompted by the 1847 displacement of the Yumhui tribelet of Nisenan to Sloughhouse to work for Sutter from their home territory on the American River (Bennyhoff 1977). Sutter's economic manipulation of the Native population paled by comparison to the cataclysmic disruption of the Gold Rush in 1848. In just a few years, the Foothill Nisenan living on the American River were forced southward into the Cosumnes River drainage. There they merged with the remnants of the indigenous Northern Miwok tribelets and Plains Miwok who had fled to the foothills for safety.

By the 1850s, after decades of displacement, the Bucks Bar area on the North Fork Cosumnes River had become part of the foothill refuge for people fleeing the missions, Sutter's dominance, and the Gold Rush. As a result, Native people seeking the safety of steep canyons at higher, less accessible foothill elevations established new habitation sites. Both Nisenan and Miwok people adapted to this joint residential pattern. According to Littlejohn "Since there was considerable intermarriage along the border, the Indians living around Pleasant Valley and Nashville were probably both Miwok and Nisenan"

(Littlejohn 1928). The Proposed Project at Bucks Bar is situated between Pleasant Valley and Nashville, an area of linguistic and cultural overlap. Researchers claimed that "By 1900 Foothill Nisenan had become the dominant Indian language on the North Fork of the Cosumnes River..." (Bennyhoff 1977). The perceived dominance of one language group or another in discussions of villages and boundaries minimizes the significance of multi-lingualism among the Miwok and Nisenan tribelets. This was the result of generations of intermarriage, complex inter-tribelet associations between the neighboring groups, and the post-contact refugee movement that resulted in new villages and alliances.

Historic Context

The North Fork Cosumnes River watershed provided a resource-rich environment for the Native inhabitants of this area; this area comprised today's El Dorado County. Year-round drainages accommodated habitation sites every few miles, where Miwok and Nisenan people could remain relatively unmolested by foreigners in their respective traditional territories until the nineteenth century.

European contact exacted a heavy toll on much of California's Native population throughout decades of mission activity during the 1830s (Pacific Legacy 2020). The mission occupation was followed in northern California by the development enterprises of entrepreneur John Sutter. The success of his ambitious commercial activities required the control and exploitation of Native American labor in the Sacramento Valley. Concurrently, increasing disruption of Tribal life through disease epidemics and foreign harassment resulted in diminishing population numbers. "It was a repeated observation that, subsequent to 1805, if not previously, the approach of any white men was marked by wholesale flight on the part of the natives..." and "it generated a perpetual refugee problem" (Cook 1976). This phenomenon was particularly evident in the Sierra Nevada foothills.

The discovery of gold in Coloma brought an abrupt end to any hope of maintaining a traditional native life in the Sierra Nevada foothills. The foreign invasion of miners began explosively in 1848. Initially, the Native people joined the foreigners as laborers in the gold fields or sought the financial rewards of gold on their own (Holliday 1981).

According to researchers, by 1850 "Buck's Bar Gold Camp was established on the north side of the North Fork Cosumnes River, upstream of today's river crossing" (Trumbly 1980). In addition to the gold camp, Bucks Bar is referred to variously in the historical record as a bridge, road, ford, gravel bar, pasturing area, small community, and vicinity (Noble 2005; Peabody 2015).

The environmental devastation to the water quality of the river was ensured by the nexus of itinerant gold seekers digging the riverbed and the popularity of the crossing for continuous use by teamsters and immigrants alike. The fishery was severely impacted on the North Fork Cosumnes River early on during the Gold Rush decade of the 1850s. When the placer gold had played out by the mid-1850s, California had won statehood. Though the initial rush to quick riches drew single men as adventurers and fortune seekers, the booming California economy and stories of opportunity began to lure the best and the brightest from other established communities east of the Mississippi. These were settlers determined to own land and to re-create the culture they had left behind, including the establishment of local government, infrastructure, commerce, education, and religious worship.

Placer mining was replaced by the extensive construction of ditches to move water around where it was needed during the dry months. This engineering and construction allowed more sophisticated mining techniques to be introduced on the North Fork Cosumnes River. By the early part of the twentieth century, dragline dredging was used on the river by three different companies. They worked the river into the early 1950s, dredging it to 18 feet in places (El Dorado County 2008).

The hill above Bucks Bar was reportedly called *Pulak* Bluff (Uldall and Shipley 1966) (currently referred to as '*Pulak*'). In 1956 F. A. Riddell recorded that a village must have been in the vicinity signifying that people were in residence during the early historic time-period (Riddell 1956).

Heavy freight hauling on Bucks Bar Road and the mining activity on the river that was carried out over decades may have been a deterrent to continuous occupation of a Native habitation site at *Pulak* Bluff and certainly below it at Bucks Bar located in a flood plain.

Prosperity depended on the efficient transportation of goods over roads that had been indigenous trails throughout the region for many hundreds of years. In 1857, the road from Pleasant Valley to Somerset became a public right-of-way, serving as a privately owned toll road and bridge operated by Daniel Hoag and regulated by the El Dorado County Board of Supervisors. By 1860, Hoag had already lost two bridges to winter floods on the North Fork Cosumnes River (Trumbly 1980). Through ownership changes, bridge replacements and washouts, the crossing at Bucks Bar Road bridge was the primary route for private and commercial travel to the southern communities of El Dorado County. After a washout in 1873 and the death of its absentee owner who left no heirs, the County did not reconstruct the bridge. That portion of the North Fork Cosumnes River was not bridged for the next 42 years. The river was crossed at Bucks Bar Ford, 0.25 mile upstream from the failed bridge crossing and by a pedestrian suspension bridge for foot travelers in the area. During that time, many lives were lost in crossing the ford without a bridge, which was especially treacherous in the rainy season (El Dorado County 2008; Trumbly 1980).

It was not until 1915 that a new bridge was constructed at the present location to accommodate automobile traffic. Benefit dances were held at River Hill Hall, west of Bucks Bar at the top of the grade, to raise local funds for the new bridge. The money raised would pay only for its approaches and piers. The County added $3,000 to the construction budget, which proved to be enough to finish the project for a total cost of $3,700 and provided a covered wooden bridge across the North Fork Cosumnes River that stood continuously for 27 years until the present Bucks Bar Road bridge was constructed in 1940/ 1941 (Noble 2012).

Research Methods

A list of studies pertaining to, cultural resources, archeological resources and tribal cultural resources associated with the Proposed Project is included in Appendix D (Confidential Reports Not for Public Disclosure).

Archival/Library Research

Various bibliographic indexes were consulted for basic data sources. This was followed by investigations in personal libraries, the Pacific Legacy Library, the California History Room of the California State Library, the University of California Bancroft Library, and the El Dorado County Historical Museum Archives. This background data search was conducted early in the study, and preliminary area/site specific research was conducted during summer and fall of 2017.

Unpublished notes at Bancroft Library were primarily those from ethnographic fieldwork conducted in the area during the early years of the twentieth century by well-known scholars such as Kroeber, Barrett, Gifford, Beals, Littlejohn, and Merriam. Additional unpublished data have been extracted from investigations for cultural resource management undertaken in the area from the 1970s to the present. The *Smithsonian Handbook of North American Indians, Volume 8, California*, which provides maps and a general cultural overview for all California Tribal linguistic groups was consulted for the study.

Anthropological and historical published sources for the foothill Nisenan and Miwok were examined for earlier knowledge on the area. Early tribal descriptions were provided by Stephen Powers in 1877. These were followed by A. L. Kroeber and his students during the early part of the twentieth century and into the 1960s, published by the University of California, Berkeley. Particularly important has been the work

of Littlejohn in which he describes the geography and Native considerations in the area; Uldall and Shipley's work in linguistics, which records place names in the area; Gifford and DuBois' research on ceremony; and the important array of data on the area's Tribal mythology included within the ethnographic data collected by many scholars. C. Hart Merriam's journals, field data, and published works on myth, biology, place names, and Native conditions are important in the study of the foothill Nisenan and Miwok peoples.

Historical information was gleaned from several sources housed at the El Dorado County Historical Museum Archives, including newspaper files, maps, special collections, and other records pertinent to the research. Of particular importance has been the work of George Peabody, who collected detailed information on El Dorado County and whose work provides data of interest on Native localities as well as historical figures and points of historical interests.

Field Visits

Ethnographic field research began with an introduction to past research at Bucks Bar and a site visit to familiarize the researchers with the site. The next step was to introduce the ethnographic staff to representatives of each Tribe that expressed interest in participating in the study. The importance of the study and the need to understand Tribal concerns were discussed with the following federally recognized and non-federally recognized Tribal cultural resource management staff:

- Shingle Springs Band of Miwok Indians (federally recognized)
- United Auburn Indian Community of Auburn Rancheria (federally recognized)
- Wilton Rancheria (federally recognized)
- El Dorado Miwok (non-federally recognized)

Tribal cultural resources management staff were asked to suggest persons knowledgeable of the area for interview. Two subsequent data retrieval meetings were held with the UAIC Historic Preservation Office, which has expressed interest in the cultural resources present at Bucks Bar. These Tribal members also supplied important supplemental data on Native historical features found at the site and the extent of these types of features throughout central California. Knowledgeable persons for interview continued to be added throughout the duration of the study.

The next step was to conduct field visits to the Bucks Bar ethnographic site with representatives of each of the above Tribe on different dates. This was accomplished between August 15 and September 26, 2017. The El Dorado Miwok attended both SSBMI and UAIC visits, but they did not attend the Wilton Rancheria site visit. These visits to the site were followed by interviews with cultural consultants from representative Tribes.

Interviews

All the Tribes invited to consult were asked to provide potential contacts for interview. The El Dorado Miwok provided a list of 16 persons who had given their permission to be contacted for information on Bucks Bar, but not all contacts resulted in interviews. Three formal interviews and several phone conversations have been held with each of two El Dorado Miwok Tribal representatives. One elder interviewed had no information on the Bucks Bar area. In addition, six lengthy discussions (with eight people) on the Native use and interest in the area have produced information on the area in question. Several very short discussions have been held with three people who have asked to be interviewed at a different time. One elder had no information.

Other Native American Coordination

Although the Proposed Project began prior to the adoption of AB 52, as noted above in the introduction of this section, the County is meeting AB 52 consultation obligations with all the Native American Tribes originally expressed interest under the federal Section 106 procedural requirements in 2011, including UAIC who subsequently expressed interest in October 2015. Consultation has included invitations for joining onsite surveys, consultation on the preparation of the ethnographic report, advance review of the archaeological study report, and advance reviews of other project environmental documentation by tribal representatives. Additionally, letters re-confirming Native Tribe interest in consultation under AB 52 were sent on May 6, 2022. AB 52 consultation has been ongoing and active during the preparation of this draft environmental impact report. Additional consultation details are provided in the 'Other Consultation Activities' portion of section 3.4.1.4. Refer to Section 3.5.1.1, Regulatory Setting, for information on the specific requirements for consultation under AB 52.

3.5.1.3 Findings

Environmental Context

The North Fork Cosumnes River at the Bucks Bar area consists of a varied riverine environment. The river upstream (east) of Bucks Bar Bridge occurs in a relatively broad floodplain with gentle topography, particularly north of the river. The floodplain upstream (east) of the bridge varies in width from 350 feet to 500 feet. The North Fork Cosumnes River enters a steeply entrenched granitic canyon channel to the west of the bridge. The bridge is located at a "choke point," where an accumulation of boulders and cobbles that are eroded from the hills upstream of the bridge are carried in by river waters and deposited before the river enters the narrow and steeply entrenched river canyon.

Flows in the North Fork Cosumnes River at Bucks Bar vary widely by season and weather. During dry summer months, the flow is reduced substantially, thus allowing non-hazardous pedestrian crossing of the river at many locations. Winter and spring flows during years of normal rainfall and Sierran snowmelt preclude safe pedestrian crossing. Very wet years and periods of heavy precipitation, such as the winters of 1996/1997, 2016/2017, and 2021/2022, witness extremely high flows and flooding.

Ethnobotanical Assessment

The Bucks Bar area is a riparian zone that changes to mixed oak woodland and yellow pine forest ascending the riparian terrace up and out of the river corridor. An ethnobotanical assessment was conducted in by '*Mountain Thistle Herbals and Consultation*' using information in the 2019 NES that focused on plants listed on federal and/or state lists. This assessment concluded that the Bucks Bar area contains specific species that are well suited to sustain multiple human uses, including oak (*Quercus* spp.), pine (*Pinus* spp), and manzanita (*Arctostaphylos* spp.), which can provide ample food for year-round harvest and other uses. The ethnobotanical assessment titled '*Bucks Bar Plant Survey 2017*' indicates that nearly every single plant species listed in the plant survey have a multitude of uses and are used by all local Tribes from surrounding areas.

Archaeological Context

The Bucks Bar area and general area of the North Fork Cosumnes River watershed is rich with Native American archaeological resources. The region within a 5-mile radius of Bucks Bar is particularly abundant in archaeological and ethnographic sites.

El Dorado County Community Development Department, Parks and Recreation Division, produced a Historical Perspective Supplement for the Pleasant Valley-Oak Hill-Sly Park Area Plan and Environmental Impact Report (El Dorado County 2008). The County Historical Supplement also reports several sites in

the vicinity of Squaw Hollow. The County Historical Supplement describes the Bucks Bar location as follows:

> "*It was named in remembrance of the Gold Rush river mining camp there, where a population of male Indians mined gold without intimidation. The rocky bluffs around Bucks Bar were called Pulak by the Indians.*"

Description of CA-ELD-49/*Pulak*

CA-ELD-49/*Pulak* was originally recorded in 1956. Visits to CA-ELD-49/*Pulak* by representatives of the El Dorado Miwok and El Dorado Indian Council, supported by UAIC and Ione Band over the last few years have added to the inventory of archaeological and cultural interest. On July 17, 2019, Tribal representatives, archaeologists, geologists, and County representatives conducted an additional site visit to locate and accurately map both known features and previously unidentified features.

Vegetation growth and decay are other processes that have likely obscured some features. Annual cycles of growth and decay result in annual variation in the visibility of archaeological features. As a result of these natural formation processes, a full inventory of all archaeological features at the site may never be realized.

Ethnographic Description of CA-ELD-49/*Pulak*

CA-ELD-49/*Pulak* is located in the vicinity of the Bucks Bar Road bridge. The Ethnographic Report completed by Pacific Legacy in 2020 focused on archaeological site CA-ELD-49/*Pulak*, which is situated in a broader ethnographic area and met the reasonable and good faith standard of Section 106 compliance while noting that further research may identify additional resources in the immediate area.

Prior to the ethnographic research conducted by Pacific Legacy, an archaeological survey was conducted, and Tribal representatives were consulted for the ASR effort (Tremaine 2020). Per UAIC representatives, tribes often do not reveal sensitive cultural information unless a place is under threat and then only for preservation purposes. Continuing consultation among local Native people led to further investigation and revelation of site features that had never been recorded. The site is an important place to the people consulted because of the heritage ties and personal memories of a shared cultural past in connection to this site. Through the collaboration of local Tribal representatives, the ethnographers charged with evaluating this site have been privileged to have these resources revealed to them by Tribal consultants.

Cultural consultants to project research were Native people who offered, through a Tribal representative, to be interviewed by the ethnographers. Representatives of four Tribes responded to the County's invitation to consult on the Proposed Project study, and a site visit was arranged by the County Project Manager. The attendees were given a description of the Proposed Project, and the ethnographers solicited comments, information, and research collaboration from the Tribal representatives. Knowledgeable Tribal consultants were asked to describe the site and its features.

The site visit follow-ups occurred over the summer and fall of 2017 with individual consultant interviews. Several consultants offered their insights about the site at Bucks Bar. All the natural and human-altered elements contribute to the nature of the site, its vitality, and its importance to traditional Native culture.

The interviews were successful in conveying the subjects' relationships to the area.

CA-ELD-49/*Pulak* was visited by Pacific Legacy ethnographers and consultants representing the El Dorado Miwok and El Dorado Indian Council on December 5, 2017. The objective of the visit was to collect photographic and global positioning system (GPS) location data on cultural features identified by those consultants. Cultural features were identified by the El Dorado Miwok and El Dorado Indian

Council consultants. The interviews and research conducted for the Ethnographic and National Register Evaluation Report did not identify the existing bridge as part of the TCR (Pacific Legacy 2020). On August 14, 2020, the bridge was listed in the CRHR by the SHRC, based on a draft nomination (Mikesell 2019). That nomination was supported by UAIC. Section 3.4, Cultural Resources, includes information on Bucks Bar Road bridge and the finding of eligibility for the CRHR. Per written information that UAIC shared with the County during consultation with UAIC in July 2022, the existing 1940/ 1941 bridge is of cultural significance to the culturally affiliated consulting Native American tribes. On May 2, 2023, the SHPO concurred with Caltrans that the Bucks Bar Road bridge is individually eligible under NRHP Criterion A for the historic significance of the role it plays as part of the TCR/TCP, CA-ELD-49/*Pulak*.

Through ongoing consultation and information provided by the UAIC on October 27, 2023, a Localized TCR Cultural Landscape was identified for CA-ELD-49/*Pulak* that encompasses the following within the project area: the CA-ELD-49/*Pulak* archaeological site, the bridge and associated roadway, the ethnobotanical vegetation, and the associated viewshed. Based upon the information provided by UAIC, the County has made the determination that the Localized TCR Cultural Landscape is a historical resource via the authority of PRC Section 21074(a)(2) under which a TCR may be "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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe."

Conclusion of Evaluation of CA-ELD-49/*Pulak* as a Tribal Cultural Resource under CEQA and Traditional Cultural Property under Section 106 of the NHPA

The County recognizes the features as identified through onsite surveys and interviews support CA-ELD-49/*Pulak* as a TCR and warrant protection. Based on Native American consultation the CA-ELD-49/*Pulak* is a TCR under AB 52 and qualifies as a TCR/TCP eligible for both the CRHR and NRHP. The eligibility criteria under CRHP and NRHP follow.

California Register of Historical Resources

Although the CRHR does not include robust criteria for addressing traditional cultural values similar to the National Register Bulletin 38, the characteristics of CA-ELD-49/*Pulak* are nonetheless sufficient to recommend it eligible for the CRHR under criteria 1, 2, 3, and 4 under PRC 5024.1(c), which reference the four NRHP criterion as follows.

(c) A resource may be listed as an historical resource in the California Register if it meets any of the following National Register of Historic Places criteria:

> *(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.*
>
> *(4) Has yielded, or may be likely to yield, information important in prehistory or history.*

National Register of Historic Places

Regulatory procedures for Section 106 of the NHPA at 36 CFR 800.4 (c)(1) require that any previously unevaluated properties within the APE of an undertaking must be evaluated to determine if they are eligible for the NRHP and in this case, as a TCP, as outlined in National Register Bulletin 38.

National Register Bulletin 38 describes the process of evaluation of a property as a TCP as a series of sequential steps. CA-ELD-49/*Pulak* met each of the criteria in these steps: (1) CA-ELD-49/*Pulak* is a property; (2) the site retains integrity of condition and relationship; and (3) the site meets each of the NRHP criteria[9] as follows:

Criterion A (*Defined as Association with events that have made a significant contribution to the broad patterns of our history*) – Regarding Criterion A, the association between the property (CA-ELD-49*/Pulak*) and traditional beliefs, practices, and events is demonstrated through the identification of such significance by UAIC representatives, interviews with several contemporary native people, and by comparison with comparable locations, traditional practices, and cultural beliefs. The association between CA-ELD-49*/Pulak* and traditional beliefs and practices is also demonstrated by analogs with comparable locations in the Sierra Nevada. National Register Bulletin 38 addresses situations in which sometimes the actual time a traditional event took place may be ambiguous, as it is at Bucks Bar: "Such a demonstration is unnecessary for purposes of eligibility determination; as long as the tradition itself is rooted in the history of the group, and associates the property with traditional events, the association can be accepted" (NPS 1998). Therefore, CA-ELD-49*/Pulak* meets Criterion A as interpreted through the guidance outlined in National Register Bulletin 38.

Criterion B (*Defined as Association with the lives of persons significant in our past*) –There are physical representations with special cultural significance that clearly demonstrate the past presence of Native Americans. Accordingly, CA-ELD-49*/Pulak* meets the requirements of Criterion B.

Criterion C (*Defined as 1. Embodiment of the distinctive characteristics of a type, period, or method of construction, 2. Representative of the work of a master, 3. Possession of high artistic values, and 4. Representative of a significant and distinguishable entity whose components may lack individual distinction*) – There are archaeological and cultural resources at the site with distinctive characteristics of a type, period, or method of construction. Additionally, natural objects are vital to Miwok, Maidu and Nisenan people as powerful symbols of their belief systems. Consequently, CA-ELD-49*/Pulak* is eligible under Criterion C because it represents a significant and distinguishable entity whose components may lack individual distinction.

Criterion D (*Defined as History of yielding, or potential to yield, information important in prehistory or history*) – Site CA-ELD-49/*Pulak* meets Criterion D as a property that retains the potential to yield information that contributes to an understanding of Native American history as well as the historical and continuing cultural practices of living Native American communities. Four areas of potentially fruitful research stand out: (1) the study of a site to identify its components and configuration; (2) investigation of the physical layout and alignment of archaeological features as possible astronomical correlates; (3) comparison of site with other analogs in the Sierra Nevada; and (4) thorough ethnobiological survey and assessment by qualified tribal practitioner.

3.5.2 Environmental Impacts

3.5.2.1 Methods of Analysis

This Draft EIR analyzes whether the Proposed Project would have the potential to adversely affect TCRs. The identified resources within the APE have been examined for their significance and the potential for the Proposed Project to result in impacts on that significance. CEQA requires an assessment of a project's potential effects on significant tribal cultural resources (i.e., those that meet the requirements under California PRC Section 21074). This assessment entails the following steps:

[9] A site or historical property must only meet one of the National Register criteria to be considered for eligibility in the NRHP.

1. Identify potential tribal cultural resources.
2. Evaluate the significance of identified tribal cultural resources.
3. Evaluate the anticipated effects of a project on all significant TCRs.

Under CEQA, only effects on significant resources are considered potentially significant, so only those impacts require detailed analysis. Because CEQA historical criteria does not include robust criteria for defining tribal cultural resources similar to the National Register Bulletin 38, the four NRHP criteria, discussed above, were used as the proxy for historical resources as defined in PRC 5020.1(k).

3.5.2.2 Thresholds of Significance

In accordance with Appendix G of the state CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- 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, or 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 Public Resources Code section 5020.1(k), or
  - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.5.2.3 Impacts and Mitigation Measures

The Proposed Project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC section 21074 as either a site, feature, place, or 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 Public Resources Code section 5020.1(k), (Significant and Unavoidable Impact)**

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

A TCR that meets the statutory definition, defined in Section 3.5.1.1, Regulatory Setting, does not have to be further evaluated for significance. PRC Section 21084.1 states in part “A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. For purposes of this section, an historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources…” PRC Section 5020.1(q) defines a ‘substantial adverse change’ to an historical resource as “Substantial adverse

change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired (PRC Section 5020.1(q)).” Furthermore, a substantial adverse change to a TCR is considered a significant impact on the environment under CEQA.

This section (3.5.2.3) evaluates how the Proposed Project may affect CA-ELD-49/*Pulak* and potentially change the significance of a TCR based on impacts to any of the reasons the site is deemed eligible for the NRHP. Because the site is significant/eligible under any of the four NHPA criterion (as outlined under Conclusion of Evaluation subsection above in Section 3.5.1.3), each are evaluated for the Proposed Project’s potential to result in a significant impact.

Criterion A (*Defined as Association with events that have made a significant contribution to the broad patterns of our history*). Construction would have temporary effects of short duration and low intensity by restricting access to tribal cultural resources within the construction footprint (Impact TCR-3). To mitigate the inability to access the area during the construction phase, the County will offer free site access to the construction area within County right of way and outside of working hours on a quarterly basis to the culturally affiliated consulting Native American tribes when Bucks Bar Road is closed to traffic (**Mitigation Measure TCR-3).** Also, access outside of the construction footprint would not be restricted and remain the purview of the adjacent private property owners. In addition to the temporary access restrictions, the area would be affected by temporary increases in noise, dust, and presence of construction equipment and workers, with effects reduced through implementation of best management practices. These temporary impacts do not result in the alteration or destruction of the previous Criterion A events.

When construction is complete, areas associated with the site would not be further affected. The new bridge would be in the same general location as the existing bridge and the higher elevation of the new bridge would allow more sun and increased visibility of the river’s natural setting. The evaluation in Section 3.1, Aesthetics, identifies that the Proposed Project would result in a change resulting in a low- to moderate visual impact. The Proposed Project would eliminate impediments to the river’s hydrologic conveyance during high flow events and remove the restrictions that catch debris with the existing bridge. The removal of the bridge and trees near the current right-of-way within the construction area would not change the eligibility of the CA-ELD-49/*Pulak* for the NRHP. However, the existing bridge, identified by UAIC as a TCR and determined eligible under Criterion A by the SHPO for the role it plays in the TCR, would be removed. There would be a change to the site’s significance as defined by Criterion A as a result of the removal of the existing bridge (Impact TCR-1). This would result in a significant impact that cannot be mitigated to less than significant even with the implementation of mitigation. **Mitigation Measure TCR-**1 would provide culturally affiliated consulting Native American tribes access to the site after construction and the property transfer are completed and provide continued opportunities to collect information and learn more about the site. (**Impacts under Criterion A would be Significant and Unavoidable [Impact TCR-1].**)

Criterion B (*Defined as Association with the lives of persons significant in our past*). The construction process includes strict protection of natural resources and contributing TCR resources through fencing and avoidance measures. The association of the site with history and lives of ancient persons remains and cannot be separated from the site through replacing the current bridge. During construction, access to tribal cultural resources within the construction footprint would not be allowed (Impact TCR-3). To mitigate the inability to access the area during the construction phase, the County will offer free site access to the construction area within County right of way and outside of working hours on a quarterly basis to the culturally affiliated consulting Native American tribes when Bucks Bar Road is closed to traffic (**Mitigation Measure TCR-3).** Also, access outside of the construction footprint would not be restricted and remain the purview of the adjacent private property owners. The temporary access

restriction within the construction footprint would not result in long-term effects to the importance or history of the site. (**Impacts under Criterion B would be Less than Significant with Mitigation.**)

Criterion C (*Defined as 1. Embodiment of the distinctive characteristics of a type, period, or method of construction, 2. Representative of the work of a master, 3. Possession of high artistic values, and 4. Representative of a significant and distinguishable entity whose components may lack individual distinction*). There is a possibility that unidentified TCRs have been covered by the road and its fill material or have been used in building the existing bridge. Therefore, it is possible that unidentified features would be inadvertently damaged or destroyed either directly or indirectly, through dismantling of the bridge or during excavation. While all natural materials (including soil and rock fill from abutments) would remain onsite, the construction activities could cause the disturbance, relocation, or destruction of TCRs that are currently unknown and would only be discovered once construction begins. If such TCRs are discovered and cannot be avoided, then disturbing, relocating, or destroying these TCRs would have a substantial adverse change on the cultural landscape with cultural value to California Native American Tribes (Impact TCR-2). This would result in a significant impact that cannot be mitigated to less than significant even with the implementation of mitigation (**Mitigation Measure TCR-1, Mitigation Measure TCR-2, and Mitigation Measure TCR-3**). (**Impacts under Criterion C would be Significant and Unavoidable [Impact TCR-2].**)

Criterion D (*Defined as History of yielding, or potential to yield, information important in prehistory or history*). Construction may yield access to potentially greater information on the pre-history and history of the site if cultural resources are found during construction. The implementation of **Mitigation Measure TCR-2** identifies the need for Tribal Monitors during construction, which will facilitate identifying, recording, avoiding, and properly managing any additional information found during construction. In addition, **Mitigation Measure TCR-2** includes the development of measures to be implemented during construction.

Construction would result in temporary access restrictions within the construction footprint to some persons during construction for safety reasons, but appropriate resources including Tribal Monitors and Native American Representatives will be present as part of **Mitigation Measure TCR-2**. It is possible that the ability to find additional information important in prehistory or history will be impacted by restricted site access during active construction (Impact TCR-3). To mitigate the inability to access the area during the construction phase, the County will offer free site access to the construction area within County right of way on a quarterly basis to the culturally affiliated consulting Native American tribes when Bucks Bar Road is closed to traffic (**Mitigation Measure TCR-3).** Also, access could still be obtained from private property owners for the area outside of the construction footprint. When construction is complete, there are no anticipated impacts to known or unknown resources that would alter the use of the site by culturally affiliated Tribes in a manner that is different from what is currently available. (**Impacts under Criterion D would be Less than Significant with Mitigation.**)

Conclusion. Even though the Proposed Project would avoid direct physical impacts to nearly all the identified TCR features, construction would result in a significant and unavoidable impact under Criterion A and Criterion C due to removal of the existing bridge (Impact TCR-1) and potential impacts to TCRs that are currently unidentified (Impact TCR-2). **Impacts on the TCR, either directly or indirectly, are identified as significant and unavoidable (Impact TCR-1 and Impact TCR-2).**

Mitigation of significant impacts must lessen or eliminate the physical impact that the Proposed Project would have on the historical or cultural resource. This is often accomplished through redesign of a project to eliminate objectionable or damaging aspects of the project. The Proposed Project has been the subject of extensive consultation and study. As a result of the consultation process:

- The bridge was redesigned to eliminate columns that would have impacted the TCR area,

- The proposed alignment of the road and the proposed location of the new bridge was moved,
- The bridge type was changed from cast-in-place concrete to precast concrete girders to eliminate the need of a temporary support structure (falsework) that would have impacted the TCR area and the river environment during construction,
- The bridge type was again changed from precast concrete girders to prefabricated steel girders to minimize the amount of time required for the full closure of Bucks Bar Road.

These avoidance measures were taken to avoid impacts on the known features to the maximum extent possible and to minimize other potential impacts within the limits of the project.

The County has also committed to the implementation of **Mitigation Measure TCR-1, Mitigation Measure TCR-2, Mitigation Measure TCR-3,** and **Mitigation Measure CUL-1** (refer to Section 3.4, Cultural Resources) to reduce the significance of the impacts. The details of these measures have undergone consultation with the culturally affiliated consulting Native American tribes. Even with the implementation of measures **Mitigation Measure TCR-1, Mitigation Measure TCR-2, Mitigation Measure TCR-3,** and **Mitigation Measure CUL-1**, there would remain **significant and unavoidable impacts under Criterion A** (*Association with events that have made a significant contribution to the broad patterns of our history)* **and Criterion C** (*Representative of a significant and distinguishable entity whose components may lack individual distinction)***.**

Mitigation Measure TCR-1: Property Acquisition, Conservation Easement, or Endowment Funding

Upon close of environmental review, including the applicable appeal periods, the County will exercise reasonable, good faith efforts to pursue one of the following three options regarding assessor parcel number 093-131-034 to provide long-term protection of the Tribal Cultural Resources.

- **Property Acquisition (first mitigation preference)**: The County has obtained authority from Caltrans to use a portion of the right of way funding allocated and set aside for this project for the negotiated purchase of property for environmental mitigation purposes. The amount of right-of-way funding available for use as mitigation will be the amount allocated for the project less the amount required to purchase the right-of-way required for implementation of the Proposed Project. If the County is able to negotiate the purchase of parcel number 093-131-034 during the project's right-of-way phase, the County will draft terms of the long-term use and preservation of the property in cooperation with the culturally affiliated consulting Native American tribes once construction is complete. The subject property with stated restrictions will then be transferred to an appropriate successor land trust with a contractual agreement detailing responsibilities for the ongoing maintenance, monitoring, and tribal access to the property.
- **Conservation Easement (second mitigation preference)**: Should a willing purchase of all of assessor parcel number 034-131-034 not be feasible**,** the County will pursue the purchase of a conservation easement over the sensitive portions of assessor parcel number 093-131-034 as further detailed in Confidential Appendix D. The amount of right-of-way funding available for use as mitigation will be the amount allocated for the project less the amount required to purchase the right-of-way required for implementation of the Proposed Project. If the County is able to negotiate the purchase of a conservation easement, the County will draft conservation easement terms for preservation of the property in cooperation with culturally affiliated consulting Native American tribes.
- **Endowment Funding (third mitigation preference)**: The County is also engaged in discussions with the Native American Land Conservancy (NALC) regarding NALC's potential fee purchase of assessor parcel number 093-131-034. The County may be able to collaborate with NALC to potentially assist with the purchase utilizing the right of way funding if acquisition timelines

allow. Should assessor parcel number 093-131-034 be purchased solely by NALC for conservation purposes prior to the end of construction, the County agrees to contribute $50,000 to an endowment for the future management and preservation of the parcel by the successor land trust.

The County finds that the preferred approach to avoid the potential for further impacts to the natural and cultural resources which provide important ecological and traditional values to the culturally affiliated consulting Native American tribes is to restrict long-term use of the private property through one of the three methods described. The County also acknowledges these are the preferred mitigation measures (in descending order) of the culturally affiliated consulting Native American tribes. The implementation of one of these mitigation measures is intended to protect assessor parcel number 093-131-034 in perpetuity within the limits of the transfer agreement and successor land trust responsibilities.

Timing of Mitigation Measure TCR-1. The County will pursue the options described above upon the close of the Environmental Review phase of this project when right of way funding becomes available. These options will be actively pursued in good faith until the County concludes that the purchase of assessor parcel number 093-131-034 is not feasible, the purchase of a conservation easement over a portion of assessor parcel number 093-131-034 is not feasible, or that a right-of-way purchase by NALC is not feasible. While the Proposed Project is for public safety and a critical infrastructure upgrade, assessor parcel number 093-131-034 is privately owned. The County purchase of property or a conservation easement is first dependent upon the willingness of the property owner to sell their property, and second, on the ability to reach a fair market price within the available budget allocated for the Proposed Project. A purchase by NALC is similarly dependent on owner willingness to sell and on financing and logistical issues. While these options of TCR-1 detail preferred approaches, should none of these options be feasible, the County will implement **M**itigation **M**easure TCR-1: Alternative.

Mitigation Measure TCR-1: Alternative: Ethnography Study Report

If none of the three options related to property purchase can be implemented prior to certification of right of way for the Proposed Project, the County shall engage an ethnographic consultant to create an ethnographic report that characterizes icon type cultural sites, as discussed in Confidential Appendix D, in the Sierra Nevada foothills. Upon completion, the report shall be provided to tribes that have participated in consultation for this project, kept on file at El Dorado County, and filed with the California Historical Resources Information System. The scope of work for the ethnographic study shall include the following elements:

- Highlight the importance of *Pulak;*
- Highlight the similarities to and differences from other icon sites in the Sierra Nevada foothills;
- Consultation with relevant tribes to obtain oral histories and anecdotal descriptions of the significance and location of these resources.
- A literature review and summary of relevant ethnographic literature.
- Photographic documentation, with the consent and input of relevant tribes, of similar resources.
- Preparation of a draft report and solicitation of County and tribal input on the draft.
- Preparation of a final report for filing as described above.

