Initial Study/
Mitigated Negative Declaration

for the

Greenstone Road at Slate Creek Bridge (No. 25C0087) Replacement Project

March 2016

Prepared for:

El Dorado County
Community Development Agency
Transportation Division
2850 Fairlane Court
Placerville, CA 95667

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PROJECT INFORMATION

1. Project Title:	Greenstone Road at Slate Creek Bridge (No. 25C0087) Replacement Project
2. Lead Agency Name and Address:	El Dorado County Community Development Agency Transportation Division 2850 Fairlane Court Placerville, CA 95667
3. Contact Person and Phone Number:	Janet Postlewait, Principal Planner (530) 621-5993 janet.postlewait@edcgov.us
4. Project Location:	The project area is located approximately 1 mile south of U.S. Highway 50 and approximately 6 miles southwest of the city of Placerville in El Dorado County. It is in Section 33 of Township 10 North, Range 10 East on the *Shingle Springs, California* 7.5-minute U.S. Geological Survey quadrangle.
5. Description of Project:	The County is proposing to replace Bridge Number 25C0087 over Slate Creek on Greenstone Road. The existing Slate Creek bridge, built in 1925, would be replaced with a new standard two-lane bridge approximately 34 feet wide and 34 feet long. In addition, approximately 615 feet of Greenstone Road would be reconstructed.
6. General Plan Designation:	Low Density Residential (LDR)
7. Zoning:	Limited Agricultural (LA-10), Residential Estate (RE-5)
8. Surrounding Land Uses and Setting:	The project area is in the Sierra Nevada foothills. Elevations range from approximately 1,430 to 1,440 feet above sea level. Dominant land uses in the vicinity are residential and open space. Open space includes oak woodlands, grasslands, and Slate Creek.

9. Other Public Agencies Whose Approval May Be Required:

- California Department of Transportation — National Environmental Policy Act compliance
- California Department of Fish and Wildlife — Streambed Alteration Agreement
- U.S. Army Corps of Engineers — Nationwide Permit 14 (Section 404 of the Clean Water Act)
- Regional Water Quality Control Board — Water Quality Certification (Section 401 of the Clean Water Act)
- El Dorado County Air Quality Management District — Fugitive Dust Plan

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1. INTRODUCTION

1.1. Purpose of this Document

The El Dorado County Community Development Agency, Transportation Division (County) is proposing to replace the existing bridge (No. 25C0087) over Slate Creek on Greenstone Road (proposed project) near the city of Placerville in El Dorado County, California. This Initial Study identifies the potential environmental impacts of the proposed project to determine whether the project may have a significant effect on the environment. It also identifies mitigation measures, where applicable, to reduce or avoid significant effects.

This Initial Study has been prepared pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines (14 California Code of Regulations 1500 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. The County is the Lead Agency under CEQA. The County is receiving federal funding under the Federal Statewide Transportation Improvement Program–Local Highway Bridge Program (FSTIP–HBP) administered by the California Department of Transportation (Caltrans). Caltrans, under a programmatic agreement with the Federal Highway Administration, will complete a Categorical Exclusion with technical studies to comply with the National Environmental Policy Act (NEPA).

1.2. Document Organization

The remainder of this document is organized into the following sections:

- **Section 2. Project Description** – Describes the proposed project;
- **Section 3. Initial Study Checklist** – Describes the environmental setting and analyzes impacts, with mitigation measures identified for potentially significant impacts;
- **Section 4. Determination** – Presents the County's findings pursuant to CEQA;
- **Section 5. Report Preparation and References** – Identifies the persons responsible for preparation of this document and lists references cited in the document;
- **Appendix A. Mitigation Monitoring and Reporting Plan –** Presents a mitigation monitoring and reporting plan for mitigation measures required to reduce potentially significant impacts to less-than-significant levels.

2. PROJECT DESCRIPTION

2.1. Location

Bridge Number 25C0087 over Slate Creek is located on Greenstone Road approximately 1 mile south of U.S. Highway 50 and approximately 6 miles southwest of the city of Placerville in El Dorado County. The bridge is in Section 33 of Township 10 North, Range 10 East on the *Shingle Springs, California* 7.5-minute U.S. Geological Survey quadrangle (Figure 1 at the end of this section). The project area encompasses approximately 3.4 acres along approximately 900 feet of Greenstone Road, generally centered on the existing bridge (Figure 2 at the end of this section), and consists of the work areas on and adjacent to the bridge and road and two potential staging areas.

2.2. Project Purpose and Objectives

The proposed project is included in the County Capital Improvement Program and the FSTIP and is being funded by HBP funds administered by Caltrans. The purpose of the project is to improve traffic safety conditions on a public roadway and comply with current County and American Association of State Highway and Transportation Officials guidelines by: (1) replacing a functionally obsolete bridge with a new structure that meets current standards and (2) widening the road geometry approaching the bridge from both south-bound and north-bound directions. The existing bridge was determined to be functionally obsolete, with a sufficiency rating of 54.2. Greenstone Road is a regional road with a two-way travel lane that has an average daily traffic count of about 1,300 trips near the project area. The overall project objective is to improve safety and traffic operations along Greenstone Road.

2.3. Project Description

Project Design

The County is proposing to replace the existing bridge with a standard two-lane bridge approximately 34 feet wide and 34 feet long. The bridge would have two 11-foot-wide travel lanes with 4-foot-wide shoulders on each side. The new bridge would be located slightly east of the existing bridge, which would straighten out the curve approaching the bridge from the north. The bridge structure type has not yet been determined. The foundation of the new bridge may consist of cast-in-drilled-hole piles or spread footings, which will be determined based on the results of a geotechnical study. The bridge abutments would be located along the banks of Slate Creek and would not be in the active channel. Rock slope protection may be placed around the new abutments to protect them from scouring and erosion. It is anticipated that the excavation for the abutments would not exceed 20 feet (approximate) below the existing ground surface.

The County plans to realign the roadway approaches slightly east of the existing road and widen the approaches (from 22 feet to 32 feet) to align with the new bridge. Approximately 230 feet and 385 feet of Greenstone Road would be reconstructed to the south and north of the new bridge, respectively. As part of this realignment, cut and fill would be required along the new roadway, and a fence, utilities, and drainage ditch would be relocated to follow the modified roadway. In addition, pavement associated with the old roadway would be removed, and the disturbed area would be restored to match adjacent conditions (e.g., grasslands). New guard rails would be installed along both sides of the new roadway north of the new bridge, extending approximately 75 feet from the bridge. Guard rails on the south side of the bridge would extend approximately 75 feet on the east side of Greenstone Road and 185 feet on the

west side of Greenstone Road. The existing property fences on both sides of Greenstone Road would be relocated, extending approximately 775 feet on the eastern side of the road and 515 feet on the western side. An underground waterline along the east side of Greenstone Road would be relocated to follow the modified roadway. As part of the relocation, the pipeline would be disinfected to prevent impacts on the water supply, and temporary service disruption may occur.

Construction Methods

The project would generally involve tree removal; site clearing, preparation, and earthwork; utility relocation; demolition and removal of the existing bridge structure; construction of new bridge foundations, abutments, retaining structures, deck, and guardrails; widening and realignment of a segment of Greenstone Road; applying pavement overlay; and hydroseeding disturbed areas, including the former roadway. Staging would occur along the road where feasible and may occur on adjacent private properties to the southeast and northwest of the existing bridge. Vegetation removal would be necessary in the proposed location of the new bridge and along the new road alignment. Blasting is not expected, but cannot be completely ruled out, depending on the nature of the subsurface rock that may be encountered. Any demolition materials would be removed and disposed of offsite at an appropriate facility. Approximately 2,600 cubic yards of imported materials would be used in construction; fill would be obtained from commercial sources. Areas to receive fill would be cleared, scarified, and re-compacted to minimize ground settlement under the increased loading caused by the fill. Excavation would be required at the bridge abutments, along the roadway prism, and for drainage improvements. An estimated 400 cubic yards of material would be excavated and either used for backfill onsite or properly disposed of offsite.

In-Stream Construction

A temporary diversion dam and piping may be used to divert stream flows around the excavation areas for the new bridge foundations. The diversion dam and piping would be temporarily installed in the creek bed approximately 100-150 feet east (upstream) of the existing bridge. The diversion dam would consist of a simple dam or other barrier (e.g., sandbags) and would be about 20 feet long, extending between both banks of the creek. Flexible piping would likely be used to carry stream flow through the instream work area. The piping would be sized to allow creek flows to be directly channeled and conveyed through the work area with minimal impacts at the inlet and outlet locations of the diversion piping. The diversion device would be removed after the bridge work is complete, and normal stream flow would be restored. The instream work would take place when stream flows are lowest.

Schedule

Construction is expected to start in 2017 or later, once all required approvals and funding have been obtained. The overall construction period would encompass up to 2.5 years. Utility relocation may be scheduled within a year prior to bridge construction or at the same time, and bridge construction and associated improvements may require two construction seasons. Construction would generally take place between April 15 and October 30. Work performed in and around the creek (e.g., diversion dam, bridge construction) would be scheduled during dry months. Other work (e.g., utility relocation, paving and striping the road) may be scheduled at any time.

Traffic Control

Greenstone Road, from just south of South Studebaker Road to 200 feet south of the existing bridge, would be closed during one construction season (7 months) while the roadway modifications and bridge portion of construction are completed. While Greenstone Road is closed, motorists would be able to use

alternate routes in the area. One detour route, likely along Mother Lode Drive and El Dorado Road, would be signed for guiding travelers around the work area. Traffic control would be provided on Greenstone Road and along the detour route during construction.

Rights-of-Way, Utilities and Services

The proposed bridge and road reconstruction work would occur in existing County rights-of-way and in additional rights-of-way to be acquired to accommodate the project. Temporary easements may also be needed for staging and other construction-related activities associated with the project. An existing waterline along the east side of Greenstone Road would be relocated to the new right-of-way or proposed easements. The County would coordinate utility relocations with construction contractors and utility companies. Temporary, short-term disruptions of utility services may occur during connection of the new facilities. All potentially affected property owners would be notified by the County, the utility company, or the construction contractor approximately one week prior to the service interruption. No wastewater services would be affected during construction.

2.4. Construction Contract

The County would retain a construction contractor to construct the new bridge. The contractor would be responsible for compliance with all applicable rules, regulations, and ordinances associated with the proposed project activities and for implementing construction-related mitigation measures. The County would provide construction contractor oversight and management and would be responsible for verifying implementation of the mitigation measures. The contractor would construct the proposed project in accordance with the Public Contracts 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.

