State Route 12/Church Road Intersection Improvements Project

SOLANO COUNTY, CALIFORNIA
DISTRICT 4-SOL-12 (PM 24.3/25.2)
EA 0G0500
Project No. 0400000305

Initial Study with Proposed Negative Declaration

Prepared by the State of California Department of Transportation
and Solano Transportation Authority

December 2016
General Information About This Document

What’s in this document:
The California Department of Transportation (Caltrans) has prepared this Initial Study/Proposed Negative Declaration, which examines the potential environmental impacts of the proposed State Route 12/Church Road Intersection Improvements Project (project) located in the City of Rio Vista, Solano County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and the proposed avoidance and minimization measures.

What you should do:

- Please read this document.
- Additional copies of this document, as well as of the technical studies relied on in preparing it, are available for review at:
  - Caltrans District 4, 111 Grand Avenue, Oakland, California 94612
  - Solano Transportation Authority, One Harbor Center, Suite 130, Suisun City, California 94585
  - Rio Vista Library, 44 South Second Street, Rio Vista, California 94571
- This document is also available online at http://www.dot.ca.gov/dist4/envdocs.htm.
- Please attend the Open House/Map Display scheduled for Tuesday, January 24, 2017, from 6:00 PM to 8:00 PM at the Rio Vista Library, 44 South Second Street, Rio Vista, CA 94571.
- We would like to hear what you think. If you have any comments regarding the project, please send us your comments:
  - Submit comments at the Open House/Map Display
  - Submit comments via email to: zachary.gifford@dot.ca.gov
  - Submit comments via postal mail to:
    Department of Transportation, District 4
    Attn: Zachary Gifford
    111 Grand Avenue
    Office of Environmental Analysis, MS-8B
    Oakland, CA, 94612

Be sure to submit comments by the deadline: February 13, 2017.
What happens next:
After comments are received from the public and reviewing agencies, Caltrans may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the project.
<table>
<thead>
<tr>
<th><strong>Project Title:</strong></th>
<th>State Route 12/Church Road Intersection Improvements Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lead agency name and address:</strong></td>
<td>California Department of Transportation 111 Grand Avenue Oakland, CA 94612</td>
</tr>
<tr>
<td><strong>Contact person and phone number:</strong></td>
<td>Zachary Gifford; (510) 286-5610</td>
</tr>
<tr>
<td><strong>Project Location:</strong></td>
<td>Solano County</td>
</tr>
<tr>
<td><strong>Project sponsor’s name and address:</strong></td>
<td>Janet Adams, Director of Projects Solano Transportation Authority 1 Harbor Center Suite 130 Suisun City, CA 94585</td>
</tr>
<tr>
<td><strong>General plan description:</strong></td>
<td>Sub-Planning Area 2—Esperson Property, River Walk, Homecoming Neighborhood (adjacent); and Sub-Planning Area 4—Northwest Area Neighborhoods (adjacent)</td>
</tr>
<tr>
<td><strong>Zoning:</strong></td>
<td>Transportation</td>
</tr>
<tr>
<td><strong>Description of project:</strong></td>
<td>The California Department of Transportation proposes to enhance operation and safety characteristics at the intersection of SR-12 and Church Road by removing turn movements from the through traffic with the addition of a left turn lane, and providing acceleration/deceleration lanes for right turns. Refer to page 1 (Project Information) for additional detail.</td>
</tr>
<tr>
<td><strong>Surrounding land uses and setting:</strong></td>
<td>The project site is adjacent to one single-family residence and areas used for agricultural production.</td>
</tr>
<tr>
<td><strong>Other public agencies whose approval is required (e.g. permits, financial approval, or participation agreements):</strong></td>
<td>None Anticipated</td>
</tr>
<tr>
<td>Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?</td>
<td>Formal letters informing the Yocha Dehe Wintun Nation and the Cortina Band of Wintun of the proposed project were submitted on October 21, 2015. Both tribes had until November 20, 2015 to formally request consultation. The Yocha Dehe Wintun Nation responded with a letter received on December 14, 2015 stating that the Yocha Dehe Wintun Nation was not aware of any known cultural resources near the project site, and requesting, if any were identified, to contact Anthony Flores, Cultural Resources Site Protection Manager. The Cortina Band of Wintun did not request consultation.</td>
</tr>
</tbody>
</table>

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.

---

Stefan Galvez-Abadia  
Office Chief, Office of Environmental Analysis  
District 4, California Department of Transportation

Date: 12/8/2016

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to California Department of Transportation, Attn: Zachary Gifford, Office of Environmental Planning, 111 Grand Avenue, MS-8B, Oakland, CA 94612; or call (510) 286-5610 (voice); or use California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.
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.

- [x] Aesthetics
- [ ] Air Quality
- [x] Cultural Resources
- [x] Greenhouse Gas Emissions
- [x] Hydrology & Water Quality
- [x] Mineral Resources
- [ ] Population & Housing
- [ ] Recreation
- [ ] Tribal Cultural Resources
- [ ] Mandatory Findings of Significance
- [x] Agriculture and Forestry Resources
- [ ] Biological Resources
- [x] Geology & Soils
- [x] Hazards & Hazardous Materials
- [ ] Land Use & Planning
- [ ] Noise
- [ ] Public Services
- [x] Transportation & Traffic
- [ ] Utilities & Service Systems

B. DETERMINATION

On the basis of this initial evaluation:

- [x] 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.

Stefan Galvez-Abadia
Office Chief, Office of Environmental Analysis
District 4, California Department of Transportation

Date
PROPOSED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description
The California Department of Transportation (Caltrans) proposes to make improvements to the State Route 12 (SR-12)/Church Road Intersection. The purpose of this project is to enhance operation and safety characteristics at the intersection of SR-12 and Church Road by removing turn movements from the through traffic with the addition of a left turn lane, and providing acceleration/deceleration lanes for right turns.

Acceleration/deceleration lanes would be provided at the Church Road intersection for right turns, along with separate left turn pockets. The project would also correct non-standard shoulder width by providing standard eight foot shoulders. 25 trees in the clear recovery zone would be removed. The project limits extend along SR-12 approximately 1300 feet west and 800 feet east of the intersection with Church Road; and extend approximately 600 feet north along Church Road in the City of Rio Vista, Solano County, California.

Determination
The 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 Caltrans’s 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 (as discussed in the CEQA Environmental Checklist):

The proposed project would have no effect to air quality, geology and soils, greenhouse gas, land use and planning, mineral resources, population and housing, public services, recreation, tribal cultural resources, and utilities and service systems.

The proposed project would have less-than-significant effects to aesthetics, agricultural resources, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, noise, transportation & traffic, and mandatory findings of significance.

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

Date
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PROJECT INFORMATION

1. Location
SR-12 is a two-lane, conventional highway that serves as the major east-west corridor between Napa, Sonoma, and Solano Counties and the San Joaquin Valley. The highway is the only east-west route connecting Solano County (County) to the Stockton area. The intersection of SR-12 and Church Road/Amerada Road is located at PM 24.8, northwest of the City of Rio Vista downtown area. The project vicinity is depicted in Figure 1.

2. Purpose and Need

Purpose
The purpose of this project is to enhance operation and safety characteristics at the intersection of SR-12 and Church Road by removing turn movements from the through traffic with the addition of a left turn lane, and providing acceleration/deceleration lanes for right turns.

Need
Vehicle queuing to enter and exit SR-12 from and to Church Road currently causes delays to through traffic on SR-12. Constructing an exclusive left turn lane and acceleration and deceleration lanes would provide a refuge area for these vehicles.

3. Funding, Programming, and Estimate

Funding
Current funding sources are all local sources from Rio Vista’s share of the Solano Transportation Authority’s Regional Traffic Impact Fee program. The Regional Transportation Plan-Local Roads Program is a potential future funding source. Funding for design and construction phases is currently being sought. It has been determined that this project is eligible for Federal-aid funding but is not pursuing Federal-aid funding at this time.

Programming
The SR-12/Church Road Intersection Improvements project has not been programmed in the Statewide Transportation Improvement Program or Long Lead State Highway Operation and Protection Program (SHOPP). Table 1 shows the current funding source Fiscal Year Estimates by project phase.

Estimate
The Cost Estimate assumes that funding will be secured in 2016 to proceed with PS&E no later than January 2017. It also assumes that funding for the Construction, Right of Way, and support costs will be secured in time for the project to proceed to construction in 2019.
Project Location

Project Vicinity

Figure 1

- Major Cities
- Major Roads
- Rivers and Streams
- County Lines
- Waterbodies

0 10 20 Kilometers
0 10 20 Miles
### Table 1 Project Fiscal Year Estimates

<table>
<thead>
<tr>
<th>Fund Source</th>
<th>FISCAL YEAR ESTIMATE</th>
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<td>Local</td>
<td>Prior</td>
<td>14/15</td>
<td>15/16</td>
<td>16/17</td>
<td>17/18</td>
<td>18/19</td>
<td>19/20</td>
<td>Future</td>
<td>Total</td>
<td></td>
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<tr>
<td>Component</td>
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<td>PS&amp;E Support</td>
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<td>Right-of-Way Support</td>
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<td>$40</td>
<td>$50</td>
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<td>Right-of-Way Support</td>
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<td>Construction Support</td>
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<td>$3,100</td>
<td>$3,100</td>
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<td><strong>Total</strong></td>
<td></td>
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<td>$220</td>
<td>$230</td>
<td>$3,800</td>
<td>$4,250</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Note: The support cost ratio is 30 percent.

### 4. Project Background

State Route 12 is a two-lane conventional highway that serves as the major east-west corridor between Napa, Sonoma, and Solano Counties and the San Joaquin Valley. The highway is also strategically located as the only east-west route connecting Solano County to the Sacramento and Stockton areas.