The County will commit a total budget of $51,000 in 2024 dollars to this effort. Upon implementation, the final budget may be increased to account for inflation, but escalation of the budget shall not exceed a reasonable increase above $57,000 other than for inflation. The Ethnography Study Report will be

completed within 18 months of the County's determination that the property or easement purchase mitigation options described above are not feasible.

Mitigation Measure TCR-2: Avoid or Minimize Potential Effects on Unknown Tribal Cultural Resources

The redesign of the roadway alignment, the change to the location of the new bridge, the change to the design of the new bridge, and the implementation of Mitigation Measure TCR-1 are all intended to mitigate potential project impacts to known Tribal Cultural Resources. In order to minimize project impacts to unknown Tribal Cultural Resources that might be discovered during construction and to identify any such resources at the earliest possible time during construction, the County and its construction contractor(s) will implement the following:

NEPA Compliance: The County will comply with the requirements resulting from the federal Section 106 National Historic Preservation Act compliance process. As the National Environmental Policy Act (NEPA) lead, Caltrans ensures compliance with the NEPA and its implementing regulations. Through the Section 106 process, the adverse effects on a Traditional Cultural Property (tribal cultural resources, or TCR under CEQA) are addressed through the development of a Memorandum of Agreement (MOA). The MOA includes measures to address the adverse effects. The measures identified in Section 3.4 and 3.5 of this CEQA EIR would be included in the MOA. The list of measures in the MOA would be agreed to by the signatories and invited signatories to avoid, minimize, or mitigate the adverse effect to the Tribal Cultural Resources.

A Memorandum of Understanding (MOU) will also be prepared as part of the MOA. The MOU would be prepared in coordination with culturally affiliated consulting Native American tribes. Specifically, the MOU will address the project needs on the number of Tribal monitor(s) and the costs of tribal monitoring to be paid.

Documents that articulate the mitigation measures to be employed during construction will include:

- Environmentally Sensitive Area Action Plan (ESA Action Plan)
- Post Review Discovery Management Plan (PRDMP)

These documents are further described below. The documents have been prepared by the County with consultation and review by Caltrans District 3 staff and tribal representatives. NEPA compliance is similar to but separate from CEQA compliance and may be completed prior to or after a CEQA determination. The Section 106 NHPA compliance process, as described in Caltrans' Standard Environmental Reference, is a comprehensive framework for addressing federal, state, and local laws and regulations as they pertain to cultural resource management.

- **ESA Action Plan** includes information on the protection of the known archaeology and TCRs during construction. The ESA Action Plan includes requirements for training, monitoring during construction, and protecting known TCRs at the site, with fencing separating the work zone from the primary TCR zone as a first order of work during construction. The ESA Action Plan is attached to this EIR as Appendix D. The ESA Action Plan will be finalized with final approval of the State Historic Preservation Officer (SHPO) during the Section 106 process.
- **Post Review Discovery and Monitoring Plan** includes the requirements for construction monitor qualifications, monitoring responsibilities, monitoring protocols, monitoring field methods, reporting, and curation. The PRDMP is attached to this EIR as Appendix D. The PRDMP will be finalized with final approval of the SHPO during the Section 106 process.

Cultural Awareness Training. A cultural resources awareness brochure and training program for all personnel involved in project implementation will be developed. The brochure will be developed and the training will be conducted in coordination with qualified cultural resources specialists, including

culturally affiliated consulting Native American tribes that choose to participate, before any stages of project implementation and construction activities begin on the project site. The program will include relevant information regarding sensitive archaeological and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating state laws and regulations. The worker cultural resources awareness program will explain the avoidance and minimization measures for resources that have the potential to be located on the project site and will outline what to do and whom to contact if any potential archaeological resources or artifacts are encountered. The program will also underscore the requirement for confidentiality and culturally appropriate treatment of any finding of significance to Native Americans and behaviors, consistent with Native American Tribal values.

Mitigation Measure TCR-3: Access to Area During Construction.

During the construction phase of the project, Bucks Bar Road will be closed, and the bridge will not be accessible to non-construction personnel. To mitigate the inability to access the area during the construction phase, the County will offer free site access to the construction area within County right of way on a quarterly basis to the culturally affiliated consulting Native American tribes when Bucks Bar Road is closed to traffic. For safety reasons, this access will only be available when the construction contractor is not working (i.e., weekends or holidays when no workers are on site). After the project is complete, the County will extend free expedited reviews of requests for special events permits for closure of the bridge or nearby roadway in accordance with El Dorado Code Chapter 12.37.

3.6 Geology and Soils

According to Earthquake tracker website, there were over 10,400 earthquakes in California in the 365 days between April 30, 2021, and April 30, 2022 (Earthquake Track 2022). Earthquakes are just one geologic risk that influences infrastructure project design and safety considerations. Other considerations include soil stability, potential for erosion, and landslides.

3.6.1 Existing Conditions

3.6.1.1 Regulatory Setting

This section summarizes the regulations related to geology and soils that are applicable to the Proposed Project.

Federal

U.S. Geological Survey National Landslide Hazard Program

The Landslide Hazards Program supports the USGS mission to serve the United States by providing reliable scientific information to minimize loss of life and property from natural disasters. The Landslide Hazards Program's mission is to provide information that leads to the reduction of losses from landslides and an increase in public safety through improved understanding of landslide hazards and strategies for hazard mitigation. In pursuit of the program mission, the Landslide Hazards Program conducts landslide hazard assessments, pursues landslide investigations and forecasts, provides technical assistance to respond to landslide emergencies, and engages in outreach activities.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act went into effect March 7, 1973, is codified in the Public Resources Code as Division 2, Chapter 7.5, and has been amended 11 times. The law initially was designated as the Alquist-Priolo Geologic Hazard Zones Act but was renamed the Alquist Priolo Special Studies Zones Act effective May 4, 1975, and the Alquist-Priolo Earthquake Fault Zoning Act effective January 1, 1994. The purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prohibit the location of most structures for human occupancy across the traces of active faults and to thereby mitigate the hazard of fault rupture. It also defines criteria for identifying active faults, giving legal weight to terms such as *active*, and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Section 2690-2699.6) directs the Department of Conservation, California Geological Survey (CGS) to identify and map areas prone to earthquake hazards of liquefaction, earthquake-induced landslides, and amplified ground-shaking. The purpose of the Seismic Hazards Mapping Act is to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating these seismic hazards.

California Building Standards Code

The State's minimum standards for structural design and construction are given in the California Building Standards Code (CBSC) (CCR, Title 24, Part 2). The CBSC provides standards for various aspects of construction, including excavation, grading, and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss.

California Public Resources Code

Section 5097.5 of California Public Resources Code protects paleontological resources. Section 5097.5 states that a person shall not knowingly and willfully excavate upon or remove, destroy, injure, or deface any historic or prehistoric ruins; burial grounds; archaeological or vertebrate paleontological site, including fossilized footprints; inscriptions made by human agency; or any other archaeological, paleontological or historical feature situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. The section defines public lands as lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

Local

Geotechnical Investigations

El Dorado County's (1986) *Design and Improvement Standards Manual* (specifically, Volume III: Grading, Erosion, and Sediment Control, Section D: Grading Permit Application Submittal Requirements) describes when geotechnical and other similar reports are required. El Dorado County also requires investigation of the soils underlying proposed areas of grading in conformance with the mandates of the International Building Code and CSBC.

Grading, Erosion, and Sediment Control Ordinances

The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance) (Chapter 110.14 of the County Code) establishes provisions for public safety and environmental protection associated with grading activities on private property. Section 110.14.090 of the Grading Ordinance prohibits grading activities that would cause flooding where it would not otherwise occur or would aggravate existing flooding conditions. The Grading Ordinance also requires all drainage facilities, aside from those in subdivisions that are regulated by the El Dorado County's Subdivision Ordinance, be approved by the County Department of Transportation. Pursuant to the ordinance, the design of the drainage facilities in the County must comply with the *County of El Dorado Drainage Manual* (Drainage Manual) (El Dorado County 1995).

El Dorado County Design and Improvement Standards Manual

El Dorado County's *Design and Improvement Standards Manual* was adopted in 1986 and last revised in 1990 and provides required erosion and sediment control measures that are applicable to subdivisions, roadways, and other types of development (El Dorado County 1986). Volume III of the manual: Grading, Erosion and Sediment Control, describes the criteria for when an erosion and sediment control plan is required. If required, erosion and sediment control plans must comply with the adopted Western El Dorado County Storm Water Management Plan (SWMP) (El Dorado County 2004b) and the NPDES MS4 Order.

El Dorado County General Plan

To protect public health and the environment from geologic and seismic hazards, the Public Health, Safety, and Noise Element of the County General Plan (El Dorado County 2004c) includes goals, objectives, and policies. They address threats to life and property from seismic and geologic hazards and the protection and conservation of soil resources.

El Dorado County Code of Ordinances

El Dorado County has adopted the 2010 CBSC as the basis for the County Building Code (El Dorado County Code of Ordinances Section 110.16.010).

3.6.1.2 Environmental Setting

Geology and Soils

Regional Geology

El Dorado County is located in the Sierra Nevada geomorphic province of California, east of the Great Valley province and west of the Basin and Range provinces. Steep-sided hills and narrow rocky stream channels characterize the Sierra Nevada province. This province consists of Pliocene and older deposits that have been uplifted as a result of plate tectonics, granitic intrusion, and volcanic activity. Subsequent glaciations and additional volcanic activity are factors that led to the east-west orientation of stream channels (El Dorado County 2004d).

The southwestern foothills of El Dorado County are composed of rocks of the Mariposa Formation that include amphibolite, serpentine, and pyroxenite. The northwestern areas of the County consist of the Calaveras Formation, which includes metamorphic rock such as chert, slate, quartzite, and mica schist. The higher peaks in the County consist primarily of igneous and metamorphic rocks with granite intrusions, a main soil parent material at the higher elevations (El Dorado County 2004d). The project area is not located within an area known to contain naturally occurring asbestos or an area "more likely to contain naturally occurring asbestos" (California Department of Conservation 2000; El Dorado County 2005).

Seismicity

Seismicity is defined as the geographic and historical distribution of earthquake activity. Seismic activity may result in geologic and seismic hazards including seismically induced fault displacement and rupture, ground-shaking, liquefaction, lateral spreading, landslides and avalanches, and structural hazards. Based on historical seismic activity and fault and seismic hazards mapping, El Dorado County is considered to have relatively low potential for seismic activity and is located beyond the highly active fault zones of the California coastal areas. The County's fault systems and associated seismic hazards are described below (El Dorado County 2004d).

Fault Systems

Earthquakes are associated with the fault systems in a particular area. The distribution of known faults is concentrated in the western portion of the County, with several isolated faults in the central County area and the Lake Tahoe Basin. Fault systems mapped in the western parts of the County include the West Bear Mountains Fault; the East Bear Mountains Fault; the Maidu Fault Zone; the El Dorado Fault; the Melones Fault Zone of the Clark, Gillis Hill Fault; and the Calaveras–Shoo Fly Thrust. None of these identified faults are known to be active except one. One western El Dorado County fault, part of the Rescue Lineament–Bear Mountains fault zone, is classified as a well-located late-Quaternary fault; therefore, it represents the only potentially active fault in western El Dorado County. However, this is located west of and well beyond the project area.

Soils

Soils on the west slope of El Dorado County consist of well-drained silt and gravelly loams divided into two physiographic regions—the Lower and Middle Foothills and the Mountainous Uplands. There are a total of eight soil associations in western El Dorado County.

Mapped soil units in the project area include Acidic Rock Land, Chaix very rocky coarse sandy loam 9-50 percent slopes, and Shaver coarse sandy loam 9-15 percent slopes (NRCS 2024). Based on Natural Resources Conservation Service (NRCS) data, the majority of the soils in the project area are Acidic Rock Land, which typically occurs in canyons as a thin layer of soil over bedrock (e.g., granite and rhyolite) resulting from rock weathering and known as residuum, and runoff is very high. Chaix very rocky coarse

sandy loam 9-50 percent slopes, which occur on mountain slopes, are composed of residuum from granite; these soils are well-drained and runoff is medium. Shaver coarse sandy loam 9-15 percent slopes occurs on mountain slopes and canyons; these soils are well-drained and runoff is low (NRCS 2024).

Expansive soils can change dramatically in volume, depending on moisture content. When wet, these soils can expand; conversely, when dry, they can contract or shrink. Sources of moisture that can trigger this shrink-swell phenomenon include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soils are generally clays. The Acidic Rock Land soils that cover most of the project area, including the bridge area, do not contain clays and are not expansive. In addition, although both Chaix very rocky coarse sandy loam 9-50 percent slopes and Shaver coarse sandy loam 9-15 percent slopes contain some clay the soils are not considered expansive because the kind of clay in the soils has a low shrink-swell potential.

3.6.2 Environmental Impacts

3.6.2.1 Methods of Analysis

Impacts related to geology and soils were assessed based on seismic hazard mapping and fault activity data from the California Geological Survey (CGS 2024), and soil data from the NRCS (NRCS 2024). This analysis focuses on the Proposed Project's potential to result in the risk of personal injury, loss of life, and damage to property because of existing geologic conditions within the project area.

3.6.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - 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.)
    - Strong seismic ground shaking?
    - Seismic-related ground failure, including liquefaction?
    - Landslides?
- Result in substantial soil erosion or the loss of topsoil?
- 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?
- Be located on expansive soil, as defined in Table 1801-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?
- Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

3.6.2.3 Impacts and Mitigation Measures

The Proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (1) 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; (2) strong seismic ground shaking; (3) seismic-related ground failure, including liquefaction; and (4) landslides. (Less Than Significant)

The Proposed Project is located in western El Dorado County, which is not near a mapped fault on the most recent Alquist-Priolo Earthquake Fault Zoning Map. No portion of western El Dorado County is in a Seismic Hazard Zone (i.e., regulatory zones that encompass areas prone to liquefaction and earthquake-induced landslides), based on the Seismic Hazards Mapping Program administered by the CGS. Consequently, the project area is not considered to be at risk from liquefaction and earthquake-induced landslides. Impacts would be less than significant, and no mitigation is required.

Although seismic risk is low, in final design, a licensed engineer would prepare a foundation report in accordance with Caltrans standards that outline site-specific recommendations regarding foundation support for the proposed structural elements, grading activities, fill placement, soil corrosivity, soil expansion, drainage control, and evaluations of seismic hazards, liquefaction, and ground settlement in accordance with all applicable requirements of the State of California, including the Caltrans Seismic Design Criteria. The report would include stability analyses of final design of the approach embankment and retaining walls. The Proposed Project's final plans and specifications would meet all requirements included in the design-level geotechnical report. The Proposed Project would be constructed in accordance with applicable requirements, including the Caltrans Seismic Design Criteria. With implementation of the guidance, the Proposed Project would result in less than significant impacts and therefore no mitigation is required.

The Proposed Project would not result in substantial soil erosion or the loss of topsoil. (Less Than Significant)

Construction activities require grading, which has the potential to cause erosion and loss of topsoil. Contract provisions require implementation of BMPs consistent with the Caltrans Stormwater Quality Handbooks to protect water quality and minimize the potential for siltation and downstream sedimentation. Construction activities would also include the implementation of an SWPPP, which outlines stormwater runoff BMPs. Application of these requirements and measures would prevent substantial erosion or topsoil loss. Areas temporarily disturbed would be revegetated and reseeded with native grasses and other native herbaceous annual and perennial species in accordance with the contract provisions (see Project Description section 2.4.4).

In addition to the SWPPP, adherence to the NPDES MS4 Order and applicable El Dorado County Grading Ordinance, Subdivision Ordinance, Design and Improvement Standards Manual, and Drainage Manual would minimize effects from erosion, runoff, and sedimentation. With the implementation of the requirements, the impacts would be less than significant, and no mitigation is required.

The Proposed Project is not 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 an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (No Impact)

The Proposed Project is not located within an area where the soils are unstable or could become unstable. The project area is underlain by granitic bedrock of Mesozoic age (California Department of Conservation 2024). Soils onsite are not susceptible to landslide, lateral spreading, subsidence, liquefaction, or collapse. No impact would occur, and no mitigation is required.

The Proposed Project is not located on expansive soil, as defined in Table 1801-B of the Uniform Building Code (1994 as updated), creating substantial risks to life or property. (No Impact)

The Acidic Rock Land soils that cover most of the project area, including the bridge area, do not contain clays and are not expansive. The Proposed Project elements would be constructed according to applicable standards. There would be no impacts, and no mitigation is required.

The Proposed Project would not require either septic tanks or alternative wastewater disposal systems, and therefore would not introduce either system in soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater. (No Impact)

The Proposed Project does not include the installation of septic tanks or alternative wastewater disposal systems. No impact would occur, and no mitigation is required.

The Proposed Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (No Impact)

The project area is underlain by igneous plutonic rock types, including mesozoic granite, quartz monzonite, granodiorite, and quartz diorite (CGS 2024). According to the Society of Vertebrate Paleontology standards and guidelines, igneous plutonic rock types (such as granites and diorites) have no potential to contain significant paleontological resources (SVP 2010). The Society of Vertebrate Paleontology standards and guidelines states that “Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources.” No impact would occur, and no mitigation is required.

3.7 Greenhouse Gas Emissions

Transportation projects can increase greenhouse gas emissions during construction and operation. The use of construction equipment can increase greenhouse gas emissions during construction and, depending on the type of transportation project, result in an increase in vehicle miles traveled (VMT) due to roadway capacity increases. Air quality is addressed in Section 3.2, Air Quality.

3.7.1 Existing Conditions

3.7.1.1 Regulatory Setting

This section summarizes the state and local regulations related to greenhouse gas emissions and climate change that are applicable to the Proposed Project.

State

California has adopted statewide legislation addressing various aspects of climate change and greenhouse gas emissions mitigation. Much of this legislation establishes a broad framework for the state's long-term greenhouse gas reduction and climate change adaptation program. In the absence of federal regulations, control of greenhouse gases is generally regulated at the state level and is typically approached by setting emission reduction targets for existing sources of greenhouse gases, setting policies to promote renewable energy and increase energy efficiency, and developing statewide action plans. Summaries of key policies, regulations, and legislation at the state level that are relevant to the Proposed Project are described below in chronological order.

Assembly Bill 32—California Global Warming Solutions Act (2006)

AB 32 was signed into law in 2006 and codified into law the 2020 greenhouse gas emissions target set by Executive Order (EO) S-03-5. AB 32 required the CARB to develop a Scoping Plan that describes the approach California will take to reduce greenhouse gases to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was updated in 2014 to start the transition to the post-2020 goals under Executive Order S-3-05. In 2016, the state legislature passed SB 32, which codifies a 2030 greenhouse gas emissions reduction target of 40 percent below 1990 levels. With SB 32, the legislature passed companion legislation AB 197, which provides additional direction for developing the Scoping Plan.

EO B-30-15 directed CARB to update the Scoping Plan to chart the path to achieving the 2030 target. The mid-term target of 40 percent below 1990 levels, set by EO B-30-15 and codified by SB 32, is critical to help frame the additional suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing greenhouse gas emissions in California.

In November 2017, CARB released *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*, which lays out the framework for achieving the 2030 reductions as established in more recent legislation. The *2017 Climate Change Scoping Plan* identifies the greenhouse gas reductions needed by each emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels before 2030, consistent with SB 32. The update also identifies how greenhouse gases associated with projects could be evaluated under CEQA. Specifically, it states that achieving "no net increase" in greenhouse gas emissions is the correct overall objective of projects evaluated under CEQA if conformity with an applicable local greenhouse gas reduction plan cannot be demonstrated (CARB 2017).

Executive Order S-01-07—Low Carbon Fuel Standard (2007, 2015)

EO S-01-07 mandates that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 and that a Low Carbon Fuel Standard for transportation fuels be established in California.

Senate Bill 375—Sustainable Communities Strategy (2008)

SB 375 provides for a new planning process that coordinates land use planning, regional transportation plans, and funding priorities to help California meet the greenhouse gas reduction goals established in AB 32. SB 375 requires that the regional transportation plans developed by metropolitan planning organizations include a Sustainable Communities Strategy (SCS). The goal of the SCS is to reduce regional vehicle miles traveled through land use planning and consequent transportation patterns and thereby reduce carbon emissions. CARB released the regional targets in September 2010. SACOG is the metropolitan planning organization for the Sacramento region, including the western slope of El Dorado County. SACOG adopted its latest SB 375-compliant MTP/SCS in November 2019.

California Environmental Quality Act Guidelines (2010)

The CEQA Guidelines (Section 15064.4) require lead agencies to describe, calculate, or estimate the amount of greenhouse gas emissions that would result from a project. Moreover, the CEQA Guidelines emphasize the necessity to determine potential climate change effects of a project and propose mitigation as necessary. The CEQA Guidelines confirm the discretion of lead agencies to determine appropriate significance thresholds but require the preparation of an EIR if "there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with adopted regulations or requirements" (Section 15064.4).

Local

El Dorado County Air Quality Management District Draft Greenhouse Gas Emissions Thresholds

CEQA does not provide explicit directions on addressing climate change. It requires that lead agencies identify project greenhouse gas emissions impacts and their "significance," but does not define what constitutes a "significant" impact. Not all projects emitting greenhouse gas contribute significantly to climate change. CEQA authorizes reliance on previously approved plans (such as a Climate Action Plan) and mitigation programs to adequately analyze and mitigate greenhouse gas emissions to a less than significant level. El Dorado County does not have an adopted Climate Action Plan or similar program-level document; therefore, the Proposed Project's greenhouse gas emissions must be addressed at the project level (see Section 3.7.2.2 below).

3.7.1.2 Environmental Setting

Greenhouse gases are recognized by wide consensus among the scientific community to contribute to global warming/climate change and associated environmental impacts. The major greenhouse gases that are released from human activity include carbon dioxide, methane, and nitrous oxide (U.S. EPA 2022). The primary sources of greenhouse gases are vehicles (including planes and trains), energy plants, and industrial and agricultural activities (such as dairies and hog farms).

3.7.2 Environmental Impacts

3.7.2.1 Methods of Analysis

Greenhouse gas emissions for transportation projects can be divided into those produced during operations and those produced during construction. The Proposed Project would not increase the capacity of Bucks Bar Road and would not increase greenhouse gas levels during operations. This analysis therefore focuses on construction-related greenhouse gas emissions of the Proposed Project.

Construction emissions were estimated using the California Air Pollution Control Officers Association (CAPCOA) California Emissions Estimator Model (CalEEMod) Version 2022.1.1.24. CalEEMod quantifies ozone precursors, criteria pollutants, and greenhouse gas emissions from the construction and operation of new land use development and linear projects in California.

3.7.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would have a significant impact related to greenhouse gas emissions if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The El Dorado County AQMD has not adopted greenhouse gas emissions significance thresholds for the construction phase of projects. Given the lack of locally adopted greenhouse gas emissions significance thresholds, the SMAQMD Bright-Line Thresholds[10] for the construction phase of project are being used for this analysis. The Bright-Line Thresholds: Construction phase of project are 1,100 metric tons (MT) of carbon dioxide equivalent per year (CO2e/yr) (SMAQMD 2020).

3.7.2.3 Impacts and Mitigation Measures

The Proposed Project does not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (Less Than Significant)

The Proposed Project would not increase the capacity of Bucks Bar Road nor result in increased traffic volumes and therefore would not increase operational greenhouse gas levels. Construction of the Proposed Project would generate short-term emissions of greenhouse gases. CalEEMod Version 2022.1.1.24 was used to estimate the Proposed Project CO2e emissions. Based CalEEMod, construction is estimated to produce approximately 328 MT carbon dioxide equivalent (CO2e) during the assumed 12-month (251 day) construction period. The modeled Proposed Project greenhouse gas emissions are below the 1,110 (MT) CO2e/yr threshold used by the SMAQMD for the construction phase of a project.

The Proposed Project would close Bucks Bar Road during construction, thereby resulting in a detour for some trips that need to cross the North Fork Cosumnes River. Bucks Bar Road carries between approximately 4,000 and 5,000 vehicles per day and is not a designated truck route (El Dorado County 2022). The County would notify property owners and residences and sign the roadway as “road closed at

[10] Numeric bright-line thresholds are numeric mass emissions thresholds that identify the point at which additional analysis (and mitigation) of project-related greenhouse gas emissions impacts is necessary. Projects below the established bright-line significance criteria have a minimal contribution to cumulative global emissions and are considered to have less-than-significant impacts, while projects above the established bright-line significance criteria require further analysis.

Bucks Bar Road bridge" at appropriate intersections. Bucks Bar Road is approximately 4.9 miles long, and the respective detours from the longest possible route are 3.6 to 6.5 miles longer (see Chapter 2 for more information). However, it is anticipated that trips would be modified, consolidated, or altered to reduce the overall miles, and thereby not result in substantial additional overall local miles traveled over the duration of the construction period. After the initial start of project construction, the County anticipates that traffic patterns would adjust, and circuitous trips would be minimized and result in negligible additional greenhouse gas to the regional transportation-related emissions. The Proposed Project impacts would be less than significant, and no mitigation is required.

The Proposed Project does not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (No Impact)

SB 32, which was passed in 2016, codified a 2030 greenhouse gas emissions reduction target of 40 percent below 1990 levels. CARB issued *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target* (CARB 2017) to reflect the target set by EO B-30-15 and codified by SB 32. The *2017 Climate Change Scoping Plan* provides information on the policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure; this plan provides a blueprint to continue lowering greenhouse gas emissions and obtain the statewide target.

The Proposed Project is identified in SACOG's *2023-2026 Metropolitan Transportation Improvement Program* (MTIP) (SACOG 2022). The federally required MTIP is a short-term listing of surface transportation projects that receive federal funds, are subject to a federally required action, or are regionally significant. Only projects included in the MTP may be incorporated into the MTIP. The MTIP derives all its projects either directly or indirectly from the MTP.

Projects included in the MTIP are required to conform to the SIP for the region and would therefore not conflict with or obstruct with implementation. The Proposed Project is listed as project number ELD19321 in the MTIP and grouped with other bridge rehabilitation and reconstruction projects within El Dorado County. The Proposed Project is exempt from the air quality conformity requirement and is identified as a project that would correct, improve, or eliminate a hazardous location or feature.

The Proposed Project would not conflict with the statewide greenhouse gas reduction measures. The Proposed Project would replace the existing bridge in generally the same location and would not increase capacity on Bucks Bar Road. The Proposed Project would also be subject to policies that might affect emissions of greenhouse gases. Finally, the operations would reduce carbon emissions during the period of motorists currently having to idle as they yield at the existing one-lane bridge. Therefore, the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases. No impacts would occur, and no mitigation is required.

3.8 Hazards and Hazardous Materials

The primary concerns pertaining to hazardous materials in the project area are their use, transportation, storage, and handling (i.e., potential accidents or spills) and the potential for encountering hazardous materials during the removal of the existing Bucks Bar Road bridge.

3.8.1 Existing Conditions

3.8.1.1 Regulatory Setting

This section summarizes federal, state, and local regulations related to Hazards and Hazards Materials that are applicable to the Proposed Project.

Federal

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, provides a federal "superfund" to clean up uncontrolled or abandoned hazardous waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the U.S. Environmental Protection Agency (EPA) was given power to seek out those parties responsible for any release and ensure their cooperation in the cleanup.

Resource Conservation and Recovery Act of 1976 (42 United States Code Sections 6901–6987)

The Resource Conservation and Recovery Act (RCRA) is the primary law governing the disposal of solid and hazardous waste. Congress passed RCRA on October 21, 1976, to address the increasing problems the nation faced from our growing volume of municipal and industrial waste.

Asbestos National Emission Standards for Hazardous Air Pollutants

The EPA's air toxics regulation for asbestos is intended to minimize the release of asbestos fibers during activities involving the handling of asbestos. Air toxics regulations under the Clean Air Act specify work practices for asbestos to be followed during demolitions and renovations of all facilities, including, but not limited to, structures, installations, and buildings (excluding residential buildings that have four or fewer dwelling units). The regulations require a thorough inspection where the demolition or renovation operation would occur.

State

Asbestos Regulations

Title 8 CCR Section 1529 regulates asbestos exposure in all construction work and defines permissible exposure limits and work practices. Typically, removal or disturbance of more than 100 square feet of material containing more than 0.1 percent asbestos must be performed by a registered asbestos abatement contractor, but associated waste labeling is not required if the material contains 1 percent or less asbestos. When the asbestos content of materials exceeds 1 percent, virtually all requirements of the standard become effective. With respect to potential worker exposure, notification, and registration requirements, the California Division of Occupational Safety and Health defines asbestos-containing construction material as construction material that contains more than 0.1 percent asbestos (8 CCR 341.6).

Hazardous Waste Control Act

The state equivalent of the RCRA is the Hazardous Waste Control Act (HWCA). HWCA created the State Hazardous Waste Management Program, which is similar to the RCRA program but generally more stringent. The HWCA establishes requirements for the proper management of hazardous substances and wastes.

California Health and Safety Codes

The California Environmental Protection Agency (Cal-EPA) has been granted primary responsibility by EPA for administering and enforcing hazardous materials management plans within California. Cal-EPA defines a hazardous material more generally than the U.S. EPA as a material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment, if released (26 CCR 25501).

State regulations include detailed planning and management requirements to ensure that hazardous materials are properly handled, stored, and disposed of to reduce human health risks. In particular, the State has acted to regulate the transfer and disposal of hazardous waste. Hazardous waste haulers are required to comply with regulations that establish numerous standards, including criteria for handling, documenting, and labeling the shipment of hazardous waste (26 CCR 25160 et seq.).

Cortese List

Cal-EPA maintains the Hazardous Wastes and Substances Site (Cortese) List, a planning document used by state and local agencies and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. The list must be updated at least once per year, in accordance with Government Code Section 65962.5. The California Department of Toxic Substances Control, State Water Resources Control Board, and California Department of Resources Recycling and Recovery all contribute to the site listings.

Local

Hazardous Materials Ordinance of 1990

The Hazardous Materials Ordinance (El Dorado County Code Chapter 8.38) regulates the handling, storage, use, transport, processing, or disposal of hazardous materials. This ordinance requires reporting of the use of hazardous materials. It also requires disclosure of accidental release of hazardous materials, as well as preventive and mitigative efforts for impacts of hazardous materials. Locally, trained staff of fire protection districts and the El Dorado County Environmental Management Department enforce the ordinance.

Solid Waste Management Ordinance (1994)

The Solid Waste Management Ordinance (County Code Chapter 8.42) prohibits the disposal, depositing, or otherwise disposing of any hazardous or biomedical waste onto land, into soil, rock, air, or water or at unauthorized disposal sites, transfer stations, resource recovery facilities, transformation facilities, buy-back centers, drop-off recycling centers, or any container to be collected and ultimately deposited, unless otherwise approved by El Dorado County.

3.8.1.2 Environmental Setting

The Proposed Project is in a rural portion of El Dorado County, and associated land uses are largely residential, with one vacant commercial property nearby. The area supported gold mining operations in

the past. The nearest school is over 4 miles from the Proposed Project site. The nearest public airport, Placerville Airport, is about 5.5 miles to the northwest.

A review regulatory agency database of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese list) was conducted as part of the Project Initial Site Assessment (Dokken Engineering 2011), and then an updated review occurred in June 2024 to confirm no changes (CalEPA 2022). No listed hazardous materials or waste sites were reported within or near the project site. Based on regulatory database searches and a site visit, there are no signs of known hazardous materials in or adjacent to the Proposed Project (e.g., storage tanks or drums). The existing bridge paint system may contain lead, and the concrete abutments could possibly include asbestos-containing material.

Naturally occurring asbestos can be released from serpentine and ultramafic rocks when the rock is broken or crushed; however, the Proposed Project is not located within an area known to contain naturally occurring asbestos or an area "more likely to contain naturally occurring asbestos" (California Department of Conservation 2000; El Dorado County 2005).

3.8.2 Environmental Impacts

3.8.2.1 Methods of Analysis

The analysis of hazards and hazardous materials is based on the Project Initial Site Assessment (Dokken Engineering 2011) prepared for the Proposed Project; database research prepared in compliance with federal, state, and local ordinances and regulations; and professional standards pertaining to hazards and hazardous materials. The environmental baseline for the analysis consists of the hazards and hazardous materials that are known to occur in the project area.

3.8.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 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?
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- 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?
- 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?
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

3.8.2.3 Impacts and Mitigation Measures

The Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less Than Significant)

Project construction would include the temporary transport, use, and storage of hazardous materials. Hazardous materials would be used during construction activities for construction equipment and vehicles and include fuels, lubricating fluids, cleaner, solvents, and roadway resurfacing and re-striping materials. If spilled, these substances could pose a risk to the environment.

Hazardous materials handling and storage during construction of the Proposed Project would be required to comply with applicable local, state, and federal standards. Use, storage, and disposal of hazardous materials is regulated through the RCRA, and the Department of Toxic Substances Control is responsible for implementation of the RCRA program. The Department of Toxic Substances Control regulates hazardous waste, cleans up existing contamination, and looks for ways to control and reduce the hazardous waste produced in California. Although it is not anticipated that construction activity would encounter naturally occurring asbestos, the Proposed Project would be required to comply with El Dorado County Air Quality Management District Rule 223-2 requiring activities to reduce asbestos dust created from earth-moving activities. Standard dust control measures such as watering would effectively control unanticipated naturally occurring asbestos exposure. Compliance with existing regulations would reduce the risk of potential release during construction. Impacts would be less than significant, and no mitigation is required. Use of hazardous materials in accordance with applicable standards ensures that exposure of the public to hazard materials would have a less-than-significant impact.

Bucks Bar Road is not a designated truck route; therefore, routine transport, use, or disposal of hazardous materials is unlikely to occur in the project area. Impacts would be less than significant, and no mitigation is required.

The Proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less Than Significant)

Based on El Dorado County records, regulatory database searches, and site visits, there are no signs of known hazardous materials in the project area. However, based on the age of the bridge, the existing bridge paint system might contain lead, and the concrete abutments could possibly include asbestos-containing material. As noted under the Project Description (Chapter 2), contract provisions would include requirements to test and manage the disposal of lead-based paint and/or asbestos-containing material:

- Contract provisions would require an asbestos and lead-based paint survey prior to demolition of the existing bridge. The asbestos survey would be performed by an EPA-accredited asbestos professional or other qualified professional. The lead-based paint survey would be performed by a California Department of Health Services Lead Inspector/Assessor or other qualified professional.
- Contract provisions would require the existing yellow striping and pavement marking materials be handled in accordance with Caltrans Standard Special Provision 14-11.07 (Remove Yellow Traffic Stripe and Pavement Marking With Hazardous Waste Residue).
- Contract provisions would require asbestos-containing material be handled in accordance with Caltrans Non-Standard Special Provision 14-11.11, Management of Asbestos Containing Materials.