The following measures are a combination of standard and project-specific procedures and requirements applicable to construction:

- Construction contract special provisions will require that a traffic management plan be prepared. The traffic management plan will include construction staging and traffic control measures to be implemented during construction to maintain and minimize impacts to traffic on nearby roads during construction. Minor traffic stoppages or delays on nearby roads may be allowed if necessary during project construction to provide access for construction equipment and vehicles into the project area. Greenstone Road may be closed to vehicle traffic during one construction season. Portable changeable message signs would be used to alert travelers on nearby roads of construction activities and to direct travelers to the detour route while Greenstone Road is closed.

- Contract special provisions will require compliance with El Dorado County Air Quality Management District (AQMD) Rules 223, 223-1, and 223-2 to minimize fugitive dust emissions and naturally occurring asbestos hazards.

- The contractor will be required to comply with the California Air Resources Board Airborne Toxic Control Measure at Title 17 Section 93105 addressing Construction, Grading, Quarrying, and Surface Mining activities and with the Asbestos Airborne Toxic Control Measure for Surfacing Applications (California Code of Regulations, Title 17, Section 93106).

- Contract provisions will require notification of the County and compliance with California Health and Safety Code Section 7050.5 and California Public Resources Code Sections 5097.5, 5097.9 et

seq., regarding the discovery and disturbance of cultural materials or human remains should any be discovered during project construction.

- Contract provisions will require compliance with the El Dorado County Grading Ordinance and Storm Water Management Plan for Western El Dorado County and implementation of best management practices (BMPs) as identified in the National Pollutant Discharge Elimination System permit and/or Storm Water Management Plan. The contractor will be required to prepare a storm water pollution prevention plan or water pollution control plan that identifies project-specific BMPs that would be implemented in accordance with County and Caltrans requirements. BMPs may include those related to structure demolition/removal over or adjacent to water, temporary stream crossings, stream bank stabilization, clear water diversions, material equipment use over water, and others as applicable.

- Contract provisions will require a fire safety plan to prevent fires from construction operations (such as welding).

- The County or its construction contractors will conduct early coordination with law enforcement and emergency service providers to ensure minimal disruption to service during construction.

- The County and its construction contractors will comply with the State of California Standard Specifications, written by Caltrans, for public service provision.

- Access to adjacent private properties will remain open at all times during the construction period.

- The project will comply with General Plan Policy 6.5.1.11 pertaining to construction noise.

2.5. Required Permit Approvals

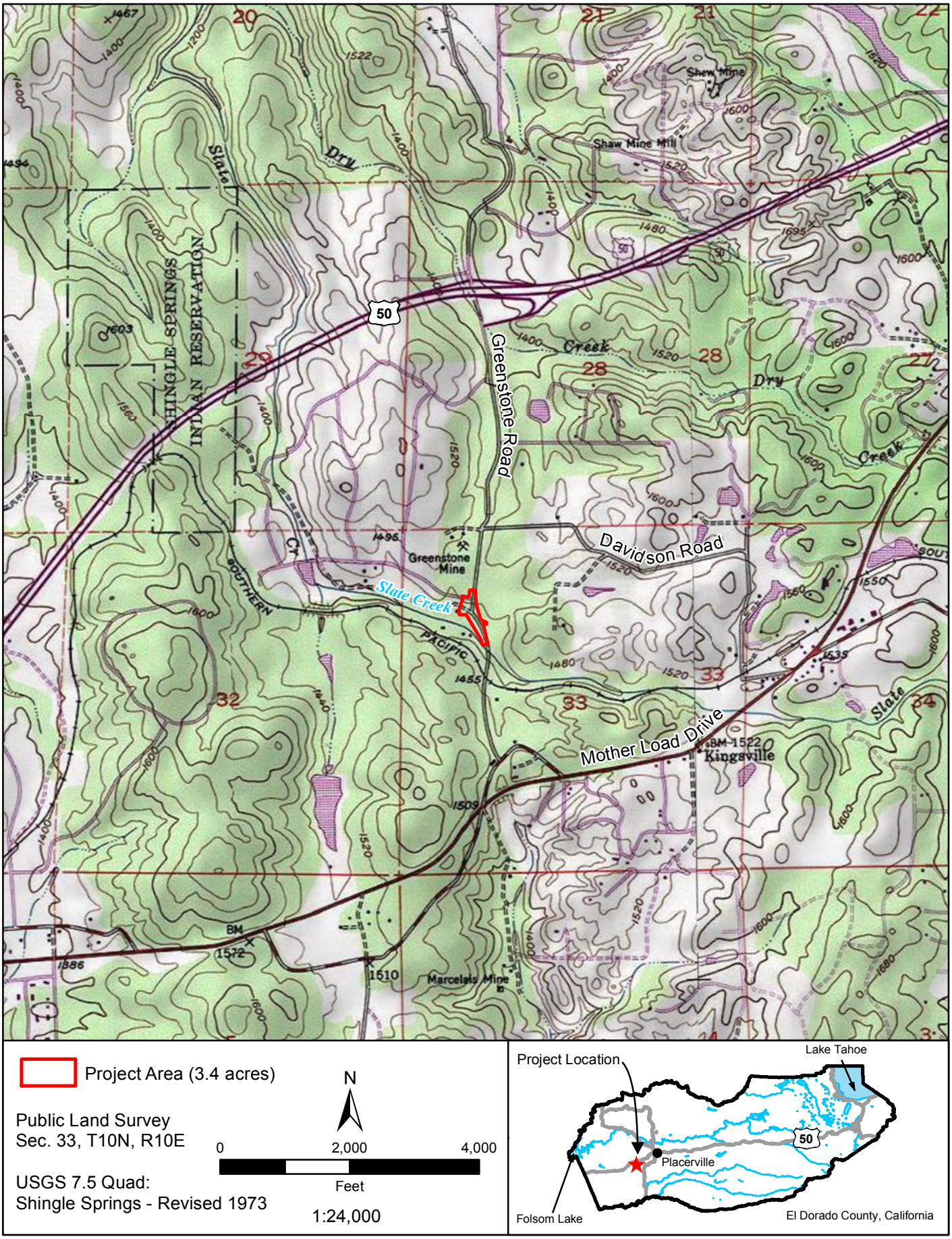
Applicable federal, state, and local authorizations that will be needed prior to project implementation are identified in Table 1.

Table 1. Required Permit Approvals

Approving Agency	Required Permit/Approval	Required for
Federal Agencies		
U.S. Army Corps of Engineers	Coverage under Nationwide Permit 14 (Section 404 of the Clean Water Act, 33 USC 1341)	Discharge of fill material into waters of the United States
State Agencies		
California Department of Transportation	Project approval/NEPA compliance	Federal funding through the FSTIP–HBP
Regional Water Quality Control Board (Central Valley)	Water quality certification (Section 401 of the Clean Water Act)	Discharge into waters of the United States
	Coverage under the General Construction Activity Storm Water Permit (Section 402 of the Clean Water Act, 40 CFR Part 122)	Storm water discharges associated with construction activity for greater than 1 acre of land disturbance

Table 1. Required Permit Approvals

Approving Agency	Required Permit/Approval	Required for
California Department of Fish and Wildlife	Streambed Alteration Agreement (Section 1602 of the Fish and Game Code)	Bridge installation across Slate Creek
Local Agencies		
El Dorado County	Project approval/CEQA compliance	Project implementation and funding
El Dorado County Air Quality Management District	Fugitive dust plan	Compliance with Rule 223-1 (Fugitive Dust, Construction Activities) and Rule 223-2 (Fugitive Dust, Asbestos Hazard Mitigation)



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Slate Creek Bridge (25C0087) Replacement Project

Figure 1
Project Area Location

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Slate Creek Bridge (25C0087) Replacement Project

Figure 2
Project Design

3. INITIAL STUDY CHECKLIST

3.1. Initial Study Checklist

This section of the Initial Study incorporates the Environmental Checklist contained in Appendix G of the CEQA Guidelines, except that greenhouse gases are discussed under air quality. Each resource section provides a brief description of the setting, a determination of impact potential, and a discussion of the impacts. Mitigation measures are identified where appropriate for adoption by the County and incorporation into the proposed project and contractor documents to reduce potential impacts to less-than-significant levels. The following 16 environmental categories are addressed in this section:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality/Greenhouse Gas
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

Each of the environmental categories was fully evaluated, and one of the following four determinations was made for each checklist question:

- **"No Impact"** means that no impact to the resource would occur as a result of implementing the project.

- **"Less than Significant Impact"** means that implementation of the project would not result in a substantial and/or adverse change to the resource, and no mitigation measures are required.

- **"Potentially Significant Unless Mitigation is Incorporated"** means that the incorporation of one or more mitigation measures is necessary to reduce the impact from potentially significant to less than significant.

- **"Potentially Significant Impact"** means that there is either substantial evidence that a project-related effect may be significant, or, due to a lack of existing information, could have the potential to be significant.

3.2. Setting, Impacts, and Mitigation Measures

I.	**AESTHETICS** — Would the project:	*Potentially Significant Impact*	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Environmental Setting

The project area is in a rural community in El Dorado County. Views from the project area are dominated by the surrounding oak woodlands, open fields, Slate Creek, residential properties, and roads. Some of the project area is visible from two nearby residences, although intervening vegetation screens some views of the project area. No scenic vistas exist in the project area or are visible from the project area. No scenic highways exist in or near the project area; the closest designated or eligible scenic highways are U.S. Highway 50 and U.S. Highway 49, approximately 1 mile north and 2 miles east of the project area, respectively. No unique scenic resources are present within or viewed from the project area.

Discussion of Impacts

a, b) ***No Impact.*** The proposed project would not permanently alter views of scenic vistas in the vicinity of the project area or damage any scenic resources within a state scenic highway.

c) ***Less than Significant Impact.*** The proposed project would result in physical changes to the visual characteristics of Greenstone Road, Slate Creek bridge, and the adjacent areas. The road and bridge would be wider, with more paved surface area. Road improvements would involve some vegetation removal, but the visual characteristics of the surrounding area would not be altered. Most impacts on the visual character would result from temporary construction activities, which would primarily occur in previously disturbed areas. The new bridge structure would not block views of the surrounding area. Nearby residents and motorists that regularly use Greenstone Road would be most likely to notice the changes, but the overall visual character of the project area would be similar to current conditions. Project implementation would result in a less-than-significant impact on the area's visual character.

d) ***Less Than Significant Impact.*** The proposed project would not create a permanent, new source of light or glare. If nighttime construction is necessary, the use of nighttime lighting would comply with County policies to direct lighting away from nearby residences and oncoming traffic. In addition, traffic control measures would be used to alert drivers to the construction activities. The use of nighttime lighting would be temporary and would affect few receptors near the project area. The County would also coordinate any nighttime

activities with nearby residents in advance to ensure minimal disruptions or disturbance to the residents. Lighting-related impacts would be less than significant.

