Estero Americano Bridge Replacement Project

MARIN AND SONOMA COUNTIES, CALIFORNIA
CALTRANS DISTRICT 4
STATE ROUTE 1 – MRN PM 50.1/50.5, SON PM 0.0/0.1
EA 209500; Project ID 04-1200-0116

Initial Study with Proposed Negative Declaration

Prepared by the
California Department of Transportation

October 2014
Figure 1. Project Vicinity Map

Estero Americano Bridge Replacement Project
Marin and Sonoma Counties, California
State Route 1
Figure 2. Existing Condition

Figure 3. Comparison of Project Area Before (top) and After (below) Construction

Site Photographs and Site Simulation.
Estero Americano Bridge Replacement Project – October 2014
INITIAL STUDY WITH PROPOSED NEGATIVE DECLARATION

04 - MRN 1 and 04 - SON 1
MRN 1 – 50.1/50.5 and SON 1 – 0.0/0.1
EA 209500; Project ID 0412000116

Dist.-Co.-Rte. P.M/P.M. E.A.

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>Estero Americano Bridge Replacement Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead agency name and address:</td>
<td>California Department of Transportation 111 Grand Ave., Oakland, CA 94612</td>
</tr>
<tr>
<td>Contact person and phone number:</td>
<td>Wajahat Nyaz, Project Manager (510) 286-5119</td>
</tr>
<tr>
<td>Project Location:</td>
<td>Valley Ford, Marin and Sonoma Counties, California</td>
</tr>
<tr>
<td>General plan description:</td>
<td>Transportation</td>
</tr>
<tr>
<td>Zoning:</td>
<td>Transportation</td>
</tr>
</tbody>
</table>
| Other public agencies whose approval is required (i.e., environmental permits): | • Biological Opinion from the U.S. Fish and Wildlife Service  
• Lake and Streambed Alteration Agreement from California Department of Fish and Wildlife  
• Coastal Development Permit from the California Coastal Commission  
• Clean Water Act 404 Permit from the U.S. Army Corps of Engineers  
• Clean Water Act 401 Water Quality Certification from the North Coast Regional Water Quality Control Board |

Additional copies of this document, as well as the technical studies this document relies on, are available for review at the district office, 111 Grand Ave., Oakland, CA 94612.

We welcome your comments. While you may voice support or opposition for a project, the most beneficial comments include concerns that are not addressed in the environmental document, inaccuracies or missing information, and specific alternatives or minimization measures that would provide better ways to avoid or minimize any potential environmental effects of the project. At this time, a public open house meeting is not planned for this project. If you would like to request an open house, please see the information below.

Please send your written comments or requests for a public open house to Caltrans by the deadline. Submit comments to Oliver Iberien, Environmental Analysis Senior, at Oliver.Iberien@dot.ca.gov or send postal mail to Caltrans District 4, Attn: Oliver Iberien, PO Box 23660 MS 8B, Oakland, CA 94623-0660. Hard copies or compact disks of the document are available by writing to the above mailing address; electronic copies are online at http://www.dot.ca.gov/dist4/envdocs.htm. Be sure to submit comments by the deadline: November 18, 2014.

Stefan Galvez  
Office Chief, Office of Environmental Analysis  
Caltrans District 4, Oakland

Date: 10/15/14

To obtain a copy in Braille, in large print, on computer disk, or on audiocassette, please contact: Caltrans, Attn: Oliver Iberien at the address above, call 510-622-0803, or use the California Relay Service TTY number, 711.
Project Information

Location
The California Department of Transportation (Caltrans) proposes to replace the existing bridge over Americano Creek on State Route 1 in Marin and Sonoma Counties, California. The Estero Americano Bridge Replacement Project is located in an unincorporated area of Sonoma and Marin Counties about 1.5 miles east of Valley Ford on State Route 1. The project limits stretch between post miles (PM) 50.1 and 50.5 in Marin County and PMs 0.0 and 0.10 in Sonoma County.

Project Goal
Caltrans proposes to replace the existing bridge spanning Americano Creek, which delineates the border between Marin and Sonoma Counties on State Route 1 southeast of the town of Valley Ford, California (Figure 1). The existing bridge deck has a two-foot (ft) sag, is structurally deficient, and is subject to periodic flooding from Americano Creek due to its low elevation in the landscape. The bridge was originally built in 1925; the bridge is at the end of its service life and will be replaced with a longer, cast-in-place concrete box girder bridge. The purpose of the project is to maintain the integrity of the roadway and provide flooding relief at this location.

Project Description

Bridge Structure
The project will remove the existing 146’ long, 25’-wide bridge and replace it with a 266’ long, 40’-wide cast-in-place concrete box girder bridge. The new bridge will support a roadway consisting of a 12’ travel way in each direction and 6.0’ shoulders. The spans will be supported on either side by six piers on extensions built with 30”-diameter, 40’-long cast-in-drilled-hole (CIDH) piles. The new bridge will be about 6’ higher than the existing bridge and was designed to accommodate the 100-year flood event. The new bridge will also provide more space for wildlife passage beneath the roadway and result in an increase in the amount of riparian habitat along Americano Creek.

Prior to constructing the bridge, the majority of riparian and roadside vegetation within Caltrans’ right-of-way (ROW) through the project limits will be removed. The area will be grubbed and graded to allow for the construction of temporary access roads up to 16 feet wide for construction of the new bridge and for materials staging and storage.

The bridge will be constructed in two sections; the eventual northbound lane will be constructed first, to allow the existing bridge to be used for traffic with one-way traffic control during construction. Traffic will then be shifted onto the new bridge. One-way traffic control will continue while the old bridge is demolished and the second half of the new bridge is completed. Temporary K-rail will be placed on the edge of the new structure while the southbound side of the new bridge is constructed.
Prior to beginning bridge construction, if necessary, a cofferdam or other temporary creek diversion system will be constructed to convey any standing water away from the work area. For each rank of piles, holes 30” in diameter will be drilled at 8’ on center using rig-mounted drills working either in the creek bed on mats or on one or more temporary access roads. Two-foot-wide rebar cages will be lowered into the holes and concrete will be pumped into the holes, with containment systems around the holes to contain water, drilling fluid, etc. Forms will be placed over the above-ground rebar and concrete pumped into the forms. Falsework to support the cast-in-place concrete box girder construction will then be constructed. Forms will be constructed over the falsework, structural steel will be placed in the forms, and concrete will be pumped into the forms. Barrier rail will be constructed on the edge of the slab (see below).

**Retaining walls**

The roadway will be raised to meet the abutments of the new bridge. Retaining walls will be constructed along the roadway alignment, with imported engineered fill used behind the walls, to support a roadway consisting of a 12’ lane in each direction and 6’shoulders, conforming at its termini to the existing roadway. Approximate wall dimensions are as follows:

<table>
<thead>
<tr>
<th>Wall location</th>
<th>Wall length</th>
<th>Extent of footing width beyond face of wall</th>
<th>Max. height</th>
<th>Min. height</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE corner of bridge</td>
<td>130’</td>
<td>2.2-3.0’</td>
<td>8.0’</td>
<td>2.0’</td>
</tr>
<tr>
<td>NW corner of bridge</td>
<td>100’</td>
<td>2.2-3.0’</td>
<td>8.0’</td>
<td>2.0’</td>
</tr>
<tr>
<td>SE corner of bridge</td>
<td>425’</td>
<td>2.2-3.0’</td>
<td>9.0’</td>
<td>2.0’</td>
</tr>
<tr>
<td>SW corner of bridge</td>
<td>575’</td>
<td>2.2-3.0’</td>
<td>9.0’</td>
<td>2.0’</td>
</tr>
</tbody>
</table>

To construct the retaining walls, the area for the footing will be excavated to a maximum depth of 3.0’. Forms will be constructed, structural steel placed in the forms, and the forms will be filled with concrete. Aesthetic treatment will then be applied to the wall. The area between the walls will be filled with imported engineered fill to the height necessary to raise the pavement to the appropriate elevation.

**Embankment**

The project will construct new embankment, where retaining walls are not used, to conform the existing roadway to the end of the new retaining walls. Embankment would be created by using imported fill and excavated material from the discarded embankment and that can be reused; this material will be compacted along the roadway edge. Approximate embankment dimensions are as follows:

<table>
<thead>
<tr>
<th>Embankment location</th>
<th>Embankment length</th>
<th>Embankment width</th>
<th>Embankment depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE</td>
<td>600’</td>
<td>0’-25’</td>
<td>0’-8’</td>
</tr>
<tr>
<td>NW</td>
<td>630’</td>
<td>0’-25’</td>
<td>0’-8’</td>
</tr>
<tr>
<td>SE</td>
<td>870’</td>
<td>0’-30’</td>
<td>0’-9’</td>
</tr>
<tr>
<td>SW</td>
<td>720’</td>
<td>0’-30’</td>
<td>0’-9’</td>
</tr>
</tbody>
</table>
Existing embankment not needed for new roadway construction will be removed and regraded to conform to the original grade. Excavated material not reused on location will become property of the contractor and will be disposed of according to Caltrans specifications.