The implementation of these requirements would substantially avoid accidental release of hazardous materials and therefore result in less than significant impacts, and no mitigation is required.

The Proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (No Impact)

There are no existing or proposed schools (public or private) within 0.25 mile of the Proposed Project. The nearest schools are about 4 miles from the Proposed Project site. There would be no impacts, and no mitigation is required.

The Proposed Project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment. (No Impact)

There are no listed hazardous materials or waste sites within or near the project area. There would be no impacts associated with a listed site, and no mitigation is required.

The Proposed Project is not located within two miles of a public airport or public use airport with either an airport land use plan or, where such a plan has not been adopted, would not result in a safety hazard or excessive noise for people residing or working in the project area. (No Impact)

There are no public airport or public use airports within 2 miles of the project area. The nearest public airport is approximately 5.5 miles from the Proposed Project site. There would be no impacts, and no mitigation is required.

The Proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (No Impact)

The Proposed Project would not impair or physically interfere with the implementation of an adopted emergency response plan or emergency evacuation plan (see Chapter 3.13, “Wildfire” for more information). Bucks Bar Road would be closed during construction, and motorists would make use of the detour route (see Chapter 2), but the temporary closure would not result in significant impacts. Project construction activities would be coordinated with local law enforcement and emergency services providers, and the North Fork Cosumnes River forms the boundary of the fire protection districts that would respond to calls if needed during construction. There would be no impacts, and no mitigation is required.

The Proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. (Less Than Significant)

The Proposed Project would not include the development of structures that would expose people or structures to wildfire risks. Refer to Section 3.13, Wildfire, for additional information on wildfires and the plan to be developed by the El Dorado County Sheriff’s Office of Emergency Services prior to construction to address the temporary closure of Bucks Bar Road. The Office of Emergency Services is leading the development of a comprehensive evacuation and sheltering plan that would account for the road closure. Impacts would be less than significant, and no mitigation is required.

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3.9 Hydrology, Water Quality, and Water Resources

This section evaluates the potential effects of the Proposed Project on hydrology, water quality, and water resources.

3.9.1 Existing Conditions

3.9.1.1 Regulatory Setting

This section summarizes federal, state, and local regulations related to hydrology, water quality, and water resources that are applicable to the Proposed Project.

Federal

Clean Water Act (CWA)

The CWA is the primary law protecting the quality of waters in the United States, which includes all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. Discharge of pollutants to waters of the United States is prohibited unless authorized by permit. The following provides information on the sections of the CWA applicable to the Proposed Project.

- Section 303(d) established the total maximum daily load process to guide the application of state water quality standards. Each state is required to identify surface waters that either do not meet or are not expected to meet state water quality standards, as well as to develop total maximum daily loads of pollutants.
- Under Section 401, applications for a federal permit or license for any activity that may result in a discharge to a water body require a State Water Quality Certification to ensure that the proposed activity complies with state water quality standards.
- Section 402 establishes a permit under the NPDES program for discharges of stormwater resulting from ground-disturbing construction activities, such as grading. For ground-disturbing construction activities in excess of 1 acre, an NPDES Phase II permit is required.
- Under Section 404, the United States Corps of Engineers (USACE) and EPA regulate the discharge of dredge and fill material into waters of the United States. The USACE issues permits for certain dredge and fill activities in waters of the United States pursuant to the regulations in 33 CFR 320-330.

Executive Order 11988 (Floodplain Management)

Executive Order 11988 directs all federal agencies to avoid, to the extent possible, long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

National Flood Insurance Program

The U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The NFIP is a federal program that enables property owners in participating communities to purchase insurance as a protection against flood losses in exchange for state and community floodplain management regulations that reduce future flood damages. A Flood Insurance Rate Map is the official map of a community prepared by the Federal Emergency Management Agency (FEMA) to delineate both the special flood-hazard areas and the flood risk premium zones applicable to the community.

State

Porter-Cologne Water Quality Control Act (California Water Code Section 13260)

The Porter-Cologne Water Quality Control Act requires the regulation of any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements). The Porter-Cologne Act was established and is implemented by the State Water Board and nine Regional Water Quality Control Boards (RWQCB). The RWQCBs are responsible for implementing CWA Sections 303(d), 401, and 402 mentioned above.

The Porter-Cologne Act also requires that State Water Board or a RWQCB adopt basin plans for the protection of water quality. Basin plans are updated and reviewed every 3 years and provide the technical basis for determining Water Discharge Requirements, taking enforcement actions, and evaluating clean water grant proposals.

Construction Activities, National Pollutant Discharge Elimination System Construction General Permit

The General National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002) (Construction General Permit) regulates stormwater discharges for construction activities under CWA Section 402. Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the Construction General Permit. The Construction General Permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is site-specific to identify potential sources of construction stormwater pollution and document the BMPs that would reduce pollutants in stormwater discharges.

National Pollutant Discharge Elimination System General Municipal Stormwater Permit

CWA Section 402 mandates permits for municipal stormwater discharges, which are regulated under the NPDES General Permit for Municipal Separate Storm Sewer Systems (MS4 Permit).

Municipal stormwater discharges in El Dorado County are regulated under the State Water Board Water Quality Order No. 2013-0001-DWQ, NPDES General Permit No. CAS000004, Water Discharge Requirements for Storm Water Discharges from Small MS4s (Phase II General Permit).

Streambed Alteration Agreement (California Fish and Game Code Section 1600 et. Seq.)

California Fish and Game Code Section 1600 requires any person, government agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the bed, channel, or bank of any river, stream, or lake, or proposing to use any material from a streambed, to first notify the California Department of Fish and Wildlife of such proposed activity.

Local

El Dorado County General Plan

The County General Plan guides development and use of land within the county. Goals, objectives, and policies within the Conservation and Open Space Element and Public Health, Safety, and Noise Element of the County General Plan relevant to the Proposed Project are related to erosion and sedimentation, grading, drainage patterns, water quality and quantity, and flood hazards.

El Dorado County Ordinance Code

The Grading, Erosion and Sediment Control Ordinance regulates grading within the unincorporated areas of El Dorado County to avoid water being polluted and to ensure that the intended use of a graded site is consistent with the County General Plan (El Dorado County 2004a) and any specific adopted plans, including the adopted stormwater management plan (El Dorado County 20004b), State Fire Safe Standards, and relevant El Dorado County ordinances. This ordinance establishes the procedures for issuing permits, approving plans, and inspecting construction sites.

The Flood Damage and Prevention Ordinance requires continued participation in the NFIP to promote public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas.

Standard conditions of approval related to stormwater drainage and infrastructure include grading plans. Grading plans must be submitted and reviewed by the County in support of permit applications and be consistent with the design standards described in the Grading, Erosion, and Sediment Control Chapter of the Design and Improvement Standards Manual.

Western El Dorado County Storm Water Management Plan

The Western El Dorado County SWMP describes a program to reduce the discharge of pollutants associated with the stormwater drainage systems that serve Western El Dorado County (El Dorado County 2004a). It identifies how El Dorado County will comply with the provisions of the NPDES MS4 permit proposed by the State Water Board. The Western El Dorado County SWMP addresses its responsibilities for implementing the applicable stormwater management practices as well as training, public education and outreach, monitoring, program evaluation, and reporting activities. The SWMP requires full compliance with El Dorado County's Grading, Erosion, and Sediment Control Ordinance; El Dorado County Design and Improvement Standards Manual; and the El Dorado County Drainage Manual.

The SWMP also includes the Construction Site Runoff Control Program, which includes practices to protect water quality and control runoff from all development or redevelopment projects greater than or equal to 1 acre. The Construction Site Runoff Control Program describes typical construction site practices expected to be implemented for common construction activities, as well as the minimum construction site practices required to protect water quality.

3.9.1.2 Environmental Setting

Climate

This climate summary is from the Western Regional Climate Center Placerville gauge for the period of record extending from January 1, 1900, to May 17, 2011 (Western Regional Climate Center 2018). The Placerville gauge is located approximately 7 miles northwest of the project area. The area is characterized by warm, dry summers and cool, moist winters. The approximate average maximum temperature in the vicinity of the project site is 71.3° F; the average minimum is 43.8° F. The mean annual precipitation is approximately 38.16 inches per year. The majority of the precipitation occurs November through March (Western Regional Climate Center 2018).

Surface Water Hydrology

The project area is located within the Upper Cosumnes American watershed (hydrologic unit code 18040013). Water features in the project area are described below:

- North Fork Cosumnes River: North Fork Cosumnes River is the only feature in the project area identified on the National Wetlands Inventory online mapper. North Fork Cosumnes River is

mapped as a perennial river on the USGS Standard quad map. The river was flowing during all site visits in 2011, 2015, and 2018. The North Fork Cosumnes River watershed begins in the Sierra Nevada Mountains to the northeast and flows south-southwest to the Cosumnes River, which drains to the Mokelumne River. The Cosumnes River is not dammed.

- Ephemeral Drainage 1: Ephemeral Drainage (ED) 1 flows into the east side of North Fork Cosumnes River on the north side of the Bucks Bar Road bridge. ED 1 extends from the northeastern edge of the project area and flows southwest into the North Fork Cosumnes River. Although within the project area, ED 1 is east of and outside the Proposed Project's construction footprint.
- Ephemeral Drainage 2: ED 2 flows into the west side of North Fork Cosumnes River on the north side of the bridge. ED 2 extends from the north edge of the project area and flows south-southeast through a seasonal wetland before draining into the North Fork Cosumnes River. Although within the project area, ED 2 is east of and outside the Proposed Project's construction footprint.
- Seasonal Wetland: One seasonal wetland, which is less than 0.01 acre, occurs at the southern limit of ED 2 on the western side of North Fork Cosumnes River on the north side of the bridge. Although within the project area, this seasonal wetland is east of and outside the Proposed Project's construction footprint.

Runoff and Drainage Patterns

The general topography of the project area is characterized by moderate to steep slopes on both sides of the North Fork Cosumnes River. Runoff from the existing road, bridge, and immediate surroundings drain to the river.

Groundwater

The project area is not located within a recognized groundwater basin (DWR 2024). The closest recognized groundwater basin is the Sacramento Valley - South American Subbasin, which is part of the larger Sacramento Valley groundwater basin, approximately 20 miles west of the project area (DWR 2024).

Water Quality

The project area is within a rural low-density residential area. Typically, water quality is affected primarily by discharges from both point and nonpoint sources. Point and nonpoint sources include winter storms, overland flow, exposed soil, residential runoff, and roads. The North Fork Cosumnes River is not a 303(d) listed water body (State Water Board 2018).

Flooding

The FEMA Flood Insurance Rate Map panel 0800E of Map Number 06017C0800E, with an effective date of September 26, 2008, shows a Zone A flood hazard zone on both sides of the North Fork Cosumnes River approximately 150 feet upstream of the existing Bucks Bar Road bridge (FEMA 2008). A Zone A flood hazard zone is defined as Areas subject to inundation by the 1-percent-annual-chance flood event. No flood zones are mapped on the North Fork Cosumnes River for over 1.5 miles downstream of Bucks Bar Bridge, because the slope of the river and steep channel prevents flooding.

3.9.2 Environmental Impacts

3.9.2.1 Methods of Analysis

The analysis addresses surface hydrology, flood hazards, groundwater supply, as well as surface water and groundwater quality. Construction-related impacts were identified and evaluated qualitatively based on the physical characteristics of the project site and the magnitude, intensity, location, and duration of activities.

Multiple bridge locations and bridge types have been considered for the Proposed Project. WRECO has performed several studies to examine and analyze the existing floodplain within the project area, to document potential impacts to or encroachments on the floodplain resulting from the various project iterations, including the Proposed Project, and to determine the hydrologic and hydraulic characteristics of the existing and proposed bridge conditions. These studies by WRECO are summarized in the August 16, 2022 "Summary of Analysis To Date" memorandum (WRECO 2022). A Final Bridge Design Hydraulic Study Report would be prepared for the Proposed Project during final design.

The 100-year peak discharge for North Fork Cosumnes River was estimated using the regional regression equations developed by the USGS. These equations are based on annual peak-flow data through water year 2006 for 771 streamflow-gauging stations in California that have 10 or more years of data. California is divided into six regions, and the project site is within the Sierra Nevada region. These regional regression equations are generally used to estimate stream flow for ungauged sites that are not affected by substantial urban development and that are natural (unregulated) streams. The equations updated from data that became available in 2012 were used in support of the Proposed Project's hydrologic analysis.

The hydraulics of the existing and proposed conditions were analyzed using the USACE's Hydrologic Engineering Centers River Analysis System (HEC-RAS) Version 6.2 hydraulic modeling software.

3.9.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would have a significant impact if it would meet any of the following criteria:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- 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:
    - Result in substantial erosion or siltation on- or off-site?
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - 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
    - Impede or redirect flood flows?
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

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

3.9.2.3 Impacts and Mitigation Measures

Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? (Less Than Significant)

Implementation of the Proposed Project would include construction activities such as demolition, excavation, grading, paving, and revegetation. Construction activities may result in a temporary increase in sediment loads and pollutants to the North Fork Cosumnes River. The delivery, handling, and storage of construction materials and wastes (e.g., concrete debris), and the use of heavy construction equipment, could also result in stormwater contamination, thus affecting water quality. Operation of heavy equipment during construction activities could result in accidental spills of hazardous materials (e.g., fuel and oil) that could enter the North Fork Cosumnes River.

Coverage under the Statewide General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-006-DWQ) would be obtained. The County would require the contractor to prepare and implement an SWPPP to minimize discharge of pollutants from construction activities.

As part of the contract provisions described in Chapter 2, BMPs consistent with the current Caltrans Stormwater Quality Handbooks to protect water quality and minimize the potential for siltation and downstream sedimentation would be implemented. This would require the contractor to prepare an SWPPP that addresses the risks of work during the rainy season. Prior to beginning construction, water pollution control measures (e.g., silt fencing) would be placed near the limit of construction to avoid affecting water quality. Additionally, as noted in Chapter 2, all disturbed areas that result in exposed soil would be restored by a combination of revegetation with native plants and hydroseeding with an appropriate native seed mix. With the implementation of BMPs and restoration of disturbed areas, impacts would be less than significant, and no mitigation is required.

Operations and maintenance of the Proposed Project would be similar to existing operation and maintenance activities, including landscape maintenance, bridge maintenance, and roadway vehicle use. Roadside ditches would be constructed along both sides of the roadway, as necessary, to convey stormwater away from the roadway and to the river without risk of erosion. Inlet structures would be installed without bottoms, and pipes would be slotted/perforated along the bottom of the pipes to allow for infiltration of stormwater runoff into the ground prior to reaching the river. Implementation of the Proposed Project would not result in an increase in vehicle use, and therefore the amount and types of pollutants associated with vehicle and road use would not increase compared to existing conditions.

No impact during operation and construction would result in a less-than-significant impact, and no mitigation is required.

Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (No Impact)

The Proposed Project would not involve withdrawals from an aquifer or groundwater table, nor would the additional negligible additional impervious surface affect the recharging of local groundwater. No impact would occur, and no mitigation is required.

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 off-site; (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; (iv) or impede or redirect flood flows? (Less Than Significant)

The Proposed Project would not involve the alteration of the course of the North Fork Cosumnes River. The Proposed Project avoids impacts to the North Fork Cosumnes River channel. The contractor will install a temporary platform spanning the North Fork Cosumnes River channel as a catchment to prevent debris from entering the river during the bridge removal and for access during the bridge removal activities. Installation of the protective temporary platform below the existing bridge would occur in late fall/early winter, immediately following the high fire risk season, during the lowest annual flows of the North Fork Cosumnes River. No heavy equipment or temporary structures are needed in the river for installation of the protective temporary platform. Installation and removal may require construction personnel to walk in the river to support efficient placement and removal.

The hydraulic analysis conducted for the Proposed Project in 2022 (WRECO 2022) concluded that the Proposed Project would result in a decrease in water surface elevations by approximately 5.6 feet during a 100-year storm event. The Proposed Project removes the restriction in flow associated with the existing bridge. Raising the bridge allows for approximately 6.5 feet of freeboard (free area between soffit [bridge bottom] and the projected 100-year flood event water level). The Proposed Project would meet the FHWA and Caltrans criteria which require that a bridge be designed to pass the 50-year storm event with adequate freeboard. Caltrans recommends 2 feet of freeboard in the 50-year storm event and no freeboard during the 100-year storm event. The bridge replacement has been designed as a single-span bridge. The single-span design means that no permanent bridge supports would be placed in the 100-year flood hazard area, which would prevent debris snags that occur in the existing bridge during high flows. The Proposed Project would allow more water to flow under the bridge, thus reducing the potential for flood impacts upstream.

The Proposed Project would result in negligible additional stormwater runoff compared with the existing bridge. The minor increase of impervious surface area (approximately 0.2 acre) resulting from construction of the approaches and wider bridge deck is not expected to contribute to a substantial increase in water runoff from the site. The impact would be less than significant, and no mitigation is required.

In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (Less than significant Impact)

The Proposed Project would remove and replace the bridge over the North Fork Cosumnes River. The Proposed Project would not construct the new bridge within the floodplain, and the bridge would be constructed above the elevation of the existing floodplain; therefore, no impacts would occur, and no mitigation is required.

The project area ranges in elevation from approximately 1,620 feet to 1,680 feet above sea level and is about 120 miles from the Pacific Ocean. There are no lakes or ponds in the project area, but there are small natural or manmade ponds within 1.5 miles of the project area. None of these features are large enough to develop a seiche, identified as a sudden wave caused by high winds or seismic events, of sufficient size to affect the project site. There is no risk that pollutants would be released due to project site inundation by seiche, tsunami, and/or mudflow. There would be no impact, and no mitigation is required.

Construction of the Proposed Project, including formwork for the abutments, would occur outside of the floodplain. Bridge construction activities that may occur in late winter/early spring, when high-water level flows are possible, are designed to be placed well above the mean high-water levels and therefore no impact to the waterway would occur. As such, impacts would be less-than-significant related to inundation during construction, and no mitigation is required.

The Proposed Project is above floodplain elevations, so no impacts to the existing floodplain are anticipated during operation. The project area is not susceptible to inundation from sea level rise. As such, there would be no potential operational impacts related to inundation. There would be no impacts during operation, and no mitigation is required.

Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (No Impact)

The Proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The Proposed Project design and construction efforts are required to comply with all statewide, regional, and local water quality requirements, and no design features would conflict with applicable water quality control plan. The Proposed Project is not associated with a groundwater basin, and there is no local sustainable groundwater management plan. There would be no impact, and no mitigation is required.

3.10 Noise

Transportation projects can result in noise impacts that affect the quality of life for those who live nearby. This section addresses the potential noise impacts of the Proposed Project on human activity in the Proposed Project area.

3.10.1 Existing Conditions

3.10.1.1 Regulatory Setting

This section summarizes the regulations related to noise that are applicable to the Proposed Project. Federal, state, and local agencies regulate various aspects of environmental noise. Generally, the federal government sets noise standards for transportation-related noise sources closely linked to interstate commerce. The state government sets noise standards for transportation noise sources such as automobiles, light trucks, and motorcycles. Noise sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies.

Federal

For highway transportation projects with federal involvement, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise) govern the analysis and abatement of traffic noise impacts.

State

California Environmental Quality Act

CEQA requires a baseline versus build analysis to assess whether a proposed project will result in a noise impact. If a proposed project is determined to cause a substantial increase in noise levels, CEQA requires that feasible mitigation measures be incorporated into the project.

Local

El Dorado County General Plan

Policies and standards for noise exposure at noise sensitive land uses during construction are outlined in the 2004 County General Plan Public Health, Safety, and Noise Element (amended in August 2019). General Plan Goal 6.5, Acceptable Noise Levels, ensure that County residents are not subjected to noise levels beyond acceptable levels.

El Dorado County Code

Chapter 130.37, Noise Standards, provides information on established standards concerning acceptable noise levels for both noise sensitive land uses and for noise generating land use including transportation sources. The chapter complies with the County General Plan Goal 6.5 (Acceptable Noise Levels). Under Section 130.37.020(I), Exemptions, of the El Dorado County Ordinance Code, construction (such as construction, alteration, or repair activities) during daylight hours —provided that all construction equipment shall be fitted with factory installed muffling devices and maintained in good working order —is exempt from the noise standards in Chapter 130.37.

3.10.1.2 Environmental Setting

The Proposed Project is in a rural area of El Dorado County with residential uses on larger parcels and one commercial use parcel that is currently vacant. The most common source of manmade noise in the

Proposed Project area is vehicular traffic on Bucks Bar Road. Bucks Bar Road is not a designated truck route, so there is limited truck traffic. The Proposed Project area is moderately vegetated, and topography is characterized by moderate slopes of varying aspects. Elevations range from approximately 1,620 feet above sea level at the North Fork Cosumnes River to approximately 1,680 feet at the northern terminus of the Proposed Project.

Sensitive noise receptors in the Proposed Project area consist of residential uses. There are residential properties near the Proposed Project site. The nearest residential property is a cabin south of the bridge and approximately 50 feet east of Bucks Bar Road. The next closest property is approximately 200 feet from the construction limits and others are over 300 feet from the bridge.

3.10.2 Environmental Impacts

3.10.2.1 Methods of Analysis

The noise analysis focused on issues related to construction and operational noise levels, including vibration. The analysis included a review of El Dorado County noise policies and identification of sensitive receptors that could be affected by noise. The Proposed Project would not result in generating new vehicle trips or long-term operational noise and vibration sources.

The Proposed Project is not considered a Type 1 project according to 23 CFR 772. Definitions of Type I projects include the construction of a highway on a new location or the physical alteration of an existing highway, where there is either a substantial horizontal alteration[11] or a substantial vertical alteration[12]. The Proposed Project would not construct the roadway in a new location and would not result in a substantial horizontal or vertical alteration. The Proposed Project would widen the bridge slightly, and therefore vehicles would be closer to the cabin, but not enough to halve the distance. The new bridge would shift travel at the bridge location about 10 feet toward the cabin but would still maintain a distance of 50 feet from the roadway. The Proposed Project would result in the new bridge being higher than the existing bridge, but the Proposed Project would not remove shielding since there is currently no shielding. Therefore, a noise analysis is not required for project operation.

The Proposed Project would replace the existing bridge in generally the same location and widen the bridge deck to meet current AASHTO, Caltrans, and County standards. The Proposed Project would not change capacity or increase VMT on Bucks Bar Road and therefore traffic generated noise is anticipated to remain similar to current conditions.

To determine if construction activities would result in vibration impacts, construction vibration estimates are based on vibration levels reported by Caltrans and the Federal Transit Administration (FTA). Vibration limits used to determine a potential impact to adjacent land uses from construction activities, such as blasting, pile-driving, vibratory compaction, demolition, drilling, or excavation, are based on the information in Caltrans' *Transportation and Construction Vibration Guidance Manual* the FTA *Transit Noise and Vibration Impact Assessment Manual* (Caltrans 2020; FTA 2018).

3.10.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

[11] A project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition.

[12] A project that removes shielding, therefore exposing the line-of-sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway noise source and the receptor.

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- Generation of excessive ground-borne vibration or ground-borne noise levels?
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose persons residing or working in the project area to excessive noise levels?

3.10.2.3 Impacts and Mitigation Measures

The Proposed Project would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant)

Construction activities would temporarily increase noise levels in the vicinity of the Proposed Project. Noise levels from operating heavy machinery would be temporarily increased at the noise-sensitive land uses and would be highest while auguring piers and dismantling the existing bridge. Elevated noise levels from construction activities would be temporary. The nearest residence is a cabin about 50 feet east of Bucks Bar Road that is occupied part of the year. A portion of the property with the cabin is proposed to be used for staging during construction.

Construction during daylight hours is exempt from El Dorado County noise standards in accordance with Section 130.37.020(1) of Chapter 130.37, Noise Standards, in the El Dorado County Ordinance Code. Consistent with Chapter 130.37, nighttime construction would be allowed when necessary to expedite construction with prior approval from the Director of the Planning and Building Department. These situations would be assessed for intensity of noise with prioritization of loud activities during the day and otherwise be short-term in nature. Impacts during construction would be less than significant, and no mitigation is required.

As noted in Section 3.10.2.1, Methods of Analysis, the Proposed Project is not a Type I project; therefore, a noise analysis for operational impacts is not required. The Proposed Project would replace the existing single-lane bridge with a two-lane bridge. The bridge would be replaced on approximately the same alignment as the existing bridge. The Proposed Project would not increase the capacity of Bucks Bar Road. The Proposed Project would substantially reduce engine idling, acceleration, and brake noise associated with vehicle starts and stops that occur under current conditions. There would be no impacts during operation, and no mitigation is required.

The Proposed Project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. (Less Than Significant)

Land uses in which groundborne vibration could potentially interfere with operations or equipment (such as research, manufacturing, hospitals, and university research operations) are considered “vibration-sensitive” (FTA 2018). The degree of sensitivity depends on the specific equipment that would be affected by the groundborne vibration. Project construction includes activities such as operation of large pieces of equipment (such as heavy trucks, large cranes, and excavators) that could result in the periodic, temporary generation of groundborne vibration. There are no vibration-sensitive land uses in the project area; however, excessive levels of groundborne vibration of either a regular or an intermittent nature can result in annoyance to nearby residences and potential damage the existing residential uses. Construction activities known to generate excessive groundborne vibration, such as pile-driving, are not proposed as part of the Proposed Project.

The greatest anticipated sources of vibration during project construction activities would be from a vibratory roller, which may be used during paving activities and may be used within 50 feet of the nearest residential structure. A vibratory roller would create approximately 0.11 inch per second peak particle velocity (PPV) at 50 feet from structures (Caltrans 2020). PPV refers to the movement within the ground and not surface movement. This would be above a strongly perceptible impact for humans of 0.10 inch per second PPV; however, this type of work would occur only for approximately two days during construction, and the only residence within 50 feet would not be occupied at all times during construction. For other residences, the PPV would be below the strongly perceptible impact but would be distinctly perceptible. The nearest residence was constructed in the 1940s, and because of its age, there is the potential for damage from vibration. The structural damage impact to historic and some older buildings of 0.25 inch per second PPV (Caltrans 2020) would not be exceeded, therefore vibration damage to the structure is not anticipated. Therefore, although a vibratory roller might be perceptible to nearby human receivers, temporary impacts associated with the roller (and other potential equipment) would be less than significant.

The Proposed Project would not expand the roadway or change the way in which it is used, and therefore groundborne vibration associated with operations of the road is not anticipated to change from the current condition. Impacts would be less than significant, and no mitigation is required.

The Proposed Project is not within either the vicinity of a private airstrip or within two miles of a public airport or public use airport, and would not expose people residing or working in the project area to excessive noise levels. (No Impact)

The Proposed Project would not be located in the vicinity of a private airstrip, within an airport land use plan area, or within 2 miles of a public or public use airport. There would be no impacts, and no mitigation is required.

3.11 Public Services and Utility Service Systems

This section addresses public services, which includes fire and police protection, schools, parks, and other public facilities, and also addresses utility service systems, which includes water, wastewater, stormwater, solid waste, telecommunications, and energy facilities.

3.11.1 Existing Conditions

3.11.1.1 Regulatory Setting

This section summarizes the regulations related to public services and utility service systems that are applicable to the Proposed Project.

Local

El Dorado County General Plan

The County General Plan includes goals and policies in the Public Health, Safety, and Noise Element and the Public Services and Utilities Element to ensure the provision of adequate services in El Dorado County. These services include fire protection, law enforcement, emergency medical, other public services such as schools, and utilities.

El Dorado County Design and Improvement Standards Manual

The *El Dorado County Design and Improvement Standards Manual*, which was adopted in 1986 and revised in 1990, provides required erosion and sediment control measures applicable to subdivisions, roadways, and other development.

3.11.1.2 Environmental Setting

The Proposed Project site is within a rural and unincorporated area of El Dorado County. There are few public services and utility service systems in the Proposed Project area.

Public Services

Fire Protection

Fire protection is provided by the El Dorado County Fire (ECF) Protection District and the Pioneer Fire (PIO) Protection District. The North Fork Cosumnes River is the boundary between the two districts, with ECF responding to calls north of the bridge and PIO to the south of the bridge. The nearest ECF stations are Station 19 (4429 Pleasant Valley Road) and Station 23 (1834 Pleasant Valley Road) about 5 and 8 miles from the project area, respectively. The nearest PIO station is Station 32 (4770 Sandridge Road) about 0.8 mile from the Proposed Project area.

Police Protection

Police protection is provided by the El Dorado County Sheriff's office. The nearest sheriff's office to the project area is in Placerville, about 9 miles from the Proposed Project area.

Schools

The Proposed Project is located within the Gold Oak Union School District and the Pioneer Union School District. Generally, elementary and middle school students north of the bridge would attend Pleasant Valley Middle School and Gold Oak Elementary School, which are part of the Gold Oak Union School District. Students living south of the bridge would attend Mountain Creek Middle School or Pioneer Elementary School in the Pioneer Union School District. Both of these middle and elementary schools

are about 4.5 miles from the Proposed Project. The high school attendance boundary that covers the project area is for Union Mine High School in the El Dorado Union High School District, which is in El Dorado. The schools in the Pioneer Union School District and Union High School District provide school bus transport on Bucks Bar Road, but only the Union High School District has bus routes that currently cross the existing bridge.

Parks

There are no parks in the project area. The nearest recreation area is the Cosumnes River Gorge, which is about 0.4 mile southwest of the Proposed Project.

Other Public Facilities

There are no other public facilities (e.g., government offices) in the project area.

Utilities

The only utilities in the Proposed Project area are overhead utilities for PG&E power and AT&T telephone. There are no water or wastewater services in the project area and no stormwater treatment facilities. Solid waste and recycling are accepted at one of the two material recovery facilities in the county. The nearest material recovery facility to the Proposed Project area is the Materials Recovery Facility/Disposal facility in Placerville (4100 Throwita Way) and operated by El Dorado Disposal. County residents can transport items for disposal and recycling as well as household hazardous waste and electronic recycling to the facility.

3.11.2 Environmental Impacts

3.11.2.1 Methods of Analysis

The analysis of public services and utilities/service systems is based on identifying public services and utilities providers and facilities in the Proposed Project area and assessing how the Proposed Project would affect services during construction.

3.11.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would be considered to have a significant effect on public services or utilities/service systems if it would result in any of the conditions listed below.

Public Services

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
  - Fire protection?
  - Police protection?
  - Schools?
  - Parks?
  - Other public facilities?

Utilities and Service Systems

- Require or result in the relocation or construction of new water or expanded wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- 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?
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

3.11.2.3 Impacts and Mitigation Measures

The Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, schools, and other public facilities. (Less Than Significant)

The replacement of an existing bridge with the Proposed Project would not result in either the provision of or the need for new or physically altered governmental facilities. When constructed, the Proposed Project would not result in impacts on service ratios, response times, or other performance objectives. The replacement structure would enhance response times by providing improved roadway and bridge deck geometry and two travel lanes, eliminating the need for oncoming traffic to stop and wait until the bridge is clear. In addition, the Proposed Project would not result in a population increase that would require new government facilities or lead to the physical alteration of existing facilities, including fire and police protection, schools, parks, or other public facilities.

During construction, Bucks Bar Road within the project limits would be closed for approximately 10 months, and all vehicles would be required to use the detour route, which is described and illustrated in Chapter 2, Project Description. Signs would be posted in advance of construction, and public outreach and coordination with public service providers would occur prior to construction.

Public outreach would include fire and police protection and the school districts to ensure that emergency and public services are aware of the closure, the planned closure duration, and detour routes. The detour route would increase travel times between Somerset and the Bucks Bar Road/Pleasant Valley Road intersection by about 5 minutes. Because the North Fork Cosumnes River forms the boundary of the two fire districts in the area, no impacts on response times are anticipated for fire protection. For other vehicles that use Bucks Bar Road, there would be a temporary increase in travel times, depending on the direction of travel.

The bridge closure would also affect the Union Mine High School bus route that travels on Bucks Bar Road and crosses the bridge. Construction during the school year would require either a temporary change in the pickup and drop off locations on Bucks Bar Road and or revisions to the school bus route. As noted, coordination would occur prior to construction with public service providers, including the

school district. Impacts associated with detour routing would be less than significant and no mitigation is required.

The Proposed Project would not require or result in the relocation or construction of new water or expanded wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. (No Impact)

The overhead utilities (PG& E and AT&T) would be relocated at the start of construction and prior to the existing bridge removal and construction of the new bridge. There is the potential that PG&E and AT&T could relocate the utilities prior to construction, and this would be determined during final design. Prior to utility relocation the County would coordinate with PG&E and AT&T on the placement of the relocated utilities. The County would consult with the culturally affiliated consulting Native American tribes on ways to avoid impacts to any tribal cultural resources relative to relocation, including reducing impacts of maintenance of relocated facilities. If utilities were relocated at the start of construction or prior to construction, no disruptions in service would be anticipated because the relocated lines would be installed before removal of the existing facilities. Because the utilities would be relocated prior to construction, no impacts would occur and no mitigation is required.

The Proposed Project would not increase the demand on public utilities and would not result in the need for expanded wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities because no development or new access would be associated with the Proposed Project. There would be no impacts, and no mitigation is required.

The Proposed Project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. (Less Than Significant)

Construction activities would require water supplies to use for dust control and other tasks; when construction is complete, these needs would end. During operation, water supplies would be needed for restored vegetated areas, and future routine maintenance may include pressure-washing and other minor water uses. However, the amount of water required would be minor and not require or result in changes to water supplies. Impacts would be less than significant, and no mitigation is required.

The Proposed Project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (No Impact)

There would be no changes in the wastewater treatment systems because there is no wastewater treatment provider associated with the project area. During construction, there would likely be portable toilets for construction workers, and waste would be collected and transported to appropriate facilities. No impacts would occur, and no mitigation is required.

The Proposed Project would not 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. (Less Than Significant)

Solid waste generated by the Proposed Project would primarily be construction debris, including asphalt and concrete, from the excavation of existing roadway and removal of the existing bridge and construction. Solid waste disposal would occur in accordance with federal, state, and local regulations. Disposal of debris associated with the Proposed Project would occur at the Materials Recovery Facility/Disposal facility in Placerville. During operation, there would be no generation of solid waste. Impacts would be less than significant, and no mitigation is required.

The Proposed Project would comply with federal, state, and local statues and regulations related to solid waste. (No Impact)

The Proposed Project would not result in impacts on landfill capacity and would comply with the relevant federal, state, and local solid waste statues and regulations. No impacts would occur, and no mitigation is required.