As shown on Figure 1, SR-12 is a west-east facility within the project limits. This portion of SR-12 is a two-lane conventional highway, composed of two 12-foot-wide travel lanes (one in each direction), and no shoulders. The highway has a 2-foot median with a rumble strip and delineators, all within a 62-foot-wide right of way. The existing posted speed limit along this portion of the SR-12 corridor is 50 miles per hour (mph) in the eastbound direction and 45 mph in the westbound direction.

The SR-12/ Church Road/Amerada Road intersection is located northwest of the downtown area of the City of Rio Vista at Post Mile 24.8. Church Road runs north of its intersection with SR-12 and connects to Airport Road. Amerada Road is a private road running south of its intersection with SR-12 and connects to Emigh Road. Amerada Road serves as access for only two users: a private residence at the southeast quadrant of SR-12 and the California Resources Corporation, an independent oil and gas company. Currently, Church Road and Amerada Road are offset approximately 75 feet from each other. A project location map is shown in Figure 2.
Land use adjacent to the intersection is agricultural, with one residence located on the southeast corner of the SR-12/Amerada Road intersection. The surrounding region is characterized by flat agricultural fields and occasional farm structures. While the SR-12 corridor is not a State-designated scenic highway, the segment of this corridor within the project limits is a locally-designated ‘scenic roadway’. In addition, the agricultural landscapes and oak- and grass-covered hills visible within the project limits are considered some of the primary scenic resources within Solano County.

Neither the SR-12/Church Road nor SR-12/Amerada Road intersection currently provide separate left turn lanes for the intersection approaches. In addition, no right turn lanes or acceleration/deceleration lanes are provided at the intersections for the traffic exiting and entering SR-12. Along SR-12, there are existing channelizers and rumble strips installed in the median.

There are several utilities in the project area. An overhead telephone line along the east edge of Church Road intersects overhead electrical and telephone lines along the north edge of SR-12. An overhead telephone line crosses SR-12 towards the residence to the south. An underground gas line runs along the west edge of Church Road, crosses under SR-12 at the intersection, and continues along the west edge of Amerada Road. Frontier Communications indicates they own an underground cable located along the south edge of SR-12, and an underground cable that crosses SR-12 at the intersection and continues along the west edge of Church Road.

5. Project Description

The proposed improvements at the intersection of SR-12 and Church Road/Amerada Road would include the following major elements:

- One twelve-foot travel lane in each direction to be maintained on SR-12 and Church Road
- Adding a twelve-foot left-turn lane at the intersection approach associated with SR-12 eastbound
- Adding a twelve-foot deceleration lane and a twelve-foot acceleration lane along SR-12 in the westbound direction
- Adding a twelve-foot refuge area along westbound SR-12 opposite the SR-12 eastbound left turn lane to protect vehicles turning left from southbound Church Road
- Adding eight-foot shoulders along SR-12 in both directions
- Adding a twelve-foot right-turn lane on southbound Church Road at the intersection approach to SR-12
- Adding four-foot shoulders along Church Road in both directions
- Relocating existing unlined ditches along the north and south sides of SR-12
- Relocating existing above ground utility poles and below ground buried cables
The highway would be widened along approximately 2,100 feet of SR-12, both north and south of the Church Road intersection. The highway would be widened approximately 32 feet to the north to accommodate the added shoulders, left turn lanes, and deceleration and acceleration lanes along westbound SR-12. The highway would be widened approximately 8 feet to the south to accommodate the added shoulders. No realignment of Church Road or Amerada Road would occur. Existing above-ground utility poles would be relocated outside of the clear recovery zone. Earthen ditches on both sides of SR-12 would be relocated, as would the Frontier Communications line. Project plans are included as Appendix C.

Shoulder improvements along the highway would require minor acquisitions of the properties fronting the south side of the highway (see Table 2). No residential or commercial displacements would occur.

Table 2 Partial Acquisitions

<table>
<thead>
<tr>
<th>Assessor's Parcel Number</th>
<th>Total Parcel Size (Acre)</th>
<th>Partial Acquisition (Acre)</th>
<th>Percent of Total Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>0176-01-0620</td>
<td>24.4</td>
<td>1.33</td>
<td>5.4%</td>
</tr>
<tr>
<td>0178-01-0070</td>
<td>199.87</td>
<td>0.87</td>
<td>0.4%</td>
</tr>
<tr>
<td>0048-12-0580</td>
<td>325.48</td>
<td>0.12</td>
<td>0.04%</td>
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<tr>
<td>0049-31-0020</td>
<td>38.48</td>
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<tr>
<td>0049-31-0010</td>
<td>1.01</td>
<td>0.04</td>
<td>3.6%</td>
</tr>
<tr>
<td>0049-31-0300</td>
<td>188.34</td>
<td>0.14</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

Construction

Constructing the proposed roadway improvements would take approximately 12 months and consist of four steps:

1) Demolition and rough grading: proposed roadway improvements would involve excavation of up to three feet of material. Existing pavement would be removed to prepare the subgrade and to place pavement for widened turning lanes and shoulders.

2) Fine grading, including sub-grade preparation.

3) Relocation of existing utilities: earthen ditches and trench for the fiber optic line relocation would require excavation up to three feet in depth. Relocated utility poles would be set into drilled holes approximately one foot in diameter and six feet deep. The poles themselves would be approximately eight inches in diameter.

4) Surface improvements, including paving.

Anticipated construction equipment to perform the proposed activities includes excavators and concrete breakers, asphalt and concrete cutters, dump truck haulers, water trucks and street sweepers for dust control, graders, compact rollers, backhoes, backfill tamping rollers,
cement mix trucks, asphalt paving machines, asphalt rollers, and pavement striping equipment.

All construction staging could be accommodated within the proposed right-of-way (ROW) boundaries associated with SR-12 and Church Road. No temporary construction easements would be required. Temporary lane closures may be implemented to bring materials and equipment to the project site. Lane closures and traffic detours, if required, would be temporary.

6. Alternatives Considered but Eliminated from Further Discussion

Several other intersection configurations were investigated during the development of the project. The rejected alternatives are described in Table 3, along with the reasons for rejection.

Table 3 Rejected Alternatives

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Summary of Reasons for Rejection</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Alternative 2 would realign Church Road and widen SR-12 mainly to the north. This alternative included acceleration/decelerations lanes and a left turn lane on westbound SR-12 to Amerada Road, a left turn to Church Road from eastbound SR-12, and a left turn from southbound Church Road to eastbound SR-12. These turning lanes would extend the project limits easterly and create a direct impact on a swale that is potentially jurisdictional wetlands. The swale is located approximately 1150 feet east of Church Road on the north side of SR-12. Since Amerada Road is a private road serving only two users and very few vehicles, there is a high cost associated with providing upgraded access to this road for little to no benefit for the general public. Thus Alternative 2 was rejected.</td>
</tr>
<tr>
<td>2A</td>
<td>Alternative 2A would realign Church Road and widen SR-12 symmetrically on both sides of the highway. This alternative included acceleration/decelerations lanes and a left turn lane on westbound SR-12 to Amerada Road, a left turn to Church Road from eastbound SR-12, and a left turn from southbound Church Road to eastbound SR-12. These turning lanes would extend the project limits easterly and create a direct impact on a swale located approximately 1150 feet east of Church Road on the north side of SR-12, which is potentially jurisdictional wetlands and can be avoided with either the Build alternative or Alternative 4. In addition, since Amerada Road is a private road serving only two users and very few vehicles, there is a high cost associated with providing upgraded access to this road for little to no benefit for the general public. The single family residence in the southeast corner of the intersection would be significantly impacted, requiring acquisition of about 25 feet of the front yard.</td>
</tr>
<tr>
<td>Alternative</td>
<td>Summary of Reasons for Rejection</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td></td>
<td>For these reasons, Alternative 2A was rejected.</td>
</tr>
<tr>
<td>3</td>
<td>Alternative 3 would realign Amerada Road with symmetrical widening on SR-12 for a lane configuration identical to Alternative 2A. In order to align Amerada Road with Church Road, the single family residence in the southeast corner of the intersection would need to be relocated as the road would sever the dwelling. This Alternative requires a wider right of way and has potential community impacts that are avoidable with all other alternatives. Alternative 3 was therefore rejected.</td>
</tr>
<tr>
<td>4</td>
<td>Alternative 4 is similar to Alternative 2 and would realign Church Road and widen SR-12 mainly to the north. This alternative included acceleration/decelerations lanes on westbound SR-12 for Church Road, a left turn lane to Church Road from eastbound SR-12, and left turn from southbound Church Road to eastbound SR-12. Unlike Alternatives 2, 2A and 3, no turn lanes would be provided to Amerada Road, and the swale east of the intersection would no longer be impacted. Alternatives 2, 2A and 4 require the realignment of Church Road which would require about one acre of additional right of way acquisition from the property in the northwest quadrant of the intersection. The parcel is currently agricultural and is planned for commercial development at some time in the distant future. Since Amerada Road is a private road serving only two users and very few vehicles, there is a high cost associated with realigning Church Road for little to no benefit for the general public. It is likely that Church Road would be extended south of SR-12 to provide access to new development in the future, hence replacing Amerada Road. Realignment of Church Road for Alternatives 2, 2A and 4 are inconsistent with the City of Rio Vista’s General Plan. For this reason, and for the fact that this alternative requires acquisition of additional right of way along Church road, Alternative 4 was therefore rejected.</td>
</tr>
</tbody>
</table>

### 7. Planned Development

Future land uses planned in the vicinity of the project improvements are summarized in Table 4 and include the Riverwalk development and the Marks-McCormack development. Neither development is anticipated to achieve formal approval by the City of Rio Vista within the next few years; however, the developments were considered reasonably foreseeable when assessing the potential cumulative effects of the project.
Table 4 Future Land Uses in the Project Vicinity

<table>
<thead>
<tr>
<th>Planned Development Name</th>
<th>Location</th>
<th>Description of Proposed Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverwalk Project</td>
<td>Northeast of SR-12/Church Road</td>
<td>236-acre single- and multi-family residential, commercial and open space development. City Council certified the Final Environmental Impact Report (EIR) for this project in January 2007.</td>
</tr>
<tr>
<td>Marks-McCormack</td>
<td>Northwest of SR-12/Church Road</td>
<td>25.7-acre retail/commercial development. An EIR was prepared for the project and certified by the City Council in April 1990.</td>
</tr>
</tbody>
</table>
This checklist identifies the physical, biological, and social factors that might be affected by the proposed project. In many cases, background studies associated with the project determined that no impacts would occur. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included following the applicable section of the checklist. 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.