**Pavement Section**

The project will construct two 12’ travel lanes, one in each direction, with 6’ shoulders. Where the project constructs new roadway between the bridge abutments and the existing roadway at the termini of the project, new AC pavement will be poured. The pavement section will consist of a layer of aggregate subbase under a layer of aggregate base, over which AC is applied. The aggregate will be mechanically compacted, after which AC will be applied and finished using truck-mounted pavers.

**Barrier Rail**

Barrier Type ST-20S rail will be constructed along the edge of shoulder over the bridge and atop the retaining walls. The Type ST-20S rail is a steel rail mounted on a concrete curb that allows for more visual transparency than a solid concrete barrier.

**Utilities Relocation**

Verifications of utilities were obtained, and it was determined that two utility poles will need to be relocated. No additional right-of-way is required for the relocation of utilities.

**Restoration**

All disturbed areas will be restored by a combination of compost application, revegetation with native plants, and hydroseeding with an appropriate native seed mix. Abandoned areas of roadway will, after the removal of old pavement and regrading to conform to the surrounding landscape, receive the same treatment. All invasive, non-native plants, duff, and excavated material containing invasive plant material will be cleared from the project footprint. The wetland ditches that line the roadway will be reconstructed on site, and all riparian vegetation along Americano Creek removed for the project will be replanted at a 1:1 ratio.

**Staging**

The majority of Caltrans’ ROW around the entire project area will be required for construction access and materials staging. Work will continue for three seasons. The majority of vegetation within the ROW will be removed down to the stumps between September 1 and October 15 the autumn ahead of the first bridge construction season. No grubbing will occur during this time period. Construction activities at the project site outside the creek will occur between April 15 and November 1; work within the creek will be limited to occur between June 1 and November 1. These windows are designed to avoid the time of year when protected wildlife is most active and the wet season when construction activities in the creek would have a higher likelihood to impact areas downstream. The project will require 200 working
days. One-way traffic control will be required; occasional full closures and detours may be required. Some night work may be required. No additional right-of-way is required to construct the project.

**Environmental Setting**

The Estero Americano project site crosses Americano Creek about two miles upstream of where the creek transitions into the Estero Americano near Valley Ford. The Estero Americano watershed covers 49 square miles and provides habitat for numerous fish and wildlife species. The Estero Americano has been categorized as a Critical Coastal Area by the State of California. Estero Americano ultimately flows towards Bodega Bay and the Gulf of the Farallones National Marine Sanctuary.

Americano Creek traverses from east to west below the existing concrete bridge structure on State Route 1. Dense riparian habitat is present along the creek west of State Route 1 and lies adjacent to upland and grassland communities. The upstream end of the bridge (east side of State Route 1) supports a small patch of riparian habitat and a riparian wetland. Four excavated wetland drainages parallel State Route 1. These drainages are located north and south of the project site and flow towards Americano Creek. The creek is nearly filled with sediment below the bridge of State Route 1. Americano Creek was once a perennial stream, and this creek and other streams in the Estero Watershed are now intermittent in most years because of excessive sediment deposition in the watershed. Americano Creek is presently not known to support fish resources above tidewater. The current tidal extent of the Estero Americano is up to four miles inland or two miles west of the project site.

The Estero Watershed has changed from its historic condition because of agricultural land use, instances of unmanaged livestock grazing, and historic potato farming, which was common between 1850 and 1953. These practices have resulted in excessive sediment deposition to the watershed, which has contributed to stream channel aggradation, which in turn exacerbates local flooding problems. The supply of fine sediment to Americano Creek significantly exceeds the carrying capacity of the stream. The northwestern and southwestern areas of the project area have been seeded with crops for forage. The northeastern parcel is actively disked and tilled. The southeastern portion area adjacent to the project limits is primarily grazed by sheep and is not tilled. There are also ditches within the southeastern parcel that have been constructed perpendicular to the road; the purpose of these ditches is unknown. The vegetation within Caltrans’ ROW consists of wetland species in the ditches and non-native, annual grasses elsewhere. Willows and blackberries are abundant along Americano Creek and are present in the roadside ditches nearest the creek. Elevations within the project area range from approximately 24 to 34 ft above sea level.

**Consistency with Existing Zoning Plans and other Applicable Land Use Controls**

The project is located on State Route 1 in both Marin and Sonoma Counties, and thus within the area covered by the Sonoma County General Plan, Sonoma County Local Coastal Plan, Marin Countywide Plan, and the Marin County Local Coastal Program Land Use Plan. This project complies with the stated goals, guidelines, and recommendations of each county’s plans, including recommendations for view preservation, the minimization of visual degradation of natural landforms, and the construction of
roadways to minimize the impacts of roads on wetlands, streams, and the scenic resources of the Coastal Zone.

The project was reviewed for consistency with the California Coastal Act policies, the analysis can be found in Appendix E.
A. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 9 for additional information.

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

B. DETERMINATION

On the basis of this initial evaluation:

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

Signature: Date: 
Printed Name: For:
Proposed Negative Declaration
Pursuant to: Division 13, Public Resources Code

Project Description
The California Department of Transportation (Caltrans) proposes a project to replace a bridge on State Route 1 over the Marin and Sonoma county line southeast of Valley Ford, California with a new 266'-long cast-in-place concrete box girder. The existing bridge has a two-foot sag, is structurally deficient, and is subject to periodic flooding due to its low elevation in the landscape. Built in 1925, the bridge is at the end of its service life. The purpose of the project is to maintain the integrity of the roadway and provide flooding relief at this location. Because of the higher elevation of the replacement bridge, the project will require new roadway approaches. This project will construct new retaining walls on both sides of the roadway approaches ranging from 100 to 575 in length and from 2.0'-9.0' in height to conform to the existing roadway. The roadway will also be widened to accommodate a 12'-lane in each direction with 6' shoulders throughout the project limits. Caltrans’ entire right-of-way within the project limits will be used for construction (e.g., vehicle access, construction equipment staging).

Determination
This proposed Negative Declaration (ND) is included to give notice to interested agencies and the public that it is Caltrans intent to adopt an ND for this project. This does not mean that the Caltrans decision regarding the project is final. This ND is subject to modification based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

All impacts to natural resources are considered minimal, because all disturbed areas onsite will be restored with an appropriate mix of native plants. All riparian trees will be replanted within the Americano Creek corridor. Caltrans has determined that this project will not result in cumulative impacts to the environment. This project is anticipated to result in an overall improvement of local environmental conditions, because the new bridge will be longer and better span the Americano Creek floodplain compared to the existing bridge.

The proposed project would have no effect on recreation, public services, growth, agriculture, air quality, cultural resources, geology, hazardous waste, land use, mineral resources, or noise.

In addition, the proposed project would have no significant impact on traffic/transportation, utilities, or on visual, biological, aquatic, or hydrologic resources.

Melanie Brent                        Date
Deputy District Director, Environmental Planning and Engineering
District 4
California Department of Transportation
CEQA Environmental Checklist

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

I. AESTHETICS: Would the project:

a) Have a substantial adverse effect on a scenic vista
   - [ ] Potentially Significant Impact
   - [ ] Less Than Significant with Mitigation
   - [ ] Less Than Significant Impact
   - [x] No Impact

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
   - [ ] Potentially Significant Impact
   - [ ] Less Than Significant with Mitigation
   - [ ] Less Than Significant Impact
   - [x] No Impact

c) Substantially degrade the existing visual character or quality of the site and its surroundings?
   - [ ] Potentially Significant Impact
   - [ ] Less Than Significant with Mitigation
   - [x] Less Than Significant Impact
   - [ ] No Impact

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?
   - [ ] Potentially Significant Impact
   - [ ] Less Than Significant with Mitigation
   - [ ] Less Than Significant Impact
   - [x] No Impact

The design will be consistent with the visual quality of the highway corridor, and no scenic resources will be adversely affected by the proposed project. Pertinent elements of the Sonoma County Local Coastal Plan are reflected in the project’s design. The Project Manager, Project Engineer, and associated staff have fully committed to the incorporation of the aesthetic elements recommended by the Office of Landscape Architecture and plant selections by the project biologist. That commitment will result in a project that improves the safety of the traveling public and preserves State infrastructure without visual degradation of the existing landscape.