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3.12 Transportation

Bucks Bar Road is part of the larger local and regional roadway system in El Dorado County, and changes to the system have the potential to affect the transportation network both positively and negatively.

3.12.1 Existing Conditions

3.12.1.1 Regulatory Setting

This section summarizes state and local regulations related to transportation that are applicable to the Proposed Project. There are no applicable federal regulations for transportation.

Regional

Sacramento Area Council of Governments

SACOG is an association of local governments in the six-county Sacramento region, which is composed of Sacramento, El Dorado, Placer, Sutter, Yolo, and Yuba counties as well as 22 cities. SACOG provides transportation planning and funding for the region and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, SACOG assists with planning related to transit, bicycle networks, clean air, and airport land uses.

The 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) is a federally mandated long-range, fiscally constrained transportation plan for the six-county area. To receive federal funding, transportation projects nominated by cities, counties, and agencies must be consistent with the MTP/SCS. The MTIP is a list of transportation projects and programs to be funded and implemented over the next 3 years. SACOG submits the MTIP to Caltrans and amends the program on a quarterly basis. Only projects listed in the MTP/SCS may be included in the MTIP. The Proposed Project is identified in the 2023-2026 MTIP as SACOG ID ELD19321.

Local

El Dorado County Transportation Commission

The El Dorado County Transportation Commission (EDCTC) was designated as the Regional Transportation Planning Agency for El Dorado County on July 23, 1975. The EDCTC is responsible for coordinating regional transportation planning for the western slope of El Dorado County. Being the State-mandated Regional Transportation Planning Agency, EDCTC prepares the Regional Transportation Plan (RTP) for the Western Slope, which is submitted to SACOG for inclusion in the MTP/SCS process. This plan is updated every 5 years. The RTP is designed to be a blueprint for the systematic development of a balanced, comprehensive multimodal transportation system (EDCTC 2020a).

El Dorado County General Plan

The Transportation and Circulation Element of the County General Plan, last amended in 2019, establishes standards that guide development of the transportation system, including access to the road and highway system required by new development.

3.12.1.2 Environmental Setting

Bucks Bar Road generally runs north-south and serves as a major collector, as defined by the California Road System – Functional Classification, linking Pleasant Valley Road to the north with Mount Aukum Road to the south. Bucks Bar Road is a two-lane roadway except at the existing Bucks Bar Road bridge, where the roadway narrows to one lane and requires southbound vehicles to yield to northbound travelers until the bridge is visually clear of vehicles. The 2013 Caltrans Local Agency Bridge List classifies

the bridge as functionally obsolete. The bridge railings, transitions, approach rails, and approach guardrails do not meet current standards. The Caltrans June 2013 bridge inspection report indicates that the deck geometry is "basically intolerable requiring high priority of replacement."

Based on the most recent traffic counts, Bucks Bar Road carries between approximately 4,000 and 5,000 vehicles per day and is not a designated truck route (El Dorado County 2024). Exhibit 3-17 lists the annual daily traffic counts on Bucks Bar Road in both directions at two locations, one 500 feet south of Pleasant Valley Road and the other 300 feet north of Mount Aukum Road. The annual daily traffic counts are calculated by taking the average of a one-day to five-day, non-holiday, weekday count.

Exhibit 3-17. Bucks Bar Road Annual Daily Traffic Counts

Count Location	Year of Count [a]				
	2023	**2022**	**2021**	**2020**	**2019**
500 feet south of Pleasant Valley Road	4,729	4,726	4,877	No Count	5,026
300 feet north of Mount Aukum Road	3,632	3,857	3,988	No Count	4,033

[a] Traffic counts were not conducted on Bucks Bar Road in 2020 due to construction, logging, fire, and equipment failure.

There are no public transportation services, including dial-a-ride, offered in the project area, and there are no current plans for new routes or services that would extend into the project area. There are also no formal pedestrian and bicycle facilities on Bucks Bar Road and no current plans to incorporate such facilities. Given the rural location of the Proposed Project, the distance between destination points and the project area, and the lack of formal sidewalks and bike lanes, pedestrian travel is not a common mode of transportation on Bucks Bar Road in the project area. No bicycle facilities are planned for Bucks Bar Road in the project area (EDCTC 2010 and 2020b).

The Accident Site Analysis Summary from January 2011 to August 2021 for Bucks Bar Road between postmile 1.0 and postmile 1.4 reports 17 accidents with 10 injuries and no fatalities (El Dorado County 2021a). The Accident Site Analysis Summary within approximately 500 hundred feet on either side of the bridge included five rear-ends, two overturned vehicles, one broadside collision, and six side-swiped or hit objects and three more accidents involved a motorcycle. Accident types closest to the bridge included sideswipe of another vehicle or hit objects. Accidents near the bridge are likely to be attributable to the abrupt presence of a one-lane bridge on a two-lane road and the limited sight distance that requires vehicles to stop and/or yield where conditions do not meet normal driver expectations.

3.12.2 Environmental Impacts

3.12.2.1 Methods of Analysis

The impact analysis for traffic and circulation was conducted only for the temporary impacts during construction since the Proposed Project is a bridge replacement and would not result in changes in traffic operations. Relevant policies and plans related to the transportation and circulation system were also reviewed.

3.12.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would be considered to have a potentially significant impact on transportation and circulation if it would result in any of the conditions listed below.

- Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
- Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Result in inadequate emergency access?

3.12.2.3 Impacts and Mitigation Measures

The Proposed Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. (No Impact)

The Proposed Project would not conflict with a program, plan ordinance, or policy addressing the circulation system. As noted, there are no transit, bicycle, or pedestrian facilities in the project area, and planning documents do not identify planned facilities on Bucks Bar Road. The Proposed Project is identified in the El Dorado County Capital Improvement Program (CIP) as project #36105003 (El Dorado County 2024). The CIP is coordinated with the Five-Year major review of the County General Plan (including the Transportation and Circulation Element) and is also included in the annual County General Plan review. The Transportation and Circulation Element addresses alternative transportation systems.

The Proposed Project would be consistent with the relevant goals and polices in the County General Plan, including the Transportation and Circulation Element: Goal TC-1 (To plan for and provide a unified, coordinated, and cost-efficient countywide road and highway system that ensures the safe, orderly, and efficient movement of people and goods) and Policy TC-1a that includes text that road design standards for County-maintained roads shall be based on the AASHTO standards, and supplemented by Caltrans design standards and by the County standards. The Proposed Project would be consistent because the replacement of the existing bridge with a new two-lane bridge would ensure the safe, orderly, and efficient movement of people, and it is being designed to meet AASHTO, Caltrans, and County standards and would provide for the safe and efficient movement of people on Bucks Bar Road. Additionally, the existing bridge does not allow residents to evacuate across the bridge while first responders simultaneously use the bridge to get to an emergency. This is a significant public safety concern wherein the existing bridge can only be used in one direction at a time. The Proposed Project complies with the two-way traffic flow safety requirements for emergency vehicle access and civilian egress of Title 14 of the California Code of Regulations, Division 1.5, Chapter 7, Subchapter 2, Article 2, section 1273.01(a). Because the Proposed Project would not conflict with a program, plan, or policy, there would be no impacts, and no mitigation is required.

The Proposed Project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). (No Impact)

With the implementation of SB 743 in 2018, vehicle miles traveled (VMT) has become the state-mandated criteria for determining if a project would result in a “significant transportation impact.” The Proposed Project is a bridge replacement and would not increase capacity on Bucks Bar Road; therefore, it would not change VMT or traffic volumes. The Proposed Project would correct and improve an existing hazard on the bridge. As a result, the Proposed Project would not conflict with or be

inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). There is no impact, and no mitigation is required.

The Proposed Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (No Impact)

The Proposed Project would correct and improve an existing hazard in design and geometry of the bridge. The project objectives include improving roadway safety and compliance with AASHTO, Caltrans, and County design standards. The replacement structure would improve roadway safety by providing a better bridge deck geometry and two travel lanes. This would eliminate the need for oncoming traffic to stop and wait until the bridge is clear. To minimize environmental impacts, the Proposed Project would require a design exception to maintain a design speed of 30 mph; however, Bucks Bar Road already varies in many places between 15 and 45 mph. Given the rural major collector status and the topographic constraints, 30 mph is a design exception but would not introduce or increase hazards in the roadway.

The new bridge structure would also meet hydraulic design requirements. The Proposed Project is designed to improve safety within the project area and would not increase hazards due to design features. There would be no impact, and no mitigation is required.

The Proposed Project would not result in inadequate emergency access. (Less Than Significant)

Replacement of the existing bridge at its existing location requires that Bucks Bar Road be closed during construction for approximately 10 months. During this closure, vehicles would use the detour route (see Chapter 2). Emergency services for response to wildfires are not expected to cause increased response times because the bridge represents the boundary between the two fire districts. However, the closest CAL FIRE station is in Placerville and, depending on the location of a fire, CAL FIRE might need to take an alternative detour route, which could increase their response times. For police, there could be an increase in response times as a result of the bridge closure. To minimize this impact the County the County has committed to (see section 2.4.4) a provision to require its contractor to coordinate with CAL FIRE to provide a project-specific Fire Protection Plan to cover their construction activities.

During operation, the Proposed Project improve emergency access because the replacement of the one-lane bridge with a two-lane bridge would remove the current conflict between passing vehicles on the bridge. The impact would be less than significant, and no mitigation is required.

3.13 Wildfire

This section addresses potential wildfire hazards impacts that could result from construction and/or operation of the Proposed Project. A wildfire is a nonstructural fire that occurs in vegetative fuels, excluding prescribed fires. Wildfires can occur in undeveloped areas and spread to urban areas. The potential for wildland fires represents a hazard where development is adjacent to open space or close to wildland fuels or designated fire severity zones. Steep hillsides and varied topography within El Dorado County also contribute to the risk of wildland fires. Fires that occur in wildland-urban interface areas could affect natural resources as well as life and property.

3.13.1 Existing Conditions

3.13.1.1 Regulatory Setting

This section summarizes regulations related to wildfire that are applicable to the Proposed Project.

State

California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE protects the people of California from fires; responds to emergencies; and protects and enhances forest, range, and watershed values that provide social, economic, and environmental benefits to rural and urban citizens. CAL FIRE responds to nearly 6,000 wildland fires that burn on average over 260,000 acres each year (CAL FIRE 2019).

State Fire Regulations

Fire regulations for California are established in Division 12, Section 13000 et seq. of the California Health and Services Code and include regulations for structural standards (similar to those identified in the California Building Code); fire protection and public notification systems; fire protection devices such as extinguishers and smoke alarms; standards for high-rise structures and childcare facilities; and fire suppression training. The State Fire Marshal is responsible for enforcement of these established regulations and building standards for all state-owned buildings, state-occupied buildings, and state institutions within California.

Strategic Plan

The Strategic Plan is a cooperative effort between the State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection. By placing the emphasis on what needs to be done long before a fire starts, the Strategic Plan looks to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health. The current plan was finalized and approved by the state in January 2019 (CAL FIRE 2019).

Local

El Dorado County General Plan

To ensure provision of adequate public human health and safety services in the county, the Public Services and Utilities Element and Public Health, Safety and Noise Element of the County General Plan (El Dorado County 2019) include goals and policies related to the adequate provision of emergency services, including fire protection and the minimization of fire hazards in wildlands and developed areas.

Fire Safe Regulations

El Dorado County has adopted the basic wildland fire protection standards of the California Board of Forestry. These standards are contained in Title 14 Natural Resources, Division 1.5 -Department of

Forestry, Chapter 7 - Fire Protection Subchapter 2 State Responsibility Area Fire Safe Regulations Articles 1-5 of the County code. These regulations have been prepared and adopted to establish minimum wildfire protection standards in conjunction with building, construction, and development in a State Responsibility Area. The design and construction of structures, subdivisions, and developments in the State Responsibility Area will provide for basic emergency access and perimeter wildfire protection measures as specified in the following El Dorado County Code in Chapter 8.09 and Western El Dorado County Wildfire Protection Plan. These measures provide for emergency access, signing and building numbering, private water supply reserves for emergency fire use, and vegetation modification.

El Dorado County Code (Chapter 8.09 Vegetation Management and Defensible Space)

Chapter 8.09 of the El Dorado County Code provides for the removal of hazardous vegetation and combustible materials situated in the unincorporated areas of the county to reduce the potential for fire and to promote the safety and welfare of the community.

Western El Dorado County Community Wildfire Protection Plan

The 2017 El Dorado County Wildfire Protection Plan provides an overview of local fire history, fire risks, hazards, and past strategies. The plan identifies specific fire protection problems and issues, lists plan goals and strategic action plan recommendations, identifies and lists communities for fire safe planning, provides for formation of local community fire safe councils, adopts a standard outline for Community Wildfire Protection Plans, identifies the El Dorado County Fire Safe Council as a focal point for bringing citizens and protection agencies together to plan and accomplish fire safe measures, and establishes a public education role for the El Dorado County Fire Safe Council.

3.13.1.2 Environmental Setting

CAL FIRE has mapped fire hazard severity zones in the state through the Fire and Resources Assessment Program (FRAP) based on a hazard scoring system using subjective criteria for fuels, fire history, terrain influences, housing density, and occurrence of severe fire weather where urban conflagration could result in catastrophic losses. Land where CAL FIRE is responsible for wildland fire protection and located in unincorporated areas is classified as a State Responsibility Area. Where local fire protection agencies are responsible for wildfire protection, the land is classified as a Local Responsibility Area. In addition to establishing local or state responsibility for wildfire protection in a specific area, CAL FIRE designates areas as very high, high, and moderate fire hazard severity zones. The Proposed Project area is within a State Responsible Area and is identified as a very high fire hazard severity zone (CAL FIRE 2024).

Although the project area is within a State Responsibility Area, all fire agencies in El Dorado County work cooperatively together to suppress wildland fires.

CAL FIRE is divided into two regions and 21 operational units. The Amador-El Dorado Unit includes the counties of Amador, El Dorado, Alpine, and portions of Sacramento and San Joaquin counties and has a Direct Protection Area of approximately 910,589 acres in all five counties (OSFM 2021).

The Proposed Project area is located within the North Division of the Amador-El Dorado Unit Direct Protection Area. The North Division is divided into five battalions, and Battalion 1 encompasses the Proposed Project area. El Dorado Fire Station 43 at 5660 Mother Lode Drive in Placerville is approximately 9.3 miles northwest of the Proposed Project area, which is within the response area this fire station. Camino Fire Station 20 and the Amador-El Dorado Unit Headquarters are also within the boundaries of Battalion 1.

The Proposed Project area is within the service boundaries of both the El Dorado County Fire Protection District (ECF) and Pioneer Fire Protection District (PIO). The North Fork Cosumnes River acts as the

boundary between the two districts, with ECF responding to calls west of the bridge and PIO to calls east of the bridge.

ECF currently operates 15 fire stations, eight of which are "staffed" and seven are "unstaffed." The nearest ECF stations that would respond to calls from the Proposed Project area include Station 19 at 4429 Pleasant Valley Road in Placerville, which is approximately 3 miles northeast of the Proposed Project area, and Station 23 at 1834 Pleasant Valley Road in Placerville, which is approximately 5 miles northwest of the Proposed Project area. Station 19 is a staffed station and Station 23 is unstaffed and supported by volunteers and off-duty personnel.

The PIO currently operates six fire stations, and the closest is Station 32 at 4770 Sandridge Road in Somerset, which is approximately 0.8 mile south of the Proposed Project area. Station 32 is currently unstaffed and supported by volunteers. Station 38, which is PIO's main district station and is staffed and equipped year-round, is located at 7061 Mount Akum Road, which is approximately 5.25 miles southwest of the Proposed Project area.

The FRAP compiled a statewide spatial database of fire perimeters from Bureau of Land Management, National Park Service, and U.S. Forest Service fires 10 acres and greater in size and CAL FIRE fires 300 acres and greater in size. No wildfires are mapped as occurring in the project area according to the CAL FIRE FRAP Fire Perimeters 1950–2018 map (CAL FIRE 2019b).

3.13.2 Environmental Impacts

3.13.2.1 Methods of Analysis

The impact analysis for wildfire was conducted qualitatively by evaluating the potential changes to the existing bridge, roadway approaches, and other transportation conditions based on the anticipated project construction activities and Proposed Project design.

3.13.2.2 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project would be considered to have a potentially significant impact on wildfire if it would result in any of the conditions listed below.

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

- Substantially impair an adopted emergency response plan or emergency evacuation plan?
- 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?
- 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?
- 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?

3.13.2.3 Impacts and Mitigation Measures

The Proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. (Less Than Significant).

Construction would require a temporary long-term closure (approximately 10 months) of the Bucks Bar Road bridge that could make evacuation routes longer for a few residents during a wildfire. Residents

would use the detour routes developed for the Proposed Project, and information on these routes would be coordinated with emergency and public services, community, and business travelers prior to the required closure of the bridge. To reduce the risks on evacuation routes needed during a wildfire emergency, the temporary long-term closure is proposed to start in the early to late fall, with the objective of having the bridge usable for evacuations by early summer, even if Bucks Bar Road is closed to public traffic. When the bridge is complete, accommodations could be made for emergency evacuation use, even if the road closure was still in place. Ultimately, the actual start and completion dates of the temporary long-term closure would be dependent upon weather and river flows.

Since each wildfire emergency has its own set of specific circumstances, it is not possible to predetermine the evacuation plans or shelter-in-place plans for each resident who would be impacted during the construction-related, long-term closure. However, to assess the potential hazard of a wildfire preventing ingress/egress using Bucks Bar Road, the County met with El Dorado County Sheriff's Office of Emergency Services, CAL FIRE, El Dorado County Fire Protection District, and Pioneer Fire Protection District on April 25, 2022 to discuss the Proposed Project and its potential impacts on evacuations if a wildfire emergency were to occur during the road closure and the use of Bucks Bar Road for ingress and egress was not possible. On May 27, 2022, this same group conducted field visits to numerous areas on both sides of North Fork Cosumnes River near the Proposed Project site to investigate potential evacuation routes and potential shelter-in-place and temporary refuge areas[13]. Through these "ground-truthing" field visits, the public safety attendees concluded that there are adequate evacuation routes and refuge areas that allow for the development of a comprehensive evacuation and sheltering plan to be implemented if the bridge closure were to impact evacuations during a wildfire event. The Office of Emergency Services would take the lead on developing the plan, which may include, but would not be limited to the following:

1. Develop unique evacuation routes and sheltering options for different locations along the Bucks Bar Road corridor.
2. Meet with property owners and residents along Bucks Bar Road and roads that feed into Bucks Bar Road.
3. Explore response plans under various wildfire and emergency scenarios.
4. Update emergency alerts (Code Red) information that provide evacuation and sheltering information tailored to specific locations along Bucks Bar Road.

Therefore, since the Office of Emergency Services is leading the development of a comprehensive evacuation and sheltering plan that would account for the road closure, the Proposed Project would not impair an adopted emergency response plan or emergency evacuation plan.

Emergency services for response to wildfires are not expected to cause increased response times because the bridge represents the boundary between the two fire districts. However, the closest CAL FIRE station is in Placerville and, depending on the location of a fire, CAL FIRE might need to take an alternative detour route, which could increase their response times. To minimize this impact the County the County has committed to (see section 2.4.4) a provision to require its contractor to coordinate with CAL FIRE to provide a project-specific Fire Protection Plan to cover their construction activities, be proactive in being alert, and employ preventative precautions, as outlined below and in project description section 2.4.4. During operation, the Proposed Project improve emergency access because the replacement of the one-lane bridge with a two-lane bridge would remove the current conflict

[13] Shelter in place is defined as remaining in your home, and temporary refuge areas are defined as space intended to preserve firefighter safety, not a public evacuation zone.

between passing vehicles on the bridge. Impacts would be less than significant, and no mitigation is required.

The Proposed Project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors that would exacerbate wildfire risks. (Less Than Significant)

The Proposed Project is within areas identified as being at risk for wildfires because of the steep slopes, vegetation, and limited access to these areas. Project construction would involve the use of heavy equipment, welding, and other activities that have potential to ignite fires. As part of the Proposed Project pre-construction approval, coordination between the County's contractor and CAL FIRE would occur and inform the development of the Project's Fire Protection Plan

As outlined below and in project description section 2.4.4 the County's contractor will prepare and submit a Fire Protection Plan as required by the California Division of Occupational Safety and Health (better known as Cal/OSHA) for CAL FIRE to review, revise if necessary, and receive approval of before the start of job site activities. Measures in the Fire Protection Plan at a minimum include the following:

- A designated fire foreman and other key personnel responsible for implementing the approved plan. Include roles, responsibilities, and contact information for all personnel identified in the plan.
- Measures and BMPs used to prevent and extinguish fires caused directly or indirectly by job site activities. Identify how these measures and BMPs would be implemented and enforced through the use of administrative protocols such as Hot Work Permits and Activity Hazard Assessments.
- Emergency vehicle access routes to enter, exit, and get to locations throughout the site.
- Fire patrol routes within/adjacent to the site and the locations where fire suppression materials would be stored.
- Monitoring plan to ensure fire prevention safety and effectiveness as work progresses on the project and during each project stage.
- Obtain the phone numbers of the nearest fire suppression agencies, including ECF and PIO, CAL FIRE unit headquarters, U.S Forest Service ranger district office, and U.S. Department of Interior Bureau of Land Management field office. Post the names and phone numbers at a prominent place at the job site.
- During construction, fires occurring within and near the project area would be reported immediately by dialing 911 and by calling the nearest fire suppression agency using the emergency phone numbers retained at the job site.

During operation, there would be the potential for wildfires in the project area; however, the Proposed Project would replace the existing bridge in the same location, which would not change or introduce new occupants with potential to be affected by pollutant concentrations. The Proposed Project would not exacerbate the risk of wildfires because there are no flammable materials associated with the bridge materials. A fire threat is present with or without the Proposed Project, but by replacing the one-lane bridge with a two-lane bridge the remaining obstacles on Bucks Bar Road would be removed thus improving reliability in evacuation options and emergency response time.

The Proposed Project would not result in increased use of the area within the Fire Hazard Severity Zones because no new access would be provided beyond the roadway improvements. Vegetation underbrush would be maintained within the roadway right-of-way to reduce potential fuels as part of roadway maintenance. Impacts would be less than significant, and no mitigation is required.

The Proposed Project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (No Impact)

The Proposed Project would not require the installation of associated infrastructure that could exacerbate fire risk or result in temporary or ongoing impacts to the environment. The Proposed Project would replace the existing bridge in the same general location and therefore minimize the potential for conflicts between vehicles, including those responding to potential wildfire incidents. There would no impacts, and no mitigation is required.

The Proposed Project would not 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. (Less than Significant)

The Proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes. The Proposed Project site is within hilly terrain in a rural residential area within a mixed conifer and oak woodlands underlaid by granite rock and adjacent to the North Fork Cosumnes River. The Proposed Project site is not within the ordinary high-water mark of the North Fork Cosumnes River and would remain outside of the floodplain; the potential for flooding would be further reduced by raising the bridge to pass 100-year flood event.

Wildfire risk in the Proposed Project area will remain with or without the Proposed Project. The Proposed Project area is not susceptible to landslides, and adjacent vegetation would be removed to provide a wider fire break at Bucks Bar Road within the Proposed Project improvement area.

The Proposed Project would remove the traffic conflict at the bridge and improve evacuation in the event of a wildfire. While wildfire risk would remain, the impact would be less than significant, and no mitigation is required.

Chapter 4 Alternatives Analysis

4.1 Alternatives Overview

The CEQA requires that an EIR include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any significant effects of the project and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6[a]). As required by CEQA, this chapter identifies and evaluates potential alternatives to the Proposed project.

Section 15126.6 of the CEQA Guidelines explains the foundation and legal requirements for the alternatives analysis in an EIR. Key provisions are listed below:

- "[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly." (15126.6[b])
- "The specific alternative of 'no project' shall also be evaluated along with its impact." (15126.6[e][1])
- "The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." (15126.6[e][2])
- "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project." (15126.6[f])
- "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (15126.6[f][1]).
- "Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." (15126.6[f][2][A])
- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." (15126.6[f][3])

For each development alternative, this analysis:

- Describes the alternative.
- Analyzes the impact of the alternative as compared to the Proposed Project.
- Identifies the impacts of the alternative that would be avoided or lessened by the alternative.

- Assesses whether the alternative would meet most of the basic project objectives (see Chapter 2, Project Description).
- Evaluates the comparative merits of the alternative and the project.

According to Section 15126.6(d) of the CEQA Guidelines, "[i]f an alternative would cause…significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed."

This chapter describes the alternatives to the Bucks Bar Road at North Fork Cosumnes River – Bridge Replacement Project and compares the anticipated environmental impacts of the alternatives to those of the Proposed Project, analyzed in Chapter 3, Impact Analysis, Sections 3.1 through 3.13.

4.2 Alternatives Development

The County obtained funding for the Proposed Project in 2007. In 2010, the County first commissioned a feasibility study to evaluate the feasibility of the following:

- Rehabilitation alternative to extend the bridge life and widening from one lane to two lanes.
- Replacement of the bridge.

The *Final Feasibility Study Report, Bucks Bar Road Bridge at North Fork Cosumnes River* (Dokken Engineering 2010) provided an engineering evaluation of the existing bridge, including a bridge condition evaluation, location hydraulic study, geologic and foundation evaluation, capacity assessment, and preliminary environmental evaluation study. The feasibility study determined that even with required extensive rehabilitation, the existing bridge, if it were widened and seismically retrofitted, would not be able to sustain a maximum credible seismic event without major damage that could result in permanent closure, nor would the bridge be able to pass the 50-year or 100-year flood events. Therefore, rehabilitating the bridge would not meet the project purpose nor project objectives (see Section 2.3, Project Purpose and Objectives). The 2010 feasibility study recommended the replacement of the existing structure. The technical evaluations suggest the Bucks Bar Road Bridge should be replaced because a replacement alternative would provide a safer roadway approach and meet the current hydraulic and seismic requirements.

Following the feasibility conclusion, the County explored replacing the bridge on the existing bridge alignment. During early public meetings, members of the public and wine producers/purveyors expressed concerns about lengthy detours for their business and personal travel during construction when Bucks Bar Road would have been closed to through traffic. In response to these concerns, County staff presented three alignment alternatives at the March 25, 2014 Board of Supervisors' meeting. These alignment alternatives, which are briefly outlined below, were based on design speeds of 40 miles per hour (mph), 35 mph, and 30 mph (on alignment).

40-mph Alternative – This alternative (Exhibit 4-1) would place a new bridge upstream from the existing bridge approximately 62 feet to the east to reduce the radius of the road curvature, which would improve the sight distance and improve roadway safety consistent with AASHTO design guidelines. This alternative could be built to the upstream side of the existing bridge before removing the existing bridge, thereby allowing traffic through the site during construction. This alternative would result in the most right-of-way acquisition and removal of a cabin, but would minimize public traffic disruption, avoid a long-term detour, minimize design exceptions, and improve sight distance between two curves in the roadway. The permanent impact would result in approximately 0.8 acre of new right-of-way and require approximately 2.2 acres for a temporary construction easement.

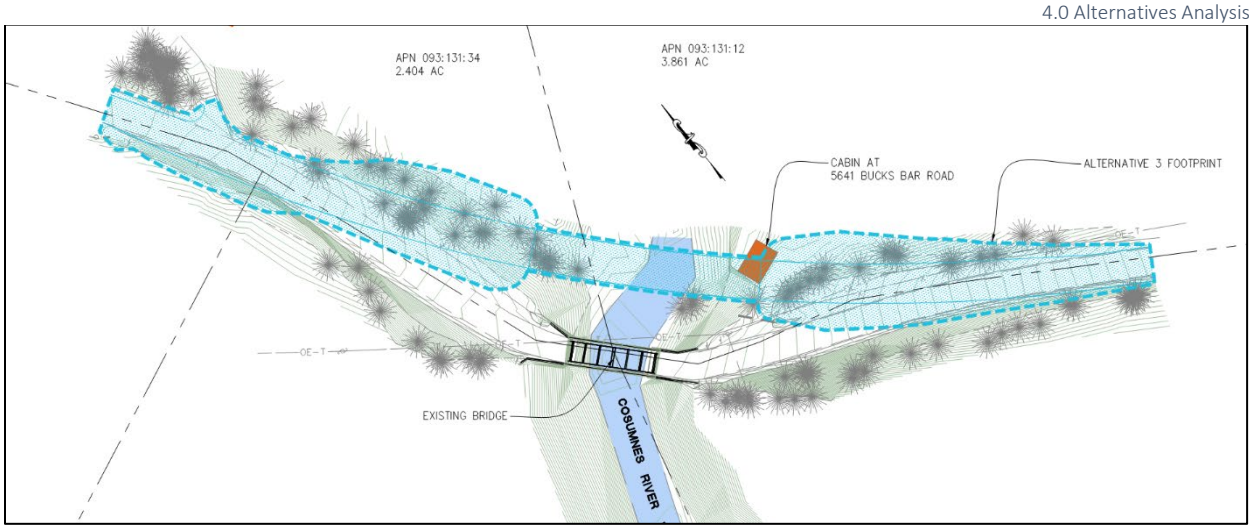

Exhibit 4-1. 40-mph Alignment Presented to Board of Supervisors on March 25, 2014

- **35-mph Alternative** – This alternative (Exhibit 4-2) would place a new bridge upstream from the existing bridge approximately 37 feet to reduce the radius of the road curvature, which would improve the sight distance and improve roadway safety. This alternative would involve acquisition from private properties upstream of the bridge to either side of the river and removal of the cabin upstream and on the south side of the river. This alternative would allow traffic through the site during construction by building the new bridge to the east (upstream) of the existing bridge before removing the existing bridge. This alternative would require design exceptions for the alignment that would not meet the design speeds for a rural major collector. The permanent impact would result in approximately 0.5 acre of new right-of-way and require approximately 2.2 acres for a temporary construction easement.

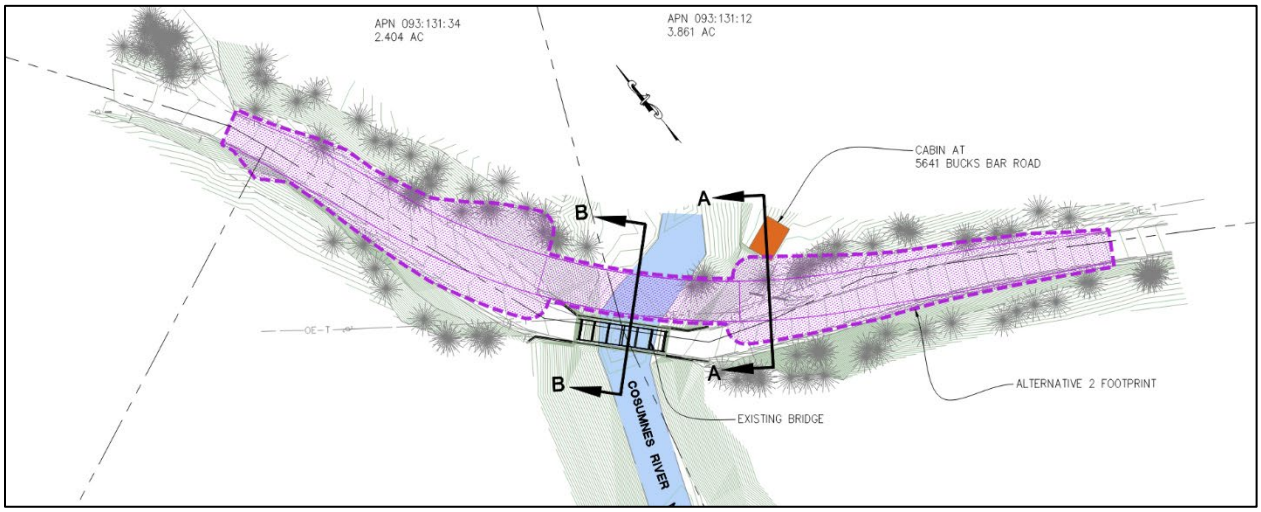

Exhibit 4-2. 35-mph Alternative Presented to Board of Supervisors on March 25, 2014

- **30-mph Alternative.** This alternative (Exhibit 4-3) would replace the bridge on or as close to its original alignment as possible. It would minimize right-of-way acquisition but require a design exception to address roadway geometrics and design speed. The AASHTO design requirements for a rural major collector are intended to meet the criteria for 45 mph design speed unless there is justification otherwise. To replace the bridge on the existing alignment, the current

bridge would need to be removed prior to construction and therefore require closing Bucks Bar Road during most of the construction period. The permanent impact would result in approximately 0.9 acre of new right-of-way and approximately 1.0 acres beyond the permanent right-of-way would be required for a temporary construction easement.

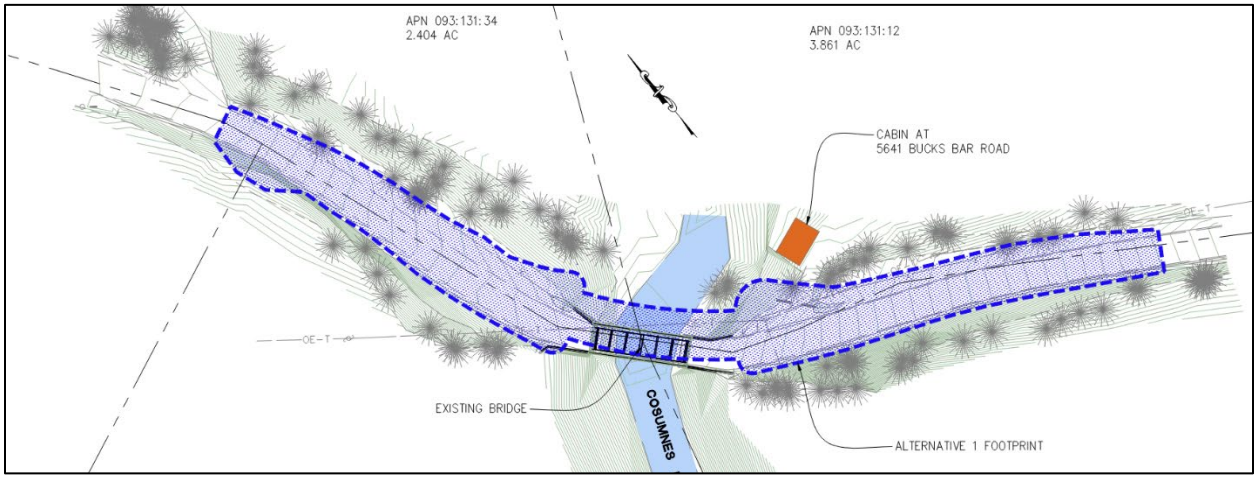

Exhibit 4-3. 30-mph Alignment Presented to Board of Supervisors on March 25, 2014

Comparatively, the 40-mph alternative offered advantages of keeping Bucks Bar Road open during construction and improved the roadway performance against some of design criteria for rural roadways. Therefore, on March 25, 2014, the Board of Supervisors directed the County staff to advance the 40-mph alternative.