II.	**AGRICULTURE AND FOREST RESOURCES** — Would the project:	***Potentially Significant Impact***	***Potentially Significant Unless Mitigation Incorporated***	***Less than Significant Impact***	***No Impact***
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d)	Result in loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment, which, due to their location or nature, could result in conversion?	☐	☐	☐	☒

Environmental Setting

The project area encompasses oak woodlands, a creek, an existing road, open space, and adjacent rural residences. The project area does not contain any farmland that is designated as Prime, Statewide, or Locally Important Farmland (California Department of Conservation 2014). Land within and adjacent to the project area is designated as "Other Land." In addition, the project area does not contain any forested land.

Discussion of Impacts

a, b) ***No Impact.*** No important farmland is present in the project area. The proposed project is a bridge replacement along an existing road and would not result in other changes that could convert farmland to non-agricultural uses.

c, d, e) ***No Impact.*** No forest land is present in the project area. The proposed project would not result in a loss of forest land or conversion of forest to non-forest use.

III.	**AIR QUALITY/GREENHOUSE GAS** — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	*Potentially Significant Impact*	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☐	☒	☐
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
f)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
g)	Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Environmental Setting

The project area is in the Mountain Counties Air Basin, and air quality is regulated by the El Dorado County Air Quality Management District (AQMD). The AQMD regulates air quality through the federal and state Clean Air Acts, district rules, and its permit authority.

National and state ambient air quality standards have been adopted by the Environmental Protection Agency and the State of California, respectively, for each criteria pollutant: ozone, particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide. El Dorado County AQMD's (2002) Guide to Air Quality Assessment identifies specific daily emissions thresholds based on the national and state standards that can be used to determine the significance of project emissions. Thresholds of significance for pollutants of concern are:

- Reactive Organic Gasses (ROG): 82 lbs/day
- Nitrogen Oxides (NOx): 82 lbs/day
- Carbon Monoxide (CO): 9 parts per million (ppm) – 8-hour average; 20 ppm – 1-hour average
- Respirable Particulate Matter (PM_{10}): 30 µg/m3 – annual geometric mean; 50 µg/m3 – 24-hour average

The County has been designated as nonattainment for both federal and state ozone standards and for the state PM_{10} and federal $PM_{2.5}$ standards and is in attainment or unclassified status for other pollutants (California Air Resources Board 2013). Sources of pollutants in the project vicinity include vehicle emissions, wood-burning stoves in nearby residences, other residential activities, and periodic

construction activities. Sensitive receptors near the project area include two residences along Greenstone Road, both approximately 50 feet from the project area.

Naturally occurring asbestos is also a concern in El Dorado County because it is known to be present in certain soils and can pose a health risk if released into the air. The AQMD has adopted an El Dorado County Naturally Occurring Asbestos Review Area Map that identifies those areas more likely to contain naturally occurring asbestos (El Dorado County 2005). The project area is in an area identified by the County as being "More Likely to Contain Asbestos."

Discussion of Impacts

a, b) ***Less Than Significant Impact.*** Construction activities would result in short-term increases in emissions from the use of heavy equipment that generates dust, exhaust, and tire-wear emissions; soil disturbance; materials used in construction; and construction traffic. These emissions would include fugitive dust (PM_{10} and $PM_{2.5}$) from ground-disturbing activities and both reactive organic compounds (ROG) and nitrogen oxide (NOx) emissions from vehicle and equipment operations. Construction-related emissions would be minimized through compliance with applicable AQMD rules, including Rule 223 Fugitive Dust–General Requirements and Rule 223-1 Fugitive Dust–Construction Requirements. These rules regulate fugitive dust generated by construction activities. In compliance with Rule 223-1, a fugitive dust plan will be prepared and submitted to the County AQMD for approval prior to construction. Although El Dorado County is designated nonattainment for PM_{10}, compliance with AQMD Rules 223 and 223-1 would ensure that the emissions do not result in a violation of air quality standards in the air basin or a substantial adverse contribution to air quality in the region. In addition, because of the potential for asbestos in the soils underlying the project area, the County would comply with AQMD Rule 223-2 Fugitive Dust–Asbestos Hazard Mitigation; the California Air Resources Board Airborne Toxic Control Measure at Title 17 Section 93105 addressing Construction, Grading, Quarrying, and Surface Mining activities; and the Asbestos Airborne Toxic Control Measure for Surfacing Applications (California Code of Regulations, Title 17, Section 93106).

During construction, the temporary closure of Greenstone Road would require travelers to use a detour route. Use of this detour route would not increase overall trips in the area or result in increased vehicle emissions from daily traffic. The new bridge is not designed to increase traffic along Greenstone Road; it would improve safety conditions for travelers using the road. Long-term emissions from traffic using Greenstone Road would be improved over current conditions with the improved roadway geometry, new pavement, and wider bridge.

c) ***Less Than Significant Impact.*** As discussed under items a, b) above, the proposed project would result in minor construction-related emissions. It would not result in a cumulatively considerable net increase of any criteria pollutant. The project would cause short-term air quality impacts as a result of construction activities; however, it would not result in long-term or cumulatively considerable increases in air quality pollutant emissions for which El Dorado County is currently designated nonattainment (ozone precursors, $PM_{2.5}$, and PM_{10}).

d) ***Less Than Significant Impact.*** As discussed in a, b) above, construction activities would result in short-term increases in emissions. Residents in homes near the project area could be exposed to temporary air pollutants from construction activities, such as fugitive dust, ROG, NOx, and carbon monoxide. Construction activities would be temporary, lasting approximately 14 months over two construction seasons, and emissions would not be substantial. In addition, compliance with AQMD Rules would ensure fugitive dust from

construction activities remains in the project area or within 50 feet of the disturbed area. Few sensitive receptors are near the project area, and with the minor increase in emissions, sensitive receptors would not be exposed to substantial pollutant concentrations. Air quality impacts would be less than significant.

e) ***Less Than Significant Impact.*** Construction activities would involve the use of gasoline or diesel-powered equipment that emits exhaust fumes. Construction would also involve asphalt paving, which has a distinctive odor during application. These activities would take place intermittently throughout the workday, and the associated odors are expected to dissipate within the immediate vicinity of the work area. Persons near the construction work area may find these odors objectionable. However, the limited number of receptors, infrequency of the emissions, rapid dissipation of the exhaust into the air, and short-term nature of the construction activities would result in less-than-significant odor impacts.

f) ***Less Than Significant Impact.*** Greenhouse gases (GHGs) are recognized by wide consensus among the scientific community to contribute to global warming/climate change and associated environmental impacts because of their ability to trap heat in the atmosphere and affect climate. The major GHGs that are released from human activity include carbon dioxide, methane, and nitrous oxide (Governor's Office of Planning and Research 2008). The primary sources of GHGs are vehicles (including planes and trains), energy plants, and industrial and agricultural activities (such as dairies and hog farms).

Emissions of GHGs from the proposed project would be produced from the materials used for the bridge as well as construction-related equipment emissions. The project would not increase the generation of emissions after construction is complete because traffic levels would be similar to current conditions. Emissions of GHGs resulting from construction activities would be short-term and minor. While the project would have an incremental contribution within the context of the county and region, the individual impact is considered less than significant.

g) ***No Impact.*** The proposed project would not generate significant emissions of GHGs and, therefore, would not conflict with any applicable plans, policies, or regulations adopted for the purpose of reducing the emission of GHGs.

IV. BIOLOGICAL RESOURCES — Would the project:	***Potentially Significant Impact***	***Potentially Significant Unless Mitigation Incorporated***	***Less than Significant Impact***	***No Impact***
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

IV.	**BIOLOGICAL RESOURCES** — Would the project:	*Potentially Significant Impact*	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Setting

The habitat communities in the project area include annual grassland, valley oak woodland, and riverine (i.e., Slate Creek) (North State Resources, Inc. 2016). Annual grassland habitat is located on the west side of Greenstone Road north of Slate Creek, and on the east side of the road south of the creek. Valley oak woodland is the main habitat type present in the project area. Slate Creek flows from east to west through the project area. It is a scoured drainage dominated by run and riffle characteristics, with cobble, gravel, and sand substrates, and has patches of Himalayan blackberry along the banks and fresh emergent wetlands along the bed west of the bridge.

Special-status plant species that have the potential to occur in the project area include big-scale balsamroot (*Balsamorhiza macrolepis*), Jepson's onion (*Allium jepsonii*), and Red Hills soaproot (*Chlorogalum grandiflorum*). These plants could be found in serpentine soils west of Greenstone Road and north of the creek. Special-status animal species that may use the project area include foothill yellow-legged frog (*Rana boylii*), western pond turtle (*Actinemys marmorata*), white-tailed kite (*Elanus leucurus*), and loggerhead shrike (*Lanius ludovicianus*). All of these animals are California Species of Special Concern. Slate Creek provides suitable aquatic habitat to support foothill yellow-legged frog breeding. The creek also provides aquatic habitat and basking locations for western pond turtle, and adjacent uplands could provide potential nesting habitat for the species. Annual grassland and valley oak woodland habitats provide nesting and foraging habitat for white-tailed kite, loggerhead shrike, and various migratory birds. No special-status fish species are expected to be present in Slate Creek or downstream of the project area. No federally or state-listed species are expected to occur in the project area.

Waters of the United States in the project area include Slate Creek, an ephemeral stream, and three wetland swales, which encompass approximately 0.206 acre (North State Resources, Inc. 2015a). Slate Creek ranges from 10 to 35 feet wide in the project area. The ephemeral stream is located on the east side

of Greenstone Road in valley oak woodland habitat and generally flows north to south in the project area as it drains towards Slate Creek. The three wetland swales are associated with the ephemeral stream where the gradient lessens and transitions into the wetland swales.

Discussion of Impacts

a) ***Potentially Significant Impact Unless Mitigation Incorporated.*** Construction activities could adversely affect three special-status plant species, foothill yellow-legged frog, western pond turtle, white-tailed kite, loggerhead shrike, and other nesting migratory birds. The realignment of the roadway approaches to Slate Creek bridge would affect less than 1 acre of annual grassland and valley oak woodland habitats, and an estimated 0.2 acre of annual grassland habitat would be created through the restoration of the old section of Greenstone Road. The new bridge would be located slightly east of the existing bridge and would span Slate Creek, minimizing permanent impacts on the creek. The proposed project would result in a negligible loss of habitat.