### I. Aesthetics:
Would the project:

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

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

The project is located in a semi-rural area outside of the City of Rio Vista. This region is characterized by flat agricultural fields and occasional farm structures. While the SR-12
corridor is not a State-designated Scenic Highway, the segment of this corridor within the project limits is a locally-designated ‘scenic roadway’. In addition, the agricultural landscapes and oak- and grass-covered hills visible within the project limits are considered some of the primary scenic resources within the County.

In general, the project would not substantially impact the visual characteristic of the SR-12/Church Road intersection. The project would slightly expand an existing roadway, but would not create large infrastructure or elevated structures that would obstruct views in the area. The project would remove 25 trees along SR-12 in order to accommodate the proposed roadway widening and provide motorists with a clear recovery zone. However, the intermittent trees along this segment of SR-12 are not a dominant feature of the landscape and do not substantially contribute to the area’s visual quality. Roadway improvements would not interfere with existing views of the surrounding agricultural lands, which are considered scenic resources by the County. The project does not propose new structures or other improvements that would create a new source of light or glare.

Although the roadway improvements and associated tree removal would increase the dominance of the SR-12/Church Road intersection, the project would generally conform to the existing visual landscape of the highway corridor.

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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></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>
<tbody>
<tr>
<td>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</td>
<td>☐</td>
<td>☐</td>
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</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>
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</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>
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</tr>
</tbody>
</table>
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?

According to the California Department of Conservation, agricultural land surrounding the project site is designated as ‘Grazing Land’, and is not considered ‘Prime Farmland’, ‘Farmland of Statewide Importance’, or ‘Unique Farmland’.\(^2\) There are no forest lands within the project limits. Partial property frontages from the surrounding agricultural properties and landscaped areas adjacent to SR-12 would be acquired to construct the project. These acquisitions would not affect the agricultural production aspects of the adjacent farmland.

The California Land Conservation Act, also known as the Williamson Act, was adopted in 1965 to encourage the preservation of the State’s agricultural lands and to prevent conversion from agricultural to urban uses. There are no Williamson Act contracts within the project vicinity.\(^3\)

The project would improve an existing roadway and would not create new access that may result in additional conversion of agricultural lands. Furthermore, agricultural areas adjacent to the project site are planned for future residential and commercial development (see **Section 7, Planned Development**), and the project improvements are within the State and local rights-of-way assumed in the preliminary concepts for the future developments.

### 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:

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

\[ \square \quad \square \quad \square \quad \square \quad \square \]

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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 proposed project is listed in the 2015 Transportation Improvement Program (TIP) for the San Francisco Bay Area and the accompanying Air Quality Conformity Analysis adopted by the Metropolitan Transportation Commission (MTC) on September 24, 2014. Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) approved MTC's TIP conformity determination on December 15, 2014. The proposed project (Project Reference Number 240745) and TIP (ID Number SOL150003) were included in the regional emissions analysis conducted by MTC for the Transportation 2040 Plan and the 2015 TIP. In addition, the proposed project was determined not to be a project of air quality concern by the MTC on February 26, 2016.⁴ Therefore, the project would not conflict with applicable air quality plans.

The proposed project is an intersection channelization project within a rural highway corridor and would not generate an increase in traffic that would affect localized vehicle emissions. A project-level air quality analysis determined that the project would not violate an air quality standard or result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under Federal or State ambient air quality standards. Construction of the proposed project would result in the emission of diesel exhaust from construction equipment and coarse particulate matter (PM₁₀) in the form of dust. Although grading and construction activities would be temporary, they would have the potential to

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⁴ Metropolitan Transportation Commission, 2016. Air Quality Conformity Task Force. P.M.2.5 Project Conformity Interagency Consultations.
cause health impacts. Implementation of feasible control measures (as specified in the Yolo-Solano Air Quality Management District [YSAQMD] Handbook for Assessing and Mitigating Air Quality Impacts [2007]) would minimize construction dust and equipment exhaust emissions, thereby reducing potential health risks. Caltrans special provisions and standard specifications would also include the requirement to minimize or eliminate dust through application of water or dust palliatives. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations.

<table>
<thead>
<tr>
<th>IV. Biological Resources: Would the project:</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>
<tbody>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</td>
<td>☐</td>
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<tr>
<td>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.) or state-protected wetlands, through direct removal, filling, hydrological interruption, or other means?</td>
<td>☐</td>
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</tr>
<tr>
<td>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?</td>
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</tr>
</tbody>
</table>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

A Biological Study Area (BSA) was established to represent where temporary and/or permanent project improvements may directly or indirectly affect biological resources. Refer to Appendix D for a delineation of the BSA boundaries.

The BSA consists of five land cover types: planted wheat (11.32 acres); ruderal vegetation, or plant species such as wild oats and Italian thistle that are first to colonize disturbed lands (3.37 acres); landscaped (0.39 acres); road (2.71 acres); and a potentially jurisdictional swale (0.07 acre). No riparian habitat is located within the BSA. Special-status species are those species that are considered sufficiently rare that they require special consideration and/or protection and should be, or have been, listed as rare, threatened or endangered by the Federal and/or State governments.

Waters of the U.S.

No jurisdictional wetlands were documented within the BSA. There is an intermittent swale (0.07 acre) northeast of SR-12 at the southern end of the BSA, which may be considered a jurisdictional water of the U.S. The project would not impact this swale.

Trees

There are a total of 38 trees within the BSA. There is one non-native plane sycamore (Plantanus acerifolia) and 37 green ash (Fraxinus pennsylvanica), a widely planted non-native ornamental species. None of the trees within the BSA are protected by local tree protection policies. The project would remove 25 trees located in the clear recovery zone.

Plant Species

A literature review was conducted to investigate the potential presence of special-status plant species within the project vicinity. A regional list of special-status flora species was developed by querying the following databases

- The United States Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System
- The California Native Plant Society Inventory of Rare and Endangered Plants of California database
• California Natural Diversity Database
• The California Department of Fish and Wildlife (CDFW) Special Vascular Plants List
• Environmental documents for surrounding development projects and the Montezuma Hills Wind Resource Area

Based on literature reviews, database searches, and familiarity with the region, a total of 34 plant species were initially evaluated for the potential to occur within the project region. After reviewing vegetation information, habitat preferences, geographic distribution, elevation range, and known locations of all species on the preliminary list, two special-status plant species were determined to have low potential to occur in the BSA due to potentially suitable habitat: round-leaved filaree (California macrophylla) and fragrant fritillary (Fritillaria liliacea).

A special-status plant survey was conducted within the BSA in April 2015, and no special-status plants were observed. The existing ruderal and planted wheat land cover types do not typically provide habitat for these plant species. Additionally, much of the ruderal vegetation within highway right-of-way is seasonally mowed and treated with herbicide. The BSA and swale habitat have a very low potential for these species to occur due to mowing, herbicide use, and the small extent of grassland along the edge of the roadway.

**Animal Species**

A literature review was conducted to investigate the potential presence of special-status animal species within the project vicinity. A regional list of special-status wildlife species was developed by querying the following databases:

• USFWS Information, Planning, and Conservation System
• The official National Marine Fisheries Service species list
• California Natural Diversity Database
• The CDFW Special Animals List
• Environmental documents for surrounding developments and the Montezuma Hills Wind Resource Area

Based on literature reviews, database searches, and familiarity with the region, a total of 65 wildlife species were initially considered to have potential to occur within the project region. After reviewing the habitat preferences, geographic distribution, elevation range, and known locations of all species on the initial list, 20 special-status animal species were determined to have the potential to occur in the BSA due to the presence of suitable habitat. Special-status species with low or no potential to occur are not considered in detail, with the exception of one Federal and State listed species (California tiger salamander [Ambystoma californiense]). In total, potential project impacts were evaluated against eleven special-status species, which are listed and discussed below.
Swainson’s hawk (Buteo swainsoni) – Listed as Threatened under the California Endangered Species Act

Golden eagle (Aquila chrysaetos) – Covered under the Bald and Golden Eagle Protection Act, listed as fully protected by the CDFW

White-tailed kite (Elanus leucurus) – listed as fully protected by the CDFW

Tricolored blackbird (Agelaius tricolor) – Candidate for listing under the California Endangered Species Act, listed as a California Species of Special Concern

Western burrowing owl (Athene cunicularia hypugaea) – Listed as a California Species of Special Concern

Northern harrier (Circus cyaneus) – Listed as a California Species of Special Concern

Loggerhead shrike (Lanius ludovicianus) – Listed as a California Species of Special Concern

Silver-haired bat (Lasionycteris noctivagans) – Included on the CDFW Special Animals List

Western red bat (Lasiurus blossevillii) – Listed as a California Species of Special Concern

Hoary bat (Lasiurus cinereus) – Included on the CDFW Special Animals List

California tiger salamander - Listed as Threatened under the federal Endangered Species Act, Listed as Threatened under the California Endangered Species Act

**Impacts to Special-Status Animal Species**

**Swainson’s hawk**

Potential impacts to the Swainson’s hawk include the loss of nesting and perching habitat through tree removal, and the loss of foraging habitat from the temporary and permanent disturbance of planted wheat fields and ruderal areas within the BSA. However, the quality and amount of disturbed nesting and foraging habitat is negligible relative to the amount of more optimal habitat in the surrounding landscape. Potential indirect effects to nesting birds may include construction noise and general construction activities (e.g., workers on foot, machinery movements and noise, nighttime work). Implementation of the avoidance and minimization measures for Swainson’s hawk, including nesting bird surveys and non-disturbance buffers for nests (discussed below), would prevent the potential for direct disturbance to Swainson’s hawk or their nests.