In mid-2015, the 40-mph alternative did not include any retaining walls, and the fill embankments required to raise Bucks Bar Road to meet the raised elevation of the new bridge extended upstream of the existing Bucks Bar Road bridge (see Exhibit 4-4, dated April 2015).

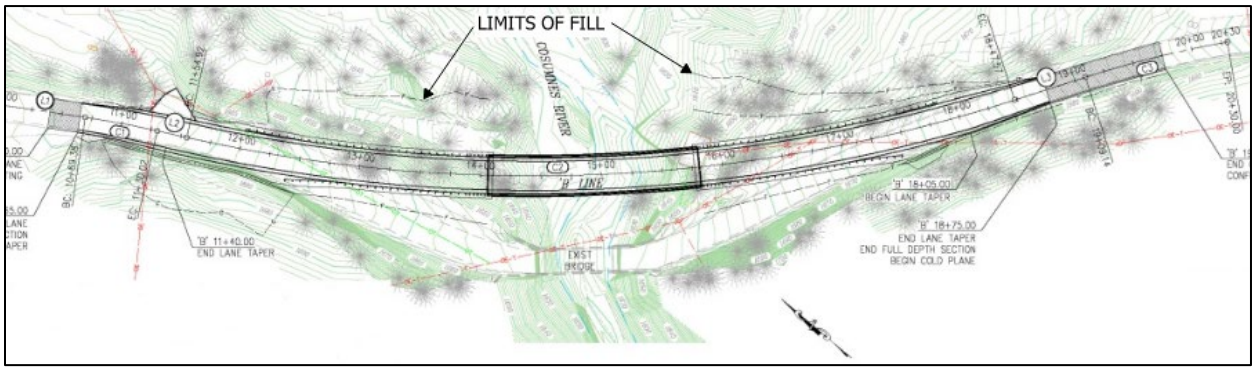

Exhibit 4-4. 40-mph Alternative, No Retaining Walls, April 2015

In the fall of 2015, shortly after consulting with culturally affiliated Tribes, the County added retaining walls to the design to reduce the encroachment of the fills into the resource area (see Exhibit 4-5, dated October 2015). The 40-mph Alternative with the retaining walls shown in Exhibit 4-5 was identified as the Proposed Project in the CEQA Initial Study/Mitigated Negative Declaration (IS/MND), which was publicly circulated from July 22 to August 21, 2015. Eight comment letters were received from members of the public and regulatory agencies during the public review period that raised new information about the presence of tribal cultural resources.

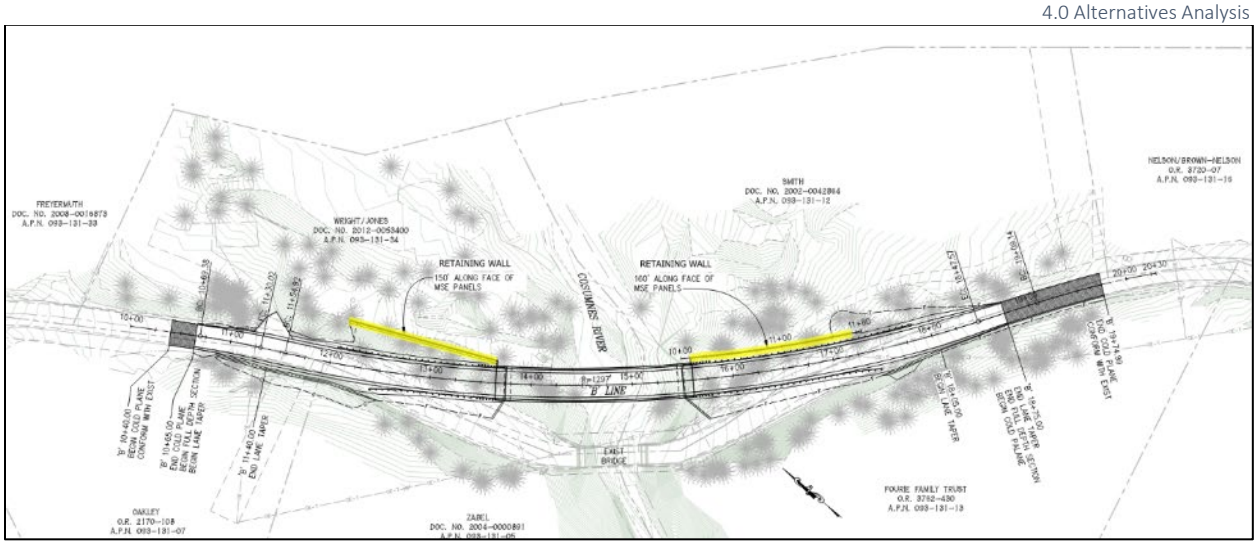

Exhibit 4-5. 40-mph Alternative, With Retaining Walls, October 2015

In November 2015, the County decided not to adopt the CEQA IS/MND. This decision was based on what the County learned about the project site through the CEQA process, and it was also based on comments that were received during the public circulation of the IS/MND. The County advanced a Light Detection and Ranging (LIDAR) study to capture a detailed three-dimensional map of key physical cultural aspects of the project area. From 2016 to 2019, the County also conducted an ethnographic study with interviews with local Tribal members. As part of this effort, the County engaged and consulted extensively with Tribal representatives throughout the detailed mapping and ethnographic study efforts. Upon understanding the significance of the tribal cultural resources within the study area, the County reflected again on the value of replacing the existing bridge on the existing alignment with the 30-mph Alternative.

The County weighed the protection of the tribal cultural resources versus strong public and stakeholder preference for maintaining traffic during construction to avoid out-of-direction traffic for residents and nearby wineries. With the 30-mph alternative, the tribal cultural resources would be impacted far less than with the 40-mph alternative, but the existing bridge would be removed prior to construction, and the road would remain closed until the new bridge was built and the road reopened, resulting in a long-term detour around the site. Further project development revealed that a full closure of the roadway would allow accelerated bridge construction methods to shorten the overall bridge construction duration and therefore reduce the duration of the detours to less than one year. After carefully considering these factors, the County decided to advance the 30-mph alternative as the Proposed Project which could both meet the project purpose and objectives and have the least impact on identified TCRs eligible for both the CRHR and the NRHP. The County continued to refine the 30-mph alternative by reducing the footprint further with the use of retaining walls as illustrated in Exhibit 4-6.

These alignment changes caused delays to project delivery. Once the County learned of the existence of the TCRs through the CEQA and continuing AB 52 consultation process, the County undertook an extensive reexamination of the project and modified the project alignment several times to minimize impacts to the tribal cultural resources while still achieving the project objectives.

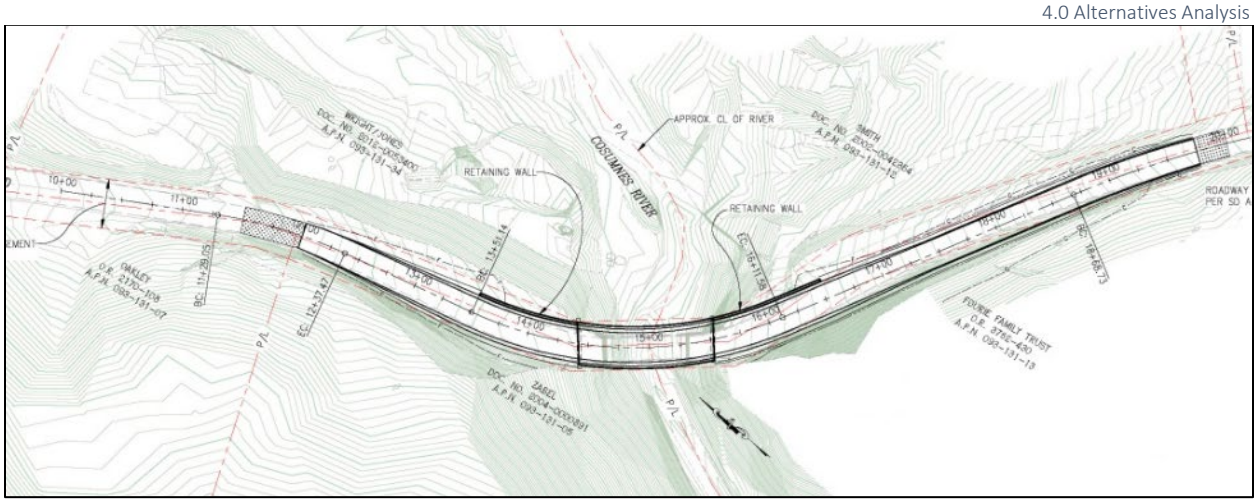

Exhibit 4-6. 30-mph Alternative, With Retaining Walls, Proposed Project for 2024 EIR

During County and Tribal consultations, United Auburn Indian Community (UAIC) provided a comment that they did not support the 35 or 40-mph alternatives due to the larger area of disturbance and suggested further minimization concepts. Their proposals consisted of transportation system management (TSM) concepts. TSM is a set of integrated strategies to optimize the performance of operations on existing infrastructure, in this case, to improve safety for passing on a one-lane bridge. The suggestions included the following:

- **Stop-sign Alternative**. This TSM would replace the Somerset-bound yield sign with a full stop sign. No other modifications to the bridge or roadway were proposed.
- **Signalization Alternative.** Like the stop-sign alternative, the roadway and bridge would remain as is and this TSM would replace the Somerset-bound yield sign with detector-triggered traffic signal.

According to Section 15126.6 of the CEQA Guidelines, the Stop-sign and Signalization alternatives "… are capable of avoiding or substantially lessening any significant effects of the project." However, according to Section 15126.6[f] of the CEQA Guidelines, "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." The Stop-sign and Signalization alternatives do not meet the project purpose and objectives set forth in Section 2.3. Stop signs and signals are justified for vehicle crossings to establish orderly movements. On a two-lane, winding road, a signal or stop sign unnecessarily stops traffic and impedes movement. These solutions would not meet current AASHTO, Caltrans, and El Dorado County design standards for a continuous two-lane roadway on a winding road. These solutions do not resolve the need for hydraulic capacity during high flood events. These solutions do not increase the design life of the bridge or improve resistance to a seismic event. Importantly, the TSM concepts do not allow residents to evacuate across the bridge while first responders simultaneously use the bridge to get to an emergency. This is a significant public safety concern wherein the existing bridge can only be used in one direction at a time. The Proposed Project complies with the two-way traffic flow safety requirements for emergency vehicle access and civilian egress of Title 14 of the California Code of Regulations, Division 1.5, Chapter 7, Subchapter 2, Article 2, section 1273.01(a). And therefore, as with the rehabilitation alternative, the TSM alternatives are not carried forward in this assessment.

4.2.1 Bridge Type Evaluation

A Caltrans Structure Type Selection Report, included in the *Supplemental Feasibility Study Report* (T.Y. Lin 2015) for the Proposed Project, evaluated three replacement bridge types and varying bridge span

lengths. Both two-span and three-span bridge types would require column supports within the North Fork Cosumnes River. The one-span bridge type would not require permanent support in the river but would require extensive falsework in the river to support a cast-in-place construction method. The length of bridge span varies by alternative, with the 30-mph at 110 feet, 35-mph at 150 feet, and 40-mph bridge at 210 feet long. For all but the 30-mph Alternative, full-span length steel girders or pre-cast concrete box girders were not feasible to bring to the project site because of the winding roadway. The feasibility study originally concluded that the preferred bridge type would be a cast-in-place/prestressed single-span, concrete-box girder bridge, when the Proposed Project was the 40-mph Alternative. This bridge type selection applies to the 35-mph Alternative as well.

The Structure Type Selection Report was revised based on further avoidance design measures to minimize impacts to the river and surrounding environment, as well as minimize the days that the road would have to be closed. The revised Structure Type Selection Report evaluated precast concrete or steel girders for the 30-mph Alternative. This would preclude the need for falsework in the river during bridge construction and reduce the overall construction schedule, as well as reducing the required duration of the full closure of Bucks Bar Road.

The Proposed Project includes the shortest span of the evaluated alternatives, thus making full-span steel girders a possible choice for hauling into the Proposed Project site. Steel girders are the preferred structure type due to their lighter weight, which makes hauling them to the site and their placement feasible for the Proposed Project. For this analysis, the following bridge types are identified by alternative:

- 30-mph Alternative (Proposed Project) – steel girder single-span and concrete deck bridge
- 35-mph Alternative – single-span cast-in-place/prestressed box girder concrete bridge
- 40-mph Alternative – single-span cast-in-place/prestressed box girder concrete bridge

4.2.2 Description of Alternatives

Exhibit 4-7 illustrates the comparative alignments and permanent fill for each of the three bridge replacement alternatives with the Proposed Project (shown as Alternative 1 – shaded dark blue), 35-mph (shown as Alternative 2 – shaded magenta), and 40-mph (shown as Alternative 3 – shaded light blue). Since the development of this comparative exhibit, the Proposed Project (30-mph Alternative) has been further refined to align more closely with the existing bridge. The Proposed Project is described in Chapter 2, Project Description. The No Project, 35-mph, and 40-mph alternatives are described below.

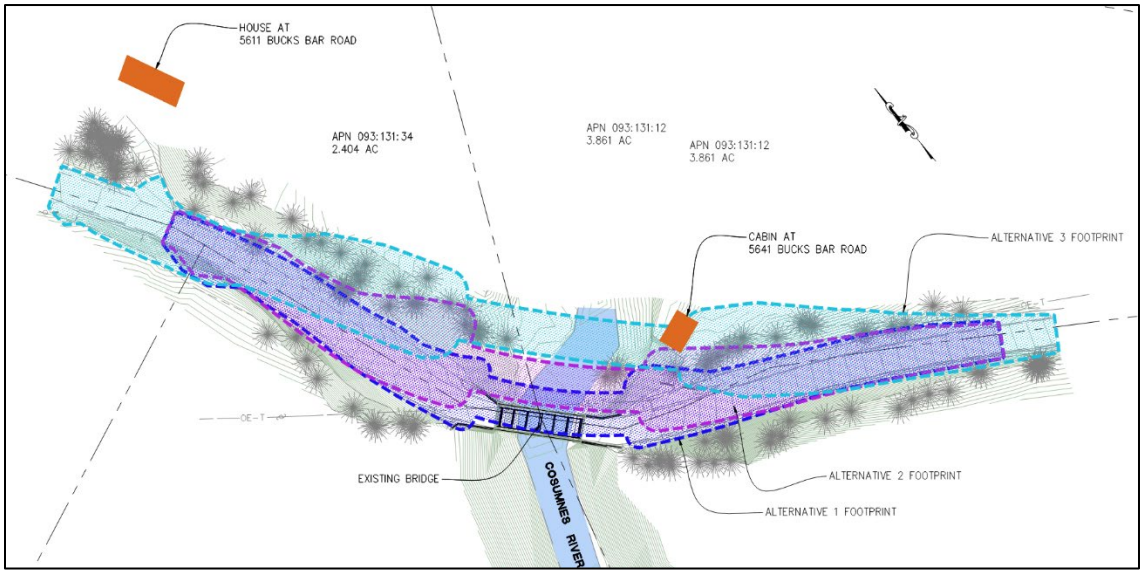

Exhibit 4-7. 40-, 35-, 30-mph Alternatives Comparison

Exhibit 4-8 presents a general comparison of the key features associated with the No Project and all three alternatives that would replace the bridge.

Exhibit 4-8. Key Features of Project Alternatives

Key Features	Project Alternatives			
	30-mph Alternative (Proposed Project)	No Project Alternative	35-mph Alternative	40-mph Alternative
Lanes on bridge (part of Project Purpose & Objectives)	Two lanes	One lane	Two lanes	Two lanes
Improve roadway sightline (part of Project Purpose & Objectives)	Yes	No	Yes	Yes
Meets hydraulic flow requirements (part of Project Purpose & Objectives)	50- and 100-year flood events	Does not meet 50- or 100-year flood events	50- and 100-year flood events	50- and 100-year flood events
Comply with the AASHTO design guidelines and Caltrans and El Dorado County standards (part of Project Purpose & Objectives)	Yes, with minor exceptions	No	Yes, with minor exceptions	Yes
Length of Bridge	120 to 130 feet	70 feet	150 feet	210 feet
Design Life	80–100 years	10–20 years remaining	80–100 years	80–100 years
Meets Seismic Standards	Yes	No	Yes	Yes

Key Features	Project Alternatives			
	30-mph Alternative (Proposed Project)	No Project Alternative	35-mph Alternative	40-mph Alternative
Duration of Construction	One season (~ 10 months)	NA	Two seasons (15–18 months)	Two seasons (15–18 months)
Maintain Traffic during Construction	No	NA	Yes	Yes
Constructability	Yes, full closure for ~ 10 months	NA	Yes, complexity due to temporary shoring, river diversion, and in-water work	Yes, complexity due to large retaining walls, river diversion, and in-water work
Additional Permanent Right-of-Way	0.9 acre	None	0.5 acre	0.8 acre
Temporary construction easement	1.0 acre	None	2.2 acres	2.2 acres
Impact 'cabin' on APN 093-131-12	No	No	Yes	Yes

AASHTO = American Association of State Highway and Transportation Officials; NA = Not Applicable

4.2.2.1 No Project Alternative

Section 15126.6(e)(2) of the CEQA Guidelines requires an EIR to include an analysis of the No Project Alternative. Evaluation of the No Project Alternative allows decision makers to compare the impacts of approving the Proposed Project with the impacts of not approving the Proposed Project. The No Project Alternative assumes that the Proposed Project would not be implemented but does not necessarily preclude use or development of the project site. Rather, the No Project Alternative evaluated in this Draft EIR considers "what would be reasonably expected to occur in the foreseeable future if the Proposed Project were not approved, based on current plans and consistent with available infrastructure and community services" (CEQA Guidelines Section 15126.6 [e][2]).

For this Draft EIR, the No Project Alternative assumes that the existing bridge would remain and continue to be maintained. As discussed in Section 2.2, Background, in Chapter 2, the existing narrow single-lane bridge is and functionally obsolete and has substandard roadway approaches (Caltrans 2001, 2013). The existing roadway has a design speed of 16 to 20 mph based on the approach vertical stopping sight distance, the radius, and horizontal alignment (superelevation) of the existing roadway approaches (TyLin 2015 Attachment 7 (Design Exception Fact Sheets)).

The existing 70-foot-long bridge span is supported by a spandrel arch with large abutments that encroach into the North Fork Cosumnes River floodplain. Together the abutments and the spandrel arch obstruct both the 50-year and 100-year flood events and catch debris during high-flow events, which can lead to the bridge being overtopped. The existing bridge sits between rural residential properties, but the only structure with views of the bridge is the cabin (APN 093-131-12) that sits upstream from the bridge to the south side of the river as shown in Exhibit 4-9.

Exhibit 4-9. No Project Alternative (2021 Google Earth Aerial)

4.2.2.2 35-mph Alternative

The 35-mph Alternative would replace the existing functionally obsolete narrow, single-lane bridge and substandard roadway approaches.

Bridge and Roadway Design

The 35-mph Alternative would replace the existing 70-foot-long bridge with a 150-foot-long, single-span, cast-in-place/prestressed box girder, concrete bridge. This alternative would have a longer bridge length compared with the Proposed Project (150 feet versus 120 feet, respectively) and shorter than the 40-mph Alternative (150 feet versus 210 feet, respectively). The 35-mph Alternative bridge profile (deck elevation) would be raised to approximately 8 feet higher than the existing bridge deck to pass the modeled 50- and 100-year storm events.

The 35-mph Alternative would involve a realignment of approximately 535 feet of roadway. The departure from the existing roadway on the north side of the river would require approximately 250 feet of approach roadway and 285 feet of approach roadway on the south side of the river.

The 35-mph Alternative would shift the new bridge upstream of the existing bridge by 37 feet, with an approximately 18-foot separation between the two structures. This alternative would allow the Bucks Bar Road bridge to remain open during the bridge construction, presuming shoring could be installed to support the existing road during abutment construction. Shoring would also expand the needed staging area for contractors to work between the two structures.

The 35-mph Alternative would result in a greater change to the horizontal alignment compared to the Proposed Project. This alternative would result in less of a change to the horizontal alignment of Bucks Bar Road compared to the 40-mph Alternative.

Construction

The 35-mph Alternative would require construction vehicle access across the North Fork Cosumnes River and construction access at the toe of the existing slopes. To support the building of the new bridge, this alternative would require falsework in the river. To minimize sediment disturbance and maintain water

quality with this alternative, prior to in-water work, implementing one or more of the following measures would be required to keep construction vehicles, materials, and sediment out of the water flows:

- Install an in-stream water diversion for a portion of the North Fork Cosumnes River.
- Install a low bridge crossing for vehicles supported above ordinary high-water flows using large beams and decking.
- Install cofferdams around planned in-water falsework support structure.
- Install a floating silt curtain or approved equivalent to prevent sediment from entering the adjacent waterways.
- Keep water from shifting into construction area by lining water limits with gravel-filled bags that comply with Caltrans Standard Specification 2010 Section 13-5.02G.

When the new bridge is operable, the contractor would be required to install a debris catchment structure for the demolition of the existing structure. The demolition of the old bridge would require removing the bridge deck and arch support, then excavating and removing the rubble fill behind the abutments, then cutting away and removing the abutment walls and wingwalls. The material would be lifted onto dump trucks and carried to a construction debris landfill.

Bridge Abutments

Both abutments would likely be founded on a spread footing embedded into the underlying rock. The south abutment might be founded on seat-type abutment founded on two large cast-in-drilled-hole concrete piles with rock sockets. Abutment construction with the 35-mph Alternative would be similar to the methods included for the Proposed Project. However, since the new abutments would be located very close to the existing abutments, and in order to keep the existing roadway stable during construction, this alternative would require significant temporary shoring during the abutment excavations for the new bridge. Given the hard granite geology of the project area and that the fill under the road contains large boulders, specialized shoring would be required to maintain through access on the existing roadway during construction. The shoring installation could take up to eight weeks, with narrowing traffic lane and periodic closures on Bucks Bar Road, before the abutment construction could begin.

Design Exception

This alternative would place a bridge with a 35-mph design speed on a major collector, as defined by the California Road System – Functional Classification. This class of roadway is required to be designed for a 45-mph design speed unless there is justification for an exception. While the Bucks Bar Road geometry between Pleasant Valley Road and Somerset does not accommodate a consistent 45-mph travel speed, the 35-mph Alternative would nonetheless need a design exception to document the decision to select this lower design speed. This speed differential would result in safety considerations, as would the Proposed Project.

Utility Relocation

Utility relocation for the 35-mph Alternative would be similar to the Proposed Project. Overhead utilities within the project limits include PG&E power and AT&T telecommunications. The utilities may be temporarily relocated before construction of the new bridge and then moved to the west side of the new bridge site for the long term. These long-term utilities relocations would accommodate demolition and removal of the existing bridge. Utility relocation would require titles or easements for new utility poles along the proposed roadway outside of the existing roadway right-of-way.

Right-of-way and Temporary Easements

The 35-mph Alternative would require approximately 0.5 acre of private property acquisition for permanent right-of-way over two parcels (APN 093-131-34 and APN 093-131-12) for the roadway, cuts and fills, retaining walls, drainage culverts, possible utilities, and the bridge. In addition, this alternative would require the removal of and compensation for an existing cabin upstream from bridge and on the south side of the river. The cabin sits upon piles, which would be cut off at ground level. The cabin structure would be removed; no subsurface disturbance is expected as part of this project component.

Approximately 2.2 acres of temporary easements would be needed for construction staging and possibly for temporary access roads. Permanent easements may be needed for maintenance access and slope/drainage. The temporary and permanent right-of-way acquisition (approximately 2.7 acres) is more than is required with the Proposed Project (approximately 1.9 acres).

Traffic Management during Construction

The 35-mph Alternative would permit the road to remain open throughout most of the construction period, with a few short-duration road closures, unlike the Proposed Project, which would requirea full road closure of Bucks Bar Road at the bridge site for approximately 10 months. Traffic management for the 35-mph Alternative would involve occasionally halting traffic during construction equipment and materials mobilization, installing caution signs to alert drivers in advance of approaching the construction zone, and installing appropriate barricades to delineate construction areas from through traffic. As construction equipment and trucks delivering material would need to enter and exit the construction zone, traffic control personnel would be on hand to temporarily halt traffic flow and maintain and minimize impacts to traffic during construction. Traffic controls (i.e., using flaggers to stop through traffic as needed) would be required during shoring installation, falsework installation, concrete pours, and other operations. Additionally, traffic management would include coordinating with nearby residents on expectations and driveway impacts.

During construction of the new bridge, some short duration (hours or days) closures could be required to bring in material and equipment and hauling material out during bridge removal. The rise in bridge elevation would affect the road approaches. To complete construction work on the roadway approaches, this alternative would require short-term full road closures of Bucks Bar Road at the bridge site for approximately two to three weeks.

During the full road closure, the detours described in Chapter 2 for the Proposed Project would be implemented.

Construction Schedule

It is anticipated the new bridge and road construction for the 35-mph Alternative would require approximately 15 to 18 months to complete.

4.2.2.3 40-mph Alternative

The 40-mph Alternative would replace the existing functionally obsolete, narrow single-lane bridge and substandard roadway approaches.

Bridge and Roadway Design

The 40-mph Alternative would replace the existing 70-foot-long bridge with a 210-foot-long, single span, cast-in-place/prestressed box girder, concrete bridge. This alternative would involve realigning approximately 700 feet of roadway. The departure from the existing roadway on the north side of the river would require approximately 220 feet of approach roadway, and 260 feet of roadway approach on

the south side of the river. The road profile approaching the bridge would be raised approximately 5 feet higher than the existing bridge. The 40-mph Alternative design speed would result in a relatively flat horizontal curve; this would "pull" the alignment upstream compared with the 35-mph Alternative and Proposed Project. This bridge location would cause the bridge alignment to shift approximately 62 feet upstream of the existing bridge.

Construction

The construction methods for this alternative would be consistent with those proposed for the 35-mph Alternative, including falsework, in-water work, river diversion, and maintaining current traffic operations for most of the construction period. Some roadway shoring would be required for abutment construction, but it would not be as time-consuming as the shoring that would be required for the 35-mph Alternative.

Bridge Abutments

The 40-mph Alternative bridge would be longer than the Proposed Project and 35-mph Alternative bridges. Both abutments would likely be founded on a spread footing embedded into the underlying rock. The south abutment might be founded on two large cast-in-drilled-hole piles with rock sockets. Construction of abutments would be similar to the methods included for the Proposed Project. The 40-mph Alternative would require shoring during the abutment excavations for the new bridge, but it would not be as time-consuming as the shoring that would be required for the 35-mph Alternative.

Retaining Walls

The 40-mph Alternative would require large retaining walls on the upstream side of Bucks Bar Road on both sides of the river (north and south). The wall upstream of bridge and on the north side of the river would be taller and longer than the wall on the south side of the river.

Design Exception

The 40-mph Alternative would not require a design exception.

Utility Relocation

Utility relocation for the 40-mph Alternative would be the same sequence as described above under the 35-mph Alternative.

Right-of-way and Temporary Easements

The 40-mph Alternative would require the most property acquisition and temporary construction easement of any of the build alternatives. This alternative would require approximately 0.8 acre of private property acquisition for permanent right-of-way over two parcels (APN 093-131-34 and APN 093-131-12) for the roadway, cuts and fills, retaining walls, drainage culverts, possible utilities, and the bridge. Approximately 2.2 acres of temporary construction easements would be needed for construction staging and possibly for temporary access roads. As with the 35-mph Alternative, this alternative would require the removal and compensation for an existing cabin located upstream of the bridge and on the south side of the river. Construction techniques would be the same as those described for the 35-mph Alternative, except the 40-mph Alternative would include retaining walls to support the proposed roadway embankment and minimize the right-of-way acquisition and impacts to both property owners.

Traffic Management during Construction

As opposed to full road closure during most of the Proposed Project construction, the 40-mph Alternative would permit Bucks Bar Road to remain open throughout most of the construction period,

with a few short-duration road closures. Traffic management activities during construction would be similar the those for the 35-mph Alternative.

Construction Schedule

It is anticipated the new bridge and road construction for the 40-mph Alternative would require approximately 15 to 18 months to complete.

4.3 Alternatives Analysis

This section provides a comparative analysis of the four project alternatives. Exhibit 4-10 at the end of this chapter summarizes a comparison of environmental impacts from each alternative. Sections 4.3.1 through 4.3.8 present environmental analyses and a comparison of alternatives by resource topics addressed in this EIR. The impacts of each alternative are qualitatively compared to the impacts of the Proposed Project in terms of impact type and severity. As part of the scoping and environmental analyses carried out for the Proposed Project, the following environmental resources outlined below were considered; however, because no significant impacts were identified, no additional analysis was required.

- **Agricultural and Forest.** There are no areas associated with agricultural-related uses or zoned for agricultural-related uses in the project area, and the project area does not include lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the California Department of Conservation Farmland Mapping and Monitoring Program. There are stands of trees in the project area, but the area is not associated with forest land or timber land, and there are no lands zoned Timber Production Zones. Therefore, none of the alternatives would impact farmlands identified by the California Department of Conservation Farmland Mapping and Monitoring Program or zoned for agricultural uses, or lands identified as either forest land or zoned Timber Production Zones.
- **Energy.** Within the project area, the Bucks Bar Road bridge does not include lighting or other components that require energy. Routine maintenance of the bridge and roadway approaches does require the use of maintenance materials, power tools, and gas and diesel for service vehicles. Construction of the build alternatives would consume energy as a result of construction equipment and materials movement; all construction equipment would be regulated in accordance with the California Air Resources Board In-Use Off-Road Diesel Vehicle Regulation. California Air Resources Board standards for construction equipment includes measures to reduce emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower requirements and imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. Project construction would also be required to comply with all applicable El Dorado AQMD rules and regulations. Future road and bridge maintenance activities (e.g., vegetation control and street sweeping) would likely involve the use of electric- or gas-powered equipment for all alternatives. None of the alternatives would introduce new operational energy demands to the project area.
- **Land Use and Planning/Population and Housing.** None of the alternatives would result in the physical division of an established community. All build alternatives require narrow slivers of property acquisition (see Exhibit 4-10) converting existing land uses to a transportation-related use, but this would not change the land uses for affected properties. Temporary construction easements required for construction would be restored and not result in impacts. The Proposed Project would require the smallest area of permanent and temporary acquisition compared to the 35-mph and 40-mph alternatives. The build alternatives are consistent with the applicable state and local goals and policies. Based on the review of the El Dorado County General Plan, the

Proposed Project is consistent with the applicable goals and policies. The build alternatives would replace an existing bridge and would not increase the capacity of Bucks Bar Road; would not include the construction of buildings that increase the number of residents or employees; and would not result in substantial population growth in the area, directly or indirectly.

- **Mineral Resources.** There are no locally important mineral resource recovery sites identified in the El Dorado County General Plan, specific plan, or other land use plan within the project area. Because there are no mineral resource recovery sites in the project area, none of the alternatives would result in mineral resource-related impacts during project construction and operation.
- **Recreation.** There are no formal local, state, or federal recreation facilities in the project area. There are no existing put-in or take-out sites for rafters or kayakers at the Bucks Bar Road bridge. There are no trails or access points to the river or other public lands from the bridge. The nearest unofficial recreational area is the Cosumnes River Gorge, which is about 0.5 mile from Bucks Bar Road bridge. This is not accessible from the project area, nor would construction constrain access to recreational resources. There would be no change in recreational resources under any alternatives.

Generally, the Proposed Project (30-mph Alternative) would disturb less area and therefore result in less physical impact on the surrounding environment than would the 35-mph and 40-mph alternatives. Similarly, the 35-mph Alternative would affect less area than the 40-mph Alternative. The No Project Alternative would not result in physical impacts but would not realize the project's safety objectives.

4.3.1 Aesthetics

The project area is in a rural setting approximately 1.2 miles north of the community of Somerset in the unincorporated portion of southern El Dorado County. The Proposed Project site is in the foothills of the Sierra Nevada Mountains, at an elevation ranging from approximately 1,620 feet to 1,680 feet above sea level and includes the crossing of the North Fork Cosumnes River surrounded by a riparian and upland forest habitat.

The cabin located upstream of the bridge on the south side of the river is the only residential structure in the project area with direct views of the bridge. One other residence to the north is shielded from viewing the bridge by vegetation. Bucks Bar Road is viewed daily by motorists using the roadway for commuting and accessing recreational areas outside of the project vicinity. All the identified viewers are moderate to moderate-high sensitive viewers. A change in setting is likely to be noticeable and concerning to these viewers.

The road's winding nature, diverse terrain, and vegetation limit views of the adjacent landscape. For motorists, views of the project area are typically only available from a short distance away, from either end of the project area and short views of the river when crossing the bridge. Due to the curve of the road, an acute angle view of the upstream face of the bridge is possible when heading toward Placerville on Bucks Bar Road.

Public access is not convenient for persons wanting to enter or access this portion of the North Fork Cosumnes River because of the lack of nearby public parking and access to the river is restricted to passage through private properties. The California State Lands Commission completed a study regarding the navigability of the Cosumnes River (CSLC 1991). The *Cosumnes River Navigability Report* determined that the North Fork is navigable for boaters approximately 7 miles downstream of the project area; therefore, the river below the bridge is not considered to be a recreational resource.

The project area is not located on a highway or route designated or eligible for designation as a state scenic highway (Caltrans 2019).

4.3.1.1 No Project Alternative

The No Project Alternative would retain the existing Bucks Bar Road bridge and roadway; therefore, this alternative would have no impact to aesthetics because there would be no change to the existing physical environment. There would be no construction-related removal of the existing bridge structure or vegetation or change in views from the roadway, residential uses, or from the North Fork Cosumnes River. No new roadway or bridge structure would be introduced to the visual setting. The No Project Alternative would not result in impacts on scenic vistas or resources because there are no designated scenic highways or other resources in the project area. The No Project Alternative would not result in impacts on visual resources.

4.3.1.2 30-mph Alternative (Proposed Project)

The Proposed Project would remain on the existing Bucks Bar Road alignment, with a change in the visual settings from raising the roadway, replacing the bridge and removing some adjacent vegetation and up to 51 trees nearest Buck Bar Road during construction. Removal of the bridge and replacing the bridge would be viewed as a wider bridge deck, increased views of the North Fork Cosumnes River, and a wider opening due to the removal of adjacent trees to facilitate construction. The drivers' view of the bridge façade would not be visible with a wider deck, and viewers would likely adapt to the more open views from the tree removal within a short period (2 to 5 years) after the revegetation is re-established. Because drivers would only experience a brief bridge crossing and the vista toward the river would be expanded, the change in visual character would result in a moderate visual impact. The view from the nearby cabin is the only view that would be directly affected, and this view would include more light and visual access of the river. In addition, the County is committed to revegetating the disturbed areas with native plantings within the temporary construction easement to the extent that it would not reduce sight distances for drivers.