Avoidance or minimization measures have been identified and can lessen visual impacts of the project. The inclusion of aesthetic features in a project design can help generate public acceptance. This section describes additional avoidance and/or minimization measures to address specific visual impacts. These will be designed and implemented with concurrence of the District Landscape Architect.

The primary means of minimizing potential project impacts to visual resources involves replanting the State right of way within the project limits. All disturbed areas will be revegetated following construction. Areas near the creek will be planted with native willows and potentially other native plants as recommended by the project biologist. This planting, naturally irrigated by the creek and adjoining ditches will screen the new structure from the view of all but those using the roadway. Beyond the ditches, all other disturbed areas will be hydroseeded with a blend of
locally native plants as recommended by the project biologist.

Concrete surfaces potentially visible from off-site will receive architectural treatment to reduce reflected light, reducing visibility of the structures from distant views. Without such modifications, concrete structures can appear as new and visually stark components within a highway corridor. Architectural treatment, such as roughing the texture of new elements, will help blend the additions into the landscape, minimizing the perceived change.

Type ST-20S bridge railing, a steel rail mounted on a concrete curb that allows for more visual transparency than a solid concrete barrier, will be used to preserve views through and beyond the barrier will be an improvement over the existing solid concrete barrier.

The use of retaining walls will allow for limited embankment construction, minimizing the project’s footprint and impact to wetlands.

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project. and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d) Result in the loss of forest land or conversion of forest land to non-forest use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

No agricultural lands will be directly affected by the project.

III. AIR QUALITY: 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:

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Conflict with or obstruct implementation of the applicable air quality plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
b) Violate any air quality standard or contribute substantially 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? □ □ ☒ ☒

The project will not increase capacity and so will not affect air quality.

IV. BIOLOGICAL RESOURCES: Would the project:

<table>
<thead>
<tr>
<th>Impact Level</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

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

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

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? □ □ ☒ ☒

The Estero Americano project site crosses Americano Creek upstream of where the creek transitions into the Estero Americano near Valley Ford. The Estero Americano watershed covers
49 square miles and provides habitat for numerous fish and wildlife species, including species of special concern. The Estero Americano has been categorized as a Critical Coastal Area by the State of California.

Americano Creek traverses from east to west below the existing concrete bridge structure on State Route 1 and flows towards Bodega Bay and the Gulf of the Farallones National Marine Sanctuary. Dense riparian habitat is present along Americano Creek west of State Route 1 and lies adjacent to upland and mesic grassland communities. The creek immediately upstream of the bridge (east side of State Route 1) supports a small patch of riparian habitat and a riparian wetland. Four excavated wetland drainages parallel State Route 1. These drainages are located north and south of the bridge site and flow towards Americano Creek. The creek is heavily filled with sediment below the existing bridge. Americano Creek is presently not known to support fish resources above tidewater, which ends near the town of Valley Ford.

The vegetation within Caltrans’ ROW consists of wetland species in the ditches and annual grasses elsewhere. Willows (Salix spp.), blackberries (Rubus spp.), teasel (Dipsacus sp.), and poison hemlock (Conium maculatum) are abundant along Americano Creek and are present in the roadside ditches nearest the creek. The upland areas abutting the wetlands largely support non-native, annual grasses. Outside Caltran’s ROW, the northwestern and southwestern areas of the project area have been seeded with crops for forage. The northeastern parcel is actively disked and tilled. The southeastern portion area adjacent to the project limits is primarily grazed by sheep and is not tilled.

Rare plants have been observed within the project area but outside the project footprint. The project footprint includes all areas within Caltrans’ ROW that will be utilized for construction staging and access and directly impacted by construction activities. For this project, rare plants include those that are included in CNPS’ Inventory of Rare and Endangered Plants and/or federally listed. Rare plants observed in the project area include the purple-stemmed checkerbloom (Sidalcea malviflora ssp. purpurea) and Johnny nip (Castilleja ambigua ssp. ambigua), which are included on CNPS’ inventory and the Contra Costa goldfields (Lasthenia conjugens, (CCG), which is federally endangered and on CNPS’ inventory.

The project area is also known to support protected wildlife, including federally listed species, migratory birds, and state species of special concern. Federally listed animal species that will or have the potential to be impacted by the project include the California red-legged frog (Rana draytonii, CRLF and also a state species of special concern) and the Myrtle’s silverspot butterfly (Speyeria zerene myrtleae, MSB). The tricolored blackbird (Agelaius tricolor), a state species of special concern, is also known to occur in the project area.

**Impacts to Biological Resources**

Impacts to biological resources associated with this project include: riparian and wetland vegetation removal, removal and grading of the existing wetland ditches, grubbing of the project site, placement and use of access roads, embankment, and retaining walls, in-creek work, construction staging activities, construction-related noise, compaction, and potential sedimentation downstream. Caltrans does not anticipate this project will impact areas outside the project footprint. The discussion below highlights the impacts to special-status plants, animals, and wetlands and waters within the project area. It also highlights the avoidance and minimization measures (AMMs) that will be implemented to minimize impacts to special-status species and to protect the surrounding environment from project-related impacts. Additionally, the complete list of proposed AMMs can be found in Appendix G.

**Special-status Plants within the Project Area**

Special-status plant species were observed in the project area but are unlikely to be affected by project activities. Rare plants observed in the project area include the purple-stemmed checkerbloom (Sidalcea malviflora ssp. purpurea) and Johnny nip (Castilleja ambigua ssp.
ambigua), which are on CNPS’ Inventory of Rare and Endangered Plants but are not state or federally listed, and the Contra Costa goldfields which is federally endangered and on CNPS’ rare plant inventory. No special-status plants were observed within the area where construction activities will occur (i.e., the project footprint).

Purple-stemmed checkerbloom was observed within Caltrans’ ROW but just north of the northern most project limits. Johnny nip was observed within a field abutting the project footprint. Construction impacts to these species are unlikely to occur, because these plants were not observed within the project footprint. Environmentally sensitive area fencing will be erected around the checkerbloom population to prevent the inadvertent encroachment of construction vehicles into the area where the checkerbloom was observed and the subsequent crushing of individual plants. Project work will not occur outside Caltrans’ ROW. Water quality BMPs will prevent dust and sediment from washing into or entering the field where Johnny nip was observed and affecting individual plants.

The extent of Contra Costa goldfields (CCG) in the project vicinity abuts, but does not overlap, the project footprint (a fence separates the goldfields from the ROW where direct impacts will occur). Individual plants could be affected by the generation of dust or sediment deposition into the field where the goldfields occur as a result of construction activities within the project footprint.

Indirect effects to the CCG within the project study area could also result from the construction of a longer bridge through changes in hydrology. A longer bridge over Americano Creek could potentially speed up the flow of water through the project area, thereby hastening the drying of the wetland swales that support the CCG and subsequently making them unsuitable for the species through shorter inundation periods. The opposite condition could also result. Caltrans’ Department of Hydraulics has produced a hydrologic model forecasting the anticipated condition of the project area post-construction. The project includes constructing a longer bridge and raising the roadway to meet the new bridge; with a taller roadway the two-year flood is anticipated to result in about a 0.7-foot increase in ponding in the field supporting the CCG over the current condition.

Although this increase in inundation could affect the CCG population, the resulting effects on the population are unlikely to adversely affect the population. Because the CCG has a higher affinity for deeper, wetter pools than drier swales and soils, a slight increase in inundation during regular flooding events is unlikely to result in a decrease in population size. Increased ponding may have a beneficial impact on the population.

Silt and ESA fencing will be erected along the fence line adjacent to the field where the CCG was observed. This will prevent the inadvertent encroachment into CCG habitat by construction vehicles. Water quality BMPs will prevent dust and sediment from washing into or entering CCG habitat and subsequently affecting individual plants. Please see the complete list of proposed AMMs for the CCG in Appendix F.

Because of the proximity of the project to CCG habitat, Caltrans entered into formal consultation with the USFWS pursuant to section 7 of the Endangered Species Act. Caltrans and the USFWS have agreed, through consultation, that this may affect, is likely to adversely affect, the CCG. Caltrans’ AMMs will reduce the likelihood that individual CCG will be affected by the proposed project.

Special-status Animals within the Project Area

Special-status animal species given further consideration with this project include the California red-legged frog (CRLF), Myrtle’s silverspot butterfly (MSB), tricolored blackbird, bats, and migratory birds. Other species that occur within 5 miles of the project area, such as steelhead (Onchorynchus mykiss) the tidewater goby were ruled out because of a lack of habitat within the project footprint. Steelhead have not been documented as occurring within the project area, and
the creek is too intermittent to support such species as the tidewater goby and freshwater shrimp.