**Western burrowing owl**

Direct impacts to western burrowing owl could occur during construction activities associated with widening the existing shoulders of SR-12. Western burrowing owls are known to forage and nest along the open edges of roadways. Implementation of the proposed avoidance and minimization measures would reduce potential impacts to this special-status species during project construction.
Other impacts to western burrowing owl foraging habitat may result from the temporary and permanent disturbance of planted wheat fields and ruderal habitat within the BSA. However, potential impacts to habitat would be limited to a relatively small area in relationship to the amount of additional nesting and foraging habitat in the larger landscape immediately adjacent to the BSA.

*Other special-status avian species*

The proposed project could result in loss or disturbance of nesting habitat used by white-tailed kites, northern harriers, and loggerhead shrikes. However these species have a low potential to nest within the BSA. Potential nesting habitat for these special-status species would be impacted by the removal of the 25 ornamental trees along SR-12 within the clear recovery zone. However, impacts would be limited to a relatively small area in relationship to the amount of nesting habitat in the larger landscape immediately adjacent to the BSA.

The project could result in loss or disturbance of foraging habitat used by white-tailed kites, northern harriers, loggerhead shrikes, and tricolored blackbirds. Potential foraging habitat would be impacted by the temporary and permanent disturbance of planted wheat fields and ruderal areas within the BSA. However, impacts would be limited to a relatively small area in relationship to the amount of foraging habitat in the larger landscape immediately adjacent to the BSA.

The BSA does not provide suitable nesting habitat for the golden eagle. A golden eagle was reportedly seen during biological surveys of the Montezuma Hills Wind Resource Area, and may occasionally forage in the BSA. However, the reduction in the potential low-quality eagle foraging habitat in the BSA resulting from the project would be limited to a negligibly small area in relationship to the amount of known eagle foraging habitat in the larger landscape associated with the Montezuma Hills. The project would, therefore, have no effect on golden eagles.

Construction activities may result in impacts to special-status avian species. However, given the short construction duration and high amount of disturbance from existing traffic on SR-12, these impacts are expected to be negligible. In addition, implementation of the proposed avoidance and minimization measures would further reduce the potential for impacts to these avian species during project construction.

*Special-status bat species*

Tree removals associated with the project could result in loss or disturbance of nesting habitat used by Silver-haired bats, western red bats, and hoary bats. Given the marginal suitability of trees along SR-12 as roosting habitat and the location of more suitable roosting habitat immediately adjacent to the BSA, no impacts to roosting habitat are anticipated.

Silver-haired bats, western red bats, and hoary bats foraging within the BSA may be directly affected by noise, light, and visual disturbances associated with any construction activities occurring at night. These impacts are expected to be short in duration and negligible when compared to the amount of available foraging habitat immediately surrounding the BSA.
addition, implementation of the proposed avoidance and minimization measures would reduce potential impacts to these special-status species during project construction.

*California tiger salamander*

The probability of California tiger salamander occurrences within the BSA is very low. There are several factors contributing to this conclusion, including the lack of known occurrences within their known dispersal distance (which extends 1.24 miles from breeding habitat); lack of suitable habitat within the BSA; the degradation of suitable habitat in the BSA and in the Montezuma Hills (which harbor the nearest known population of California tiger salamanders); and the presence of major dispersal barriers between the BSA, the population in the Montezuma Hills, and other core population areas within Solano County.

On April 11, 2016, a letter was submitted to the USFWS requesting concurrence on the Caltrans’ determination that no adverse impacts to the California tiger salamander would occur. On July 13, 2016, the USFWS concurred with the determination that the project is not likely to adversely affect the California tiger salamander, as the effects are likely to be discountable. This Letter of Concurrence is included as Appendix E.

**Avoidance and Minimization Measures**

To avoid and minimize impacts to special-status species and their habitats within the project limits, Caltrans would implement the following avoidance and minimization measures. Under the proposed project, there are no project impacts that would require compensatory mitigation or non-standard avoidance measures. The measures listed below are considered standard specifications that would be incorporated into the construction contract.

1. **Biological Monitoring.** An agency-approved biologist(s) will be on-site during initial ground-disturbing activities, and thereafter as needed to fulfill the role of the approved biologist as specified in these measures. Through the Resident Engineer or their designee, the approved biologist(s) will be given the authority to communicate either verbally, by telephone, electronic mail or hardcopy with all project personnel to ensure that the risk of take to listed species is minimized. Through the Resident Engineer or their designee, the approved biologist(s) will have the authority to stop project activities to minimize take of listed species.

2. **Worker Environmental Awareness Training.** Prior to working on the project, all construction personnel will attend a mandatory environmental education program delivered by an approved biologist. At a minimum the training will include a description of California tiger salamander and other listed species, migratory birds and their habitats. The training will also discuss the potential occurrence of these species within the action area; an explanation of the status of these species and protection under the Act and other laws; the measures to be implemented to conserve listed species and their habitats as they relate to the work site; and boundaries within which construction may occur.

3. **Pre-construction Surveys.** Prior to any ground disturbance, pre-construction surveys for wildlife species will be conducted by an approved biologist. These surveys will consist of
walking surveys of the project limits and, if possible, accessible adjacent areas within at
least 50 feet of the project limits. The biologist(s) will investigate all potential cover sites.
This includes thorough investigation of mammal burrows, rocky outcrops, appropriately
sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites
within the project limits will be documented and relocated to an adequate cover site in the
vicinity.

4. **Listed Species On Site.** The Resident Engineer will immediately contact the agency-
approved project biologist(s) if listed species are observed within a construction zone.
The Resident Engineer will suspend construction activities and regulatory agencies will be
contacted. Caltrans will initiate formal consultation with the USFWS if the California tiger
salamander is encountered within the action area.

5. **Surveys for Swainson’s hawk.** Pre-construction surveys will be completed with the
express purpose of identifying any potential nesting by Swainson’s hawk within 0.5 mile of
the project area. Implementation of these surveys will be consistent with the
Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in
California’s Central Valley produced in 2000 by the Swainson’s Hawk Technical Advisory
Committee.⁵

6. **Surveys for Burrowing Owls.** Pre-construction surveys will be completed within 15 days
prior to the start of construction activities, with the express purpose of identifying any
potential nesting by burrowing owls within 300 feet of the project area. Implementation of
these surveys will be consistent with the guidelines outlined in Appendix D of CDFW’s
Staff Report on Burrowing Owl Mitigation.⁶

7. **Prevention of Wildlife Entrapment.** To prevent inadvertent entrapment of wildlife
species during construction, excavated holes or trenches more than one foot deep with
walls steeper than 30 degrees will be covered at the close of each working day by
plywood or similar materials. Alternatively, an additional four-foot high vertical barrier,
independent of exclusionary fences, will be used to further prevent the inadvertent
entrapment of wildlife species. If it is not feasible to cover an excavation or provide an
additional four-foot high vertical barrier, independent of exclusionary fences, one or more
escape ramps constructed of earth fill or wooden planks will be installed. Before such
holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at

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⁵ Swainson’s Hawk Technical Advisory Committee (SHTAC). 2000. Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in
California’s Central Valley.

any time a trapped listed animal is discovered, the on-site biologist will immediately place escape ramps or other appropriate structures to allow the animal to escape. If the animal is a listed species, the CDFW or USFWS will be contacted by telephone for guidance.

8. **Work Window for Nesting Birds.** To the extent practicable, clearing and grubbing activities and any tree removal will be conducted during the non-nesting season, from September 1 to February 14.

9. **Pre-construction Surveys for Nesting Birds.** Pre-construction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction for activities.

10. **Non-Disturbance Buffer for Nesting Swainson’s Hawks and Burrowing Owls.** If an active Swainson’s hawk nest or burrowing owl nest is identified during the construction period a non-disturbance buffer will be established in coordination with CDFW. The non-disturbance nest buffer will be a distance sufficient to minimize disturbance based on the nest location, topography, cover, the apparent level of habituation to disturbance, and the intensity/type of potential work activities. This buffer will be at least 300 feet.

11. **Non-Disturbance Buffer for Nesting Birds.** If active nests are observed, a non-disturbance buffer will be established by the Biological Monitor in coordination with CDFW. The non-disturbance buffers will be, at a minimum, 300 feet for active raptor nests or 50 feet for active non-raptor nests, but may, through consultation with CDFW, be reduced based on the nest location, topography, cover, the species’ sensitivity to disturbance, and the intensity/type of potential work activities.

12. **Vehicle Use.** Project employees will be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.

13. **Night Work.** To the extent practicable, nighttime construction will be minimized.

14. **Night Lighting.** Artificial lighting of the project site during nighttime hours will be minimized and directed away from non-paved surfaces to the maximum extent practicable.

15. **Trash Control.** 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 a day from the work area.

16. **Firearms.** No firearms will be allowed in the project area except for those carried by authorized security personnel, or local, State, or federal law enforcement officials.

17. **Pets.** To prevent harassment, injury or mortality of sensitive species, no pets will be permitted on the project site.

18. **Caltrans Standard Best Management Practices (BMPs).** The potential for adverse impacts to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 7-1.01G of the Caltrans Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind or water-related erosion. The State Water Resources Control Board (SWRCB) has issued a National Pollution Discharge Elimination
System (NPDES) Statewide Storm Water Permit to Caltrans to regulate stormwater and non-stormwater discharges from Caltrans facilities. A Storm Water Pollution Prevention Plan (SWPPP) will be developed for the project, as one is required for all projects that have at least 1.0 acre of soil disturbance. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for Design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges.