The scenic character of the North Fork Cosumnes River would be temporarily affected during project construction. However, because the bridge would be closed during construction, few viewers would notice the temporary changes. When project construction is complete, the scenic view of the new bridge and North Fork Cosumnes River would be visually consistent with the existing baseline conditions and with other transportation infrastructure in the project vicinity. The changes to the visual character during construction may be a moderate-high impact for the one residential property. Scenic views of the new bridge and North Fork Cosumnes River from roadway would be visually consistent with the surroundings, but the Proposed Project would result in greater impacts on aesthetic resources than the No Project Alternative.

4.3.1.3 35-mph Alternative

The 35-mph Alternative would realign the roadway and bridge slightly upstream from the current crossing of the North Fork Cosumnes River. This alternative would require removing both the Bucks Bar Road bridge and a cabin located on the upstream of bridge and south side of the river. The 35-mph Alternative would result in a longer bridge span compared to the Proposed Project. Permanent disturbance areas would be greater than with the Proposed Project; however, trees to be removed would be similar. Shifting the bridge would result in potentially exposing views of the bridge and Bucks Bar Road to a nearby residence upstream and north of the river, which would be an adverse change in setting for the residents and passing motorists.

The 35-mph Alternative would maintain traffic through the project area during construction, thus exposing views of construction equipment and land clearing to passing motorists. This alternative would require temporary in-water work for falsework and construction access across the river. On-site revegetation of cleared areas, required for soil stabilization, and mitigation for the loss of mature and

riparian vegetation, would reduce the visual effects of the 35-mph Alternative over an approximately 2 to 5-year period.

This 35-mph Alternative would result in greater impacts to aesthetics compared with the Proposed Project.

4.3.1.4 40-mph Alternative

Visual impacts with the 40-mph Alternative would be the same as with the 35-mph Alternative for operations and construction, except the 40-mph Alternative would be the longest bridge span and shifted farther upstream. Therefore, the opening under the bridge would be more expansive, which would allow more views and result in a more substantial visual change than with both the Proposed Project and the 35-mph Alternative. Under this alternative, the cabin would be removed, so changes to aesthetics from the cabin's perspective are moot. However, the bridge would likely become visible to a different residence upstream of the road where there is currently no such view of the road or the bridge. Because the roadway re-alignment would broaden the opening under the bridge more than under both the Proposed Project and the 35-mph Alternative, the 40-mph Alternative would result in greater visual impacts compared with the Proposed Project—both for construction and operational phases of the project.

4.3.2 Air Quality

The El Dorado County AQMD's *Guide to Air Quality Assessment* (El Dorado County AQMD 2002) specifies daily emissions thresholds that can be used to determine the significance of project emissions. The AQMD considers a significant cumulative impact occurs if the project requires a change in the existing land use designation (i.e., General Plan) and would individually exceed the project-level thresholds of significance. The El Dorado County AQMD has not yet adopted PM2.5 and PM10 mass emission significance thresholds for land use development projects (El Dorado County AQMD 2002). The adopted Sacramento Metropolitan AQMD (SMAQMD) thresholds for PM2.5 and PM10 are being used here (SMAQMD 2020). El Dorado County AQMD and SMAQMD CEQA thresholds for criteria pollutants are presented below.

Criteria Pollutant	Construction	Operations
Reactive Organic Gases (ROG)	82 pounds per day [a]	82 pounds per day [a]
Nitrogen Oxides (NO_X)	82 pounds per day	82 pounds per day [a]
Carbon Monoxide (CO)	NA For Construction	CAAQS
Fine Particulates (PM2.5)	82 pounds/day and 15 tons/year [b]	82 pounds/day and 15 tons/year [b]
Particulates (PM10)	80 pounds/day and 14.6 tons/year [b]	80 pounds/day and 14.6 tons/year [b]

Source: El Dorado County Air Quality Management District 2002 (El Dorado County AQMD 2002) and SMAQMD (2020).

[a] During construction, this threshold can be combined to obtain a total ozone threshold of 164 pounds per day. With the combined threshold, construction emissions of one pollutant may be in excess of 82 pounds per day; however, as long as the combined total is below 164 pounds per day, the EDAQMD considers the impact to be less than significant.

[b] From Sacramento Metropolitan AQMD, Guide to Air Quality Assessment in Sacramento County (2020).

4.3.2.1 No Project Alternative

Under the No Project Alternative, there would be no impacts on air quality. Short-term construction emissions would not be generated, and there would be no potential to exceed El Dorado County AQMD's thresholds or expose sensitive receptors—defined as people or facilities that generally house people (such as schools, hospitals, clinics, elderly housing, and residences) who can experience adverse effects from unhealthful concentrations of air pollutants—to substantial pollutant concentrations; therefore, impacts would be less than under the Proposed Project.

There would likewise be no change in VMT or traffic conditions relative to existing conditions and, as a result, no change in operational criteria pollutant emissions. Because no construction would occur, there would be no potential for exposure to nuisance odors.

4.3.2.2 30-mph Alternative (Proposed Project)

Construction activities under the 30-mph Alternative would result in short-term increases in emissions from the use of heavy equipment that generate dust, exhaust, and tire-wear emissions and from paints and coatings. Project construction would create short-term increases in ROG, NOx, and PM10 emissions from vehicle and equipment operation. Emissions associated with construction were conservatively estimated using CalEEMod, and the average daily emissions during construction of the Proposed Project would not exceed the El Dorado County AQMD or SMAQMD construction significance thresholds. The Proposed Project would require a long-term temporary closure of Bucks Bar Road at the bridge (approximately 10 months); the closure would force motorists onto detours that could result in longer, more circuitous travel and therefore temporarily incrementally increase vehicle emissions to the region.

Overall, the Proposed Project would have lower construction-related emissions compared to the 35-mph and 40-mph alternatives because the Proposed Project would have a shorter construction period, the shortest bridge, smaller bridge abutments, and considerably fewer concrete construction activities. Fugitive dust would be minimized with the implementation of BMPs (e.g., minimizing idling time of equipment, wetting of exposed soils, and ensuring equipment is in good working condition), and construction would be required to comply with Caltrans Standard Specification 14-9, which requires complying with air quality pollution rules, regulations, and ordinances.

Construction activities would involve the use of construction equipment and asphalt paving, which have distinctive odors. Odors would affect a limited number of sensitive receptors over a short term. The nearest sensitive receptors are residential properties. There are four residential properties within less than 600 feet of the Proposed Project. The increases in emissions would be temporary and localized and would not expose sensitive receptors to substantial pollutant concentrations. Impacts on air quality during Proposed Project construction would be least among the build alternatives.

The Proposed Project would not add capacity nor provide new access to land areas that did not already have access. Therefore, in the long term, operations under this alternative would remain similar to the No Project Alternative. However, the Proposed Project would reduce the need for vehicles to yield and queue to wait for northbound (Placerville-bound) traffic to clear, thereby reducing idling. This would result in lower vehicle emissions overall compared to the No Project Alternative. The Proposed Project would result in lesser impacts on air quality than the No Project Alternative in the long term but greater impacts in the short term.

4.3.2.3 35-mph Alternative

Compared with the Proposed Project, the 35-mph Alternative would have a longer construction period, a longer bridge span, more cast-in-place attributes, complex shoring installed by heavy drill rigs, and more fill needed to support the rise of the bridge and approach spans. In addition, the 35-mph Alternative would require installation of a river diversion and the erection of bridge falsework; the Proposed Project would require neither of these activities. The 35-mph Alternative would likely require two construction seasons: the first would be 10 to 12 months for construction of the new bridge, then 4 to 5 additional months during the winter to construct the new roadway tie-ins, and then another month to remove the existing bridge and demobilize from the site.

The estimated project construction emissions were originally modeled for only the 40-mph Alternative and were determined to not exceed El Dorado County's significance thresholds; by comparison, the 35-mph Alternative would have a shorter bridge, shorter retaining wall lengths, and shorter road approach

work. Therefore, emissions are expected to be less and thus would also not exceed the County's significance thresholds. Just as with the Proposed Project, the 35-mph Alternative would implement BMPs and be required to comply with Caltrans Standard Specifications 14-9 to control fugitive dust.

The potential for receptor exposure to nuisance odors during construction of this alternative would be similar to the Proposed Project. The 35-mph Alternative would result in a somewhat greater impact on air quality during project construction than with the Proposed Project; however, this impact would remain below the significance thresholds.

The 35-mph Alternative would result in the same long-term operational emissions as the Proposed Project.

4.3.2.4 40-mph Alternative

Construction-related air quality impacts that would result from the 40-mph Alternative would be greater than those under the Proposed Project. The 40-mph Alternative's construction period would be longer than the Proposed Project and likely require two construction seasons because the bridge and abutment work would be larger, and the fill to raise the roadway would be more than the Proposed Project. In addition, the 40-mph Alternative would require installation of a river diversion and the erection of bridge falsework; the Proposed Project would require neither of these activities. However, the 40-mph Alternative would not exceed the County's significance thresholds. Just as with the Proposed Project, the 40-mph Alternative would implement BMPs and be required to comply with Caltrans Standard Specifications 14-9 to control fugitive dust.

The potential for receptor exposure to nuisance odors during construction of 40-mph Alternative would be similar to the Proposed Project. This alternative would result in a somewhat greater impact on air quality during construction than the Proposed Project and the 35-mph Alternative; however, this impact would remain below the significance thresholds.

The 40-mph Alternative would result in the same long-term operational emissions as the Proposed Project.

4.3.3 Biological Resources

The defined 2019 BSA included the areas that would be temporarily impacted, including the temporary construction easements, staging area, and areas permanently impacted by property acquisition for the project. The 2019 Natural Environment Study included a larger BSA that addressed areas potentially affected by the 35-mph Alternative and the 40-mph Alternatives.

Within the project area, the North Fork Cosumnes River flows generally east-west and there are areas of riparian and upland forest habitat. Land cover in the project area also includes paved areas, buildings, landscaping, bare ground, and other disturbed areas. The dominant vegetation type in the project area is canyon live oak-ponderosa pine forest, with areas of alder riparian forest occurring in a narrow strip along both banks of the North Fork Cosumnes River. The removal of oak trees typically requires mitigation in accordance with the 2017 El Dorado County Oak Resources Management Plan and the Oak Resources Conservation Ordinance; however, County road projects are typically exempt from the mitigation requirements. In the project area, a seasonal wetland abuts the north side of the North Fork Cosumnes River, east of the existing bridge. There are two ephemeral (does not flow all year) drainages in the project area that empty into the North Fork Cosumnes River and one seasonal wetland. The seasonal wetland and two ephemeral drainages occur in the larger BSA and are not located within the Proposed Project footprint.

The project area provides marginal habitat for special-status wildlife species including FYLF, CRLF, western pond turtle, monarch butterfly, and nesting habitat for birds of prey and birds protected by the

Migratory Bird Treaty Act of 1918. Habitat for two special status plant species is present in the project area. No special status plant or animal species were observed in the project area. No federal designated critical habitat occurs in the project area.

The Proposed Project is not located in an area covered by an adopted Habitat Conservation Plan or Natural Community Conservation Plan; therefore, none of the alternative would conflict. As noted, County road projects are typically exempt from the Oak Resources Conservation Ordinance; therefore, none of the build alternatives would conflict with local ordinances.

4.3.3.1 No Project Alternative

Under the No Project Alternative, maintenance activities would potentially result in temporary disturbances to nesting migratory birds. No ground disturbance or loss of habitat or wetlands would occur and impacts would be less than under the Proposed Project.

4.3.3.2 30-mph Alternative (Proposed Project)

The Proposed Project would result in least disturbance of biological resources of all the build alternatives because the project footprint is located in generally the same alignment as the existing bridge.

Special-status Wildlife Species

The project area provides marginal habitat for special-status wildlife species. There is no federal designated critical habitat in the project area; therefore, the Proposed Project would not affect critical habitat. Construction of the Proposed Project could temporarily disrupt the movements of native wildlife species that occur in or adjacent to the project area. However, the Proposed Project alignment is very similar to that of the existing bridge and the Proposed Project avoids direct impacts to the bed of the North Fork Cosumnes River. Construction during the daytime would result in minimal disruption of nocturnal wildlife movement, and the rural, low-density residential development in the project area provides ample space for wildlife to avoid the construction area during night hours. The Proposed Project would comply with the noise standards for construction outlined in Section 130.37.020(1) of Chapter 130.37, Noise Standards, in the El Dorado County Ordinance Code. Although construction disturbance could temporarily hinder wildlife movements within the project area, the impact would be short term in nature.

While none of the following special-status wildlife species have been identified within the project area, encountering FYLF, CRLF, western pond turtle, and monarch butterfly is possible. Project work would include construction of a temporary platform over the North Fork Cosumnes River to catch debris during the demolition of the existing bridge and avoid direct impacts to the river channel. The Proposed Project would not result in the “take” of state-listed species or species proposed for listing. Implementation of mitigation measures will reduce impacts for the special-status wildlife species identified as potentially being found in the project area. Still, the Proposed Project would have greater potential for impacts on special-status wildlife species compared with the No Project Alternative.

Birds of Prey and Migratory Birds

Removal of active nests during the breeding season or disturbance that results in the abandonment of nest/nestlings is considered a “take” of the species under federal law. Tree and bridge removal could impact migratory birds. However, construction is anticipated to begin prior to nesting season (February 15 to September 1), including the removal of the existing bridge; therefore, existing nests would be removed prior to nesting season. If nests are identified during construction within the nesting season, mitigation measures will be implemented. The Proposed Project would result in greater potential for impacts on birds listed on the MBTA with the No Project Alternative.

Special-status Plant Species

Special-status plant species were not observed in the project area during focused botanical survey in 2011 or during the January 27, 2015; June 14, 2017; and March 8 and July 27, 2018 biological surveys. While no special-status plants have been observed, there is the potential to dig up, bury, grub, or otherwise maim or injure special-status plants in the Project area due to the presence of suitable habitat. The Proposed Project construction footprint would be narrow along the existing roadway alignment, which would limit the amount of vegetation removal necessary. Mitigation measures would include preconstruction surveys and protocols for avoidance and, as necessary, physical relocation where a special-status plant species is identified within the construction footprint. The Proposed Project would result in greater potential for impacts on special-status plant species compared with the No Project Alternative.

In addition to the special-status plant species, there are invasive plant species in the project area, including English ivy and Himalayan blackberry. The Proposed Project would minimize the spread of invasive species by restoring all disturbed areas that result in exposed soil with a combination of compost application, revegetation with native plants, and hydroseeding with an appropriate native seed mix. By revegetating disturbed areas with native species, the Proposed Project would minimize the potential for spreading invasive species. Because the Proposed Project would bring equipment from outside the area, there would be the possibility of introducing invasive species which could therefore result in greater potential impacts compared to the No Project Alternative.

Habitat Impacts

The Proposed Project would result in both permanent and temporary impacts on canyon live oak-ponderosa pine forest and alder riparian forest. Permanent impacts would be associated with the additional right-of-way required to widen the bridge, and temporary impacts would be associated with the temporary construction easement and staging area. The County anticipates that up to 51 trees could be removed in advance of construction. The County would determine the final tree removals based on final design of the Proposed Project.

The Proposed Project would not result in impacts to the North Fork Cosumnes River, seasonal wetland, and ephemeral drainages. The seasonal wetland and ephemeral drainages are located outside of the temporary and permanent project footprint. The proposed bridge would not require temporary or permanent supports below or within the ordinary high-water mark of the North Fork Cosumnes River. The Proposed Project would result in greater potential for both temporary and permanent impacts on habitat compared to the No Project Alternative.

The Proposed Project has been designed to avoid impacts to the North Fork Cosumnes River. Therefore, the Proposed Project also avoids impacts to Central Valley Drainage Hardhead/Squawfish Stream and Central Valley Drainage habitat, which means resident rainbow trout would not be impacted. No heavy equipment or temporary structures are needed in the river for installation of the protective temporary platform. Installation and removal may require construction personal to walk in the river to support efficient placement and removal. Contract provisions include the implementation of BMPs consistent with current Caltrans Stormwater Quality Handbooks to protect water quality, and the contractor would prepare an SWPPP that includes measures to address the risks of working during the rainy season.

Proposed Project operations would not result in a substantial change from the No Project Alternative because the roadway would remain on the same alignment, roadway capacity would not change, there would be no increase in VMT, and no new noise or disturbances are anticipated. The Proposed Project would result in similar impacts on migratory fish species compared with the No Project Alternative.

The Proposed Project would result in similar impacts on biological resources when compared with the No Project Alternative in the long term but would have greater impacts in the short term.

4.3.3.3 35-mph Alternative

Operation of the 35-mph Alternative would be similar to the Proposed Project and not result in a substantial change from the No Project Alternative because the traffic volumes would remain similar to the No Project and no new long-term noise or disturbances are anticipated. However, the alignment would be farther east (upstream), which would require removing more trees and would result in a larger permanent impact on the surrounding habitat than would the Proposed Project.

The 35-mph Alternative would result in the same construction impacts as the Proposed Project on migratory birds, but greater potential impact on wetlands, special-status wildlife and special-status plant species due to the additional impacts listed below:

- The area of disturbance for the 35-mph Alternative would be larger than with the Proposed Project.
- The realignment of the roadway and bridge would impact the seasonal wetland and one of the ephemeral drainages associated with the wetland.
- The number of trees impacted would increase to a potential of 70 trees (from 51 trees for the Proposed Project).
- Construction would require in-water work (including a temporary water diversion), which could increase the potential for impacts on special-status species (FYLF, CRLF, and western pond turtle).

Mitigation measures identified for the Proposed Project would be the same for the 35-mph Alternative; however, the 35-mph Alternative would require additional mitigation measures to reduce impacts on wetlands and fish species. Impacts with the 35-mph Alternative would be greater than with the Proposed Project but potentially similar or less than with the 40-mph Alternative.

4.3.3.4 40-mph Alternative

The range of impacts and applicable mitigation measures for the 40-mph Alternative would mirror those described for the 35-mph Alternative, except the 40-mph Alternative would have a greater temporary disturbance area and remove more trees than both the 35-mph Alternative and the Proposed Project. Impacts with the 40-mph Alternative would be greater than with the Proposed Project and the 35-mph Alternative.

4.3.4 Cultural Resources

Cultural resources consist of historical-period and Native American archaeological sites, TCR, and built environment resources. The project area contains one resource listed on the CRHR, Bucks Bar Road bridge, and another eligible for the CRHR, site CA-ELD-49/*Pulak*.

The August 13, 2020, California State Historic Resource Commission staff report for the nomination of the Bucks Bar Road bridge to the CRHR states:

> "*The property is eligible for the California Register of Historical Resources under Criterion 1 for its association with the development of transportation in southern El Dorado County, ending in 1970 when transportation patterns shifted due to El Dorado County's wine boom, and Criterion 3 as a locally significant example of open-spandrel reinforced concrete arch bridge design. The bridge retains a high degree of historic integrity in all aspects.*"

This report concludes that:

> "*While the Bucks Bar Bridge is relatively modest in size, scale, and significance, in no way equal to the grandest and most dramatic bridges in California, it meets the minimum requirements for listing in the California Register, a program designed to identify and recognize properties of this sort. The Commission finds that the Bucks Bar Bridge is eligible for listing in the California Register of Historical Resources based on this information, the historical or cultural significance of the resource is identified, and that the overriding significance of the resource justifies listing the resource in the California Register over the objections of the local government.*"
>
> The Bucks Bar Road bridge was listed on the CRHR on August 14, 2020.

CA-ELD-49/*Pulak* is eligible for listing on the NRHP as a TCP because the site retains integrity of condition and association. Based on National Bulletin 38, which describes the process of evaluation of a property as a TCP, the site meets all four NRHP criteria (A, B, C, and D). The site meets the criteria of eligibility for the CRHR because the CRHR criteria mirror NRHP criteria. For simplicity, Criterion A through D are referenced henceforth. Furthermore, the site is assessed as a TCR pursuant to Assembly Bill 52 (Chapter 532, Section 4, 21074(a)).

On 2 May 2023 the SHPO concurred that the Bucks Bar Road Bridge is individually eligible under NRHP Criterion A for the historic significance of the role it plays as part of the TCP, CA-ELD-49/*Pulak*.

For purposes of addressing both the cultural recognition and the historic significance, the effects of the alternatives on CA-ELD-49/*Pulak* pertains to both the cultural and the TCR resources. However, the discussion of comparative impacts of the Alternatives on CA-ELD-49/*Pulak* is elaborated in Section 4.3.5, Tribal Cultural Resources.

4.3.4.1 No Project Alternative

The potential for impacts on cultural resources would remain unchanged from existing conditions under the No Project Alternative. For the purposes of this section, identified cultural resources consist of historic-period and Native American archaeological sites, TCRs, and built environment resources. The Bucks Bar Road bridge would remain at the same location. The potential to disturb or destroy buried archaeological resources or previously unknown human remains would remain unchanged. The operation and maintenance of the existing bridge and road would not affect previously identified cultural resources. The No Project Alternative would result in no impacts on cultural resources and therefore would have a lesser impact on cultural resources than would the Proposed Project.

4.3.4.2 30-mph Alternative (Proposed Project)

The Proposed Project would result in the removal of the Bucks Bar Road bridge. The removal of a historic structure listed or eligible for listing on the CRHR cannot be mitigated. California PRC Section 21084.1 states in part "*A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. For purposes of this section, an historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources…*". In accordance with PRC Section 21084.1, the Proposed Project would result in a "…*substantial adverse change in the significance of an historical resource*…" by removing the existing bridge, which is listed in the CRHR. Therefore, the Proposed Project would have a significant effect on the environment even with the implementation of mitigation that includes documentation to preserve the important information about the bridge.

In addition, the Proposed Project has the potential to adversely impact unknown archaeological features during construction. While avoidance and minimization measures are included in the Project construction specifications, this evaluation recognizes that there may be features that cannot be

anticipated (such as features that have been consumed in the abutments of the bridge long ago) and thus there is a possibility they could be inadvertently impacted during construction. The Proposed Project would result in greater impacts on cultural resources than would the No Project Alternative.

4.3.4.3 35-mph Alternative

The 35-mph Alternative would require removing Bucks Bar Road bridge, which would result in the same significant impact to the CRHR-listed resource. This alternative would result in greater total impacts (and more ground disturbance) than the Proposed Project. In addition, as elaborated under Section 4.3.4.2, the 35-mph Alternative would also result in a greater impact compared with the No Project Alternative**.**

4.3.4.4 40-mph Alternative

Cultural resource impacts under the 40-mph Alternative would be same impact on the historical resources as with the 35-mph Alternative. However, this alternative would result in greater total impacts (and more ground disturbance). The 40-mph Alternative would have greater temporary and permanent impacts to cultural resources compared with the Proposed Project and the 35-mph Alternative.

4.3.5 Tribal Cultural Resources

The Area of Potential Effect for the Proposed Project includes a TCR (CA-ELD-49*/Pulak*), which is eligible for both the NRHP and the CRHR. While resource eligibility need only meet one of four criteria, the site identified as CA-ELD-49/*Pulak* meets all four criteria, as outlined in National Register Bulletin 38:

- **Criterion A** (*Defined as "Association with events that have made a significant contribution to the broad patterns of our history"*). Regarding Criterion A, the association between CA-ELD-49*/Pulak* and traditional beliefs and practices is demonstrated through the identification of such significance by United Auburn Indian Community representatives, interviews with several contemporary native people, and by comparison with comparable locations, traditional practices, and cultural beliefs. CA-ELD-49*/Pulak* meets Criterion A as interpreted through the guidance of outlined in National Register Bulletin 38.
- **Criterion B** (*Defined as "Association with the lives of persons significant in our past"*). CA-ELD-49*/Pulak* meets the requirements of Criterion B.
- **Criterion C** (Defined as *"1. Embodiment of the distinctive characteristics of a type, period, or method of construction, 2. Representative of the work of a master, 3. Possession of high artistic values, and 4. Representative of a significant and distinguishable entity whose components may lack individual distinction"*). CA-ELD-49/*Pulak* is eligible under Criterion C because it represents a significant and distinguishable entity whose components may lack individual distinction.
- **Criterion D** (*Defined as "History of yielding, or potential to yield, information important in prehistory or history"*). CA-ELD-49/*Pulak* meets Criterion D as a site that retains the potential to yield information that contributes to an understanding of Native American (prehistory) as well as the historical and continuing cultural practices of living Native American communities.
- **California Register of Historical Resources.** Although the CRHR does not include robust criteria for addressing tribal cultural values similar to the National Register Bulletin 38, the characteristics of CA-ELD-49/*Pulak* are nonetheless sufficient to recommend it eligible for the CRHR under criteria 1, 2, 3, and 4 under PRC 5024.1(c), which parallel the four NRHP criterion discussed above. Therefore, CA-ELD-49/*Pulak* is a historical resource subject to consideration under CEQA.

As a resource that is eligible for both the NRHP and CRHR, and in the determination of the County, CA-ELD-49/*Pulak* is a TCR under PRC Section 21074.

4.3.5.1 No Project Alternative

The potential for impacts on a TCR would remain unchanged from existing conditions under the No Project Alternative. The Bucks Bar Road bridge would remain at the same location. The potential to disturb or destroy TCRs would remain unchanged. The operation and maintenance of the existing bridge and road would not affect previously identified TCRs. Impacts would be less than with the Proposed Project.

4.3.5.2 30-mph Alternative (Proposed Project)

The Proposed Project has been developed specifically on the existing roadway and bridge alignment to maximize avoidance potential. Selection of this alternative would maintain the same general position of the existing bridge, with the addition of an extra lane. The bridge would extend approximately 11 feet beyond the existing bridge upstream and be 6 feet wider downstream. Because the new bridge would be raised approximately eight feet higher than the existing bridge, the wider bridge would allow more sunlight and increased visibility of the river's natural setting.

The Proposed Project includes protective fencing, such that construction would be restricted to a limited area. The Proposed Project requires that onsite Tribal Monitors be present during ground disturbance periods when the identification of new features could occur. The actions described above are considered when reviewing how the Proposed Project may change the resource eligibility under any of the applicable criteria, as described below:

- **CFR 60.4, Criterion A**. Construction of the Proposed Project would have temporary effects of short duration and low intensity by restricting access within the construction footprint (areas of permanent and temporary impacts) which includes the areas near the bridge construction and where temporary construction easements would be required. In addition to the temporary access restrictions within the construction footprint, the area would be affected by temporary increases in noise, dust, and the presence of construction equipment and workers, with effects reduced by implementing BMPs. The removal of the bridge and trees near the current right-of-way within the construction area would not change the eligibility of the CA-ELD-49/*Pulak* for the NRHP. However, the existing bridge which was determined eligible under Criterion A by the SHPO for the role it plays in the TCR would be removed. CA-ELD-49/*Pulak* may be affected compared with current conditions where associated TCR events have occurred, but the significance of previous events would not be erased by construction of the new bridge. When construction is complete, areas associated with the site would not continue to be further affected. The bridge would be in the same general location as the existing bridge, with little to no effect on the associated TCR events that have occurred; therefore, there would be no change of the site's significance as defined by Criterion A. Because the site would not be affected after construction, association with events are not significantly impacted. Impacts would be greater than the No Project Alternative.
- **CFR 60.4, Criterion B**. During construction and operation of the Proposed Project, identified resources would be protected to the extent possible, and the association of the protected known cultural features would continue unharmed. The association of the site with history and lives of ancient persons remains and cannot be physically altered or destroyed by replacing the bridge. While this non-physical connection and significance remains, there is also a relationship between the current physical bridge, those past individuals, and ceremony. Removal and replacement of the current physical bridge would impact this significance. There would be periods when no access to portions of the site within the construction footprint would be

allowed. To minimize the inability to access the area during the construction phase, the County will offer free site access to the construction area within County right of way on a quarterly basis to the culturally affiliated consulting Native American tribes when Bucks Bar Road is closed to traffic (**Mitigation Measure TCR-3)**. Also, access outside of the construction footprint would not be restricted and remain the purview of the adjacent private property owners. The temporary access restriction within the construction footprint would not result in long-term effects to the importance or history of the site; however, the temporary impacts of the Proposed Project would be greater than the No Project Alternative.

- **CFR 60.4, Criterion C**. Although the County has undertaken extensive efforts to avoid and minimize impacts to all identified features within the APE, including but not limited to re-designs of the Proposed Project as resources were identified, the Proposed Project still has the potential to impact unidentified features. There is a possibility that unidentified features have been covered as well as used in building the existing bridge. Therefore, it is possible that unidentified features would be inadvertently damaged or destroyed either directly or indirectly, through dismantling of the bridge or during excavation. While all natural materials (including soil and rock fill from abutments) would remain onsite, the construction activities would result in changes to the immediate surroundings and remove vegetation that contribute to the TCR. The Proposed Project, whereby the existing bridge is removed and replaced, would have a substantial adverse change on the cultural landscape with cultural value to California Native American Tribes. This would result in a significant impact that cannot be mitigated to less than significant Therefore, impacts would be greater with the Proposed Project than with the No Project Alternative.
- **CFR 60.4, Criterion D.** Proposed Project construction may yield access to potentially greater information on the pre-history and history of CA-ELD-49/*Pulak* if cultural resources were found during construction. The Proposed Project would include the presence of Tribal Monitors during ground-disturbing activities within the construction footprint; this would facilitate identifying, recording, and properly managing any additional information discovered. No construction would occur outside of the construction footprint and access outside of the construction footprint would remain the purview of the adjacent property owners. The impacts of the Proposed Project would not be greater than those of the No Project Alternative.

4.3.5.3 35-mph Alternative

The 35-mph Alternative would result in a realignment of the bridge and roadway. This alternative would change the setting and could not avoid direct impacts due to being off the alignment of the existing bridge. The likelihood of significant impacts on TCRs is directly related to the amount of new ground disturbance. The 35-mph Alternative would disturb a larger area than would the Proposed Project. See the related discussion in Section 4.3.4, Cultural Resources. As discussed in section 4.2, the UAIC supports a transportation system management alternative. However, UAIC does not support the 35 or 40-mph alternatives due to the larger area of disturbance off the alignment of the existing bridge and resultant impacts to the TCR.

The 35-mph Alternative would result in additional impacts over and above the Proposed Project, as recorded through the four applicable criteria:

- **CFR 60.4, Criterion A.** The 35-mph Alternative bridge would be located farther off the alignment of the existing bridge; this would change the setting associated with the TCR events that have occurred. This would not remove the history of the site and previous events, but the site setting for recalling and recognizing the events would be changed, therefore potentially changing the site's significance as defined by Criterion A. Because the 35-mph Alternative would result in a

larger ground disturbance, impacts under Criterion A would be greater compared with the Proposed Project**.**

- **CFR 60.4, Criterion B**. The association of the CA-ELD-49/*Pulak* with history and lives of ancient persons cannot be physically removed. There would be periods when no access to portions of the site close to project construction would be allowed, but the 35-mph Alternative would not result in long-term effects to the importance or history of the site and impacts would be the same as with the Proposed Project.
- **CFR 60.4, Criterion C**. Construction activities would cover, impact, and/or destroy features. Even if construction could avoid resources, it is possible that unidentified features would either be disturbed, temporarily relocated, or destroyed either directly or indirectly. Therefore, the 35-mph Alternative would have a substantial adverse change on the cultural landscape with cultural value to Californian Native American tribes. This would result in an impact that could not be mitigated. The 35-mph Alternative would require ground disturbance over a larger area than does the Proposed Project. Impacts would be greater than impacts from the Proposed Project.
- **CFR 60.4, Criterion D.** Construction could yield access to potentially greater information on the pre-history and history of CA-ELD-49/*Pulak* if cultural resources were found during construction. Mitigation will include the presence of Tribal Monitors during construction; this will facilitate identifying, recording, and properly managing any additional information discovered. Impacts would be the same as with the Proposed Project. However, the 35-mph Alternative has the potential to result in greater impacts than with the Proposed Project because of the impacts noted under CFR 60.4, Criterion A and Criterion C.

4.3.5.4 40-mph Alternative

The 40-mph Alternative would have greater potential impacts to the TCR than would the Proposed Project and the 35-mph Alternative. The 40-mph Alternative would result in the greatest bridge shift off the current alignment and new ground disturbance. In addition, impacts associated with the 35-mph Alternative assessment above are also applicable to the 40-mph Alternative. Therefore, the 40-mph Alternative has the potential to result in greater impacts than would the Proposed Project and 35-mph Alternative. The 40-mph Alternative is not supported by UAIC as noted in Section 4.3.5.3

4.3.6 Geology and Soils

The project area is underlain by igneous rocks, which have no potential to contain paleontological resources. Soils onsite are not susceptible to landslide, lateral spreading, and liquefaction and are not considered expansive.

4.3.6.1 No Project Alternative

Under the No Project Alternative, there would be no new impacts related to geologic hazards, such as those associated with fault rupture, strong ground shaking, and soil erosion. Impacts under the No Project Alternative would be less than those under the Proposed Project. Impacts on paleontological resources under this alternative would be similar to those under all alternatives because the project area is underlain by igneous rocks, which have no potential to contain paleontological resources. No impact to paleontological resources would occur under the No Project Alternative.

4.3.6.2 30-mph Alternative (Proposed Project)

The Proposed Project would be resilient to a seismically important event because engineering standards have advanced since the original bridge was built in 1940/ 1941. The project area is underlain with

igneous rock, which does not easily erode and does not include the potential for paleontological resources. Although seismic risk is low, a foundation report would be prepared in final design in accordance with all applicable requirements of the State of California, including the Caltrans Seismic Design Criteria, and the Proposed Project would be constructed in accordance with applicable requirements. In addition, contract provisions require implementation of BMPs consistent with the Caltrans Stormwater Quality Handbooks to protect water quality and minimize the potential for siltation and downstream sedimentation. Construction activities would also include the implementation of an SWPPP, which outlines stormwater runoff BMPs. Under the Proposed Project, there would be a low risk of geologic hazards and no impact on paleontological resources. Impacts from the Proposed Project would be similar to but slightly greater than for the No Project Alternative.

4.3.6.3 35-mph Alternative

The 35-mph Alternative would have similar impacts on geology and soils as the Proposed Project. This alternative would have a larger temporary and permanent construction footprint compared with the Proposed Project; however, geologic risk-related impacts between the alternatives would not differ. No impact to paleontological resources would occur.