The CRLF is known to occur along Americano Creek within the project footprint and general project area. The most recent documented observation is from surveys conducted in 2004. The historical range of the CRLF extended coastally from the vicinity of Elk Creek in Mendocino County, California, and inland from the vicinity of Redding, Shasta County, California, southward to northwestern Baja California. The CRLF was historically documented in 46 counties, but the species is now extant in 238 drainages within 23 counties, representing a loss of 70 percent of its former range. The CRLF is still locally abundant within portions of the San Francisco Bay Area and the Central Coast.

Pursuant to section 7 of FESA, Caltrans concluded that this project may affect, is likely to adversely affect, the CRLF. The proposed project will likely result in direct and indirect impacts on the CRLF and its habitat within the project footprint and may result in the harm and harassment of individuals during construction activities through handling efforts and displacement from construction-related disturbance. Habitat impacts will occur with the placement of fill material to construct the roadway, bridge bents, and retaining walls. Although this project will permanently impact suitable breeding, dispersal, and upland habitat, this project is ultimately likely to improve the environmental baseline for the frog within the project footprint and BSA, because the frog will have a wider movement corridor (121 feet wider) along the creek than what is currently present. As a result of constructing a longer bridge, more riparian habitat and aquatic breeding and dispersal habitat will become established following project completion (0.095 acre). Reduced frog roadway mortality is also anticipated with the construction of retaining walls near the creek, because the retaining walls will be elevated above ground level and will prevent frogs from accessing the paved roadway. Additionally, the existing roadway will be removed and regraded where it does not overlap with the new roadway, and the old bridge will be demolished. These activities will result in the restoration of reclaimed habitat, including upland and aquatic habitat.

The MSB is a member of the brush-foots family (Nymphalidae). This subspecies is a medium-sized butterfly with a wingspan of approximately 2.17 inches. The upper surfaces of the wings are golden brown with numerous black spots and lines. The undersides are brown, orange-brown, and tan with black lines and distinctive silver and black spots. Typical habitats supporting the MSB and its host plant are coastal dunes, coastal scrub, or coastal prairie at elevations ranging from sea level to 1,000 feet and as far as three miles inland. There is a minimal likelihood that the MSB would be encountered at the project site. The site is not suitable for breeding, because the project area does not support the larval host plant, western dog violet (Viola adunca), and the butterfly generally seeks out areas that are protected from the wind and hillside topographic features not present in the project area. The nearest known MSB population occurs in uncultivated coastal grassland habitat that is more scrublike than what is found in the project area and supports outcrops and hilltop features suitable for the species. The project footprint and project area supports suitable nectar plants for the MSB. However, these are present in low abundance, and the species is generally dependent upon the presence of both suitable nectar plants and the larval host plant. Take of the MSB will be avoided through the implementation of AMMs in listed Appendix G. Proposed AMMs conducting vegetation removal outside the adult flight period.

While the proposed project is likely to adversely affect the CRLF and could potentially affect the MSB and CCG, planned avoidance and minimization measures will minimize these potential adverse effects and a full list can be found in Appendix G. Through consultation with the USFWS, Caltrans did not propose any compensatory mitigation for federally listed species, because this project is anticipated to improve the environmental baseline in the project area.

The willows and wetland vegetation present along the riparian area of Americano Creek and associated wetland ditches have a high potential to support nesting migratory birds. The majority of migratory birds are protected by the Migratory Bird Treaty Act. Several common bird species have been observed within the project area. Measures have been incorporated into this project to
avoid the take of migratory birds and their nests (Appendix G). The tricolored blackbird, a state species of special concern, was observed within the project area in 1977. The wetland and riparian habitat in the project area is suitable for the species. The tricolored blackbird, largely endemic to California, is experiencing a precipitous decline in abundance and may be listed under the California Endangered Species Act by the time this project goes to construction. The most recent statewide survey did not observe the tricolored blackbird in Sonoma County. The tricolored blackbird is a colonial nester; the species generally nests in large flocks. The species has not been observed on site, but species-specific surveys will conducted in 2015. If present, measures will be taken to avoid disturbing and impacting this species (Appendix G). Caltrans will restore all impacted areas present on site, and therefore, all potentially suitable tricolored blackbird habitat within the project footprint will be replaced on site at a 1:1 ratio.

A bat assessment conducted within the project limits demonstrated that bats do not utilize the bridge structure itself. However, various species occur in Marin and Sonoma Counties, including some species of special concern. Special-status bat species include the western red bat (Eumops perotus), pallid bat (Antrozous pallidus), and Townsend’s big-eared bat (Corynorhinus townsendii). The riparian area surrounding the bridge may be used for foraging, while large trees within the project area may be utilized for roosting. Demolition of the existing bridge will not impact bats. Removal of large trees within the project footprint could impact roosting bats. No large trees with cavities suitable for roosting were observed during the bat assessment. Foraging bats present in the project area are capable of construction activities. This project is not anticipated to impact bats. A follow-up assessment for potential roost sites will be conducted prior to beginning construction. Proposed AMMs to avoid impacting bats are included in Appendix G.

**Wetlands and Waters**

This project will impact wetlands and waters under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the North Coast Regional Water Quality Control Board (NCRWQCB), the California Coastal Commission (CCC), and California Department of Fish and Wildlife (CDFW). This project was designed to minimize impacts to these resources through the adoption of a longer bridge design and incorporation of retaining walls into the roadway approaches. This project will impact approximately 0.75 acre of wetlands and waters (of the U.S., State, and CCC); 0.45 acre of these wetlands will be impacted permanently and 0.30 acre will be impacted temporarily.

The wetland ditches along the roadside comprise approximately 0.45 acre of wetland waters of the U.S., State, and CCC. Impacts to the wetland ditches are considered permanent because of the two full construction seasons that will be required to complete the project. The roadside ditches will be filled to construct the new roadway, embankment, and retaining walls. These ditches will be replaced in kind within the ROW as part of the project at a 1:1 ratio. This will ultimately result in a shift of these ditches away from their current position. They will be reseeded with an appropriate mix of native species and constructed to the appropriate elevations.

Temporary impacts to waters will result from construction of the bridge and work within the creek. Americano Creek falls under the jurisdiction of USACE, NCRWQCB, CCC, and CDFW. Temporary impacts will result from doing work within the creek, such as constructing access roads down into the creek, building a temporary creek diversion if necessary, and placing wetland mats down for vehicle access etc. Appendix G contains a list of measures that will be implemented during construction to avoid impacting areas downstream and outside the project footprint as a result of this project.

The project footprint supports 0.90 acre of riparian trees all of which fall under CDFW jurisdiction. The majority of the riparian vegetation within the ROW will be removed in preparation for this project. All riparian vegetation impacted during construction will be replanted on site at a 1:1 ratio. Offsite restoration and enhancement efforts will be coordinated during the permitting phase of this project.
This project will ultimately enhance the riparian area of Americano Creek, because the new bridge will be 121 feet longer than the existing bridge and will ultimately facilitate the growth of more riparian habitat along the creek. Because of the diversity of vegetation and structural complexity found along streams and creeks, riparian corridors provide valuable habitat for wildlife. Riparian areas are important for providing food, nesting sites, shelter and space for wildlife movement. In general, riparian corridors support a greater abundance of wildlife than other adjacent habitats.

Offsite restoration and enhancement efforts to offsite the temporal impacts to wetlands and waters and riparian area of Americano Creek will be coordinated during the design and permitting phase of this project. Temporal impacts include the time it takes for the wetland and riparian vegetation to become reestablished following construction and the two years that the wetland ditches will not be available to migratory birds and wildlife.

Avoidance and Minimization
Caltrans will restore all disturbed areas on site, including the riparian area of Americano Creek and the ditches that line the roadway. Caltrans will replace all wetland ditches on site following construction. Upland areas impacted during the project will be reseeded with a native seed mix. All riparian trees removed during the project will be replanted on site at a 1:1 ratio. Offsite restoration efforts will be explored during the permitting and design phase of this project but are not needed to avoid significant impacts to wetlands and waters of the U.S. and State and Coastal Zone or protected wildlife and plant species.

The new bridge will ameliorate flooding at the project location and create more space for wildlife passage beneath the roadway. Construction of the retaining walls will reduce the amount of environmental impacts within the Americano Creek floodplain by reducing the amount of wetland impacts nearest the creek and likely preventing wildlife from accessing and crossing the roadway, thereby reducing wildlife mortality. Overall, this project is anticipated to result in a net environmental benefit, because there will ultimately be a larger riparian corridor following construction.