Construction activities could introduce invasive plants into the project area from seeds or plant material on equipment if it is not washed prior to entering the project area. Ground disturbance could encourage the spread of invasive plants already present in the project area by creating conditions that are more favorable for invasive plants than native plants. Equipment used in the project area could expose seeds of existing invasive species or introduce other invasive plants, which could degrade habitat in and near the project area. Implementation of Mitigation Measure 1 would reduce the potential for invasive plants to be introduced or spread into the project area.

Staging activities in the open lot at Studebaker Road and Greenstone Road could disturb big-scale balsamroot, Jepson's onion, and Red Hills soaproot if they are present. Vegetation removal and grading activities would not be necessary; however, equipment and staged materials could crush or damage the plants. Long-term habitat impacts are not anticipated, but impacts on individual plants could result in a significant impact. Implementation of Mitigation Measure 2 would reduce the potential for direct impacts on the plants, resulting in a less-than-significant impact.

Direct impacts on foothill yellow-legged frog and western pond turtle could include harassment, injury, and mortality of individuals during construction activities near the creek. Indirect impacts could result from the degradation of aquatic habitat and water quality due to erosion and sedimentation, accidental fuel leaks or spills, and the removal of vegetation along the creek. Implementation of BMPs would ensure that impacts on aquatic habitat would be less than significant. Although the potential for direct impacts is low, the potential direct impacts could be significant if individual frogs or turtles are wounded or killed. Implementation of Mitigation Measure 3 would reduce the potential for direct impacts and ensure that impacts on these species are less than significant.

Direct impacts on nesting special-status and migratory bird species could occur if active nests are destroyed during construction or if construction activities disturb nesting or breeding activities. These types of impacts could result from vegetation removal along Greenstone Road or Slate Creek prior to bridge installation or other construction activities near active nest sites. Indirect impacts from human activity and noise can result in the incidental loss of fertile eggs or nestlings or otherwise lead to the abandonment of nests or young, if active nests are present in the immediate vicinity of the construction area. Impacts on nesting birds would be significant if nesting activity is disrupted. Implementation of Mitigation Measure 4

would reduce the potential for adverse impacts on nesting migratory birds during construction, and impacts would be less than significant.

Mitigation Measure 1: Implement measures to prevent the spread of invasive plant species.

The County will require its contractor to implement the following measures to prevent the spread of invasive plant species into the project area:

- All equipment used for off-road construction activities will be weed-free prior to entering the project area.
- If project implementation calls for mulches or fill, they will be weed free.
- Any seed mixes or other vegetative material used for re-vegetation of disturbed areas will consist of locally adapted native plant materials.
- All temporary disturbance areas (e.g., staging areas) will be identified on construction drawings/plans and the boundaries will be delineated in the field with flagging prior to the initiation of construction activities.
- All temporarily disturbed areas will be returned to pre-project conditions upon completion of construction and will be re-vegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. These areas will be properly protected from washout and erosion using appropriate erosion control devices, including coir netting, hydroseeding, and revegetation. In sloped areas, additional erosion control measures will be applied, including erosion control blankets and biodegradable fiber rolls.

Mitigation Measure 2: Conduct pre-construction botanical surveys for special-status plants and protect individuals or populations in work areas.

The County will retain a qualified botanist to conduct up to two botanical surveys prior to construction activities. The surveys will focus on potential habitat (i.e., serpentine soils) for big-scale balsamroot, Jepson's onion, and Red Hills soaproot in the project area, which primarily includes a proposed staging area west of Greenstone Road and north of Slate Creek. The survey(s) will be timed appropriately to coincide with the blooming period for the species and will be performed within one year prior to any staging or construction-related activities in the area with serpentine soils. In the event that individuals or populations of these special-status plant species are found, the County will mark the plant location(s) as an avoidance area both in the field, using flagging, staking, fencing, or similar devices, and on construction plans. Information on the plants and avoidance area will be provided to construction crews as part of worker awareness training.

Mitigation Measure 3: Implement construction measures to reduce impacts on foothill yellow-legged frog and western pond turtle.

The County and/or its contractor will implement the following measures to avoid or minimize project-related impacts on foothill yellow-legged frog and western pond turtle:

- Environmental awareness training will be conducted by a qualified biologist prior to onset of the work for construction personnel to brief them on how to recognize foothill

yellow-legged frog, western pond turtle, and other special-status animals that may occur in the project area.

- To avoid potential injury or mortality to foothill yellow-legged frogs or western pond turtle using vegetated areas for cover along Slate Creek, initial vegetation clearing (i.e., removal of small trees, shrubs, brush, and tall dense grasses) along Slate Creek will be done manually using hand tools (e.g., chainsaw, lopper, weed wacker). The vegetation will be cut to ground level and be removed from the work area by hand.

- Slate Creek outside the work area will be staked, flagged, or signed to avoid encroachment by equipment and construction crews. The number of access routes, size of the staging area, and the total area of impact will be limited to the minimum necessary to achieve the proposed project goal. This goal includes locating access routes and construction areas outside of the creek to the maximum extent practicable. The flagged areas will confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on natural habitats in the project area.

- All refueling and maintenance of equipment and vehicles will occur at least 50 feet from water bodies and will not occur at a location where a spill would drain directly toward the creek. Prior to the onset of work, the County will ensure that a spill prevention and clean-up plan is in place for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

- Appropriate BMPs to protect water quality and control erosion will be implemented.

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

- Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed will be minimized to the maximum extent possible.

- If foothill yellow-legged frogs or western pond turtles or their nests are encountered in the project area during construction and will be harmed by construction activities, work will stop in the area and the County will notify the California Department of Fish and Wildlife (CDFW). Upon authorization from CDFW, a qualified biologist may relocate the individual(s) the shortest distance possible to a location containing habitat outside of the work area. If a pond turtle nest is discovered during construction activities, a qualified biologist will flag the site and determine if construction activities can avoid affecting the nest. If the nest cannot be avoided, it will be excavated and relocated at a suitable location outside of the construction impact zone by a qualified biologist in coordination with CDFW.

Mitigation Measure 4: Conduct pre-construction surveys for nesting birds and establish construction-free buffer zones around active nest sites.

The County and/or its contractor will implement the following measures to minimize or avoid project-related effects on nesting migratory and special-status birds:

- To deter cliff swallows from nesting under the existing bridge, the County will install an exclusionary device (e.g., netting) around the bridge prior to the initiation of the avian breeding season (before February 15) during the same year as bridge removal is proposed and after a qualified biologist has determined no nesting activity is present. The exclusionary device will remain in place until August 15 or until the bridge is demolished. The exclusionary device will be anchored such that swallows cannot attach their nests to the structure through gaps. If swallows begin building nests on the structure after installation of the exclusionary device, the County will coordinate with CDFW and will remove the nesting material in the presence of a qualified biologist to ensure that the destruction of an active nest does not occur. Bridge removal may be delayed until the nests are no longer active.

- Because construction activities cannot avoid the avian breeding season, the County will retain a qualified biologist to conduct a pre-construction survey of the project area and a 250-foot buffer, as access is available, to locate active bird nests and identify measures to protect the nests. The pre-construction survey will be performed between February 15 and August 31, but no more than 14 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities for 14 days or longer occurs, another pre-construction survey will be performed.

- If active nests are found during the pre-construction survey, the County will coordinate with a qualified biologist and CDFW, as necessary, on additional protection measures, such as establishment of a buffer around the nest tree. No construction activity will be conducted within this zone during the nesting season (February 15 and August 31) or until such time that the biologist determines that the nest is no longer active or the nesting activity would not be disrupted. The buffer zone will be marked with flagging, stakes, or other means to mark the boundary. All construction personnel will be notified of the existence of the buffer zone and will avoid entering the buffer zone during the nesting season.

b, c) ***Potentially Significant Impact Unless Mitigation Incorporated.*** Construction of the new bridge abutments and installation of the diversion dam and piping would require the placement of fill material (e.g., concrete for the abutments, dam materials) into Slate Creek. In addition, the Greenstone Road alignment modifications could result in the discharge of fill (asphalt and roadway fill) into the two southernmost wetland swales and part of the ephemeral stream. Overall, the proposed project has been designed to minimize impacts on Slate Creek, the ephemeral stream, and the wetland swales to the maximum extent practicable.

Instream construction in Slate Creek would occur during the summer months when flows are lowest and after installation of a diversion dam and pipeline to dewater the work area (about 100–150 feet of the creek). The diversion dam and pipeline would divert creek flow through the work area. The temporary diversion dam would affect less than 0.001 acre or 20 linear feet of the creek. Placement of the new abutments and rock slope protection could result in

the permanent discharge of fill into approximately 0.014 acre (30 linear feet) of Slate Creek. Removal of the existing bridge abutments would restore approximately 0.001 acre (48 linear feet) of the creek just west/downstream of the new bridge. Modifications to the Greenstone Road alignment may result in the placement of fill materials into the ephemeral stream and the two southernmost wetland swales. The new roadway could affect approximately 0.22 acre of the wetland swales and 0.007 acre (145 linear feet) of the ephemeral stream, resulting in the permanent discharge of fill material into these features.

BMPs would be implemented during construction activities to protect water quality in Slate Creek. The modified roadway could result in a net loss of wetlands, and other construction activities in waters of the United States could result in significant impacts. Compliance with the terms of a Nationwide Permit, Water Quality Certification, and Streambed Alteration Agreement, if necessary, and implementation of Mitigation Measure 5, which requires compensatory mitigation for the loss of wetlands, would reduce impacts to less than significant.

Mitigation Measure 5: Comply with permit conditions and compensate for the loss of wetlands in the project area.

- The County will comply with the terms of a Clean Water Act Section 404 permit issued by the U.S. Army Corps of Engineers (Corps) and Section 401 water quality certification issued by the Regional Water Quality Control Board (RWQCB) for activities involving the discharge of fill material into Slate Creek, the ephemeral stream, or the wetlands swales. For activities in and along Slate Creek, the County will also comply with terms of a Streambed Alteration Agreement with the CDFW (if determined necessary by the CDFW). The actual project impacts will be calculated once final designs are available and during the permit application process. Prior to any discharge of dredged or fill material into Slate Creek, the ephemeral stream, or the wetland swales, the required permits and authorizations will be obtained from the respective agencies. All terms and conditions of the required permits and authorizations will be implemented.

- Based on the final designs, if unavoidable permanent impacts on wetlands in the project area are anticipated, the County will compensate for the loss of wetland functions through payment into an in-lieu fee program or mitigation bank identified in coordination with the Corps. The specific mitigation ratio will be identified in coordination with the Corps and will provide at least a 1:1 replacement ratio for impacts to wetlands.

- All waters of the United States temporarily affected by project construction will be restored as close as practicable to their original conditions.