4.3.6.4 40-mph Alternative

The 40-mph Alternative would have similar impacts on geology and soils as the Proposed Project and 35-mph Alternative. This alternative would have a larger temporary and permanent construction footprint compared with the Proposed Project and 35-mph Alternative; however, the impacts between the alternatives for geologic risks do not differ.

4.3.7 Greenhouse Gas Emissions

Greenhouse gas emissions are gases that trap heat in the atmosphere. Project-related sources of greenhouse gas emissions would include transportation uses and construction equipment that burn fuel.

4.3.7.1 No Project Alternative

The No Project Alternative would not result in an increase of greenhouse gas emissions. Short-term construction emissions would not be generated. There would likewise be no change in VMT or traffic conditions, relative to existing conditions, and as a result, no impact on operational greenhouse gas emissions. Vehicles would continue to idle at the bridge; therefore, the No Project Alternative would not result in the benefits of potentially reduced greenhouse gas emissions during operation that would be associated with the Proposed Project.

4.3.7.2 30-mph Alternative (Proposed Project)

The Proposed Project would not expand capacity of the roadway and therefore would not increase VMT, but because the Proposed Project would reduce the amount of idling when vehicles stop to yield and queue to wait for Placerville-bound traffic to clear, emissions would be improved compared to the No Project Alternative. The construction-related greenhouse gas emissions were estimated using the CalEEMod and below the threshold used by the SMAQMD for the construction phase of a project[14] . The

[14] The El Dorado County AQMD has not adopted greenhouse gas emissions significance thresholds for the construction phase of projects. Given the lack of locally adopted greenhouse gas emissions significance thresholds, the Sacramento Metropolitan AQMD Bright-Line Thresholds for the construction phase of project are being used for this analysis. The Bright-Line Thresholds: Construction phase of project are 1,100 metric tons (MT) of carbon dioxide equivalent per year (CO2e/yr.) (SMAQMD 2020).

Proposed Project would result in less greenhouse gas emissions than both the 35-mph and 40-mph alternatives because the Proposed Project would disturb less area, be constructed in less time, and use less resources to build a shorter bridge. Therefore, the Proposed Project would slightly reduce greenhouse gas emissions during the operation phase compared to the No Project Alternative and would be below the threshold used during construction.

4.3.7.3 35-mph Alternative

The 35-mph Alternative would have similar impacts on greenhouse gas emissions as the Proposed Project. The modeled Proposed Project greenhouse gas emissions during construction are below the SMAQMD greenhouse gas threshold being used. While the 35-mph Alternative would have a longer bridge and longer retaining wall lengths compared to the Proposed Project, these differences would not cause increases in impacts that would exceed the 40-mph Alternative, which was previously determined to not exceed the emissions thresholds.

4.3.7.4 40-mph Alternative

Under the 40-mph Alternative VMT, traffic conditions would be similar to under the Proposed Project, with similar greenhouse gas emissions. The 40-mph Alternative greenhouse emissions would be below the SMAQMD greenhouse gas threshold being used.

4.3.8 Hazards and Hazardous Materials

Based on El Dorado County records, regulatory database searches, and site visits, there are no signs of known hazardous materials in or adjacent to the project area. The Proposed Project site is not within an area known to contain naturally occurring asbestos or an area “more likely to contain naturally occurring asbestos” (California Department of Conservation 2000; El Dorado County 2005). There are few residences in the project area; no existing or proposed schools occur within 0.25 mile of the project area; and no public airports are within 2 miles of the project area. The existing bridge paint system may contain lead, and the concrete abutments could possibly include asbestos-containing material.

4.3.8.1 No Project Alternative

There would be no construction activity under the No Project Alternative. This alternative would not introduce new fire hazards or risk to people and structures in the project area. This alternative would not introduce new hazardous materials into the project area, and impacts would be less than under the Proposed Project.

4.3.8.2 30-mph Alternative (Proposed Project)

Construction activities with the Proposed Project might result in risk of accidental spills and human-caused fire hazards from equipment use during the approximate 12-month construction duration. Although it is not anticipated that construction activity would encounter naturally occurring asbestos, the Proposed Project would be required to comply with El Dorado County AQMD Rule 223-2 requiring activities to reduce asbestos dust created from earth-moving activities. Standard dust control measures such as watering would effectively control unanticipated asbestos exposure. During construction, the Proposed Project would have greater potential for impact compared to the No Project Alternative. When construction is complete, project operation would not introduce new hazardous materials, similar to the No Project Alternative.

4.3.8.3 35-mph Alternative

The 35-mph Alternative would have similar construction-related impacts regarding the handling of hazards and hazardous materials as the Proposed Project. No new hazards would be introduced. The

duration of construction activities would result in a similar risk of accidental spills during construction. However, the duration of construction would be 4 to 7 months longer, and therefore result in a potentially longer period of risk of spills.

The existing cabin on APN 093-131-12, which would be removed by the 35-mph Alternative, could contain lead-based paint and or asbestos-containing material. Because this alternative would involve removing the cabin, there would be a slightly greater impact than the Proposed Project.

4.3.8.4 40-mph Alternative

The 40-mph Alternative would have similar impacts relating to hazards as the 35-mph Alternative. Impacts would be greater than under the Proposed Project.

4.3.9 Hydrology/Water Quality

The project area is located within the Upper Cosumnes watershed. Water features in the project area include the North Fork Cosumnes River, two ephemeral drainages (both located upstream and on the north side of the existing Bucks Bar Road bridge), and one seasonal wetland, also located upstream and on the north side of the bridge.

4.3.9.1 No Project Alternative

The No Project Alternative would not result in changes to hydrology and water quality. The most recent hydraulic analysis demonstrated that the existing bridge does not allow for passage of either the 100-year storm event or the 50-year storm event. The County and nearby residents observed the bridge being overtopped during a major storm in 1997 and near flooding in 2006, 2017, and 2022. This results in higher water surface elevations upstream and increased water velocities immediately downstream of the bridge, compared to what would occur under Proposed Project conditions. Construction impacts related to land-disturbing activities would not occur, and there would be no potential for temporary increases in sediment loads and pollutants to the North Fork Cosumnes River or degradation of water quality. There would be no changes in flow rates in the river or to drainage patterns of stormwater runoff. The flood threat would remain greater than with the Proposed Project.

4.3.9.2 30-mph Alternative (Proposed Project)

The Proposed Project would avoid impacts to the North Fork Cosumnes River. The Proposed Project would include protection from debris entering the river during removal of the old bridge, and the pre-cast steel girders would eliminate the need for falsework in the river. However, with construction near a natural watercourse, there is the risk potential for the use of chemicals or pollutants associated with construction activities or erosion or siltation entering the waterway. BMPs consistent with the current Caltrans Stormwater Quality Handbooks to protect water quality and minimize the potential for siltation and downstream sedimentation would be implemented, including the preparation of an SWPPP to address work during the rainy season. All disturbed areas that result in exposed soil would be restored by a combination of compost application, revegetation with native plants, and hydroseeding with an appropriate native seed mix. With the implementation of BMPs and restoration of disturbed areas, impacts would be less than significant, and no mitigation will be required.

The Proposed Project would raise the Bucks Bar Road bridge and expand the flow capacity at the bridge by removing the abutments, arch, and spandrels out of the channel limits. The Proposed Project would pass both the 50-year and 100-year flood events with ample clearance between the bottom of the soffit. To raise the bridge, there would be a net reduction of fill within the floodplain after removal of the existing bridge and its abutments. Therefore, the Proposed Project would provide a beneficial impact on the hydrologic condition during operation.

The threat of flooding with the Proposed Project is anticipated to be improved from the No Project Alternative, but the risk of short-term water quality impacts would be greater.

4.3.9.3 35-mph Alternative

The 35-mph Alternative would also achieve long-term benefits of reducing fill in the floodplain and passing the 50-year and 100-year flood events. However, this alternative's construction period could potentially result in more significant impacts to hydrology and water quality than would occur with the Proposed Project. This alternative would have a longer construction duration and a larger construction footprint compared to the Proposed Project. In addition, the 35-mph Alternative would require a stream diversion to be constructed and falsework in the North Fork Cosumnes River. The project description for this alternative includes a list of measures to minimize harm to the river; however, the risk to water quality would be greater. Construction BMPs and federal, state, and local regulations would apply to this alternative and address hydrological and water quality impacts. The 35-mph Alternative has the potential for greater impacts on water quality than the Proposed Project.

4.3.9.4 40-mph Alternative

The 40-mph Alternative would result in the same benefits to the floodplain and hydraulic conveyance and the same water quality risks as the 35-mph Alternative. The 40-mph Alternative would be required to implement the same construction BMPs and federal, state, and local regulations as the 35-mph Alternative. The 40-mph Alternative has the potential for greater impacts on water quality than the Proposed Project.

4.3.10 Noise and Vibration

The project area is located within a rural area of El Dorado County, and the only sensitive land uses in the project area are residences. The nearest residential property is a cabin south of the bridge and approximately 50 feet east of Bucks Bar Road. The next closest residence is approximately 200 feet from the construction limits, and other residences are over 300 feet from the bridge.

4.3.10.1 No Project Alternative

The No Project Alternative would result in no new noise- or vibration-related impacts. Short-term construction noise would not be generated, so there would be no potential to exceed the El Dorado County construction noise thresholds. There would be no change to traffic conditions relative to existing conditions and, therefore, no impact on operational noise levels. Noise- and vibration-related impacts with the No Project Alternative would be less than with the Proposed Project.

4.3.10.2 30-mph Alternative (Proposed Project)

Construction during daylight hours is exempt from El Dorado County noise standards in accordance with Section 130.37.020(1) of Chapter 130.37, Noise Standards, in the El Dorado County Ordinance Code. Nighttime construction would be allowed when necessary to expedite construction with prior approval from the Director of the Planning and Building Department. Construction noise could result in short-term annoyance for the nearby residences. The greatest anticipated sources of vibration during project construction activities would be from a vibratory roller, which may be used during paving activities. The nearest residence is a cabin and substantial temporary noise and vibration impacts are not anticipated. The cabin was constructed in the 1940s, and because of its age, there is the potential for damage from vibration; however, vibration threshold for impacts would not be exceeded and damage to the structure is not anticipated. Impacts of the Proposed Project during construction are anticipated to be greater than under the No Project Alternative.

The Proposed Project would replace the existing bridge in generally the same location and widen the bridge deck to meet current AASHTO, Caltrans, and County standards. The Proposed Project would not change capacity or increase VMT on Bucks Bar Road; therefore, traffic generated noise during operation is anticipated to remain similar to current conditions. There would be no change in traffic volumes during Proposed Project operation, except that braking sounds would occur less often. Noise during operations would therefore be improved over the No Project Alternative.

4.3.10.3 35-mph Alternative

Under the 35-mph Alternative, noise and vibration impacts would be similar to those under the Proposed Project, but the construction period would be longer. The cabin would be removed; therefore, there would be no potential for damage from vibration. While the noise levels would be similar to those under the Proposed Project because of the longer duration the impacts would be greater than the Proposed Project. Under the 35-mph Alternative, the roadway alignment would be shifted upstream and east of the existing bridge; however, because the existing cabin would be removed, there would be no operational noise impacts at this receptor. The roadway would not be shifted closer to other residences, and noise impacts during operation would be the same as with the Proposed Project.

4.3.10.4 40-mph Alternative

The 40-mph Alternative would have the same noise and vibration impacts as the 35-mph Alternative, although the impacts would be of longer durations since the 40-mph Alternative has more paving work than the 35-mph Alternative.

4.3.11 Public Services and Utility Service Systems

There are no community facilities (such as schools or parks) in the project area. Fire protection is provided by the El Dorado County Fire Protection District and the Pioneer Fire Protection District, and police protection is provided by the El Dorado County Sheriff's Office. The project area overlaps with the Gold Oak Union School District, the Pioneer Union School District, and the Union High School District. The schools in the Pioneer Union School District and Union High School District provide school bus transport on Bucks Bar Road, but only the Union High School District has bus routes that currently cross the existing bridge. Utility providers include AT&T and PG&E, and both have overhead utilities in the project area. No water, wastewater, or solid waste and recycling services are provided in the project area.

4.3.11.1 No Project Alternative

Under the No Project Alternative, there would be no changes or impacts on public services or utilities. The current substandard roadway approach and bridge conditions would remain. The AT&T and PG&E telecommunication lines would not need to be relocated.

4.3.11.2 30-mph Alternative (Proposed Project)

The Proposed Project bridge would be constructed on the current roadway alignment, which would require an estimated 10-month closure. The existing bridge could not remain open to traffic during construction, and therefore the road closure would impact fire protection and police response times and require Union High School District buses to use the detour route. AT&T and PG&E utilities are expected to be unaffected after being relocated to accommodate the construction area. Construction would require coordination and advanced planning with public services with regards to detour routes. Water required for construction would be trucked in, and construction waste would be carried to the Materials Recovery Facility/Disposal facility in Placerville. Impacts of the Proposed Project are anticipated to be greater than with the No Project Alternative during construction.

The Proposed Project would not require new public service facilities, and there are no existing facilities in the project area. During operation of the completed facility, impacts on public services and utilities from the Proposed Project would be less than from the No Project Alternative because public service vehicles on Bucks Bar Road would no longer have to potentially yield at the bridge, thereby reducing travel times.

4.3.11.3 35-mph Alternative

The 35-mph Alternative would relocate utilities and require coordination with public service for short-term roadway closures, but these closures would be short and infrequent compared with the Proposed Project. Compared with the Proposed Project, impacts on public services and utilities during construction would be less with the 35-mph Alternative because the existing bridge could remain open during much of construction. During the operational phase, impacts on public services and utilities from the 35-mph Alternative would be the same as with the Proposed Project because public service vehicles on Bucks Bar Road would no longer have to potentially yield at the bridge, thereby reducing travel times.

4.3.11.4 40-mph Alternative

For public services and utilities, the 40-mph Alternative would perform the same as the 35-mph Alternative. Compared to the Proposed Project, there would be fewer impacts because the existing bridge could remain open during much of the construction period. Therefore, the 40-mph Alternative would have lesser impacts on public services and utilities as the Proposed Project during construction and the same impacts during the operations phase.

4.3.12 Transportation

Bucks Bar Road generally runs north-south and serves as a major collector, as defined by the California Road System – Functional Classification, linking Pleasant Valley Road to the north with Mount Aukum Road to the south. Bucks Bar Road is a two-lane roadway except at the existing Bucks Bar Road bridge, where the roadway narrows to one lane and requires southbound vehicles to yield to northbound travelers until the bridge is visually clear of vehicles. There are no public transportation services and no pedestrian or bicycle facilities in the project area.

4.3.12.1 No Project Alternative

Under the No Project Alternative, there would be no construction-related impacts on traffic or circulation conditions in the project area. The Bucks Bar Road bridge would remain a single-lane bridge on a two-lane road. No improvements would be made to the bridge or roadway approaches. The yield sign directing Somerset-bound (east) traffic to yield to Placerville-bound (west) traffic as it crosses the single-lane bridge would remain in place. Compared with the Proposed Project, impacts from the No Project Alternative would be less in the short term but greater over the long term because the lack of bridge improvement would result in a higher potential for accidents.

4.3.12.2 30-mph Alternative (Proposed Project)

Closure of the roadway during construction of the Proposed Project would result in longer travel distances for all motorists wishing to use Bucks Bar Road to travel from Pleasant Valley Road to Mount Aukum Road and vice versa (refer to Chapter 2, Project Description, for information on the detour route) compared to the No Project Alternative. Advanced notice and coordination with residents, businesses, and emergency services would occur prior to construction. Because there are no transit services or bicycle or pedestrian facilities in the project area, there would be no impacts during construction. The completed project would eliminate the need for southbound traffic to stop and wait until the bridge is

clear. The design does include an exception for a 30-mph facility on a rural major collector, but the curve radii are inherent to the roadway and thus the design speed is not anticipated to result in new traffic hazards or worsen hazards.

4.3.12.3 35-mph Alternative

The 35-mph Alternative would allow the Bucks Bar Road bridge and roadway to remain open during construction, which would have less temporary impact on traffic than with the Proposed Project. This alternative would still result in some short-term bridge closures during construction, but the closures would not last more than a couple of weeks while conforming the new bridge approaches to the existing roadway. Advanced notice and coordination with residents, businesses, and emergency services would be provided. Because the bridge would remain open during the majority of project construction, the impacts would be less than those associated with the Proposed Project.

During construction, the 35-mph Alternative would have less impacts on traffic than those associated with the Proposed Project, but over long-term operation, the impacts would be the same as with the Proposed Project. The 35-mph Alternative would require a design exception.

4.3.12.4 40-mph Alternative

The 40-mph Alternative would cause the same impacts on transportation as the 35-mph Alternative, but the 40-mph Alternative would not require design exceptions.

4.3.13 Wildfire

The project area is mapped as occurring in a State Responsible Area and is identified as a very high fire hazard severity zone (CAL FIRE 2024).

4.3.13.1 No Project Alternative

The potential for impacts from wildfire and the potential to induce wildfires would remain unchanged from existing conditions under the No Project Alternative.

4.3.13.2 30-mph Alternative (Proposed Project)

Over the long term, the Proposed Project would improve emergency response, create a slightly larger fire break, and not create new fire hazards. Construction equipment and activities, such as welding, has the possibility to ignite fires. Minimal clearing of the adjacent terrain would not substantially increase possibility for landslides or slope instability.

Construction would require a temporary long-term closure (approximately 10 months) of the Bucks Bar Road bridge that could result in making possible evacuation routes longer for some residents during a wildfire. Residents would use the detour routes developed for the Proposed Project, and information on these routes would be coordinated with emergency and public services, community services, and business travelers prior to the required bridge closure. In order to reduce the risks on evacuation routes needed during a wildfire emergency, the temporary long-term closure is proposed to start in the early to late fall, with the objective of having the bridge usable for evacuations by early summer ahead of the fire season. The County has coordinated with the fire chiefs and the El Dorado County Office of Emergency Services with regards to the long-term closure (see Section 3.13 Wildfire for more detail).

Emergency services for response to wildfires are not expected to cause increased response times because the bridge represents the boundary between the two fire districts. However, the closest CAL FIRE station is in Placerville and, depending on the location of a fire, CAL FIRE might need to take an alternative detour route, which could increase their response times. To minimize this impact, the County

will require its contractor to coordinate with CAL FIRE to provide a project-specific Fire Protection Plan to cover their construction activities, be proactive in being alert, and employ preventative precautions.

Impacts of the Proposed Project are anticipated to be greater than the No Project Alternative in the short-term construction period but similar during long-term operation.

4.3.13.3 35-mph Alternative

The 35-mph Alternative would not require a long closure of Bucks Bar Road during construction; therefore, impacts to evacuation routes would be lower compared with the Proposed Project. The County would still require its contractor to coordinate with CAL FIRE to provide a project-specific Fire Protection Plan to cover their construction activities.

Over the long term, operation impacts of the 35-mph Alternative would be the same as the Proposed Project Alternative.

4.3.13.4 40-mph Alternative

The 40-mph Alternative would have the same construction sequence as the 35-mph Alternative and, therefore, have lower construction impacts on emergency evacuation compared with the Proposed Project, but the same long-term operation impacts as the Proposed Project.

4.4 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires an EIR to identify an "environmentally superior alternative". Exhibit 4-10 presents a comparison of potential project impacts by alternative for each resource assessed herein. This information was used to identify an environmentally superior alternative. As shown in Exhibit 4-10, under most resource topics the No Project Alternative would result in fewer impacts because the No Project Alternative does not result in ground disturbance or other construction related impacts. As a result, the No Project Alternative would be environmentally superior alternative. Per the CEQA Guidelines, if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. Compared to the other alignment alternatives, the Proposed Project is the environmentally superior alternative because it does not impact residential structures, would not require in-water work, and requires the least ground disturbance of the alignment alternatives minimizing impacts on riparian and natural sensitive areas including wetlands as well as avoiding potential impacts on cultural and tribal cultural resources.

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Exhibit 4-10 Comparison of Potential Impacts by Project Alternative

Resource Topic	Brief Description of Impact	Proposed Project Determination of Significance	Compared to Proposed Project: No Project Alternative	35-mph Alternative	40-mph Alternative
Aesthetics					
Would scenic vistas change?	Scenic character of the North Fork Cosumnes River would be temporarily affected; Scenic views from roadway of the new bridge and North Fork Cosumnes River would be visually consistent with surroundings.	LTS	Lesser (NI)	Greater	Greater
Degrade scenic resources?	Bucks Bar Road is not a scenic highway.	NI	Same	Same	Same
Degrade visual character or quality in non-urbanized areas?	Because the bridge is replaced in generally the same location views of the river would remain unchanged for drivers. Additionally, there are no publicly available vantage points. Drivers would have short period drive-by views of a new structure and therefore not considered a publicly accessible vantage point.	NI	Same	Greater	Greater
Create new source of light or glare?	Temporary construction lighting would not impact traveling public; No new permanent source of light.	LTS	Lesser (NI)	Greater	Greater
Agriculture and Forestry Resources					
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance?	No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance present.	NI	Same	Same	Same
Conflict with existing agricultural zoning?	No conflict	NI	Same	Same	Same
Conflict with existing forest land zoning?	No conflict	NI	Same	Same	Same
Loss of forest land?	No conflict. No designated forest land.	NI	Same	Same	Same
Other changes to the existing environment that would result in conversion of farmland or forest land?	No other conflict.	NI	Same	Same	Same

Resource Topic	Brief Description of Impact	Proposed Project Determination of Significance	Compared to Proposed Project: No Project Alternative	35-mph Alternative	40-mph Alternative
Air Quality					
Conflict with air quality plan?	No short-term increases in pollutants are expected to exceed thresholds; With no increase in traffic capacity, there would be no change in long-term pollutants.	NI	Same	Same	Same
Cumulatively considerable net increase in criteria pollutant?	No considerable net increase in criteria pollutant.	LTS	Lesser (NI)	Similar	Similar
Impact sensitive receptors?	Nearby residents may experience increases in emissions during construction.	LTS	Lesser (NI)	Greater	Greater
Objectionable odors?	Short-term odors during construction.	LTS	Lesser (NI)	Similar	Similar
Biological Resources					
Adversely affect special-status species?	Not likely to adversely affect FYLF, CRLF, western pond turtle, monarch butterfly or birds of prey and migratory birds or fish.	LTSM	Lesser (NI)	Greater	Greater
Impact riparian and sensitive natural communities?	Impacts to canyon live oak-ponderosa pine forest	LTS	Lesser (NI)	Greater	Greater
Impacts on U.S. or State waters, or wetlands?	No impact on North Fork Cosumnes River or wetlands	NI	Lesser (NI)	Greater	Greater
Impacts on wildlife movement and migration?	Temporarily disrupt movement of native wildlife species during construction.	LTS	Lesser (NI)	Similar	Similar
Conflict with local policies and ordinances?	No conflict with tree protection/removal policies.	NI	Same	Same	Same
Conflict with habitat conservation plan?	Not located in an area covered by a habitat or natural community conservation plan.	NI	Same	Same	Same
Cultural Resources					
Adverse effect on historical resources?	Would remove the existing Bridge eligible for CRHR.	SU	Lesser (NI)	Same	Same
Adverse effect on archaeological resources?	Would destroy or remove unknown features supporting the CA-ELD-49/*Pulak* site eligible for NRHP and CRHR.	SU	Lesser (NI)	Greater	Greater

Resource Topic	Brief Description of Impact	Proposed Project Determination of Significance	Compared to Proposed Project No Project Alternative	35-mph Alternative	40-mph Alternative
Disturb human remains?	Potential for inadvertent discoveries of human remains during construction.	LTSM	Lesser (NI)	Greater	Greater
Tribal Cultural Resources					
Substantial adverse change in the significance of a TCR Listed or eligible for listing in the California Register of Historical Resources?	Would destroy or remove unknown features supporting the CA-ELD-49/*Pulak* site eligible for NRHP and CRHR.	SU	Lesser (NI)	Greater	Greater
Substantial adverse change in the significance of a TCR that is determined by the lead agency to be significant?	Would destroy or remove unknown features supporting the CA-ELD-49/*Pulak* site eligible for NRHP and CRHR.	SU	Lesser (NI)	Greater	Greater
Energy					
Significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy?	Short-term increased energy use (gasoline and diesel fuels for operation of heavy-duty construction equipment and vehicles); No long-term change in energy use.	LTS	Lesser (NI)	Similar	Similar
Conflict plan for renewable energy or efficiency?	No conflict with renewable energy or efficiency plans.	NI	Same	Same	Same
Geology & Soils					
Vulnerable to seismicity?	Would be designed to withstand a seismically important event.	LTS	Greater	Similar	Similar
Cause soil erosion?	Adherence to regulatory requirements would result in less than significant impacts.	LTS	Lesser (NI)	Similar	Similar
Vulnerable to unstable geologic unit?	Geologic units are not considered to be unstable.	NI	Same	Same	Same
Vulnerable to expansive soils?	Soils in the project area are not considered to be expansive.	NI	Same	Same	Same
Impact wastewater disposal systems?	Would not involve wastewater disposal.	NI	Same	Same	Same
Impact paleontological resource?	No potential to contain significant paleontological resources.	NI	Same	Same	Same

Resource Topic	Brief Description of Impact	Proposed Project Determination of Significance	Compared to Proposed Project No Project Alternative	35-mph Alternative	40-mph Alternative
Greenhouse Gas Emissions					
Exceed greenhouse gas emissions?	Below significance threshold.	LTS	Lesser (NI)	Similar	Similar
Conflict with greenhouse gas plan?	No conflict with greenhouse gas plan.	NI	Same	Same	Same
Hazards and Hazardous Materials					
Result in use, transport, or disposal of hazardous materials?	Potential for spills during construction; No change in potential for hazardous materials during operation.	LTS	Lesser (NI)	Similar	Similar
Potentially cause accidental release?	No record of previously present hazardous materials sites outside of existing bridge that might contain lead; the concrete abutments could possibly include asbestos-containing material.	LTS	Lesser (NI)	Greater	Greater
Emit hazardous emissions within 0.25 mile of a school?	No existing or proposed schools occur within 0.25 mile of the project area.	NI	Same	Same	Same
Located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5?	No listed hazardous materials or waste sites occur within or near the project area.	NI	Same	Same	Same
Located in an airport land use plan or within 2 miles of a public airport or public use airport?	Not located within 2 miles of a public airport or public use airport.	NI	Same	Same	Same
Conflicts with emergency response plan?	Temporary closure of Bucks Bar Road and bridge requires a change in evacuation route plans.	NI	NI	Lesser	Lesser
Exacerbate wildfire risks?	See wildfire impact description below.	LTS	Lesser (NI)	Similar	Similar
Hydrology/Water Quality					

Resource Topic	Brief Description of Impact	Proposed Project Determination of Significance	Compared to Proposed Project: No Project Alternative	Compared to Proposed Project: 35-mph Alternative	Compared to Proposed Project: 40-mph Alternative
Water quality standard violations?	Revegetation measures and water quality BMPs during construction would result in low risk of water quality violations.	LTS	Lesser (NI)	Greater	Greater
Decrease groundwater supplies?	No withdrawals from an aquifer or groundwater table.	NI	Same	Same	Same
Alter drainage and result in erosion?	Minor increase in impervious surface would not provide additional sources of runoff compared with the existing bridge and revegetation measures and water quality BMPs during construction would result in low risk of water quality violations.	LTS	Lesser (NI)	Greater	Greater
Impede flood flows?	No permanent bridge supports would be placed in the 100-year flood-hazard area.	NI	Greater	Same	Same
Creates risks of a flood hazard, tsunami, or within seiche zones, risk release of pollutants?	No operational risk release of pollutants, but minor risk during construction otherwise, not near ocean.	LTS, during construction	NI	Same	Same
Conflict with water quality control plan or sustainable groundwater management plan?	Would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	NI	Same	Same	Same
Land Use Planning and Population – Housing					
Divide an established community?	Short-term closure of Bucks Bar Road; Small conversion of lands to transportation use; No change to land use or circulation system; therefore, would not divide a community.	NI	Same	Same	Same
Cause a significant environmental impact due to a conflict with any land use plan?	No conflict with land use plans.	NI	Same	Same	Same
Induce substantial unplanned population growth?	No change in capacity of road; therefore, no inducement to attract increase in population.	NI	Same	Same	Same

Resource Topic	Brief Description of Impact	Proposed Project Determination of Significance	Compared to Proposed Project No Project Alternative	35-mph Alternative	40-mph Alternative
Displace substantial numbers of existing people or housing?	No displacement of persons or housing units.	NI	NI	Greater	Greater
Mineral Resources					
Loss of availability of a known mineral?	No change in access to mining or and change to available minerals.	NI	Same	Same	Same
Loss of a locally important mineral resource recovery site?	No locally important mineral resource present.	NI	Same	Same	Same
Noise and Vibration					
Noise in excess of standards?	Temporary increase in noise during construction; No increase in traffic capacity and reduced noise from idling vehicles at yield signs.	LTS	Lesser (NI)	Greater	Greater
Groundborne vibration/noise?	Temporary increase in vibratory noise during construction; No ongoing vibratory impacts.	LTS	Lesser (NI)	Greater	Greater
Within an airport land use plan area or within 2 miles of a public airport expose people in the project area to excessive noise levels?	No airport within 5 miles.	NI	Same	Same	Same
Public Services and Utility Service Systems					
New/expanded governmental facilities?	No change to governmental facilities, only temporary construction impacts.	LTS	Lesser	Same	Same
Require or result in the relocation or construction of new or expanded water/ wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications?	No increase in demand on public utilities and would not result in the need for expanded wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities. Relocate AT&T and PG&E prior to construction. No permanent change in utilities.	NI	Lesser	Similar	Similar

Resource Topic	Brief Description of Impact	Proposed Project Determination of Significance	Compared to Proposed Project: No Project Alternative	35-mph Alternative	40-mph Alternative
Have sufficient water supplies?	No increase in water use, except during construction.	LTS	NI	Same	Same
Determination by the wastewater treatment provider?	No increase in wastewater.	NI	Same	Same	Same
Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure?	Landfills can accommodate bridge removal; No solid waste increase following construction.	LTS	Lesser (NI)	Similar	Similar
Comply with regulations related to solid waste?	In compliance with solid waste regulations.	NI	Same	Same	Same
Recreation					
Deterioration of existing parks or recreational areas?	No increased use of recreational facilities.	NI	Same	Same	Same
Include recreational facilities or require the construction or expansion of recreational facilities?	No construction or expansion of recreational facilities.	NI	Same	Same	Same
Transportation					
Conflict with a program, plan, ordinance, or policy addressing the circulation system?	No transit, bike/pedestrian, or other transportation services planned or proposed. Project would fulfill transportation plans.	NI	Same	Same	Same
Conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b) (VMT)?	No change in VMT.	NI	Same	Same	Same
Increase design hazards?	Eliminates current hazard of one-lane bridge but does not meet geometric standard of 45 mph roadway; overall reduced transportation hazard.	NI	Greater	Lesser	Lesser

Resource Topic	Brief Description of Impact	Proposed Project Determination of Significance	Compared to Proposed Project No Project Alternative	35-mph Alternative	40-mph Alternative
Inadequate emergency access?	Short-term detours needed for emergency access; Improves long-term emergency access safety.	LTS	Greater	Lesser	Lesser
Wildfire					
Substantially impair an adopted emergency response plan?	Short-term detours needed for emergency response; Improves long-term emergency response.	LTS	Greater	Lesser	Lesser
Exacerbate wildfire risks?	Construction would involve the use of heavy equipment, welding, and other activities that have potential to ignite fires; Long term would create wider fire break in localized area.	LTS	Lesser (NI)	Similar	Similar
Require the installation or maintenance of associated infrastructure that may exacerbate fire risk?	No new exposure to a new or increased significant risk of loss, injury, or death involving wildland fires.	NI	Same	Same	Same
Significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Minor clearing of areas along shoulders for construction access would be revegetated and limit instability issues.	LTS	Lesser (NI)	Similar	Similar

Notes: Impact Level

NI = no Impact, includes beneficial effects, LTS = less-than-significant impact, LTSM = less-than-significant impact with mitigation incorporated, PS = potentially significant impact , SU = significant and cannot be mitigated to less-than-significant impact,

Impact Comparisons: Same=same as the Proposed Project, Similar = similar to Proposed Project, Lesser = lesser than the Proposed Project, Greater = greater than Proposed Project,

BMP = best management practices; CEQA = California Environmental Quality Act; CRHR = California Register of Historical Resources; CYLF = California red-legged frog; FYLF = foothill yellow-legged frog; NRHP = National Register of Historic Places; VMT = vehicle miles traveled

Chapter 5 Other CEQA Considerations

5.1 Overview

This chapter includes the following discussions and analyses required by CEQA.

- Cumulative impacts
- Growth-inducing impacts
- Significant and unavoidable environmental impacts
- Significant irreversible environmental impacts
- Mitigation measures with the potential for environmental effects

5.2 Cumulative Impacts

The CEQA Guidelines define a *cumulative impact* as two or more individual impacts that, when considered together, are significant or that compound or increase other significant environmental impacts. The incremental impact of a project may be considerable when viewed in the context of other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time (CEQA Guidelines Section 15355).

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and roadway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators.

The CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. For this EIR, significant cumulative impacts would occur if impacts related to the implementation of the Proposed Project, combined with related environmental impacts resulting from implementation of the adopted County General Plan, build-out of land, and installation of infrastructure consistent with the General Plan Land Use Map and Circulation Map, as well as maintenance and upgrades to existing infrastructure, would result in an adverse significant effect. For an impact to be considered cumulative, these incremental impacts and potential incremental impacts must be related to the types of impacts caused by the Proposed Project and evaluated in Chapter 3, Impact Analysis. Per CEQA Guidelines Section 15064(h)(1) “cumulatively considerable” means “that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”

5.2.1 Analyses and Study Area

All resource areas were reviewed to determine the potential for cumulative impacts and if additional analysis were warranted or the resource area could be dismissed. The Proposed Project would not contribute to a cumulative impact in the resource areas listed below because either: (1) the resource is in generally good health and the Proposed Project would result in beneficial impacts, no impacts, or

minor impacts that would be fully mitigated (to a less-than-significant level under CEQA), or (2) the resource is regulated in such a way that by implementing mitigation measures to fully compensate for the loss of the resource, and by obtaining the necessary permits and following the required regulations for impact avoidance or minimization and compensating for impacts, a significant contribution to a cumulative impact would not occur. Consequently, the contribution to a cumulative impact on the following resources would not be considerable.

- Agriculture and forestry resources
- Air quality
- Biological Resources
- Energy
- Geology and soils
- Greenhouse gas emissions
- Hazards and hazardous materials
- Hydrology, water quality, and water resources
- Land use and planning/population and housing
- Mineral resources
- Noise
- Public and utility service systems
- Recreation
- Transportation
- Wildfire

The only resources for which the Proposed Project would result in a permanent impact are aesthetics and cultural resources, including historical, archaeological, and tribal cultural resources. Therefore, those are the resources that are evaluated to determine the level of contribution to cumulative impacts.