Avoidance and minimization measures that will be implemented during this project to reduce impacts to the local environment, include: worker environmental awareness training, the delineation of work areas with high-visibility fencing to prevent construction equipment encroachment into sensitive areas, minimizing night-time work, only removing the minimum amount of vegetation necessary to complete the project, water quality best management practices, etc.

Additional specific requirements for special-status species or habitat restoration will be addressed in permitting. All avoidance and minimization measures will be incorporated into the bid package and the construction contract.

This discussion highlights the AMMs, a complete list of proposed AMMs can be found in Appendix G.

V. CULTURAL RESOURCES: Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

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

No historic structures have been identified in the immediate vicinity of the project, and the Estero Americano Bridge was found ineligible for National Register listing. No archaeological resources are known to be present, and as the project is constructed on areas that have been previously disturbed or are man-made fill, there is little risk of damage to unknown archaeological resources. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

The Native American Heritage Commission (NAHC) was contacted to request a search of the Sacred Lands File for sacred lands or other cultural properties of significance to Native Americans within or near the Areas of Potential Effect (APE). No sacred lands were identified in the project APE.

A representative of the Federated Indians of Graton Rancheria requested a list of culturally significant plants that will be removed during the project and the results from testing for the project. Culturally significant plants that are identified in the project area will be included in the seed mix used for onsite re-vegetation purposes. These plants include: blackberry (*Rubus* spp.), coyote brush (*Baccharis pilularis*), and yarrow (*Achillea millefolium*).

<table>
<thead>
<tr>
<th>VI. GEOLOGY AND SOILS</th>
<th>Would the project:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</td>
<td></td>
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<tr>
<td>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?</td>
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<tr>
<td>ii) Strong seismic ground shaking?</td>
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<tr>
<td>iii) Seismic-related ground failure, including liquefaction?</td>
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<tr>
<td>iv) Landslides?</td>
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<tr>
<td>b) Result in substantial soil erosion or the loss of topsoil?</td>
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<tr>
<td>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?</td>
<td></td>
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<tr>
<td>d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</td>
<td></td>
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<tr>
<td>e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?</td>
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</tbody>
</table>
The project contains no components which would contribute to soil or slope instability. All slopes will be stabilized using standard Caltrans erosion-control BMPs.

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. See http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

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

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels. Research from such establishments as the Intergovernmental Panel on Climate Change (IPCC) are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (s,s,s,2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles make up the largest source (second to electricity generation) of GHG emitting sources. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).¹

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower GHG emitting fuels, and 4) improving vehicle technologies. To be most effective all four strategies should be pursued collectively. The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

Regulatory Setting

State

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and pro-active approach to dealing with GHG emissions and climate change. Relevant legislation include the following policies:

¹ http://climatechange.transportation.org/ghq mitigation
• Assembly Bill 1493 (AB 1493), Pavley.

• Executive Order (EO) S-3-05: (signed on June 1, 2005, by former Governor Arnold Schwarzenegger)

• AB 32, the Global Warming Solutions Act of 2006, Nunez and Pavley

• Executive Order S-20-06: (signed on October 18, 2006 by former Governor Arnold Schwarzenegger)

• Executive Order S-01-07: (signed on January 18, 2007 by former Governor Arnold Schwarzenegger)

• Senate Bill 97 (SB 97) Chapter 185, 2007 • Caltrans Director’s Policy 30 (DP-30) Climate Change (approved June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. This policy contributes to Caltrans’ stewardship goal to preserve and enhance California’s resources and assets.

Federal

Although climate change and GHG reduction is a concern at the federal level; currently there are no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level GHG analysis. As stated on FHWA’s climate change website (http://www.fhwa.dot.gov/hep/climate/index.htm), climate change considerations should be integrated throughout the transportation decision-making process— from planning through project development and delivery. Despite the lack of Federal GHG regulations and legislation, FHWA as well as the National Highway Traffic Safety Administration (NHTSA) and U.S. EPA are taking steps to lessen climate change impacts by improving transportation system efficiency, creating cleaner fuels, reducing the growth of vehicle hours travelled, and enabling the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines.

Project Analysis

The proposed project is not a capacity increasing project so it is not anticipated to have any increase in operational GHG emissions as a result. Additionally the project is located in a very rural area that sees low volumes of traffic, and the surrounding communities not likely to experience a significant increase in growth.

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines sections 15064(h)(l) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting

2 This approach is supported by the AEP: Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).
emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Figure 1 California Greenhouse Gas Forecast

Caltrans and its parent agency, the Transportation Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006. The purpose of this project is to replace the existing bridge on State Route 1 over the Marin and Sonoma county line southeast of Valley Ford, California with a new 266'-long cast-in-place concrete box girder. The existing bridge has a two-foot sag, is structurally deficient, and is subject to periodic flooding due to its low elevation in the landscape. Built in 1925, the bridge is at the end of its service life. The purpose of the project is to maintain the integrity of the roadway and provide flooding relief at this location. As discussed below, construction emissions will be unavoidable, but there will likely be long-term GHG benefits associated reduced maintenance and improved operation through smoother pavement surfaces.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

CEQA Conclusion

Although construction emissions are unavoidable and are expected to be minimal, the proposed project will not increase capacity and is not expected to result in additional operational CO2 emissions. However, it is Caltrans determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too

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3 Caltrans Climate Action Program is located at the following web address: http://www.dot.ca.gov/hg/pp/offices/dgm/key_reports/files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf
speculative to make a determination regarding significance of the project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

**Greenhouse Gas Reduction Strategies**

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).4

**Greenhouse Gas Mitigation**

AB 32 Compliance Caltrans continues to be actively involved on the Governor’s Climate Action Team as ARB works to implement Executive Orders S-3-05 and S-0 1-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year.

The following measures will be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

1) According to Caltrans’ Standard Specifications, the contractor must comply with all of the Bay Area Air Quality Management District rules, ordinances, and regulations regarding air quality restrictions.

2) Compliance with Title 13, California Code of Regulations §2449(d)(3)-Adopted by the Air Resources Board on June 15, 2008, this regulation would restrict idling of construction vehicles to no longer than 5 consecutive minutes. The Contractor must comply with this regulation in order to reduce harmful emissions from diesel-powered construction vehicles.

3) To the extent that it is feasible for the project, the use of reclaimed water may be used to reduce GHG emissions produced during construction. Currently 30 percent of the electricity used in California is used for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces greenhouse gas emissions from electricity production.

**Adaptation Strategies**

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the State’s transportation infrastructure and strengthen or protect the facilities from damage.

Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the States infrastructure due to projected sea level rise.

Executive Order S-1 3-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting

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4 [http://climatechange.transportation.org/ghg_mitigation/](http://climatechange.transportation.org/ghg_mitigation/)
safety, maintenance and operational improvements of the system, and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

The potential effects to the existing floodplain as a result of climate change near the Estero Americano Bridge project site are discussed further in the Hydrology and Water Quality section of this IS checklist.

<table>
<thead>
<tr>
<th>VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant without Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>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?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>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?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>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?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>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?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>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?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>

Previous investigations have indicated the presence of aerially deposited lead next to the edge of pavement in this area, but the project involves little excavation of existing unpaved soil. Soils at a distance from the roadway, at the location of the new ditch, would not contain lead in concentrations that would pose a hazard or trigger regulatory action. Thermoplastic striping would be removed and disposed of in compliance with standard Caltrans procedures.
IX. HYDROLOGY AND WATER QUALITY: Would the project:

<table>
<thead>
<tr>
<th>a)</th>
<th>b)</th>
<th>c)</th>
<th>d)</th>
<th>e)</th>
<th>f)</th>
<th>g)</th>
<th>h)</th>
<th>i)</th>
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<td>☐</td>
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</tbody>
</table>

The project will add additional impervious area, which includes new pavement and reworked pavement. Additional treatment for increased runoff from this increased impervious area is provided by the biostrips, which are a component of this project. Sediment from construction will be minimized by the use of Caltrans’ construction best management practices for stormwater.

The hydraulics engineers defined and quantified the floodplain impacts for the proposed bridge alignment, and the conclusion was that the proposed raised bridge alignment was viable. The water surface elevation does not overtop the proposed new roadway alignment. A hydraulic model produced for this project shows that the both the 50-year- and 100-year-flood events pass under the assumed structure depth of 3.5 feet.