The SWPPP will reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges and can be found at the following website: http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

Protective measures will be included in the contract, including, at a minimum:

a. No discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses.

b. Vehicle and equipment fueling and maintenance operations must be at least 50 feet away from water courses.

c. Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses.

d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocking temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.

e. Coir rolls will be installed along or at the base of slopes during construction to capture sediment and temporary organic hydro-mulching will be applied to all unfinished disturbed and graded areas.

f. Work areas where temporary disturbance has removed the pre-existing vegetation will be re-seeded with a native seed mix.

g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.

h. A Revegetation Plan will be prepared for restoration of temporary work areas. Pavement and base will be removed; topography blended with the surrounding area; and topsoil will be salvaged from the new alignment area to be placed over the restored area, which will then be revegetated with native grassland species. Invasive, exotic plants will be controlled within the project site to the maximum extent practicable, pursuant to Executive Order 13112.

19. **Monofilament Erosion Control.** As per Caltrans standards, plastic mono-filament netting (erosion control matting) or similar material will not be used for the project because wildlife may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
Solano Multispecies Habitat Conservation Plan

The proposed project is located within the City of Rio Vista, which will voluntarily participate in the Solano Multispecies Habitat Conservation Plan (Solano HCP). However, the Solano HCP is currently undergoing environmental review, and will not be adopted before the approval of this project. Therefore, the project would not conflict with any adopted habitat conservation plans.

V. Cultural 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) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?</td>
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</tr>
<tr>
<td>b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?</td>
<td>☐</td>
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</tr>
<tr>
<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>d) Disturb any human remains, including those interred outside of dedicated cemeteries?</td>
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</table>

Cultural Resources

There are no documented cultural resources within the project limits. The only structure within the immediate area is the single-family residence located on the southeast corner of SR-12 and Amerada Road. This residence was evaluated and determined to be ineligible for listing on the California Register of Historical Resources or the National Register of Historic Places.

Results of a Buried Site Sensitivity Analysis identified the project site as having low- to very-low sensitivity for undocumented buried archaeological resources. However, if materials with archaeological value are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that construction activities shall stop in any area or nearby area suspected to overlie human
remains, and the County Coroner shall be contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the County Coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact Caltrans Professionally Qualified Staff (PQS) Archaeologist so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 would be followed as applicable.

**Paleontological Resources**

There are no known paleontological resources within the project limits. According to the Paleontological Identification/Evaluation Report prepared for the project, there is low potential to discover paleontological resources within the top three feet of soil during project grading and excavation. Excavations exceeding three feet in depth have potential to encounter unidentified paleontological resources due to the aged nature of the deeper alluvium soils.

The proposed roadway improvements would involve excavation of up to three feet within previously disturbed soils. As such, the project does not propose excavations at depths that would encounter potentially fossil-bearing soils. Relocation of utility poles would involve drilled holes to depths of six feet that could potentially reach fossil-bearing soils; however, due to the nature of construction, any fossil fragments brought to the surface would lack context, depth/elevation, formation identification, and other elements that are scientifically significant. Therefore, the recovery options for paleontological specimens would be low.

<table>
<thead>
<tr>
<th>VI. Geology and Soils: Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</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>
<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>
<td>☐</td>
<td>☐</td>
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<td>☑</td>
</tr>
<tr>
<td>ii) Strong seismic ground shaking?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>
iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

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

c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

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

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

The project contains no components which would contribute to soil or slope instability. All slopes would be stabilized using Caltrans erosion-control BMPs. The project is an intersection channelization project, and thus would not expose people or structures to adverse geological effects.
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?

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

<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>

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. 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. These measures are outlined in the body of the environmental document.

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.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts 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 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” and “Adaptation.” "Greenhouse Gas Mitigation" is a term for reducing GHG emissions 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).

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing travel activity), 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency. To be most effective all four strategies should be pursued cooperatively.

Regulatory Setting
This section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

State
With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California has been innovative and pro-active in addressing GHG emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations

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to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (EO) (June 1, 2005): The goal of this EO is to reduce California’s GHG emissions to: 1) year 2000 levels by 2010, 2) year 1990 levels by the 2020, and 3) 80 percent below the year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and SB32 in 2016.

Assembly Bill 32 (AB 32), Chapter 488, 2006 Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” The Legislature also intended that that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Executive Order S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California’s transportation fuels is to be reduced by at least ten percent by the year 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 greenhouse gas reduction goals.

Senate Bill 97 (SB 97) Chapter 185, 2007, Greenhouse Gas Emissions: required the Governor’s Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan: This bill requires the State’s long-range transportation plan to meet California’s climate change goals under AB 32.
Executive Order B-16-12 (March 2012) orders State entities under the direction of the Governor including ARB, the Energy Commission, and Public Utilities Commission to support the rapid commercialization of zero emission vehicles. It directs these entities to achieve various benchmarks related to zero emission vehicles.

Executive Order B-30-15 (April 2015), establishes an interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. It further orders that all state agencies with jurisdiction over sources of greenhouse gas emissions to implement measures, pursuant to statutory authority, to achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO2e). Finally, it requires the Natural Resources Agency to update the state’s climate adaptation strategy, Safeguarding California, every three years, and to ensure that its provisions are fully implemented.

Senate Bill 32 (SB32) Chapter 249, 2016, this legislation codifies the greenhouse gas reduction targets to achieve a mid-range goal of 40 percent below 1990 levels by 2030 established in EO B-30-15.

Federal

Although climate change and GHG reduction are a concern at the federal level; to date no national standards have been established for nationwide mobile source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Council on Environmental Quality (CEQ) released final guidance (Aug1, 2016) for Federal agencies on how to consider the impacts of their actions on global climate change in their National Environmental Policy Act (NEPA) reviews. This final guidance provides a framework for agencies to consider both the effects of a proposed action on climate change, as indicated by its estimated greenhouse gas emissions, and the effects of climate change on a proposed action. The final guidance applies to all types of proposed Federal agency actions that are subject to NEPA analysis and guides agencies on how to address the greenhouse gas emissions from Federal actions and the effects of climate change on their proposed actions within the existing NEPA regulatory framework.

FHWA supports the approach that climate change considerations should be integrated throughout the transportation decision-making process, from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in
the planning process will assist in decision-making and improve efficiency at the program
level, and will inform the analysis and stewardship needs of project-level decision-making.
Climate change considerations can be integrated into many planning factors, such as
supporting economic vitality and global efficiency, increasing safety and mobility, enhancing
the environment, promoting energy conservation, and improving the quality of life. The four
strategies outlined by FHWA to lessen climate change impacts correlate with efforts that the
state is undertaking to deal with transportation and climate change; these strategies include
improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in
tavel activity.

Climate change and its associated effects are being addressed through various efforts at the
federal level to improve fuel economy and energy efficiency.

was passed by Congress and set goals, created mandates, and amended utility laws to
increase clean energy use and improve overall energy efficiency in the United States. The
Act consists of twenty-seven titles detailing various measures designed to lessen the nation's
dependence on imported energy, provide incentives for clean and renewable energy, and
promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It
gave the U.S. Department of Energy administrative power to regulate the minimum number of
light duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year
1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5
billion gallons per year by 2020

research and development program covering: (1) energy efficiency; (2) renewable energy; (3)
oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and
motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11)
hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Action of 1975 and Corporate Average Fuel Standards
The Energy Policy and Conservation Act of 1975 (42 USC Section 6201 [1975]) establishes
fuel economy standards for on-road motor vehicles sold in the United States.

Compliance with federal fuel economy standards is determined through the Corporate
Average Fuel Economy (CAFE) program on the basis of each manufacturer's average fuel
economy for the portion of its vehicles produced for sale in the United States.

Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic
Performance 74 Federal Register 52117 (October 8, 2009). The Executive Order set
sustainability goals for federal agencies and focuses on making improvements in their
environmental, energy, and economic performance. Instituted policy of the United States that
Federal agencies measure, report, and reduce their GHG emissions from direct and indirect
activities.
State Route 12/Church Road Intersection Improvements Project
Initial Study

Executive Order 13653 Preparing the United States for the Impacts of Climate Change (78 Federal Register 66817, November 6, 2013) builds on a previously released (and since revoked) EO I3514 Federal Leadership in Environmental Energy, and Economics Performance to establish direction for federal agencies on how to improve on climate preparedness and resilience strategies.

President Obama’s Climate Action Plan June 2013, President Obama announced a comprehensive plan for action to cut carbon pollution, prepare the Nation for the impacts of climate change, and lead international efforts to address climate change as a global challenge. The Plan builds on the work of the 13 USGCRP member agencies, the USGCRP National Climate Assessment program, and the Interagency Climate Change Adaptation Task Force.

Executive Order 13693 Planning for Federal Sustainability (80 Federal Register 15869, March 2015). This Executive Order (1) reaffirms the policy of the United States that Federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities; (2) sets sustainability goals for all agencies to promote energy conservation, efficiency, and management while by reducing energy consumption and GHG emissions, and (3) builds on the adaptation and resiliency goals in EO 13693 to ensure agency operations and facilities prepare for impacts of climate change.

U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions.

U.S. EPA in conjunction with NHTSA issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010 and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards set a requirement to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules’ long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and ARB will decide on CAFE and GHG emissions standard stringency for model years 2022-2025. Standards for model years 2022 through 2025 have not been formally adopted by NHTSA.
NHTSA and EPA issued a Final Rule for “Phase 2” for medium and heavy duty vehicles to improve fuel efficiency and cut carbon pollution. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO2 emissions by up to 1.1 billion metric tons over the lifetimes of model years 2018-2029 vehicles.