- A constructed drainage ditch/channel should be placed along the eastern boundary of the new roadway alignment to convey runoff from the ephemeral stream towards Slate Creek.

d) ***No Impact.*** The project area does not encompass any wildlife nursery sites. The proposed project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors.

e) ***No Impact.*** The project area is not within the boundaries of any local resource protection areas.

f) ***No Impact.*** No known, adopted, state, regional, or federal habitat conservation plans or Natural Community Conservation Plans apply within the project area.

V.	**CULTURAL RESOURCES** — Would the project:	***Potentially Significant Impact***	***Potentially Significant Unless Mitigation Incorporated***	***Less than Significant Impact***	***No Impact***
a)	Cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?	☐	☐	☒	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
e)	Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code Section 21074?	☐	☐	☐	☒

Environmental Setting

Prior to the large-scale emigration of Euro-Americans beginning in the middle decades of the nineteenth century, Native American groups identified as the Southern Maidu or Nisenan inhabited the Pleasant Valley region. Traditionally, the southern boundary of Nisenan territory was to the south of present-day Highway 50. Although cultural group boundaries were almost never as well-defined as depicted in historic references and today's literature, the project area was almost certainly associated more with the Nisenan than the Miwok to the south. Traditionally, this territory covered the area from Sacramento in the southwest east to the Cosumnes River and up the foothills to the Sierra Nevada crest, north along the crest to the headwaters of the North Fork of the Yuba River, west along the Yuba River to the Feather River just above present day Marysville, and south to the confluence of the Feather River and the Sacramento River.

The Nisenan adopted a loose political organization with six primary tribelet centers based around several main villages, with smaller settlements and temporary camps as satellites. The area between the Cosumnes River and the South Fork of the American River, particularly the area around modern-day Placerville, was controlled by one such tribelet. In the foothills, villages were located on large flats near creeks or on ridges. Buildings in these villages included conical shaped houses covered in bark, skins, and brush; acorn granaries; large earth-covered semi-subterranean dance houses; and brush shelters. Bedrock mortar stations were also found within or near settlements. Three years after the discovery of gold at Sutter's sawmill on the American River in 1848, the entirety of the Nisenan territory was occupied by miners and settlers.

Due to the discovery of gold in the mid-1800s, El Dorado County became a focus of placer mining, and economic ventures in lumber and agriculture began to appear to support the mining. The discovery of gold created a rapid influx of fortune seekers and settlers pursuing gold or building farms, towns, and supporting infrastructure. During the late 19th and early 20th centuries, the foothills were primarily an agricultural region dotted with stock raising ranches. Just north of the project area, a large-scale bedrock gold mine, the "Greenstone Mine," operated from approximately 1860 to 1949. Although a large portion of the project area consists of "Placer digging" soils (primarily the southern portion), no definitive indications of mining activities or definable tailings piles, ditches, or other typical placer mining features were noted in the project area during field surveys. The main economic theme of the area focused on agriculture, particularly livestock grazing, during the late 19th and early 20th centuries. By the mid-20th century, urban in-filling of the Sierra Nevada foothills had re-defined the modern landscape from rural agriculture to suburban community.

Archived records, historical documents, and prior investigations did not indicate the presence of any known archaeological or historical resources within or immediately adjacent to the project area (North State Resources, Inc. 2015b). Greenstone Road at Slate Creek bridge (No. 25C0087) is not eligible for listing as a historic bridge. Research indicates that three cultural resources sites that reflect prehistoric and historic-era occupation of the general area have been documented within 0.5 mile of the project area. Field surveys did not reveal any intact prehistoric or historic era resources in the project area. The field surveys also indicated that soil disturbances such as stream channel erosion/deposition and 20th century developments likely would have destroyed any in situ archaeological materials. In addition, the areas to either side of Slate Creek appear to be largely non-depositional settings not subject to seasonal flooding or colluvial action that might deeply bury archaeological remains. As a result, any significant cultural deposits would likely be visible on the ground surface or in near-surface erosional contexts such as road cuts, ad-hoc trails, or rodent burrows. Based on the cultural resources investigation, the project area has a low to moderate potential to contain historical resources.

Discussion of Impacts

a, b) ***Less than Significant Impact.*** Ground disturbance associated with construction of the proposed bridge and modification of the roadway approaches would disturb soils and could affect previously undiscovered buried resources. Based on the cultural resources investigation, the project area has a low to moderate potential to contain undocumented cultural resources, and historical resources are not likely to be affected by the proposed project. Compliance with the County's standard contract provisions, including halting construction in the vicinity of a potential cultural resources find and notifying the County to allow evaluation of the resource by a qualified archaeologist prior to resuming construction, would ensure that any potential impacts on buried or previously undiscovered resources are less than significant.

c) ***No Impact***. Paleontological resources in El Dorado County are associated with limestone cave deposits, deposits associated with the Mehrten formation, and Pleistocene channel deposits (El Dorado County 2004). These types of deposits and other unique geologic features are not present in the project area.

d) ***Less than Significant Impact.*** Based on the prehistoric and historic uses of the area and the current disturbed nature of the project area, human remains are not expected to be affected by construction activities. The County's standard contract provisions give direction to construction crews to cease work in the event of an unanticipated discovery and notify the County or other appropriate entity to allow the remains to be evaluated and properly treated if

necessary. Compliance with the County's standard provisions would ensure that any potential impacts on human remains are less than significant.

e) ***No Impact.*** Correspondence with Native American representatives and tribal organizations, including Wilton Rancheria, did not identify any concerns about the project or potential tribal resources in the project area. The proposed project would not affect any Tribal Cultural Resources.

VI. GEOLOGY AND SOILS — Would the project:	***Potentially Significant Impact***	***Potentially Significant Unless Mitigation Incorporated***	***Less than Significant Impact***	***No Impact***
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Environmental Setting

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 province. The Sierra Nevada province consists of Pliocene and older deposits that have been uplifted as a result of plate tectonics, granitic intrusion, and volcanic activity. Subsequent glaciation and additional volcanic activity are factors that led to the east-west orientation of stream channels (El Dorado County 2004). The underlying geologic unit of the project area and surrounding area is Mesozoic gabbroic rocks.

Seismicity and Fault Systems

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, 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 (El Dorado County 2003). No active faults have been mapped in the county, and none of the known inactive faults has been designated as an Alquist-Priolo Earthquake Fault Zone. The distribution of known faults in El Dorado County is concentrated in the western portion of the county, with several isolated faults in the central county area and the Lake Tahoe Basin. The nearest fault to the project area is an unnamed inactive fault running in a north-south direction parallel to Greenstone Road along the eastern edge of the project area (El Dorado County 2005).

Soils

Soil types in the project area include Auburn very rocky silt loam, placer diggings, and serpentine rock land as described below (Natural Resources Conservation Service 2015).

- **Auburn very rocky silt loam, 2 to 30 percent slopes:** The Auburn series consists of shallow, well-drained soils that formed from weathered igneous and/or metamorphic rock. This soil type occurs in the northern portion of the project area and has a moderate expansion potential.

- **Placer diggings, 2 to 15 percent slopes:** Placer diggings consists of shallow, well drained soils that formed from alluvium derived from mixed sources. This soil type dominates the project area and occurs in the central portion of the project area. This soil type has a low expansion potential.

- **Serpentine rock land, 15 to 70 percent slopes:** Serpentine rock land consists of very shallow, poorly drained soils that formed from weathered serpentine rock. This soil type occurs in the southern portion of the project area and has a low expansion potential.

Discussion of Impacts

a-i,iii,iv) ***No Impact.*** The project area is not near any Alquist-Priolo faults, and the potential for seismic-related ground failure or landslides is considered low based on soil and geologic conditions. The proposed project would not expose people to seismic-related soil or geologic hazards.

a-ii) ***Less than Significant Impact.*** Seismic activity in the region could cause ground shaking in the project area. The risk of seismic activity occurring would not change with the implementation of the proposed project. The proposed project, specifically the new bridge, would be designed in accordance with Caltrans and California Building Code requirements for seismically active regions. Earthquake activity would have a negligible effect on the new bridge and road, resulting in less-than-significant impacts on public safety.

b) ***Less than Significant Impact.*** The proposed project would require grading and earthwork as part of the road improvements. Approximately 400 cubic yards of material would be excavated, and approximately 2,600 cubic yards of material may be imported for fill. As described in the project description (Section 2.3), the contractor would comply with the El Dorado County Grading Ordinance and Storm Water Management Plan for Western El Dorado County and would implement BMPs to reduce the potential for soil erosion during

construction activities. Implementation of these BMPs would ensure that impacts from soil erosion are less than significant.

c, d) ***No Impact.*** The soil types and geologic units underlying the project area are not considered unstable or expansive. The soils in the project area are not at risk of landslides, liquefaction, or collapse; the topography of the project area is generally flat and would not create risks from unstable or expansive soil or geologic conditions.

e) ***No Impact.*** The project does not involve construction of septic tanks or wastewater disposal systems.

VII. HAZARDS AND HAZARDOUS MATERIALS — Would the project:		*Potentially Significant Impact*	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h)	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?	☐	☐	☒	☐

Environmental Setting

Hazardous materials and waste are substances that are considered toxic, ignitable, corrosive, or reactive (as defined in California Code of Regulations, Title 22, Sections 66261.20-66261.24). The release of hazardous materials into the environment could contaminate soils, surface water, and groundwater supplies. Under Government Code Section 65962.5, the California Department of Toxic Substances Control maintains a list of hazardous substance sites. This list, referred to as the "Cortese List," includes CALSITE hazardous material sites, sites with leaking underground storage tanks, and landfills with evidence of groundwater contamination. In addition, the El Dorado County Environmental Management Department maintains records of toxic or hazardous material incidents, and the Central Valley RWQCB maintains files on hazardous material sites. Most hazardous materials regulation and enforcement in El Dorado County are overseen by the El Dorado County Environmental Management Department, which refers large cases of hazardous materials contamination or violations to the RWQCB and the State Department of Toxic Substances Control. Other agencies, such as the El Dorado County AQMD and the federal and state Occupational Safety and Health Administrations, may also be involved when issues related to hazardous materials arise.

No hazardous substance sites from the Cortese List have been identified in the project area (California Department of Toxic Substances Control 2016). The closest clean-up site is located at the former Bennett Sculpture Foundry, approximately 500 feet south of the project area near the intersection of Quail Valley Road. The clean-up site is currently being monitored for copper, metals/heavy metals, and selenium contamination to soils and surface water following excavation and removal of impacted soil in 1999.