The best available science should was utilized to determine if sea-level rise (SLR) would affect the existing floodplain near the bridge site and impact the proposed structure. The maximum SLR projections without any future reduction in greenhouse gas emissions from today’s levels were used to establish a range of locally-relevant future water levels and shoreline change.
The State of California Sea Level Rise Guidance Document provides guidance for incorporating SLR projections into planning and decision making for projects in California. This document was developed by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT) in response to Governor Schwarzenegger's Executive Order S-13-08, issued on November 14, 2008, which directed state agencies to plan for sea-level rise and coastal impacts. That executive order also requested the National Research Council (NRC) to issue a report on sea-level rise (SLR) to advise California on planning efforts.

The final report from the NRC, Sea-Level Rise for the Coasts of California, Oregon, and Washington, was released in June 2012. The Sea-Level Rise Guidance Document has been updated with the scientific findings of the 2012 NRC report. The intent of this guidance document is to inform and assist state agencies as they develop approaches for incorporating SLR into planning decisions with the most recent and best available science, as published in the 2012 NRC report. These reports represent the best available science.

Projections of future sea level rise (SLR) from the National Research Council's 2012 report on SLR state that south of Cape Mendocino from the year 2000-2100 the SLR is projected to be between 16.56 and 65.76 inches. Basin wide satellite images and site survey data were used as a baseline to determine potential effects to the existing floodplain near the Estero Americano Bridge project site. The project site is located 8.5 miles upstream of the Pacific Ocean, and the creek elevation at the project site is 20 feet. Our analysis demonstrates that the highest forecasted SLR of 66 inches for the year 2100 should not impact the tailwater elevation used in the current bridge design model and can be discounted as no significant impact to this project design. The volume of discharge by the watershed is not enough to increase the tailwater far enough upstream to the point that SLR will impact the new bridge structure and elevated roadway.

**X. LAND USE AND PLANNING:** Would the project:

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Physically divide an established community?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

This project complies with the stated goals, guidelines, and recommendations of each county's plans, including recommendations for view preservation, the minimization of visual degradation of natural landforms, and the construction of roadways to minimize the impacts of roads on wetlands, streams, and the scenic resources of the Coastal Zone.

**XI. MINERAL RESOURCES:** Would the project:

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>
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?

There are no documented mineral resources within the project area.

XII. 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?

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 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?

The project would not introduce new noise impacts or increase ambient noise levels. Construction noise would be temporary and would be within acceptable levels for construction activity. There are no sensitive receptors within the area.

XIII. POPULATION AND HOUSING: Would the project:

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?

No additional residential or commercial right-of-way is required to construct this project. As such, no displacements will occur.
XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

<table>
<thead>
<tr>
<th>Service</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tbody>
<tr>
<td>Fire protection</td>
<td></td>
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<td></td>
<td>X</td>
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<tr>
<td>Police protection</td>
<td></td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>Schools</td>
<td></td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>Parks</td>
<td></td>
<td></td>
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<td>X</td>
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<tr>
<td>Other public facilities</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

To maintain the flow of traffic during construction, Caltrans will prepare a Traffic Management Plan that will ensure accessibility through the project area for vehicles associated with essential services.

XV. RECREATION:

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

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantial physical deterioration</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse physical effect</td>
<td>X</td>
<td></td>
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</tbody>
</table>

The project does not include any recreational areas, nor will it limit the access to recreational areas, such as those along the State Route 1 Coastline.

XVI. TRANSPORTATION/TRAFFIC: Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict</td>
<td>X</td>
<td></td>
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</table>

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict</td>
<td>X</td>
<td></td>
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</tbody>
</table>
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 due 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) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? ☐ ☐ ☐ ☒

State Route 1 is a conventional highway. Presently there are no existing pedestrian facilities on the bridge. Although no bicycle-specific facilities are provided as part of this project, the project will construct 6’ shoulders. These shoulders will accommodate bicyclists compared to the current bridge as the current roadway has no shoulders. The proposed barrier railing, Type ST-20S, meets the minimum height required for bicycle railing.

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:

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? ☒ ☐ ☐ ☐
The project proposes alterations to existing drainage facilities and will add 0.5 acre of additional impervious area. Additional treatment for increased runoff from this new impervious area will be provided by bioswirls, which are a component of this project. The total volume of additional runoff flowing away from the project area will not cause increases that will result in impacts to the connecting drainage systems, and improvements to local drainage should reduce local flooding issues.

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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</table>

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

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

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

Caltrans’ application of best management practices; the re-establishment of ditches and vegetation in kind, and incorporation of minimization measures into project construction ensure that there will be no residual impacts from this project that can contribute to cumulative impacts.
Appendix A: References
Caltrans District 4 Office of Biological Studies and Permits. Natural Environment Study for the Estero Americano Bridge Replacement Project. Oakland, CA. October 2014


Wilson, Chris. “Estero Americano Bridge Replacement Project”, e-mail to Oliver Iberien. August 5, 2014.

Appendix B: Notice of Intent to Adopt a Negative Declaration

Advertisement in the Santa Rosa Press-Democrat, October 20, 2014
Appendix C: Notice of Determination (DRAFT)

Notice of Determination

To: Office of Planning and Research
   U.S. Mail: P.O. Box 3044
   Street Address: 1400 Tenth St., Rm 113
   Sacramento, CA 95812-3044
   Sacramento, CA 95814

☐ County Clerk
   County of: ___________________________
   Address: _____________________________

From: Public Agency: Department of Transportation
   Address: 111 Grand Avenue
   Oakland, California 94612
   Contact: Stefan Galvez
   Phone: _______________________________

☐ Lead Agency (if different from above):
   Address: _____________________________
   Contact: ______________________________
   Phone: _______________________________

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): ____________________________

Project Title: Estero Americano Bridge Replacement Project

Project Applicant: Department of Transportation, District 04

Project Location (include county): Valley Ford, Marin and Sonoma Counties, California

Project Description:
The California Department of Transportation (Caltrans) proposes to replace the existing bridge over Americano Creek on State Route 1 in Marin and Sonoma Counties, California. The Estero Americano Bridge Replacement Project is located in an unincorporated area of Sonoma and Marin Counties about 1.5 miles east of Valley Ford on State Route 1.

This is to advise that the Department of Transportation (☐ Lead Agency or ☐ Responsible Agency) has approved the above described project on 12/15/14 and has made the following determinations regarding the above described project.

1. The project [☐ will ☑ will not] have a significant effect on the environment.
2. ☑ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☑ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☐ were ☑ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☐ was ☑ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☑ was not] adopted for this project.
6. Findings [☐ were ☑ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

__________________________________________
Signature (Public Agency):

__________________________________________
Title:

__________________________________________
Date: ____________________________ Date Received for filing at OPR: ____________________________

Authority cited: Sections 21063, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Revised 2011
Appendix D: List of Preparers

Gifford, Zachary  Caltrans District 4 Office of Environmental Analysis
Iberien, Oliver  Caltrans District 4 Office of Environmental Analysis
Rose, Kathryn  Caltrans District 4 Office of Cultural Studies
Hartman, Lindsay  Caltrans District 4 Office of Cultural Studies
Kinoshita, Glenn  Caltrans District 4 Office of Environmental Engineering
Lindsay, Susan  Caltrans District 4 Office of Landscape Architecture
Malamud-Roam, Frances  Caltrans District 04 Office of Biological Studies and Permits
Vivian, Lindsay  Caltrans District 04 Office of Biological Studies and Permits
Solotar, Bob  GANDA, Caltrans District 04 Coastal Permitting Liaison
Else, Chris  Caltrans District 4 Office of Landscape Architecture
McKee, Lissa  Caltrans District 4 Office of Cultural Studies
Wellen, Jonathan  Caltrans District 4 Office of Environmental Engineering
Wilson, Christopher  Caltrans District 4 Office of Environmental Engineering
### Appendix E: Consistency with California Coastal Act