Environmental Setting

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32)]\(^\text{11}\), which created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Board in 2008 and must be updated every five years. The First Update to the Climate Change Scoping Plan was approved by the Board on May 22, 2014.\(^\text{12}\) ARB is moving forward with a second update to the Scoping Plan to reflect the 2030 target established in Executive Order B-30-15 and Senate Bill 32 (SB32).

The AB 32 Scoping Plan and the subsequent update 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: March 24, 2014). The forecast is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emission projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided below represents a Business-as-Usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO2e.\(^\text{13}\)

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the recent economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario includes reductions anticipated from Pavley I and the Renewable Electricity

\(^{11}\) California Environmental Protection Agency Air Resources Board. 2014. Assembly Bill 32 Overview. Available at: https://www.arb.ca.gov/cc/ab32/ab32.htm. Last accessed: November 2, 2016.


\(^{13}\) the revised target using Global Warming Potentials (GWP) from the IPCC Forth Assessment Report (AR4)
Standard (30 MMTCO2e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO₂e.

Figure 3 2020 Business as Usual (BAU) Emissions Projection 2014 Edition

Project Analysis

The purpose of this project is to enhance operation and safety characteristics at the intersection of SR-12 and Church Road by removing turn movements from the through traffic with the addition of a left turn lane, and providing acceleration/deceleration lanes for right turns. As the project is not anticipated to result in an increase in vehicle capacity, the operation of this project would result in low-to-no potential for an increase in operational GHG emissions.

Construction Emissions

GHG 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 on-site 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. Currently, neither Caltrans nor YSAQMD have adopted GHG significance thresholds that apply to construction.
projects. For informational purposes, GHG emissions from project construction are estimated to be 612 metric tons of CO$_2$ over the course of the entire construction project.

**Greenhouse Gas Reduction Strategies**

Caltrans continues to be involved on the Governor’s Climate Action Team as the ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32.

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities, but does not have local land use planning authority. Caltrans assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by participating on the Climate Action Team. It is important to note, however, that control of fuel economy standards is held by the U.S. EPA and ARB.

Caltrans is also working towards enhancing the State’s transportation planning process to respond to future challenges. Similar to requirements for regional transportation plans under Senate Bill (SB) 375, SB 391 require the State’s long-range transportation plan to meet California’s climate change goals under AB 32.

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California’s future, statewide, integrated, multimodal transportation system.

The purpose of the CTP is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, the CTP 2040 will identify the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the State’s transportation needs.

Caltrans Director’s Policy 30 (DP-30) Climate Change (June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

The following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:
1. Caltrans Standard Specification 14-9.01, Standard Specification 10, and Standard Specification 18, which address the requirements of the local air pollution control district. In addition, the YSAQMD CEQA Guidelines provides the following feasible control measures for construction emissions (see Section III, Air Quality):

2. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. Implementation of idling restrictions during construction will reduce temporary greenhouse gas emissions from this project.

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.

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 201114, outlining the federal government’s progress in expanding and strengthening the Nation’s capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks.

Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and

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biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California’s vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

All state agencies that are planning to construct projects in areas vulnerable to future sea level rise are directed to consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data.

Although the proposed project is outside the coastal zone, the Cal Adapt website was reviewed for potential impacts to the surrounding Delta area for potential inundation potentially exacerbated by projected future sea level rise. Direct impacts to transportation facilities due to projected sea level rise are not expected.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be needed to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.

<table>
<thead>
<tr>
<th>VIII. Hazards and Hazardous Materials:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>Less Than Significant Impact with Mitigation</th>
<th>No Impact</th>
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<tbody>
<tr>
<td>Would the project:</td>
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<tr>
<td>a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</td>
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b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ☐ ☐ ☒ ☐

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ☐ ☐ ☐ ☒

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

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? ☐ ☐ ☐ ☒

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ☐ ☐ ☐ ☒

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☐ ☒

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? ☐ ☐ ☐ ☒

A search of environmental regulator databases (e.g. GeoTracker) did not identify any known hazardous waste sites that could affect the project location.

A preliminary site investigation for the project found that lead levels in shallow soils range from less than 12 milligrams per kilogram (mg/kg) up to 160 mg/kg. In addition, the
investigation found that arsenic concentrations in the soils range from 2.5 to 6.0 mg/kg, which exceed the various arsenic thresholds defined by Bay Area Regional Water Quality Control Board’s (RWQCB) environmental screening levels (ESL); however, naturally occurring arsenic levels in San Francisco Bay Area soils typically exceed the arsenic ESLs, and are known to be as high as 20 mg/kg. The arsenic concentrations reported in the preliminary site investigation appear to represent typical background levels. Remediation of naturally occurring chemicals to levels below background concentrations is typically not required. Other contaminants of potential concern (pesticides, diesel, motor oil) were found in the site soils at concentrations below their respective ESLs.

The proposed project involves limited excavation activities. Additional site investigation work based on specific design details will be planned and conducted during the project development process to define the contamination profile of the soils that will be excavated by the construction work. The resulting site investigation report will discuss how the contamination, in particular the lead contamination, fits with the regulatory limits and requirements established for Caltrans by the Department of Toxic Substance Control’s Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils. Adherence to the requirements of the ADL agreement, as dictated in the project specifications, will ensure that excavated soils are properly handled and disposed of in a way that would not create a significant hazard to the public or the environment.

The proposed project would improve operations at the SR-12/Church Road intersection; therefore, there would be no permanent impact to emergency vehicles’ access, an emergency response plan, or an emergency evacuation route. Short-term effects associated with lane closures, detours, and construction activities would be avoided and/or minimized through preparation and implementation of a standard Transportation Management Plan (TMP). Caltrans will notify affected police and emergency service providers at least one week in advance of any lane or roadway closures or impacts related to access. With implementation of standard TMP measures, the project would not result in construction-period effects to police and emergency service providers.

The Rio Vista Municipal Airport is located approximately 1.2 miles north of the SR-12/Church Road intersection. Project construction and operation would not interfere with this airport. The proposed project is not within 0.25 miles of a school, and there are no private airstrips nearby.

### IX. Hydrology and Water Quality:
Would the project:

<table>
<thead>
<tr>
<th>a) Violate any water quality standards or waste discharge requirements?</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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b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

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<tr>
<th>c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion of siltation on- or off-site?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
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d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

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<tr>
<th>e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?</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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f) Otherwise substantially degrade water quality?

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<tr>
<th>g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</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>
</table>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?  

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?  

j) Inundation of seiche, tsunami, or mudflow?  

Project construction could potentially cause erosion. In addition, the operation of roadways results in the discharge of contaminants to the environment that can be transported away from the roadway by stormwater runoff. Though implementation of the project would increase impervious surfaces at the project site by 1.7 acres, this small amount of new impervious surface would generate a negligible increase in stormwater runoff.

The SWRCB has issued a statewide Construction General Permit for all construction activities disturbing over 1.0 acre of soil. All projects subject to the Construction General Permit require a SWPPP to reduce the potential for adverse effects of erosion and sedimentation. As the project would disturb approximately 2.6 acres of soil, it must comply with provisions of the Construction General Permit and will prepare a SWPPP. The SWPPP will identify potential pollutant sources that may affect the quality of the runoff and identify, construct, and implement BMPs to reduce pollutants in stormwater discharges from the construction site.

Stormwater is also managed under a NPDES permit, which, in conjunction with the Caltrans Storm Water Management Plan (SWMP), would address water quality issues both during and after construction. Treatment for increased runoff would be provided by the proposed Design Pollution Prevention BMPs, including biofiltration strips and/or swales, which are proposed as a component of the project. Caltrans’ standard construction BMPs would further reduce potential impacts to hydrology and water quality.

A review of relevant Federal Emergency Management Agency (FEMA) Flood Zone Maps indicates that the proposed project site is not within a 100 year floodplain or special flood

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16 Biofiltration Swales/Strips are vegetated channels that receive, filter, and convey stormwater flows. Pollutants including litter, soil, and metal particulates are removed from stormwater by filtration through the vegetation, uptake by plant biomass, sedimentation, and adsorption/infiltration through the soil.
zone, and thus would not place structures or people within a flood-hazard area. The Flood Zone Map associated with the project site is included as Appendix F.

### X. Land Use and Planning:

<table>
<thead>
<tr>
<th>Would the project:</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>
<tbody>
<tr>
<td>a) Physically divide an established community?</td>
<td>☐</td>
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</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>
<td>☒</td>
</tr>
<tr>
<td>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
<td>☐</td>
<td>☐</td>
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</tr>
</tbody>
</table>

All project improvements would occur on, or immediately adjacent to, the existing SR-12/Church Road intersection. No new physical or perceptual barriers would be created that could potentially divide an established community. None of the proposed property acquisitions are located where there are existing structures or improvements, and no residential or business relocations would occur.

The Rio Vista General Plan 2001 land use policies focus on the City of Rio Vista’s Planning Area, as defined in the Planning Constraints & Boundaries Element. Within the overall Planning Area, six distinct sub-planning areas were derived from examining the location and range of existing and potential uses, and the unique characteristics of various portions of the overall planning area. Sub-Planning Area 2—Esperson Property, River Walk, and Homecoming Neighborhood; and Sub-Planning Area 4—Northwest Area Neighborhoods are adjacent to the project limits. Each of the sub-planning areas include the planned developments listed in Section 7, Planned Development of this document. The project would not preclude the foreseeable residential and commercial land uses associated with the future Riverwalk and Marks-McCormack developments, and is therefore consistent with existing and future local land use planning. Therefore, the project would not conflict with local land use plans.

Caltrans has programmed an SR-12 Resurfacing, Restoration and Rehabilitation project in the 2016 SHOPP. Segment 2 of the SHOPP project proposes widening SR-12 from Summerset Road to the Solano County line, constructing shoulders, repairing pavement and
improving nonstandard vertical curvature where feasible. The SR-12/Church Road project is within the limits of the SHOPP project, and is consistent with regional planning efforts.