The project area lies within the State Responsibility Area with regards to fire protection, which means the State provides fire response services. No federal lands are in the project area. Fire hazard can be defined as the amount, condition, and structure of fuels that will burn if a fire enters an area. The project area is designated by the California Department of Forestry and Fire Protection (2007) as having a high fire hazard safety rating.

Discussion of Impacts

a, b) ***Less Than Significant Impact.*** Small amounts of hazardous materials would be used during construction activities for equipment maintenance (e.g., fuel and solvents) and roadway resurfacing. Hazardous materials may also be stored in staging areas. Use of hazardous materials would be limited to the construction phase and would comply with applicable local, state, and federal standards associated with the handling and storage of hazardous materials. Construction measures and BMPs would reduce the potential for a hazardous materials spill to occur and would minimize impacts if a spill were to happen. In addition, as described in the project description (Section 2.4), the contractor will be required to prepare a storm water pollution prevention plan or water pollution control plan that identifies project-specific BMPs that would be implemented in accordance with County and Caltrans requirements, which would further reduce the potential for a hazardous material spill.

c, d, e, f) ***No Impact.*** The project area is not within 0.25 mile of a school or an airport. The proposed project would not exacerbate the conditions at the hazardous waste clean-up site located south of the project area and would not expose people to hazards associated with airports or hazardous waste site activity.

g) ***Less Than Significant Impact.*** The proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan. Greenstone Road would be closed during one construction season (7 months) while the roadway modifications and bridge

portion of construction are completed. Traffic control measures would be implemented on Greenstone Road and along the detour route during construction. Minor delays may be experienced for emergency access to the residences adjacent to the work area. As stated in the project description (Sections 2.3 and 2.4), the County or its construction contractors will conduct early coordination with law enforcement and emergency service providers to ensure minimal disruption to service during construction. In addition, access to adjacent properties will remain open at all times during the construction period.

h) ***Less Than Significant Impact.*** Due to the high fire hazard rating of the surrounding area, construction activities, particularly the use of construction equipment and any welding activities, have the potential to result in the ignition of a fire. As a standard contract provision, the County would require a fire plan to reduce the potential for accidental ignitions. Water used for dust control would help maintain soil moisture and provide a source of water for extinguishing a fire.

The proposed project would not alter the potential for wildfire ignitions over the long term. The fire hazard rating of the area would not be altered by the project, and the project would not expose people and/or structures to a significant risk of loss, injury, or death involving wildland fires over the long term.

VIII. HYDROLOGY AND WATER QUALITY — Would the project:		***Potentially Significant Impact***	***Potentially Significant Unless Mitigation Incorporated***	***Less than Significant Impact***	***No Impact***
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e)	Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f)	Otherwise substantially degrade water quality?	☐	☐	☐	☒

VIII. HYDROLOGY AND WATER QUALITY — Would the project:		*Potentially Significant Impact*	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j)	Inundation of seiche, tsunami, or mudflow?	☐	☐	☐	☒

Environmental Setting

The project area is in the South Fork American River U.S. Geological Survey Hydrologic Map Unit (Map Unit Number 18020129), which is part of the Sacramento River below Shasta Dam basin (U.S. Geological Survey 2014). Slate Creek is the primary drainage feature in the project area. Slate Creek originates a few miles upstream near the city of Diamond Springs. It flows approximately 2.9 miles downstream from the project area into Dry Creek, which then flows for approximately 11 miles west through a network of water courses into the South Fork American River, which drains into Folsom Lake. Beneficial uses of the South Fork American River from Placerville to Folsom Lake, as identified in the Basin Plan for the Sacramento River and San Joaquin River Basins (Central Valley Regional Water Quality Control Board 2011), include municipal and domestic supply, irrigation, power, contact recreation, canoeing and rafting, other noncontact recreation, warm and cold freshwater habitat, and wildlife habitat. Slate Creek is not listed as an impaired water body under Section 303(d) of the Clean Water Act (Central Valley Regional Water Control Board 2010).

The project area is in Zone X, which is outside the 100-year floodplain (Federal Emergency Management Agency 2008).

Discussion of Impacts

a) ***Less than Significant Impact.*** Construction activities would disturb and expose soil within the stream channel beneath the bridge and at the location of the diversion dam. These activities could discharge sediment into runoff during precipitation or storm events, which could be carried into downstream creeks and rivers and affect water quality. As a standard contract requirement, the County would require the contractor to comply with the County's Grading Ordinance and Storm Water Management Plan for Western El Dorado County, which requires preparation of a site-specific storm water pollution prevention plan or water pollution control plan. BMPs will be implemented during construction activities to minimize discharge of pollutants from construction activities. BMPs may include those related to structure demolition/removal over or adjacent to water, temporary stream crossings, stream bank stabilization, clear water diversions, material equipment use over water, and others as applicable. Implementation of BMPs in accordance with County and Caltrans requirements and construction activities during the drier summer months would ensure project impacts on water quality are less than significant.

b) ***No Impact.*** The proposed project would not require the use of groundwater or affect groundwater recharge in the project area.

c, d, e) ***Less Than Significant Impact.*** The proposed project would require the placement of a diversion dam to facilitate temporary dewatering of approximately 100–150 linear feet of Slate Creek during construction of the new bridge. A temporary alteration of drainage patterns in the dewatered area would occur during construction, but the dam would be removed at the end of the construction season to restore flows to normal conditions. The dam is not expected to create flooding because it would be in place only when stream flows are lowest. The new bridge and wider roadway approaches would result in a minor increase in impervious surface area, which would result in a negligible increase in surface runoff entering the creek. BMPs would be implemented during construction to reduce the potential for erosion. The temporary alteration of Slate Creek flows and additional impermeable surface area would result in less-than-significant impacts on water quality and flooding.

f) ***No Impact.*** The proposed project would not have other water quality impacts beyond those discussed under item a) above and would not contribute runoff to a storm drain system.

g, h, i, j) ***No Impact.*** The proposed project is outside the 100-year flood zone and would not expose people or structures to risks from flooding or inundation by seiche, tsunami, or mudflow.

IX.	**LAND USE AND PLANNING** – Would the project:	***Potentially Significant Impact***	***Potentially Significant Unless Mitigation Incorporated***	***Less than Significant Impact***	***No Impact***
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Environmental Setting

The project area is in unincorporated El Dorado County approximately 6 miles southwest of Placerville. Land uses in the vicinity of the project area include residential uses and open space. The project area is designated for Low Density Residential (El Dorado County 2015). The El Dorado County General Plan provides policies and implementation strategies for management of the resources in the unincorporated area, and the Zoning Ordinance provides direction on allowable uses and facilities in each zone. No habitat conservation plans have been adopted for the area. The County is in the process of preparing an Integrated Natural Resources Management Plan, but it has not yet been adopted.

Discussion of Impacts

a) ***No Impact.*** The proposed project involves the replacement of an existing bridge and roadway improvements. The project would not physically divide an established community.

b, c) ***No Impact.*** The proposed project would not conflict with the El Dorado County General Plan. The proposed road improvements are consistent with the Circulation Element of the General Plan, and the project is included in the El Dorado County Capital Improvement Program, adopted by the County Board of Supervisors. No habitat conservation plans or natural community conservation plans have been adopted for the project area.

		Potentially Significant Impact	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
X.	**MINERAL RESOURCES** — Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Environmental Setting

El Dorado County in general is considered a mining region capable of producing a wide variety of mineral resources. Metallic mineral deposits, including gold, are considered the most significant extractive mineral resources. The project area is not in an important mineral resource area, as depicted in the General Plan (El Dorado County 2004).

Discussion of Impacts

a, b) ***No Impact.*** The project area is not in or adjacent to any important mineral resource areas identified by the State of California or El Dorado County. Road and bridge improvements would not affect the availability of mineral resources of value to the state or region.

		Potentially Significant Impact	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
XI.	**NOISE** — Would the project result in:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

XI.	**NOISE** — Would the project result in:	*Potentially Significant Impact*	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport of public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Setting

The El Dorado County General Plan Noise Element identifies several policies that regulate construction-related noise and establish acceptable noise levels and standards. Policy 6.5.1.7 requires mitigation to keep non-transportation noise levels below acceptable standards identified in the General Plan. Policy 6.5.1.11 outlines standards for daytime construction and would apply to construction-related noise associated with the project (El Dorado County 2004). In residential communities, maximum noise levels for non-transportation sources are 70 decibels (dB) during daytime hours, 60 dB during evening hours, and 55 dB during nighttime hours.

Ambient noise levels in the project area and vicinity are primarily from vehicular traffic along Greenstone Road. Sensitive receptors in the vicinity include residents along Greenstone Road. The closest residence to the project area is approximately 50 feet away.

Discussion of Impacts

a, d) ***Less Than Significant Impact.*** Construction activities would increase noise levels temporarily in the vicinity of the project area and may periodically exceed the noise standards in the General Plan. Actual noise levels would depend on the type of construction equipment involved, distance to the source of the noise, time of day, and similar factors. Noise levels for typical construction equipment that may be used are listed in Table 2.

Table 2. Typical Construction-Related Noise Levels

Construction Equipment	Typical Noise Level (dB) 50 Feet from Source
Truck	88
Bulldozer	85
Concrete mixer	85
Grader	85
Loader	85
Concrete pump	82
Pump	76

Source: Federal Transit Administration 2006

Few sensitive receptors are present near the project area. Construction would temporarily increase noise levels in the project area, ranging from about 76 to 88 dB at 50 feet from the activity. Residences more than 50 feet from the project area would be exposed to less noise as noise levels would be expected to attenuate (decrease) with distance from the source. Some noise would be masked by intervening vegetation and topography between the residences and construction activities. In addition, and as stated in the project description (Section 2.4), the project will comply with General Plan Policy 6.5.1.11 pertaining to construction noise. This would minimize potential impacts associated with construction noise. Construction noise would be temporary and would not substantially increase noise levels in the project area for extended periods.

b) ***Less Than Significant Impact.*** Blasting is not expected but cannot be ruled out completely, depending on the nature of the subsurface rock that may be encountered. If blasting is required, it would result in periodic temporary generation of groundborne vibrations. Impacts from groundborne vibrations are not expected to cause vibration levels capable of affecting nearby structures based on the distance of the new bridge from residences.

c) ***No Impact.*** Because the proposed project is not traffic-inducing (i.e., traffic levels will not increase), ambient noise levels in and around the project area would not permanently increase as a result of project implementation. Traffic noise along Greenstone Road would be reduced with the improved roadway geometry, new pavement, and wider bridge.

e, f) ***No Impact.*** The project area is not near a public or private airport or airstrip. The proposed project would not expose people to noise from airport activities.