The study area used for the cumulative analyses encompasses the APE used in the cultural resources and tribal cultural resources analyses found in Chapter 3 (roughly 1,700 feet long aligned with Bucks Bar Road and 300 feet wide, totaling approximately 5.38 acres). Due to the hilly terrain and the localized resources potentially impacted, the cultural APE contains the potential effects of the past, present, and reasonably foreseeable future projects that affect aesthetics. The replacement of the bridge removes a California Historical Resource.

5.2.2 Past, Present, and Reasonably Foreseeable Future Projects

The timeline for evaluating cumulative impacts of the Proposed Project begins with the early settlement of the Eurocentric migration to El Dorado County. Present projects are those that would be constructed within the same timeline as the Proposed Project and overlap with the cumulative study area. Reasonably foreseeable future projects are those anticipated projects that would overlap into the cumulative study area. Reasonably foreseeable means that either an application or project has been defined and is progressing through an approval process, such as seeking environmental review or funding allocation. In El Dorado County, there are no foreseeable future projects that overlap with the cumulative study area, outside of the Proposed Project itself.

5.2.2.1 Past Projects

Past projects in the study area include Bucks Bar Road, the previous bridges constructed between 1854 and 1915, and the existing bridge that was constructed in 1940/ 1941. All past projects were constructed or proposed prior to environmental and historic preservation laws starting around 1970. The following provides information on the background that led to the development of these past projects.

Placerville, the nearest populated city during the 1800s, is only ten miles north of the Bucks Bar Road bridge. As Placerville grew during the 1850s, it became a transportation and trade center for the central region of the Sierra Nevada foothills. This resulted in an influx of people traveling through the area. On the south side of the North Fork Cosumnes River, southeast of Diamond Springs, was a gold mining camp.

Mining is documented through local mining claims at Bucks Bar as early as 1854. It is highly likely, however, that placer mining took place at this location at the earliest arrival of individuals looking to make their fortune in the California Gold Rush. In the late 1850s, Sow Eng and Hop Yun purchased a mining claim about 0.25 mile east of the current bridge at Bucks Bar and developed the claim by constructing a dam and ditch to facilitate washing of placer gravels (Peabody 1989). Later, the ditch water was reportedly used to turn a water wheel to operate a small stamp mill and run water through sluices (Mead & Hunt 2020).

The Horseshoe Dredging Company conducted a placer gravel mining operation upstream of the bridge in the 1920s and 1930s, which resulted in more people in the river and travel along Bucks Bar roadway for workers and business purposes. Based on a review of aerial photography taken in a decade after mining, the mining operations appear to have extended from the east side of the bridge to approximately 1,700 feet upstream. On the north side of the river, the mining disturbance extended up to 400 feet from the river; on the south side, the disturbance extended up to 200 feet from the river. Both of these upstream parcels include portions that have been mined.

In 1854, the El Dorado County Board of Supervisors voted to award Daniel Hoag a franchise to operate a toll bridge at Bucks Bar, proposed for an earlier site adjacent to and northeast of the current bridge crossing. It evolved into a route for commerce access to Diamond Springs. In 1915, a new bridge was constructed across the river on the current alignment (Mead & Hunt 2020). Bucks Bar Road was realigned beginning at the current intersection of Bucks Bar Road and Bucks Bar Circle south to the bridge location. The relocation of the road up the hill slope required blasting of the granitic hillside.

These discoveries of gold, subsequent settlements, and the dangerous crossing fueled the need for a permanent bridge structure over the North Fork Cosumnes River. The Bucks Bar Road bridge was to serve the traffic between various settlements within the foothills of those who wished to partake in the booming economy. The 1940/ 1941 bridge was built to replace the previous 1915 covered bridge. Neither bridge appears to have fostered additional development in the area, although the bridge crossing allowed for improved travel within the region.

Many actions and events of the past related to gold mining in the project area have not been fully documented but have contributed impacts on the visual landscape, archaeological and TCR resources. The history that has been collected reveals that gold mining, settlement and construction of the existing bridge has had direct impacts on the landscape. Physical changes to the landscape include changing the appearance through blasting, building irrigation ditches, a railway line, and then later the Bucks Bar Road and the bridge. Additionally, previous Native Americans were forced to change the use of the site,

which results in visual changes as well as impacting archaeological resources and TCR. Past projects resulted in impacting the visual experience, archaeological resources, and TCR.

Since the Gold Rush era, the small towns in the County and relic structures, such as the Bucks Bar Road Bridge offer cultural historic perspectives on the Gold Rush era, including architecture from the mid-1800s and historic bridges, and routes to mines have become rural residential homesteads. These were changes to the pre-historic visual and cultural landscape, which have not been integrated into the visual and cultural landscape as resources. They offer visual interest and historic references.

El Dorado County is close to Sacramento County, which is the state's capital and a regional commercial center in northern California. The hilly mixed deciduous woodlands, cool temperatures, and interesting history has attracted residents to settle in this rural area a short distance away from the metropolitan Sacramento area. This influx of residents, growing support services, and local businesses has resulted in the need to update roadways to meet safety standards, develop communities, and add public utility services throughout El Dorado County. As a result, lands in the project area have been acquired by private landowners who have built residences and fenced in property lines. These actions have altered the landscape in many respects. The residences are now sensitive viewers and yet their buildings have impacted the visual and cultural landscape. Also, based on changes in local, state, and federal safety standards, rural roadways have been widened to 12-foot-wide lanes with minimum 3- to 6-foot-wide shoulders and improved sight distances.

Over time, these changes have led to incremental impacts on the visual experience and the cultural resources, both direct impacts on the historic resources, archaeological resources, and the TCR. For instance, the private property lines go down to the North Fork Cosumnes River and therefore limit access to the river for the public.

5.2.2.2 Present Projects

Today, the El Dorado County foothills are primarily residential, agricultural, and tourist communities. Beyond the Proposed Project, there are no current or soon to be construction projects that would be considered 'present' period projects.

5.2.2.3 Aesthetics

The Proposed Project would have a direct visual impact changing the existing aesthetic with the replacement of the existing bridge. The removal and replacement would permanently change the visual character, but this change would diminish over time as viewers would adjust to the change and as vegetation becomes established. The Proposed Project would result in a change to the visual resources including additional light and more visibility of the natural landscape. The Proposed Project would impact the current visual context of the project site, which itself reflects the changes that have occurred due to past projects. There are no other projects that would change the aesthetics of the cumulative study area, and there would be no incremental cumulative impact associated with foreseeable future projects. The effects of the Proposed Project would not be cumulatively considerable. No additional mitigation is required.

5.2.2.4 Cultural Resources

Historic Resources

The Proposed Project would have a direct impact on cultural resources due to the removal of the existing bridge, which is listed on the CRHR. The open spandrel bridge is one of three such bridges located in El Dorado County and the two other examples, Old Mt. Aukum Road Bridge and Forni Road

Bridge, are still standing. The Old Mt. Aukum Road Bridge is no longer owned by the County and no longer open to traffic. The Forni Road Bridge is still open to traffic. As described in Section 3.4, Cultural Resources, the removal of the bridge includes mitigation to reduce the significance of the impact. The impact associated with the removal of the bridge would not be cumulatively considerable because the Forni Road bridge is not under consideration for removal or replacement by the County, and the Old Mt. Aukum Road Bridge is not open to traffic and therefore not under threat for removal or replacement. Both bridges would remain examples of an open spandrel bridges. No additional mitigation is required.

Archaeological Resources

The Proposed Project would avoid disturbing previously identified archeological resources; however, archeological resources not previously identified could either be disturbed, temporarily relocated, or destroyed either directly or indirectly after construction starts. Direct impact would consist of damage or movement of a previously unidentified resource from its original position. Because features in the area have been impacted by past actions, and because there is the potential for additional impacts during construction, the Proposed Project would result in an incremental impact and would potentially be cumulatively considerable depending on the level of impact to a specific resource. There are no other reasonably foreseeable future projects that would impact archaeological resources. Mitigation measures are identified in Section 3.5, Tribal Cultural Resources, to sufficiently address the Proposed Project's incremental impacts to the cumulative impacts from past projects. No additional mitigation is required.

5.2.2.5 Tribal Cultural Resources

The Proposed Project would avoid direct physical impacts to known and identified features. There could be impacts to TCRs found before or during construction (Impact TCR-2). Design of the Proposed Project has minimized the impacts as described in Section 3.5 (Tribal Cultural Resources) and measures would be implemented prior to and during construction activities to protect known features. Through the CEQA process described in this document and through AB 52 consultation with Native American tribes, the archaeological and cultural significance of the site became apparent, and the County used the knowledge gained as justification to modify the design of the Proposed Project to avoid known features, other than the existing bridge. The County changed the originally proposed upstream project alignment to an alignment that stays with the alignment of the existing road and bridge. This minimizes the proposed construction footprint largely to areas that have been previously disturbed by roadway/bridge construction. While all natural materials (including soil and rock fill from abutments) would remain onsite, the construction activities would replace the existing bridge and portions of the road (Impact TCR-1) and remove vegetation that contribute to the TCR. Construction of the 1940-1941 bridge was a previous impact to the localized TCR Cultural Landscape identified for CA-ELD-49/*Pulak*. The existing 1940-1941 bridge has been identified as part of a localized TCR Cultural Landscape for CA-ELD-49/*Pulak* by UAIC. Removal and replacement of the existing bridge would have a substantial adverse change on the cultural landscape with cultural value to California Native American Tribes. The incremental impacts to the TCR contributed by the Proposed Project are, therefore, potentially considerable.

The Proposed Project would place the new bridge higher above the waterway canyon of the North Fork Cosumnes River than the existing bridge, exposing more of the granite and natural setting. Features found before or during construction would contribute to additional data recovery and would be mitigated in accordance with Mitigation Measure TCR-1, Mitigation Measure TCR-2, and Mitigation Measure TCR-3 as detailed in Section 3.5 of this EIR. There are no reasonably foreseeable future projects that would impact the TCR and once constructed no further impact potential that would alter the use of the site differently from what is currently available to culturally affiliated Tribes. The County has determined that the mitigation proposed for the project in Section 3.5, Tribal Cultural Resources, in

addition to changing the alignment and altering the bridge design, ensures that the project's contribution to the cumulative condition of previously impacted Tribal Cultural Resources is not cumulatively considerable

5.3 Growth-Inducing Impacts

CEQA requires the analysis of a project's potential to induce growth. CEQA Guidelines, (Section 15126.2[d])

Factors that influence land use and development in an area may include population and economic growth, desirability of locations, the costs and availability of developable land, physical and regulatory constraints, transportation, and the costs of sewer, water, and other utility services.

Transportation agencies play a role in land use changes by providing infrastructure that can improve mobility and/or open up access to new locations. New development generates travel to and from that location, and this additional travel creates demand for new transportation facilities. The relationship between transportation and land use and the degree to which one influences the other is a topic of ongoing discussion. This section addresses the forecasted growth in the project area and El Dorado County and the extent to which the Proposed Project would contribute to that growth and if the Proposed Project would result growth-inducing impacts.

5.3.1 Affected Environment

The growth-inducing impact analysis used information from the Sacramento Area Council of Governments (SACOG) for growth forecasts for population and jobs. As shown in Exhibit 5-1, growth is expected to occur in the county and the Traffic Analysis Zones (TAZ s) that overlap the project area. TAZs are used in transportation planning models; are constructed using U.S. Census Bureau Census Block[15] information; and contain socioeconomic data, including population, dwelling units, jobs, and information on vehicle miles traveled. The project area overlaps with three TAZs used by SACOG in the development of the 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) that was adopted in November 2019.

According to population projections prepared by SACOG for the 2020 MTP/SCS, the county's population was projected to increase by approximately 19 percent between 2016 and 2040 (SACOG 2019) (Exhibit 5-1). Over the same period, the project area TAZs are anticipated to increase approximately 9 percent.

Exhibit 5-1 Project Area Population Growth Forecast

Area	2016 Population Estimate	Projected 2040 Population	Projected Population Change (2016 to 2040)
El Dorado County	147,202	174,635	19.0%
Project Area TAZ	3,361	3,662	9.0%

Source: SACOG 2019

TAZs = Traffic Analysis Zones

[15] A Census Block is the smallest geographic area used by the U.S. Census Bureau.

In addition to the anticipated population growth by 2040, the county is expected to experience employment growth (Exhibit 5-2). Employment is projected to rise approximately 20 percent in the county by 2040 and is not forecasted to change in the project area TAZs.

Exhibit 5-2 Project Area Employment Growth Forecast

Area	2016 Jobs Estimate	Projected 2040 Jobs	Projected Change in Jobs (2016 to 2040)
El Dorado County	48,690	58,333	20.0%
Project Area TAZs	436	436	0%

Source: SACOG 2019

TAZs = Traffic Analysis Zones

5.3.2 Impacts

5.3.2.1 Methodology

The Proposed Project would not include construction of new housing that could directly induce population growth, nor would it include displacement of existing housing or people that would necessitate the construction of replacement housing elsewhere. The impact analysis focuses on the potential of the Proposed Project to indirectly result in growth-inducing impacts and does so by answering the following questions.

- How, if at all does the project change accessibility?
- How, if at all, does the project type, project location, and growth pressure potentially influence growth?
- Is project-related growth reasonably foreseeable?

5.3.2.2 Impact Discussion

How, if at all, does the project change accessibility?

The Proposed Project is a bridge replacement and would not provide access to undeveloped areas. The existing bridge would be replaced on a similar alignment, and there would be no increased capacity on Bucks Bar Road. The new bridge structure would improve traffic flow only through the immediate project area by removing the need for southbound vehicles to yield, which would result in a minor change in travel times. The Proposed Project is not expected to result in a change in accessibility to employment, shopping, or other destinations.

How, if at all, does the project type, project location, and growth pressure potentially influence growth?

The Proposed Project would not result in growth pressure because it is in a rural and unincorporated area of El Dorado County. Zoning in the area is largely related to rural residential, with single-family residences on larger parcels (5 or 10 acres). There are no opportunities for redevelopment in the project area based on general plan land use designations and zoning codes. The Proposed Project would not increase capacity on Bucks Bar Road or create new access points that could lead to changes in the existing land use designations.

Is project-related growth reasonably foreseeable?

Project-related growth is not reasonably foreseeable because of the Proposed Project location in a rural and unincorporated area of El Dorado County. The only land use change would be the incorporation of right-of-way for the bridge structure, abutments, and approaches. The project area is not expected to attract population growth because there would be no fundamental change to the roadway or access. Any new development would be consistent with current planning documents and population, household, and economic forecasts, which does not anticipate changes in this area. Based on this analysis, the Proposed Project would not induce growth. No additional analysis related to growth is necessary.

5.4 Significant and Unavoidable Impacts

As documented in Chapter 3, Impact Analyses, the Proposed Project would result in most impacts being less than significant or significant but reduced to less-than-significant levels with mitigation measures, with two significant and unavoidable impacts even with the implementation of mitigation measures. The Proposed Project would remove the existing bridge which was listed in CRHR on August 14, 2020. The Proposed Project purpose and need does not support the rehabilitation, widening, or seismic retrofit of the historical bridge. Therefore, the removal of the bridge would result in a significant and unavoidable impact[16].

Additionally, the Proposed Project would cause a significant and unavoidable impact on cultural resources and TCRs even with considerable avoidance measures in the design and construction specifications. The County has determined that the Proposed Project would impact unknown features that are currently unidentified and would be discovered before or during construction. The County will implement predetermined mitigation measures to minimize impacts that might result from the discovery of and impacts to features associated with the TCR. These mitigation measures address an irreversible situation where a currently unidentified feature is damaged or requires relocation. The Proposed Project design and accompanying specifications include avoiding all known resources, and the bridge would remain in predominately same alignment as the existing bridge. Measures to further avoid impacting unidentified features to the extent possible would be implemented, however the Proposed Project would still impact the TCR due to the existing bridge's classification as a TCR.

5.5 Significant Irreversible Environmental Impacts

CEQA Guidelines Section 15126.2 requires the evaluation and discussion in EIRs of significant irreversible changes that would be caused by a proposed project. Implementation of the Proposed Project would include construction of a replacement bridge and approaches, which would be composed of a variety of nonrenewable materials (metal, gravel, concrete) and be fueled using primarily nonrenewable fossil fuel sources. While these resources are nonrenewable, the amount that would be required for construction of the Proposed Project does not represent a significant commitment of resources nor would it be inappropriate for the scale of the Proposed Project.

Irreversible environmental changes would also result from the conversion of undeveloped land to transportation infrastructure. The lands that would be converted to a transportation-related use are narrow linear strips along the shoulder of the existing roadway and not associated with critical habitat

[16] 15064.5(b)(2) from CEQA Guidelines states, "The significance of an historical resource is materially impaired when a project: (A) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in, or eligibility for, inclusion in the CRHR"

for biological resources that could be present in the project area. Implementation of mitigation to reduce impacts on biological resources would ensure that this irreversible change would become less than significant.

As discussed in Section 5.4, Significant and Unavoidable Impacts, the Proposed Project would remove the existing bridge which is listed in the CRHR. This would result in a significant irreversible environmental impact. The County has committed to commissioning the preparation of the Historic American Engineering Record so that the current bridge will retain its significance in history. The Proposed Project design and specifications include avoiding and protecting known features of the site as well as preventative measures to avoid impacting unidentified features to the extent possible. While the County has refined the Proposed Project to avoid those features which have been surveyed to date, during construction, the Proposed Project, which removes and replaces the existing bridge would result in an adverse impact to the TCR because of the existing bridge's classification as a TCR and because of impacts to unknown TCRs. A significant irreversible environmental impact from the Proposed Project would occur to the TCR during construction. No other construction-related impacts identified would result in significant irreversible environmental changes.

When constructed, operation of the Proposed Project would not use additional nonrenewable resources, except for pavement resurfacing or repairs. Also, annual maintenance of the new bridge would be less than the annual maintenance for the existing bridge. A clear span bridge is less likely to catch river-borne debris during flooding events, compared with the current reinforced concrete spandrel arch design. No significant irreversible environmental impacts from the operation phase of the Proposed Project would occur.

5.6 Mitigation Measures with the Potential for Environmental Effects under CEQA

Section 15126.4(a)(1)(D) of the CEQA Guidelines provides that, "[i]f a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but, in less detail, than the significant effects of the project as proposed." For each impact considered significant in this Draft EIR, mitigation measures have been designed that would reduce the severity of the impact.

Mitigation measures are identified in the impact analyses in Chapter 3 and summarized in Exhibit ES-3 in the Executive Summary. Most of the mitigation measures do not have the potential to themselves result in significant impacts. The measures are preventative in nature or involve compensation or other non-physical elements and will not require construction activities and, except for planting replacement trees in areas disturbed during construction, the measures will not result in ground disturbance that could cause additional impacts.

Mitigation Measure TCR-1, Property Acquisition (first preference) conservation easement (second preference) or endowment funding (third preference) is included in Section 3.5, Tribal Cultural Resources, of this Draft EIR and would require the acquisition of a full parcel or placement of a conservation easement over said parcel. The potential removal of the residence would have a less than significant impact on the residential development in El Dorado County because the residence is located in a rural area and unincorporated area of El Dorado County that does not allow for redevelopment as described above under Section 5.3.2.2. The implementation of Mitigation Measure TCR-1 is Categorically Exempt from CEQA per Section 15325, Transfers of Ownership in Land to Preserve Existing Natural Conditions and Historical Resources State Regulations, of the CEQA Guidelines. As a result, the mitigation measures would not cause significant effects.

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Chapter 6 Preparers

As required by the California Environmental Quality Act (CEQA), this chapter identifies the preparers of this Environmental Impact Report beyond the authors of the technical reports which are recorded in the Chapter 7 References.

6.1 Draft EIR Preparers and Reviewers

6.1.1 County Staff

- John Kahling, Project Manager
- Jefferson B. Billingsley, Deputy County Counsel
- Aradhana Kocher, Project Engineer
- Steven McVey, P.E., Engineer

6.1.2 TYLin

- Bob Fish, Structural Engineer
- Andrew Bayne, Environmental Manager/ Lead
- Jodi Ketelsen, Environmental Manager (Retired)
- Robert Rodland, Environmental Lead (Retired)
- Adam Forbes M.S., Senior Environmental Planner
- Jill Irwin, Editor
- Stacey Mello, Document Processor

6.1.3 Tremaine and Associates

- Kim Tremaine, Archaeologist and Tribal Consultation

6.1.4 SWCA/Sycamore

- Jeffery Little, Environmental Lead
- Adam Forbes M.S., Senior Biologist

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Appendix A: Notice of Preparation

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE

BUCKS BAR ROAD AT NORTH FORK COSUMNES RIVER - BRIDGE (NO. 25C0003) REPLACEMENT PROJECT

DATE: **June 21, 2018**

TO: **Interested Agencies and Individuals**

FROM: **El Dorado County Department of Transportation**

The El Dorado County Department of Transportation (Transportation) is preparing an Environmental Impact Report (EIR) for the Bucks Bar Road at North Fork Cosumnes River - Bridge Replacement Project. Transportation is soliciting the view of interested persons and agencies on the scope and content of the information to be included in the EIR. Agencies should comment with regard to information relevant to the agencies' statutory responsibilities, as required by Section 15082 of the California Environmental Quality Act (CEQA) Guidelines. Transportation will also accept written comments regarding the scope and content from interested persons and organizations concerned with the Project, in accordance with the CEQA Guidelines Section 15083.

The scoping comment period begins June 25, 2018 and ends July 25, 2018. Please direct all written comments to: El Dorado County Department of Transportation, Attention: Ms. Donna Keeler, 2850 Fairlane Court, Placerville, CA 95667. **Individuals and organization/agency representatives are invited to provide written and oral comments at a scoping meeting that will be held on Monday evening, July 9, 2018 from 6:00 to 7:00 p.m. at the Pioneer Park Community Center, 7640 Fairplay Road, Somerset, CA.** Persons with disabilities that may require special accommodations at the scoping meeting should contact Donna Keeler at the above address, or by phone at 530/ 621-3829. This notice can also be found on the El Dorado County Transportation website at https://www.edcgov.us/Government/dot/Pages/bridge_projects.aspx .

PROJECT LOCATION: The Bucks Bar Road Bridge Replacement Project is located along Bucks Bar Road approximately one mile northwest of the community of Somerset in southern El Dorado County (Figure 1). Bucks Bar Road is an east- west, two-lane, off-system rural major collector connecting Pleasant Valley Road with Mount Aukum Road.

BACKGROUND: The existing bridge was constructed in 1940-1941 and is a one lane bridge on a two lane road. The current width only accommodates a single lane which forces southbound vehicles to yield to northbound travelers until the bridge is clear. The Caltrans Local Agency Bridge List classifies the bridge as functionally obsolete with a sufficiency rating of 71.4. The bridge railings, transitions, approach rails, and approach guardrails do not meet current standards. The June 2013 bridge inspection indicates that the deck geometry is 'basically intolerable requiring high priority of replacement'. The existing bridge does not pass the 100-yr flows and was observed being overtopped during a major storm in 1997.

A CEQA Initial Study/ Mitigated Negative Declaration (IS/MND) was prepared and publically circulated from 22 July to 21 August 2015. The IS/MND evaluated the County's preferred 40 mph design speed, replacement alternative consisting of a cast-in-place (CIP) prestressed (PS) single span concrete box girder bridge. Eight (8) comment letters were received from members of the public and regulatory agencies during the public review period. The most significant of the comment letters were associated with cultural resources/ Section 106 resources. In November 2015 the County decided not to adopt the CEQA IS/ MND based on new cultural resource information. Based on the new information the County decided to prepare a CEQA EIR.

PROJECT DESCRIPTION: The Project proposes to replace the existing Bucks Bar Road Bridge over the North Fork Cosumnes River. Transportation will use Highway Bridge Program (HBP) funds to replace the existing structure to improve roadway safety and comply with the American Association of State Highway and Transportation Officials (AASHTO) design guidelines and El Dorado County standards.

ENVIRONMENTAL PROCESS AND PUBLIC INPUT: Following receipt of input during the comment period, the County will prepare a Draft EIR that will describe the Project and alternatives (including a no project alternative as required by CEQA) and will identify the potential environmental effects and mitigation measures that may be necessary to minimize or avoid such effects. The Draft EIR will be made available for public review and input for a 45-day review period. The County will consider all comments received and will prepare a Final EIR which identifies any necessary changes to the Draft and provides responses to all comments on the Draft. The County Board of Supervisors will consider certification of the Final EIR prior to approval of actions required for undertaking the Project.

Appendix B: CalEEMod Version 2022.1.1.24 Results

CalEEMod Version 2022.1.1.24 Results For Bucks Bar Road Bridge Replacement Project

1. Basic Project Information

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage
Bridge/Overpass Construction	0.16	Mile	2.25

2. Emissions Summary

2.1. Construction Emissions

Un/Mit.	**ROG**	**NOx**	**CO**	**PM10E**	**PM2.5E**	**CO_2e**
Daily, Summer (Max)	2.2	16.4	24.7	0.7	0.6	3856.6
Daily, Winter (Max)	1.8	13.6	17.4	0.6	0.6	3198.9
Average Daily (Max)	1.1	8.3	11.7	0.4	0.3	1982.7
Annual (Max)	0.2	1.5	2.1	0.1	0.1	328.3

Appendix C: Current Species Lists from USFWS, CNDDB, and CNPS

USFWS LIST

Sources: https://ipac.ecosphere.fws.gov/location/YUADFA6WMBDOJJAAR76FKBRAJQ/resources

Endangered species: Listed species and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

Additional information on endangered species data is provided below.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
California Spotted Owl (*Strix occidentalis occidentalis*)	Proposed Threatened

Reptiles

NAME	STATUS
Northwestern Pond Turtle (*Actinemys marmorata*) (Wherever found)	Proposed Threatened

Amphibians

NAME	STATUS
California Red-legged Frog (*Rana draytonii*) (Wherever found) (Critical Habitat)	Threatened
Foothill Yellow-legged Frog (*Rana boylii*)	Endangered

Insects

NAME	STATUS
Monarch Butterfly (*Danaus plexippus*) (Wherever found)	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

CNDDB Rare Find Dated June, 30 2024 -- Biogeographic Data Branch, Report Printed on Monday, July 15, 2024

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter atricapillus American goshawk	ABNKC12061	None	None	G5	S3	SSC
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Aplodontia rufa californica Sierra Nevada mountain beaver	AMAFA01013	None	None	G5T3T4	S2S3	SSC
Arctostaphylos nissenana Nissenan manzanita	PDERI040V0	None	None	G1	S1	1B.2
Ardea alba great egret	ABNGA04040	None	None	G5	S4	
Atractelmis wawona Wawona riffle beetle	IICOL58010	None	None	G3	S1S2	
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Bombus pensylvanicus American bumble bee	IIHYM24260	None	None	G3G4	S2	
Calochortus clavatus var. avius Pleasant Valley mariposa-lily	PMLIL0D095	None	None	G4T2	S2	1B.2
Calystegia vanzuukiae Van Zuuk's morning-glory	PDCON040Q0	None	None	G2Q	S2	1B.3
Camissonia lacustris grassland suncup	PDONA030W0	None	None	G2	S2	1B.2
Carex cyrtostachya	PMCYP03M00	None	None	G2	S2	1B.2
Central Valley Drainage Hardhead/Squawfish Stream *Central Valley Drainage Hardhead/Squawfish Stream*	CARA2421CA	None	None	GNR	SNR	
Central Valley Drainage Resident Rainbow Trout Stream Central Valley Drainage Resident Rainbow Trout Stream	CARA2421CA	None	None	GNR	SNR	
Chlorogalum grandiflorum, Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
Clarkia biloba ssp. brandegeeae Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
Cosumnoperla hypocrena Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
Diplacus pulchellus yellow-lip pansy monkeyflower	PDSCR1B280	None	None	G2	S2	1B.2
Emys marmorata western pond turtle	ARAAD02031	Proposed Threatened	None	G3G4	S3	SSC

Erethizon dorsatum North American Porcupine	AMAFJ01010	None	None	G5	S3	
Horkelia parryi Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
Lewisis serrrata saw-toothed lewisia	PDPOR040E0	None	None	G1G2	S1S2	
Myotis thysanodes fringed myotis	AMACC01090	None	None	G4G5	S3	
Myotis volans long-legged myotis	AMACC01110	None	None	G5	S4	
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Nebria darlingtoni South Forks ground beetle	IICOL6L100	None	None	G1	S1	
Packera layneae Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
Pekania pennanti Fisher	AMAJF01020	None	None	G5	S2S3	SSC
Phacelia stebbinsii Stebbins' phacelia	PDHYD0C4D0	None	None	G3	S3	1B.2
Rana boylii pop. 5 foothill yellow-legged frog - south Sierra DPS	AAABH01055	Endangered	Endangered	G3T2	S2	
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Rhynchospora capitellata brownish beaked-rush	PMCYP0N080	None	None	G5	S1	2B.2
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S3	
Sacr*amento-San Joaquin Foothill/Valley Ephemeral Stream* Sacramento-San Joaquin Foothill/Valley Ephemeral Stream	CARA2130CA	None	None	GNR	SNR	
Sphagnum Bog Sphagnum Bog	CTT51110CA	None	None	G3	S1.2	
Strix nebulosa great gray owl	ABNSB12040	None	Endangered	G5	S1	
Viburnum ellipticum oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3	2B.3

CNPS 9 Quad Search:
https://rareplants.cnps.org/Search/result?frm=T&qsl=9&quad=3812076:3812056:3812055:3812066:3812065:3812075:3812057:3812077:3812067:&elev=:m:o

CNPS							
ScientificName	**CommonName**	**CRPR**	**GRank**	**SRank**	**OtherStatus**	**CESA**	**FESA**
Allium sanbornii var. congdonii	Congdon's onion	4.3	G4T3	S3		None	None
Allium sanbornii var. sanbornii	Sanborn's onion	4.2	G4T4?	S3S4		None	None
Arctostaphylos mewukka ssp. truei	True's manzanita	4.2	G4?T3	S3	SB_UCSC	None	None

Arctostaphylos nissenana	Nissenan manzanita	1B.2	G1	S1	BLM_S; USFS_S	None	None
Bolandra californica	Sierra bolandra	4.3	G4	S4		None	None
Calochortus clavatus var. avius	Pleasant Valley mariposa-lily	1B.2	G4T2	S2	SB_SBBG;USFS_S	None	None
Calystegia vanzuukiae	Van Zuuk's morning-glory	1B.3	G2Q	S2	BLM_S;SB_UCSC	None	None
Camissonia lacustris	grassland suncup	1B.2	G2	S2		None	None
Carex cyrtostachya	Sierra arching sedge	1B.2	G2	S2		None	None
Ceanothus fresnensis	Fresno ceanothus	4.3	G4	S4		None	None
Chlorogalum grandiflorum	Red Hills soaproot	1B.2	G3	S3	BLM_S; SB_SBBG	None	None
Clarkia biloba ssp.brandegeeae	Brandegee's clarkia	4.2	G4G5T4	S4	SB_CalBG/RSAB SB_UCSC	None	None
Clarkia virgata	Sierra clarkia	4.3	G3	S3	G	None	None
Claytonia parviflora ssp.grandiflora	streambank spring beauty	4.2	G5T3	S3		None	None
Delphinium hansenii ssp. ewanianum	Ewan's larkspur	4.2	G4T3	S3		None	None
Diplacus pulchellus	yellow-lip pansy monkeyflower	1B.2	G2	S2	BLM_S;SB_SBBG;USFS_S	None	None
Engellaria obtusa	obtuse starwort	4.3	G5	S4		None	None
Erigeron petrophilus var. sierrensis	northern Sierra daisy	4.3	G4T4	S4		None	None
Eriogonum tripodum	tripod buckwheat	4.2	G4	S4	USFS_S	None	None
Githopsis pulchella ssp.serpentinicola	serpentine bluecup	4.3	G4T3	S3		None	None
Hesperocyparis bakeri	Baker cypress	4.2	G3	S3	IUCN_VU;SB_CalBG/RSAB G; SB_KewBG SB_USDA	None	None
Horkelia parryi	Parry's horkelia	1B.2	G2	S2	BLM_S; USFS_S	None	None
Jensia yosemitana	Yosemite tarplant	3.2	G3	S3		None	None
Jepsonia heterandra	foothill jepsonia	4.3	G3	S3		None	None
Juncus digitatus	finger rush	1B.1	G1	S1		None	None
Lewisia serrata	saw-toothed lewisia	1B.1	G1G2	S1S2	USFS_S	None	None
Lilium humboldtii ssp.humboldtii	Humboldt lily	4.2	G4T3	S3	SB_UCSC	None	None
Monardella candicans	Sierra monardella	4.3, G4, S4				None	None
Myrica hartwegii	Sierra sweet bay	4.3, G4, S4				None	None
Navarretia prolifera ssp. lutea	yellow bur navarretia	4.3, G4T3, S3			USFS_S	None	None
Packera layneae	Layne's ragwort	1B.2, G2, S2			SB_CalBG/RSAB G; SB_UCBG; SB_UCSC	CR	FT
Peltigera gowardii	western waterfan lichen	4.2, G4, S3			USFS_S	None	None
Phacelia stebbinsii	Stebbins' phacelia	1B.2, G3, S3			USFS_S	None	None
Piperia colemanii	Coleman's rein orchid	4.3,G4, S4				None	None
Rhynchospora capitellata	brownish beaked- rush	2B.2, G5, S1			IUCN_LC	None	None
Streptanthus longisiliquus	long-fruit jewelflower	4.3, G3, S3				None	None
Viburnum ellipticum	oval-leaved viburnum	2B.3, G4G5, S3				None	None

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Appendix D: Confidential Reports Not for Public Disclosure

A list of studies pertaining to, cultural resources, archeological resources and tribal cultural resources associated with the Proposed Project.

- *Ethnographic and National Register Evaluation Report, CA-ELD-49 at Bucks Bar Bridge* (No. 25C0003) (Ethnographic Report), 2020.
- *Archaeological Survey and Extended Phase I Investigation Report*, 2021.
- Memorandum by Tremaine, Bucks Bar Road at North Fork Cosumnes River Bridge Replacement Project, 2020.
- Historic Property Survey Report Bucks Bar Road over North Fork Cosumnes River Bridge (25C0003) Replacement Project, 2021.
- Historic Resource Evaluation Report Bucks Bar Road Bridge (25C0003) over North Fork Cosumnes River Replacement Project. October, 2020.
- Sunlight-Shade Report for Bucks Bar Road / North Fork Cosumnes River Bridge Replacement. October, 2017.
- Draft ESA Action Plan
- Draft PDRMP