The project site is not currently within an adopted habitat conservation plan or natural community conservation plan.

<table>
<thead>
<tr>
<th>XI. Mineral Resources: Would the project:</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>
<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>
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<tr>
<td>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?</td>
<td>☐</td>
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</table>

According to the Solano County General Plan, the project site is not located within a Mineral Resource Zone.17

<table>
<thead>
<tr>
<th>XII. Noise: Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
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<tbody>
<tr>
<td>a) Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</td>
<td>☐</td>
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A Mineral Resource Zone is an area where existing mineral deposits are known to occur, where adequate information indicates that significant material deposits are present, or where it is judged that a high likelihood for their presence exists.
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne vibration 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 proposed project would improve operations at the SR-12/Church Road intersection without directly increasing traffic levels. As such, it would not permanently increase noise levels at the project site. Construction noise would be temporary and would be within acceptable levels for construction activity as specified by local plans.

<table>
<thead>
<tr>
<th>XIII. Population and Housing: Would the project:</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>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)?</td>
<td>☐</td>
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<tr>
<td>b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?</td>
<td>☐</td>
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</table>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? □ □ □ ☒

No new growth would be generated with project implementation. Land acquisitions associated with the project are all partial property frontages, and there would be no displacement of current residents.

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<th>XIV. Public Services: Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>Less Than Significant Impact with Mitigation</th>
<th>No Impact</th>
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<tr>
<td>a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant Impact</td>
<td>Less Than Significant Impact with Mitigation</td>
<td>No Impact</td>
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<tr>
<td>i) Fire protection?</td>
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<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
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<td>ii) Police protection?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
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<td>iii) Schools?</td>
<td>☐ ☐ ☐ ☒</td>
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<td>iv) Parks?</td>
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<td>v) Other public facilities?</td>
<td>☐ ☐ ☐ ☒</td>
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The project would not induce population growth in the area, and no increased demands for public services would occur.

The proposed project would improve operations at the SR-12/Church Road intersection; therefore, there would be no permanent impact to emergency vehicles’ access, an emergency response plan, or an emergency evacuation route. Short-term effects associated with lane closures, detours, and construction activities would be avoided and/or minimized through preparation and implementation of a standard TMP. Caltrans will notify affected police and emergency service providers at least one week in advance of any lane or roadway closures or impacts related to access. With implementation of standard TMP measures, the
The project would not result in construction-period effects to police and emergency service providers.

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<th></th>
<th>Potentially Significant Impact</th>
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**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?

- [ ] Potentially Significant Impact
- [ ] Less Than Significant Impact
- [ ] Less Than Significant Impact with Mitigation
- [x] No Impact

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?

- [ ] Potentially Significant Impact
- [ ] Less Than Significant Impact
- [ ] Less Than Significant Impact with Mitigation
- [x] No Impact

The project site is not located near a recreational area. The project would not induce population growth in the area, and no increased demands for recreational facilities would occur.

**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?

- [ ] Potentially Significant Impact
- [ ] Less Than Significant Impact
- [ ] Less Than Significant Impact with Mitigation
- [x] No Impact
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?

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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?

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

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e) Result in inadequate emergency access?

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f) Result in inadequate parking capacity?

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g) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

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The proposed project is intended to result in beneficial effects to traffic operations at the SR-12/Church Road intersection by separating left- and right-turning traffic from through traffic. The project would also improve motorist safety by correcting non-standard shoulder widths and removing the 25 trees that are in the clear recovery zone. The project would not generate new sources of vehicle traffic or change existing traffic circulation patterns; therefore, there would be no impact to adopted transportation plans or congestion management plans.

Short-term emergency access impacts associated with lane closures, detours, and construction activities would be avoided and/or minimized through preparation and implementation of a standard TMP.
XVII. Tribal Cultural Resources

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

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

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

The project site is not listed or eligible for listing in applicable registers of historic resources. Formal letters were submitted to the Yocha Dehe Wintun Nation and the Cortina Band of Wintun informing them of the proposed project. The Cortina Band of Wintun did not request consultation, and the Yocha Dehe Wintun Nation was not aware of any known cultural resources near the project site.
<table>
<thead>
<tr>
<th>XVIII. Utilities and Service Systems:</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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<tr>
<td>Would the project:</td>
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<tr>
<td>a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?</td>
<td>☐</td>
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<tr>
<td>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?</td>
<td>☐</td>
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<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</td>
<td>☐</td>
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<tr>
<td>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?</td>
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<tr>
<td>f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?</td>
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<tr>
<td>g) Comply with federal, state, and local statutes and regulations related to solid waste?</td>
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As discussed in Section IX, Hydrology and Water Quality, the proposed project would add approximately 1.7 acres of impervious surface, which would generate new sources of stormwater runoff. However, additional runoff generated on the project site would be captured by onsite retention facilities, and would not enter municipal stormwater drainage systems.
The project would not induce population growth, and no increased demands for other utilities and service systems would occur.

<table>
<thead>
<tr>
<th>XIX. Mandatory Findings of Significance</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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</thead>
<tbody>
<tr>
<td>a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</td>
<td>☐</td>
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</tr>
<tr>
<td>b) Does the project have impacts that are individually limited, but cumulative considerable? (“Cumulative 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)?</td>
<td>☐</td>
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</tr>
<tr>
<td>c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</td>
<td>☐</td>
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This cumulative impact analysis determines whether the proposed project, in combination with other approved or foreseeable projects, would result in a significant cumulative impact. Reasonably foreseeable future projects include the land use developments listed in Section 7, Planned Development.

If the project would not result in a direct or indirect effect on a resource, then it would not contribute to a cumulative impact on that resource, and does not require further evaluation. As demonstrated above, the project would have no impact to air quality, geology and soils, greenhouse gas emissions, land use and planning, mineral resources, population and
housing, public services, recreation, tribal cultural resources and utilities and service systems. Therefore, these resources are not discussed further.

Certain resources are not vulnerable to cumulative effects. For example, cultural resources and hazardous materials related to future development in areas surrounding the project limits are site specific. There is no additive effect of cultural resources or hazardous materials associated with other approved or foreseeable development and the project, and no further cumulative analysis of these resources is warranted.

As discussed in Section I, Aesthetics, roadway improvements and associated tree removal would slightly alter views in the project vicinity. However, the project would generally conform to the existing visual landscape of the highway corridor, and would not have a cumulatively considerable impact to visual resources in the region.

As discussed in Section II, Agricultural Resources, partial property frontages from the surrounding agricultural properties and landscaped areas adjacent to SR-12 would be acquired to construct the project. These partial acquisitions would not affect the agricultural production of the adjacent farmlands, and would not cumulatively contribute to farmland loss in the County.

As discussed in Section IV, Biological Resources, project implementation would result in the permanent loss of wildlife habitat; however, based on the relatively small amount of disturbance and the limited habitat suitability within the BSA, it is expected that the project’s impact to wildlife habitat would be negligible. Therefore, the project would not cumulatively contribute to biological impacts.

As discussed in Section IX, Hydrology and Water Quality, implementation of the project would increase impervious cover at the project site by 1.7 acres. However, treatment for increased runoff would be provided by the proposed onsite bioretention facilities and implementation of other BMPs. Therefore, the project would not cumulatively contribute to hydrological and/or water quality impacts in the area.

As discussed in Section, XII Noise, the project would not permanently generate noise, and would not cumulatively contribute to noise levels in the area.

As discussed in Section, XVI Transportation and Traffic, the project would not generate new sources of vehicle traffic or change existing traffic circulation patterns. Project construction may require short-term lane closures and detours. This temporary impact would not permanently alter the regional circulation network, and would not cumulatively contribute to transportation and traffic impacts in the area.
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APPENDIX A

LIST OF TECHNICAL STUDIES

SR-12/Church Road Intersection Improvements Project, Air Quality Report. April, 2016.
SR-12/Church Road Intersection Improvements Project, Natural Environment Study. April, 2016.
SR-12/Church Road Intersection Improvements Project, California Tiger Salamander Habitat Assessment. April, 2016.
APPENDIX B
LIST OF PREPARERS

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Zachary Gifford, Associate Environmental Planner
Andrew Amacher, Office of Biological Sciences & Permits
Arick Bayford, North County Design
Appendix C

Project Plans
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NOTES:
1. PAVEMENT STRUCTURAL SECTIONS SHOWN ARE FOR PLANNING PURPOSES ONLY. FINAL SECTIONS TO BE DETERMINED DURING PSE.
2. TYPICAL STRUCTURE SECTIONS AND CORRESPONDING DESIGN DESIGNATIONS FOR ROUTE 12 ARE FROM THE SR-12 CURRIE RD-AZEVEDO RD CONTRACT PM 20.6/23.5.

ROUTE 12
STA 19+92.57 TO 29+10.00

TYPICAL CROSS SECTIONS
SCALE 1N1S
NOTE:
SEE SHEET X-1 FOR PAVEMENT SECTIONS.

CHURCH ROAD
STA 5+54 TO 7+10

PROPOSED

Existing

PROPOSED

EXISTING

PROPOSED

 ваш

EXISTING

CHURCH RD

1' 4'

6'

12'

LT TURN

SHLD

1' (3' WHERE WITHIN STATE R/W)

1' (3' WHERE WITHIN STATE R/W)

NOTE:
SEE SHEET X-1 FOR PAVEMENT SECTIONS.