XII. POPULATION AND HOUSING — Would the project:		*Potentially Significant Impact*	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c)	Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental Setting

The project area is in unincorporated El Dorado County near the community of Kingsville. Several residences occur in the project vicinity.

Discussion of Impacts

a-c) ***No Impact.*** The proposed project includes a bridge replacement and associated road improvements to conform to the new, wider bridge. The new bridge would remain two lanes and, thus, would not increase traffic capacity and induce population growth directly or indirectly. The proposed project would not displace any housing or people.

XIII. PUBLIC SERVICES — Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Environmental Setting

The proposed project is in a rural area of El Dorado County. Fire and police protection services are provided by the El Dorado County Fire Protection District and El Dorado County Sheriff, respectively. These service providers may use Greenstone Road to access residential areas near project area. No schools, parks, or other public facilities occur in the immediate vicinity. The County maintains public facilities, including Greenstone Road.

Discussion of Impact

a) ***No Impact.*** The proposed project would not include elements that would increase the human population or presence in the area, nor would it be associated with population changes or new residential development. Therefore, additional governmental facilities would not be needed for fire protection, police protection, schools, parks, or other public facilities as a direct or indirect result of the project. The project would improve access across Slate Creek, and the temporary closure of Greenstone Road would not impede emergency access to nearby properties, as the construction contract special provisions will require that a traffic management plan be prepared that will include detours for emergency services and early notification of the construction schedule to emergency response providers.

XIV. RECREATION — Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

XIV. RECREATION — Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Environmental Setting

No designated recreation or park facilities occur in or near the project area.

Discussion of Impacts

a, b) ***No Impact.*** Road and bridge improvements would not affect the use of existing neighborhood and regional parks or other recreational facilities in the region. The proposed project does not include the construction of any recreational facilities, nor would it require the expansion of existing recreational facilities.

XV. TRANSPORTATION/TRAFFIC — Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Environmental Setting

Greenstone Road is a two-lane regional road with an average daily traffic count of about 1,300 trips near the project area. No designated bike routes pass through the project area, and none are proposed along Greenstone Road (El Dorado County Transportation Commission 2010). The nearest major crossroad, Mother Lode Drive, is approximately 0.5 mile to the south of the project area.

Discussion of Impacts

a, b) ***Less than Significant Impact.*** The proposed project is not designed to increase vehicle trips on Greenstone Road; it is intended to improve traffic flow and traffic safety through the area by widening the bridge and modifying the roadway to match the new bridge. Construction-related activities may temporarily increase traffic delays on the road and across the bridge and could result in increased traffic on other roads in the area during construction. In addition, the closure of Greenstone Road during one construction season would require that traffic use alternate routes, slightly increasing traffic on nearby roads. However, the effects of project-related traffic delays would be temporary and intermittent over a maximum of two construction seasons lasting a total of approximately 14 months. The project description (Sections 2.3 and 2.4) identifies traffic control measures that would be in place during the construction phase to alert travelers to potential delays and of alternative routes. Project implementation would have a less-than-significant impact on traffic loads and level of service in the area.

c) ***No Impact.*** The proposed project would not affect air traffic patterns and would have no effect on air traffic levels or safety.

d) ***No Impact.*** The proposed project would not increase hazards due to a design feature or incompatible uses. Road and bridge improvements are expected to improve traffic safety.

e) ***Less Than Significant Impact.*** Construction activities would require temporary road closure for one construction season. Minor delays may be experienced for emergency access along Greenstone Road or to the two residences adjacent to the work area. As part of the traffic management plan required under the construction contract special provisions, the County or its construction contractor(s) will coordinate with law enforcement and emergency service providers prior to the start of construction to ensure that construction activities do not impair emergency services and law enforcement response. Residents will also be notified in advance of construction and would be allowed access to their properties throughout the construction phase. With implementation of these traffic management measures, emergency access impacts would be less than significant.

f) ***No Impact.*** The proposed project does not involve on-street or off-street parking.

g) ***No Impact.*** The proposed project would improve Greenstone Road and bridge. It would not conflict with adopted policies for alternative transportation.

XVI.	**UTILITIES AND SERVICE SYSTEMS** — Would the project:	*Potentially Significant Impact*	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e)	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?	☐	☐	☐	☒
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Environmental Setting

Utilities located within and adjacent to the project area include an underground waterline along the east side of Greenstone Road and small storm water drainage ditches. The closest landfill is the Western El Dorado Recovery System transfer and processing facility located near Pleasant Valley Road and Diamond Road in Diamond Springs, about 4 miles east of the project area (California Integrated Waste Management Board 2015). It has a permitted capacity of 400 tons per day and accepts commercial waste.

Discussion of Impacts

a, b, d, e) ***No Impact.*** The proposed project would not generate wastewater or require a new water supply. No new wastewater or water facilities would be constructed or needed as part of the project.

c) ***Less than Significant Impact.*** Roadside drainage would be modified and improved to match the new roadway. Construction of new drainage facilities would result in minor soil disturbance and vegetation removal, and associated impacts would be less than significant.

f, g) ***Less than Significant Impact.*** Solid waste generated by the proposed project would be limited to construction debris, including asphalt and concrete, and old bridge pieces.

Disposal would occur at permitted landfills, such as the Western El Dorado Recovery System, in accordance with federal, state, and local regulations pertaining to waste disposal. Materials would be recycled or reused as feasible. The proposed project would not generate the need for a new solid waste facility, and impacts would be less than significant.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE	*Potentially Significant Impact*	*Potentially Significant Unless Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion

a) ***Potentially Significant Unless Mitigation Incorporated.*** Construction-related activities could result in impacts on sensitive biological resources. No important cultural resources would be affected. Standard construction practices and mitigation measures described in this Initial Study would be implemented to ensure minimal impacts to biological resources.

b) ***Potentially Significant Unless Mitigation Incorporated.*** Other bridge replacement projects in the Slate Creek watershed and road improvement projects along Greenstone Road may be undertaken by the County or Caltrans in the future. These projects may result in cumulative impacts on streams, wetlands, and special-status wildlife species. With the implementation of standard construction practices described in the project description (Sections 2.3 and 2.4) and mitigation measures described for biological resources, the project would result in individually minor impacts and would not contribute substantially to cumulative impacts, resulting in a less than significant impact.

c) ***Less than Significant Impacts.*** The proposed project, particularly during the construction phase, would result in a variety of temporary impacts to human beings. Potential adverse effects would be related to air quality, noise, traffic, and wildfire hazards. The implementation of construction measures described in the project description (Sections 2.3 and 2.4) would ensure that construction-related impacts on human beings are less than significant, and no long-term impacts are anticipated.

4. DETERMINATION

This Initial Study has determined that in the absence of mitigation the proposed project could have the potential to result in significant impacts associated with the factors checked below. Mitigation measures are identified in this Initial Study that would reduce all potentially significant impacts to less-than-significant levels.

	Aesthetics		Mineral Resources
	Agricultural Resources		Noise
	Air Quality		Population and Housing
X	Biological Resources		Public Services
	Cultural Resources		Recreation
	Geology and Soils		Transportation/Traffic
	Hazards and Hazardous Materials		Utilities
	Hydrology and Water Quality	X	Mandatory Findings of Significance
	Land Use/Planning		

On the basis of this initial evaluation:

- ☐ I find that the project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the project MAY have a "Potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date _____

Name and Title: Janet Postlewait, Principal Planner

5. REPORT PREPARATION AND REFERENCES

5.1. Report Preparation

El Dorado County Community Development Agency, Transportation Division – CEQA Lead Agency

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Jed McLaughlin	Environmental Analyst
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Len Lindstrand III	Senior Biologist
Nick Eide	Biologist

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APPENDIX A

Mitigation Monitoring and Reporting Plan

Mitigation Monitoring and Reporting Plan
for the
Greenstone Road at Slate Creek Bridge (No. 25C0087) Replacement Project

El Dorado County
Community Development Agency
Transportation Division
(CEQA Lead Agency)

March 2016

Adopted by Board of Supervisors on: _____

Introduction

Purpose

The El Dorado County Community Development Agency, Transportation Division (County) has prepared an Initial Study (IS) and Mitigated Negative Declaration (MND) for the proposed Greenstone Road at Slate Creek Bridge (No. 25C0087) Replacement Project (proposed project). The County is developing plans to replace Bridge No. 25C0087 on Greenstone Road at Slate Creek. The proposed project is described in more detail in the IS/MND.

As described in the IS/MND, the project itself incorporates a number of measures to minimize adverse effects on the environment. The following measures will be contract provisions:

- Construction contract special provisions will require that a traffic management plan be prepared. The traffic management plan will include construction staging and traffic control measures to be implemented during construction to maintain and minimize impacts to traffic on nearby roads during construction. Minor traffic stoppages or delays on nearby roads may be allowed if necessary during project construction to provide access for construction equipment and vehicles into the project area. Greenstone Road may be closed to vehicle traffic during one construction season. Portable changeable message signs would be used to alert travelers on nearby roads of construction activities and to direct travelers to the detour route while Greenstone Road is closed.

- Contract special provisions will require compliance with El Dorado County Air Quality Management District (AQMD) Rules 223, 223-1, and 223-2 to minimize fugitive dust emissions and naturally occurring asbestos hazards.

- The contractor will be required to comply with the California Air Resources Board Airborne Toxic Control Measure at Title 17 Section 93105 addressing Construction, Grading, Quarrying, and Surface Mining activities and with the Asbestos Airborne Toxic Control Measure for Surfacing Applications (California Code of Regulations, Title 17, Section 93106).

- Contract provisions will require notification of the County and compliance with California Health and Safety Code Section 7050.5 and California Public Resources Code Sections 5097.5, 5097.9 et seq., regarding the discovery and disturbance of cultural materials or human remains should any be discovered during project construction.

- Contract provisions will require compliance with the El Dorado County Grading Ordinance and Storm Water Management Plan for Western El Dorado County and implementation of best management practices (BMPs) as identified in the National Pollutant Discharge Elimination System permit and/or Storm Water Management Plan. The contractor will be required to prepare a storm water pollution prevention plan or water pollution control plan that identifies project-specific BMPs that would be implemented in accordance with County and Caltrans requirements. BMPs may include those related to structure demolition/removal over or adjacent to water, temporary stream crossings, stream bank stabilization, clear water diversions, material equipment use over water, and others as applicable.

- Contract provisions will require a fire safety plan to prevent fires from construction operations (such as welding).

- The County or its construction contractors will conduct early coordination with law enforcement and emergency service providers to ensure minimal disruption to service during construction.

- The County and its construction contractors will comply with the State of California Standard Specifications, written by Caltrans, for public service provision.

- Access to adjacent private properties will remain open at all times during the construction period.