<table>
<thead>
<tr>
<th>Section #</th>
<th>Section Topic</th>
<th>Consistency Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>30210</td>
<td>Access: Maximum coastal access shall be provided.</td>
<td>Preferred alternative will improve access through the Coastal Zone by replacing a structurally deficient bridge and creating six-foot shoulders on the roadway, which will improve access and safety for bicyclists across the Estero Americano.</td>
</tr>
<tr>
<td>30211</td>
<td>Access: Development shall not interfere with public’s access to sea.</td>
<td>Project will not impact shoreline access.</td>
</tr>
<tr>
<td>30212 (a-c)</td>
<td>Access: Public access from nearest public roadway to the shoreline shall be provided with new development.</td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>30212.5</td>
<td>Access: Public facilities distributed to mitigate overcrowding.</td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>30213</td>
<td>Access: Lower cost facilities shall be protected.</td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>30214</td>
<td>Access: Appropriateness of public access</td>
<td>The project will provide a safer way for bicyclists traveling along the coast to cross Americano Creek by providing shoulders on the bridge which are not present on the existing bridge. Also, the bridge will provide safe vehicular access to the coast.</td>
</tr>
<tr>
<td>30220-30224</td>
<td>Recreation</td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>30230</td>
<td>Marine Environment: Marine resources shall be maintained, enhanced and restored. Protection given to areas of biological or economic significance. Use of marine environment must sustain the biological productivity of coastal waters.</td>
<td>The project is located in an inland location of the Coastal Zone and will not impact the marine environment or resources.</td>
</tr>
<tr>
<td>30231</td>
<td>Marine Environment: Biological productivity shall be maintained and restored.</td>
<td>The project is located in an inland location of the Coastal Zone and will not impact the marine environment or resources.</td>
</tr>
<tr>
<td>30232</td>
<td>Marine Environment: Protection against hazardous waste spills during development.</td>
<td>The project is located in an inland location of the Coastal Zone and will not impact the marine environment or resources.</td>
</tr>
<tr>
<td>30233</td>
<td>Marine Environment: Diking, filling or dredging of coastal resources.</td>
<td>The project is located in an inland location of the Coastal Zone and will not impact the marine environment or resources.</td>
</tr>
<tr>
<td>30234</td>
<td>Marine Environment: commercial fishing and recreational boating.</td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>30234.5</td>
<td>Marine Environment: commercial and recreational fishing.</td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>Section #</td>
<td>Section Topic</td>
<td>Consistency Evaluation</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>30235</td>
<td>Marine Environment: construction which alters natural shoreline.</td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>30236</td>
<td>Marine Environment: substantial alterations to rivers and streams.</td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>30237</td>
<td>Marine Environment: County of Orange</td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>30240</td>
<td>Land Resources: Environmentally sensitive habitat areas protected against significant disruption; only uses dependent on those resources shall be allowed within those areas. Adjacent development shall be sited and designed to prevent significant impacts and compatible.</td>
<td>The project will impact habitat suitable for the California red-legged frog (CRLF), a federally threatened species. The project does not fall within designated critical habitat for the CRLF. This project will also require the fill of coastal wetlands and removal of riparian vegetation along Americano Creek. The wetlands and riparian zone within the project area are considered environmentally sensitive habitat areas (ESHAs). This project has been designed to minimize impacts to these resources, and there is no alternative to build this project without impacting these resources. All impacted wetlands and vegetation will be replaced and restored on site at a 1:1 ratio. Incorporating retaining walls into the project design will leave sufficient space for the recreation of the wetland ditches on site after construction. Implementation of appropriate avoidance and minimization measures will minimize potential impacts to the CRLF and other protected resources.</td>
</tr>
<tr>
<td>30241</td>
<td>Land Resources: Maintain maximum amount of prime agricultural land to assure protection of the areas agricultural economy and minimize conflicts between agricultural and urban use through all of the following:</td>
<td>The project will not impact prime agricultural farmland or impact ranching operations in the vicinity of the project.</td>
</tr>
</tbody>
</table>

- a. Establishing stable boundaries separating urban and rural areas; minimize conflicts between agricultural and urban land uses.
- b. Limit conversions of agricultural lands around the periphery of urban areas to lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.
- c. Permit conversion of agricultural land surrounded by urban uses consistent with Section 30250.
- d. Develop available lands not suited for agricultural prior to conversion of agricultural lands.
- e. Assure that public service and facility expansions do not impair agricultural viability.
- f. Assure that all divisions of prime agricultural land do not diminish the productivity of prime agricultural land.
<table>
<thead>
<tr>
<th>Section #</th>
<th>Section Topic</th>
<th>Consistency Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>30244</td>
<td>Protection of archaeological or paleontological resources.</td>
<td>No cultural resources were identified in the Areas of Potential Effects (APEs) for this project. Surveys of all APEs in the project vicinity, conducted in August 2013 and August 2014, did not identify any cultural resources.</td>
</tr>
<tr>
<td>30250</td>
<td>Development:</td>
<td>The project will replace an existing highway bridge with a bridge of similar capacity. The project will have no impact on development in this portion of the coastal zone.</td>
</tr>
<tr>
<td>30251</td>
<td>The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance.</td>
<td>There are no views to the ocean from the project site. The preferred project alternative has been designed to minimize alteration of natural landforms and will be visually compatible with the character of the surrounding area.</td>
</tr>
<tr>
<td>30252</td>
<td>Facilitate transit, minimize use of coastal access roads, provide non-automobile circulation, adequate parking facilities, correlate development with local parks development to facilitate recreational opportunities.</td>
<td>The project will provide a safer way for bicyclists traveling along the coast to cross Americano Creek by providing shoulders on the bridge which are not present on the existing bridge.</td>
</tr>
<tr>
<td>30253</td>
<td>Minimize risks from geologic, flood and fire hazards. Assure stability and structural integrity, minimize erosion, retain natural landforms, consistency with State Air Resources Control Board, minimize energy consumption, and protect special communities.</td>
<td>The current bridge over the creek was constructed in 1925 and is structurally deficient. The bridge was built at a low elevation relative to the highest water levels in Americano Creek and is subject to flooding by the creek in winter. Because of the worsening condition of the bridge and annual flooding, Caltrans is proposing to replace the current 146-foot bridge with one that is 266 feet long. The increased length of the new bridge will alleviate flooding at the project location and create more space for wildlife passage beneath the roadway. Avoidance and minimization measures have been incorporated into the project design to reduce impacts from construction, such as to prevent sediment from washing downstream. The project will not substantially alter natural landforms.</td>
</tr>
<tr>
<td>30254</td>
<td>Limit design of new or expanded public works facilities to accommodate needs generated by permitted development. Highway 1 in rural areas of the coastal zone shall remain a scenic two-lane road. Services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state or nation... shall not be precluded by other development.</td>
<td>The proposed project retains the character of Highway 1 as a two-lane highway. Safety improvements, such as the proposed six-foot shoulders incorporated into the project’s design, will increase safety for bicyclists using the bridge to cross the Estero Americano. The project will not induce other development in the area.</td>
</tr>
<tr>
<td>30254.5</td>
<td>Terms and conditions to sewer treatment plants</td>
<td>Not applicable to project</td>
</tr>
<tr>
<td>30255</td>
<td>Priority and siting of coastal-dependent developments</td>
<td>Not applicable to project</td>
</tr>
<tr>
<td>30260-&amp;</td>
<td>Industrial Development</td>
<td>Not applicable to project</td>
</tr>
</tbody>
</table>
Appendix F: Project Plans
Appendix G: Avoidance and Minimization Measures

Caltrans has incorporated several avoidance and minimization measures into the proposed project to avoid and minimize the impacts of this project on special-status species, migratory birds, and protected resources that occur in the project area. Special-status species known to occur or with a potential to occur in the project area include the California red-legged frog (CRLF), Myrtle’s silverspot butterfly (MSB), Contra Costa goldfields (CCG), tricolored blackbird, bats, and migratory birds. Measures taken to minimize the likelihood of take of federally listed species (CRLF, MSB, and CCG) have been identified through consultation with the USFWS pursuant to section 7 of the federal Endangered Species Act. Proposed avoidance measures include conducting construction activities during specific work windows to avoid the time of year when protected species is most active, worker education awareness training, and species surveys of the project area ahead of construction. Caltrans has also developed other measures to avoid impacts to species of special concern as part of the proposed project. The principal measures listed below are not all inclusive and not an iterative list. For example, the final biological opinion contains several, very specific measures that will ultimately be incorporated into the contractor’s bid package but are not listed here. The list below is categorized by species and includes a general overview of the most important and applicable measures. The proposed avoidance and minimization measures are as follows:

<table>
<thead>
<tr>
<th>Protected Resource</th>
<th>Proposed Avoidance and Minimization Measures</th>
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</thead>
<tbody>
<tr>
<td>General Avoidance and Minimization Measures</td>
<td>1. Vegetation will be cleared only where necessary; grubbing will be minimized to the maximum extent practicable. Efforts will be taken to minimize impacts to well-established vegetation, particularly within the Americano Creek floodplain where feasible.</td>
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<td></td>
<td>2. Construction activities will only be conducted between April 15 and November 1 outside the creek. Work in the creek will be limited to when the creek is dry or mostly dry as much as practicable, likely June 1 through November 1. These windows were implemented to avoid working during the time of year when the CRLF is most active and to avoid working in the creek during the wet season when construction activities would have a higher likelihood of impacting areas downstream.</td>
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<td>3. Grubbing will only be conducted during the summer dry season and during the time when work is allowed in the creek.</td>
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<td>4. Nighttime work will be avoided to the maximum extent practicable. Should nighttime work need to be conducted, all lighting will be directed downwards and towards the construction work taking place.</td>
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<td>5. All construction personnel will attend a mandatory environmental education program delivered by a USFWS-approved biologist prior to working on the project site. The program will include an explanation of how to best avoid the incidental take of listed species and how to avoid impacting sensitive areas. The program will include an explanation of applicable federal and state laws protecting endangered species as well as the importance of compliance with Caltrans and various resource agency conditions.</td>
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<td>6. Project-related vehicle traffic will be restricted to established...</td>
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<tr>
<td>Protected Resource</td>
<td>Proposed Avoidance and Minimization Measures</td>
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<td>roads and construction areas. Access roads will be constructed to the minimum amount necessary. Project vehicles will observe a 20-mile-per-hour speed limit while in the action area.</td>
<td>7. Dust control measures will be implemented consisting of regular truck watering of construction access areas and disturbed soil areas, including the use of organic soil stabilizers if needed.</td>
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<td>8. All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed at least once daily from the project footprint.</td>
<td>9. Dedicated fueling and refueling practices will be designated as part of the approved SWPPP. Dedicated fueling areas will be protected from stormwater run-on and will be located at least 50 feet from downslope drainage facilities and water courses. Fueling must be performed on level-grade areas. On-site fueling will only be used when and where it is impractical to send vehicles and equipment off-site for fueling.</td>
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<tr>
<td>10. All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat and at a minimum of 150 ft from any downstream riparian habitat, aquatic habitat, culvert, or drainage feature.</td>
<td>11. Any and all dredge material produced as a result of removing the existing bridge abutments and constructing the new abutments will be fully contained within the project limits and removed offsite.</td>
</tr>
<tr>
<td>All areas that are temporarily affected during construction will be revegetated with an assemblage of native species. The wetland ditches that line the roadway will be reconstructed within the ROW as part of the project. All riparian vegetation removed will be replanted at a 1:1 ratio on site.</td>
<td>12. All areas that are temporarily affected during construction will be revegetated with an assemblage of native species. The wetland ditches that line the roadway will be reconstructed within the ROW as part of the project. All riparian vegetation removed will be replanted at a 1:1 ratio on site.</td>
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</table>

**California red-legged frog (CRLF)**

1. USFWS-approved biological monitors will be present daily during all initial, major vegetation removal and all grubbing activities. Prior to the vegetation clearing and initial ground-disturbing activities, a pre-construction survey will be conducted. Once the project footprint is cleared, there will be daily biological monitoring during the early stages of the project. Monitoring activities and the intensity needed will be determined in coordination with the USFWS throughout the project.

2. All USFWS-approved biologists on site will have the authority to halt work through coordination with the Resident Engineer in the event that a California red-legged frog gains access to the project footprint. The Resident Engineer will ensure construction activities remain suspended in any construction area where the biologist has determined that take of CRLF could occur. Work will resume once the animal leaves the site voluntarily, is removed by the biologist(s) to a release site using USFWS-approved handling techniques, or it is determined that the frog is not being harassed by construction activities. 3. The boundaries of each active construction area will be delineated with...
### Protected Resource

### Proposed Avoidance and Minimization Measures

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<tr>
<th>Proposed Avoidance and Minimization Measures</th>
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<tbody>
<tr>
<td>temporary, high-visibility, wildlife exclusion fencing to prevent the encroachment of construction personnel and equipment beyond the described construction footprint and to promote exclusion of the CRLF into active work areas. The fencing will be removed only when all construction equipment is removed from the job site, following each construction season.</td>
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<tr>
<td>3. All major vegetation removal will be conducted between September 1 and October 15. Vegetation will be cleared only where necessary and grubbing will be minimized to the maximum extent practicable. Grubbing will only be conducted between April 15 and November 1 outside the creek and June 1 and November 1 within the creek.</td>
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<tr>
<td>4. If nighttime work is needed to avoid safety issues or to complete work within the allotted construction season, all lighting will be directed downwards and towards the construction work taking place.</td>
</tr>
<tr>
<td>5. Project-related vehicle traffic will be restricted to established roads and construction areas. Access roads will be constructed to the minimum amount necessary. Project vehicles will observe a 20-mile-per-hour speed limit while within the project limits.</td>
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<tr>
<td>6. To prevent the inadvertent entrapment of the California red-legged frog, all excavated, steep-walled holes or trenches more than 1 foot deep will be covered at the close of each working day by plywood or similar materials. If it is not feasible to cover an excavation, one or more escape ramps constructed of earthen fill or wooden planks will be installed. Plastic mono-filament netting (erosion control matting) or similar material will not be used at the project site. Acceptable substitutes include coconut coir matting or tackified hydoseeding compounds.</td>
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<td>7. Rodenticides will not be used at the project site. Herbicides will only be used if needed to control noxious weeds.</td>
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<tr>
<td>8. Injured California red-legged frog will be cared for by a USFWS-approved biologist or a licensed veterinarian, if necessary.</td>
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<tr>
<td>9. Caltrans will submit post-construction compliance reports prepared by the USFWS-approved biologist to the USFWS within 60 calendar days following completion of each construction season or within 60 calendar days of any break in construction activity lasting more than 60 calendar days.</td>
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<tr>
<th>Myrtle’s silverspot butterfly</th>
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<tr>
<td>1. A USFWS-approved biologist will conduct surveys for foraging Myrtle’s silverspot butterfly adults ahead of any major vegetation clearing within the project footprint and at regular intervals until all clearing is completed.</td>
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<tr>
<td>2. Major vegetation removal at the project site will be conducted outside the typical MSB adult flight period.</td>
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<td>Protected Resource</td>
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</table>
| **Bats**           | 1. Nighttime work will be avoided to the maximum extent practicable. If nighttime work must be conducted, all lights will be directed onto the road and active construction areas.  
2. Any large snags or trees with large cavities potentially used as roosting sites within the construction impact area will be removed using a two-phased approach to allow any roosting bats to leave on their own volition. This approach involves removing limbs from the tree on the afternoon of the first day and stumping the tree on the following day. |
| **Contra Costa goldfields** | 1. Wildlife exclusion fencing or silt fencing will be erected at the edge of the project footprint along the edge of the field where CCG have been observed.  
2. Water quality and dust control BMPs will be implemented to prevent dust and sediment from washing into or entering Contra Costa goldfields habitat. |
| **Purple-stemmed checkerbloom and Johnny nip** | 1. Environmentally sensitive area fencing will be erected around the area where purple-stemmed checkerbloom is known to occur. This area lies just north of the northernmost project limits. The fencing will prevent the inadvertent encroachment of construction personnel and vehicles into the area where the species has been observed.  
2. Water quality BMPs will prevent dust generated from construction activities from washing into the field where Johnny nip has been observed. |
| **Tri-colored Blackbird** | 1. Species-specific surveys for the tricolored blackbird will be conducted in 2015 to determine if the species is present at the project site. If so, the measures below will minimize impacts to the species during construction. Additional measures will be identified as necessary.  
2. If present, pre-construction surveys for the tricolored blackbird will be conducted ahead of all vegetation removal, grubbing, and ground-disturbing activities (2015-2017). Major vegetation removal will be conducted outside the typical migratory bird nesting season, which will help avoid the tricolored blackbird nesting season. If any nesting birds are present within the vicinity during construction, disturbance to the nesting birds will be avoided by implementing a 50-foot project buffer or the minimum amount necessary to avoid disturbing the species until all birds have fledged.  
3. If tricolored blackbird nests are observed within the project footprint, Caltrans will coordinate necessary measures to protect the species with the California Department of Fish and Wildlife.  
3. The project footprint will be reseeded with a native seed mix and by replanting all impacted riparian vegetation following construction to restore the area to its pre-project condition. This will replace suitable blackbird habitat lost during construction. |
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<thead>
<tr>
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</table>
| Migratory Birds    | 1. All initial, vegetation clearing, but not grubbing, will be conducted outside the typical bird nesting season, February 15 to August 31. Major vegetation removal will be conducted between September 1 and October 15.  
2. At least five (5) days prior to construction or any vegetation clearing, the project area will be surveyed for migratory birds and their nests, regardless of the time of year. Should any active nest be found, appropriate buffers will be applied. No work will be allowed to occur within 50 feet of nesting passerine birds or 300 feet of nesting raptors. Any nesting migratory birds within or near the project footprint will be regularly monitored for signs of disturbance; work will be avoided in such areas until all birds have fledged. |