- The project will comply with General Plan Policy 6.5.1.11 pertaining to construction noise.

The IS/MND also identified five mitigation measures that are required to reduce potentially significant impacts on biological resources to levels that are less than significant. This Mitigation Monitoring and Reporting Plan (MMRP) describes a program for ensuring that these mitigation measures are implemented in conjunction with the project. The County, as the lead agency under the California Environmental Quality Act (CEQA), is responsible for overseeing the implementation and administration of this MMRP. The County will designate a staff member to manage the MMRP. Duties of the staff member responsible for program coordination will include conducting routine inspections and reporting activities, coordinating with the project construction contractor, coordinating with regulatory agencies, and ensuring enforcement measures are taken.

Regulatory Framework

California Public Resources Code Section 21081.6 and California Code of Regulations Title 14, Chapter 3, Section 15097 require public agencies to adopt MMRPs when they approve projects under a MND. The MMRPs must be adopted when a public agency makes its findings pursuant to CEQA so that the mitigation requirements can be made conditions of project approval.

Format of This Plan

The MMRP identifies the impacts and mitigation measures from the project IS/MND. Each impact discussed within this MMRP is numbered based on the sequence in which it is discussed in the IS/MND. The impact number corresponds with the specific mitigation measures. Mitigation measures are followed by an implementation description, the criteria used to determine the effectiveness of the mitigation, the timeframe for implementation, and the party responsible for monitoring the implementation of the measure.

Implementation of mitigation measures is ultimately the responsibility of the County; during construction, the delegated responsibility is shared by County contractors. Each mitigation measure in this plan contains a “Verified By” signature line, which will be signed by the County project manager when the measure has been fully implemented and no further actions or monitoring are necessary for the implementation or effectiveness of the measure.

Impacts and Associated Monitoring or Reporting Measures

Impact 1: **Degradation of habitats from invasive plant species.**

Mitigation Measure 1: *Implement measures to prevent the spread of invasive plant species.*

The County will require its contractor to implement the following measures to prevent the spread of invasive plant species into the project area:

- All equipment used for off-road construction activities will be weed-free prior to entering the project area.
- If project implementation calls for mulches or fill, they will be weed free.
- Any seed mixes or other vegetative material used for re-vegetation of disturbed areas will consist of locally adapted native plant materials.
- All temporary disturbance areas (e.g., staging areas) will be identified on construction drawings/plans and the boundaries will be delineated in the field with flagging prior to the initiation of construction activities.
- All temporarily disturbed areas will be returned to pre-project conditions upon completion of construction and will be re-vegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. These areas will be properly protected from washout and erosion using appropriate erosion control devices including coir netting, hydroseeding, and revegetation. In sloped areas additional erosion control measures will be applied including erosion control blankets and biodegradable fiber rolls.

Implementation: The County will ensure its contractor implements the measures described above.

Effectiveness Criteria: The County will prepare and keep on file documentation verifying the implementation of the above referenced measures.

Timing: Construction Phase

Verified By: _____ Date: _____
County Project Manager

Impact 2: **Potential impacts on special-status plant species.**

Mitigation Measure 2: *Conduct pre-construction botanical surveys for special-status plants and protect individuals or populations in work areas.*

The County will retain a qualified botanist to conduct up to two botanical surveys prior to construction activities. The surveys will focus on potential habitat (i.e., serpentine soils) for big-scale balsamroot, Jepson's onion, and Red Hills soaproot in the project area, which primarily includes a proposed staging area west of Greenstone Road and north of Slate Creek. The survey(s) will be timed appropriately to coincide with the blooming period for the species and will be performed within one year prior to any staging or construction-related activities in the area with serpentine soils. In the event that individuals or populations of these special-status plant species are found, the County will mark the plant location(s) as an avoidance area both in the field, using flagging, staking, fencing, or

similar devices, and on construction plans. Information on the plants and avoidance area will be provided to construction crews as part of worker awareness training.

Implementation:	The County will retain a botanist to implement the measures described above.
Effectiveness Criteria:	The County will prepare and keep on file documentation verifying the implementation of the above referenced measures.
Timing:	**Pre-**Construction Phase
Verified By:	_____ Date: _____ County Project Manager

Impact 3:	**Potential impacts on foothill yellow-legged frog and western pond turtle.**
Mitigation Measure 3:	*Implement construction measures to reduce impacts on foothill yellow-legged frog and western pond turtle.*

The County and/or its contractor will implement the following measures to avoid or minimize project-related impacts on foothill yellow-legged frog and western pond turtle:

- Environmental awareness training will be conducted by a qualified biologist prior to onset of the work for construction personnel to brief them on how to recognize foothill yellow-legged frog, western pond turtle, and other special-status animals that may occur in the project area.

- To avoid potential injury or mortality to foothill yellow-legged frogs or western pond turtle using vegetated areas for cover along Slate Creek, initial vegetation clearing (i.e., removal of small trees, shrubs, brush, and tall dense grasses) along Slate Creek will be done manually using hand tools (e.g., chainsaw, lopper, weed wacker). The vegetation will be cut to ground level and be removed from the work area by hand.

- Slate Creek outside the work area will be staked, flagged, or signed to avoid encroachment by equipment and construction crews. The number of access routes, size of the staging area, and the total area of impact will be limited to the minimum necessary to achieve the proposed project goal. This goal includes locating access routes and construction areas outside of the creek to the maximum extent practicable. The flagged areas will confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on natural habitats in the project area.

- All refueling and maintenance of equipment and vehicles will occur at least 50 feet from water bodies and will not occur at a location where a spill would drain directly toward the creek. Prior to the onset of work, the County will ensure that a spill prevention and clean-up plan is in place for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

- Appropriate BMPs to protect water quality and control erosion will be implemented.

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

- Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed will be minimized to the maximum extent possible.

- If foothill yellow-legged frogs or western pond turtles or their nests are encountered in the project area during construction and will be harmed by construction activities, work will stop in the area and the County will notify the California Department of Fish and Wildlife (CDFW). Upon authorization from CDFW, a qualified biologist may relocate the individual(s) the shortest distance possible to a location containing habitat outside of the work area. If a pond turtle nest is discovered during construction activities, a qualified biologist will flag the site and determine if construction activities can avoid affecting the nest. If the nest cannot be avoided, it will be excavated and relocated at a suitable location outside of the construction impact zone by a qualified biologist in coordination with CDFW.

Implementation:	The County will retain the services of a qualified biologist to train construction crews and relocate special-status animals, if needed, and will ensure the contractor implements the measures described above.
Effectiveness Criteria:	The County will prepare and keep on file documentation verifying the implementation of the above referenced measures.
Timing:	Pre-Construction Phase and Construction Phase
Verified By:	_____ Date: _____ County Project Manager

Impact 4:	**Potential impacts on nesting birds.**
Mitigation Measure 4:	*Conduct pre-construction surveys for nesting birds and establish construction-free buffer zones around active nest sites.*

The County and/or its contractor will implement the following measures to minimize or avoid project-related effects on nesting migratory and special-status birds:

- To deter cliff swallows from nesting under the existing bridge, the County will install an exclusionary device (e.g., netting) around the bridge prior to the initiation of the avian breeding season (before February 15) during the same year as bridge removal is proposed and after a qualified biologist has determined no nesting activity is present. The exclusionary device will remain in place until August 15 or until the bridge is demolished. The exclusionary device will be anchored such that swallows cannot attach their nests to the structure through gaps. If swallows begin building nests on the structure after installation of the exclusionary device, the County will coordinate with CDFW and will remove the nesting material in the presence of a qualified biologist to ensure that the destruction of an active nest does not occur. Bridge removal may be delayed until the nests are no longer active.

- Because construction activities cannot avoid the avian breeding season, the County will retain a qualified biologist to conduct a pre-construction survey of the project area and a 250-foot buffer, as access is available, to locate active bird nests and identify measures to protect the nests. The pre-construction survey will be performed between February 15 and August 31, but no more than 14 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities for 14 days or longer occurs, another pre-construction survey will be performed.

- If active nests are found during the pre-construction survey, the County will coordinate with a qualified biologist and CDFW, as necessary, on additional protection measures, such as establishment of a buffer around the nest tree. No construction activity will be conducted within this zone during the nesting season (February 15 and August 31) or until such time that the biologist determines that the nest is no longer active or the nesting activity would not be disrupted. The buffer zone will be marked with flagging, stakes, or other means to mark the boundary. All construction personnel will be notified of the existence of the buffer zone and will avoid entering the buffer zone during the nesting season.

Implementation: The County will retain the services of a qualified biologist to conduct pre-construction surveys and will ensure its contractor implements the measures described above.

Effectiveness Criteria: The County will prepare and keep on file documentation verifying the implementation of the above referenced measures.

Timing: Pre-Construction Phase and Construction Phase

Verified By: _____ Date: _____
County Project Manager

Impact 5: **Discharge of fill into and disturbance to waters of the United States (Squaw Hollow Creek and adjacent wetlands).**

Mitigation Measure 5: *Comply with permit conditions and compensate for the loss of wetlands in the project area.*

- The County will comply with the terms of a Clean Water Act Section 404 permit issued by the U.S. Army Corps of Engineers (Corps) and Section 401 water quality certification issued by the Regional Water Quality Control Board (RWQCB) for activities involving the discharge of fill material into Slate Creek, the ephemeral stream, or the wetlands swales. For activities in and along Slate Creek, the County will also comply with terms of a Streambed Alteration Agreement with the CDFW (if determined necessary by the CDFW). The actual project impacts will be calculated once final designs are available and during the permit application process. Prior to any discharge of dredged or fill material into Slate Creek, the ephemeral stream, or the wetland swales, the required permits and authorizations will be obtained from the respective agencies. All terms and conditions of the required permits and authorizations will be implemented.

- Based on the final designs, if unavoidable permanent impacts on wetlands in the project area are anticipated, the County will compensate for the loss of wetland functions through payment into an in-lieu fee program or mitigation bank identified in coordination with the Corps. The specific mitigation ratio will be identified in coordination with the Corps and will provide at least a 1:1 replacement ratio for impacts to wetlands.

- All waters of the United States temporarily affected by project construction will be restored as close as practicable to their original conditions.

- A constructed drainage ditch/channel should be placed along the eastern boundary of the new roadway alignment to convey runoff from the ephemeral stream towards Slate Creek.

Implementation:	The County will submit the required documentation and comply with terms of the permits.
Effectiveness Criteria:	The County will prepare and keep on file documentation verifying the implementation of the above referenced measures.
Timing:	Pre-Construction Phase and Construction Phase
Verified By:	_____ Date: _____
	County Project Manager