CHURCH ROAD
STA 9A84 TO 9A84
STA 7+10 TO 9+40

TYPICAL CROSS SECTIONS
SCALE: NTS

X-2
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Appendix D

Biological Study Area
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Appendix E

United States Fish & Wildlife Service
Letter of Concurrence and
Species Lists
Ms. JoAnn Cullom  
California Department of Transportation  
Environmental Division, MS-8E  
111 Grand Avenue  
Oakland, California 94612

Subject: Informal Consultation on the State Route 12 Church Road Intersection Improvement Project, Solano County, California (Caltrans EA 04-0G0500)

Dear Ms. Cullom:

This letter is in response to the California Department of Transportation's (Caltrans) April 7, 2016, request for informal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed State Route (SR) 12 Church Road Intersection Improvement Project in the City of Rio Vista, Solano County, California. The proposed project includes the addition of right and left turn lanes at the intersection of SR 12 and Church/Amerada Road along with other standardization and safety-related improvements. This consultation concerns the effects of the proposed action on the threatened Central California Distinct Population Segment of the California tiger salamander (Central California tiger salamander) (*Ambystoma californiense*). No designated or proposed critical habitat is present within the action area. This letter is issued under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 et seq.), (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law on July 6, 2012. Effective October 1, 2012, MAP-21 includes provisions to promote streamlined and accelerated project delivery. Caltrans was approved to participate in the MAP-21 Surface Transportation Project Delivery Program through the National Environmental Policy Act (NEPA) Assignment Memorandum of Understanding (MOU). The MOU allows Caltrans to assume the Federal Highway Administration’s (FHWA) responsibilities under NEPA as well as FHWA’s consultation and coordination responsibilities under Federal environmental laws for most highway projects in California. Caltrans is exercising this authority as the Federal nexus for section 7 consultation on this project.

According to the March 2016 Biological Assessment (BA) provided by Caltrans, the purpose of the proposed project is to reduce the likelihood of accidents on SR 12 at the Church/Amerada Road intersection, minimize the severity of accidents with fixed objects, and provide a clear recovery zone off the travel lanes. To address these issues, the proposed project includes the additions of left turn pockets and acceleration/deceleration lanes in each direction of travel on SR 12 at the intersection. The project limits will extend approximately 1,312 feet west and 820 feet east of the intersection.
Standardized 8-foot shoulders and drainage ditches will also be added within this zone and overhead and underground utilities will be relocated to the edge of the new right-of-way.

Addition of these features will require widening the existing roadway approximately 32 feet to the north and 8 feet to the south. These adjacent areas are characterized by managed ruderal roadside landscaping, primarily annual weed species and wheat. Clearing and grubbing of this area will also involve the removal of 25 trees. The project will result in the addition of 3.67 acres of hardscape with the use of 1.79 acres of temporary work space. Construction is anticipated to take 12 months.

The action area for the project likely includes the project footprint and a 300 foot buffer. This action area is located within the range of the Central California tiger salamander. A map depicting the species' range is included in the Service's online profile for the species at http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D01T. The project is also located in the southeast periphery of the Jepson Prairie Management Unit described in the Service's 2016 Draft Recovery Plan for the species (available at http://ecos.fws.gov/docs/recovery_plan/DRAFT_RP_CTS-20160113.pdf). The closest recorded Central California tiger salamander occurrence in the California Natural Diversity Database (CNDDB) is located approximately 7 miles west of the action area in an area of open grassland with nearby stockponds and vernal pools (CNDDB occurrence #1180, CDFW 2016a & b). Comparable and appropriate rolling grassland habitat is located approximately 0.8 mile southwest of the action area, beyond the cultivated row crops which characterize the land in between.

The action area is within historical range of the listed amphibian but due to surrounding land conversion to row crops and residential development, there is limited potential for the species to occur in the narrow strip of ruderal roadside habitat within the Caltrans ROW paralleling the busy SR 12 travel corridor. In addition, there are no discernable breeding pond locations within a 1.3 mile radius of the project. Therefore, the Service believes that it is unlikely that the Central California tiger salamander occurs within the action area and the project is unlikely to result in habitat loss, increased road mortality risk, or other adverse effects that may result in take of individuals.

As part of their project description, Caltrans has committed to implementing environmental measures, which include biological monitoring for various natural resource issues. The measures include reference to the Central California tiger salamander and the project will be suspended and formal consultation initiated with the Service if the listed amphibian is encountered in the action area.

1. **Permits.** Caltrans will include a copy of the any relevant regulatory permits within the construction bid package of the proposed project. The Resident Engineer or their designee will be responsible for implementing the terms and conditions of those regulatory permits.

2. **Biological Monitoring.** An agency-approved biologist(s) will be on-site during initial ground-disturbing activities, and thereafter as needed to fulfill the role of the approved biologist as specified in these measures, and/or project permits. The biologist(s) will keep copies of applicable permits in their possession when on-site. Through the Resident Engineer or their designee, the approved biologist(s) will be given the authority to communicate either verbally, by telephone, electronic mail or hardcopy with all project personnel to ensure that the risk of take to listed species is minimized, and that any permit requirements are fully implemented. Through the Resident Engineer or their designee, the approved biologist(s) will have the authority to stop project activities to minimize take of listed species or if they determine that any permit requirements are not fully implemented.
3. **Worker Environmental Awareness Training.** Prior to working on the project, all construction personnel will attend a mandatory environmental education program delivered by an approved biologist. At a minimum the training will include a description of California tiger salamander and other listed species, migratory birds and their habitats. The training will also discuss the potential occurrence of these species within the action area; an explanation of the status of these species and protection under the Act and other laws; the measures to be implemented to conserve listed species and their habitats as they relate to the work site; and boundaries within which construction may occur.

4. **Pre-construction Surveys.** Prior to any ground disturbance, pre-construction surveys for wildlife species will be conducted by an approved biologist. These surveys will consist of walking surveys of the project limits and, if possible, accessible adjacent areas within at least 50 feet of the project limits. The biologist(s) will investigate all potential cover sites. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites within the project limits will be documented and relocated to an adequate cover site in the vicinity.

5. **Listed Species On Site.** The Resident Engineer will immediately contact the agency-approved project biologist(s) if listed species are observed within a construction zone. The Resident Engineer will suspend construction activities and regulatory agencies will be contacted. Caltrans will initiate formal consultation with the Service if the Central California tiger salamander is encountered within the action area.

6. **Surveys for Swainson’s Hawk.** Pre-construction surveys will be completed with the express purpose of identifying any potential nesting by Swainson’s hawk within 0.5 mile of the project area. Implementation of these surveys will be consistent with the *Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley* produced in 2000 by the Swainson’s Hawk Technical Advisory Committee (SHTAC 2000).

7. **Surveys for Burrowing Owls.** Pre-construction surveys will be completed within 15 days prior to the start of construction activities, with the express purpose of identifying any potential nesting by burrowing owls within 300 feet of the project area. Implementation of these surveys will be consistent with the guidelines outlined in Appendix D of California Department of Fish and Wildlife’s (CDFW) *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

8. **Prevention of Wildlife Entrapment.** To prevent inadvertent entrapment of wildlife species during construction excavated holes or trenches more than one foot deep with walls steeper than 30 degrees will be covered at the close of each working day by plywood or similar materials. Alternatively, an additional 4 foot high vertical barrier, independent of exclusionary fences, will be used to further prevent the inadvertent entrapment of wildlife species. If it is not feasible to cover an excavation or provide an additional 4 foot high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks will be installed. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist will immediately place escape ramps or other appropriate structures to allow the animal to escape. If the animal is a listed species, the CDFW and the Service will be contacted by telephone for guidance.
9. **Work Window for Nesting Birds.** To the extent practicable, clearing and grubbing activities and any tree removal will be conducted during the non-nesting season, from September 1 to February 14.

10. **Pre-construction Surveys for Nesting Birds.** Pre-construction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction for activities.

11. **Non-Disturbance Buffer for Nesting Swainson's Hawks and Burrowing Owls.** If an active Swainson's hawk nest or burrowing owl nest is identified during the construction period a non-disturbance buffer will be established in coordination with CDFW. The non-disturbance nest buffer will be a distance sufficient to minimize disturbance based on the nest location, topography, cover, the apparent level of habituation to disturbance, and the intensity/type of potential work activities. This buffer will be at least 300 feet.

12. **Non-Disturbance Buffer for Nesting Birds.** If active nests are observed, a nondisturbance buffer will be established by the Biological Monitor in coordination with CDFW. The non-disturbance buffers will be, at a minimum, 300 feet for an active raptor nests or 50 feet for active non-raptor nests, but may, through consultation with CDFW, be reduced based on the nest location, topography, cover, the species’ sensitivity to disturbance and the intensity/type of potential work activities.

13. **Vehicle Use.** Project employees will be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.

14. **Night Work.** To the extent practicable, nighttime construction will be minimized.

15. **Night Lighting.** Artificial lighting of the project site during nighttime hours will be minimized and directed away from non-paved surfaces to the maximum extent practicable.

16. **Trash Control.** 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 a day from the work area.

17. **Firearms.** No firearms will be allowed in the project area except for those carried by authorized security personnel, or local, State, or federal law enforcement officials.

18. **Pets.** To prevent harassment, injury or mortality of sensitive species, no pets will be permitted on the project site.

19. **Caltrans Standard BMPs.** The potential for adverse impacts to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 7-1.01G of the Caltrans Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind or water-related erosion. The State Water Resources Control Board has issued a National Pollution Discharge Elimination System Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities. A Storm Water Pollution Prevention Plan (SWPPP) will be developed for the project, as one is required for all projects that have at least 1.0 acre of soil disturbance. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for Design staff to include provisions in construction contracts to include measures to
protect sensitive areas and to prevent and minimize storm water and non-storm water discharges.

The SWPPP will reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges and can be found at the following website: http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

Protective measures will be included in the contract, including, at a minimum:

a. No discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses.

b. Vehicle and equipment fueling and maintenance operations must be at least 50 feet away from water courses.

c. Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses.

d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, providing temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.

e. Coir rolls will be installed along or at the base of slopes during construction to capture sediment and temporary organic hydro-mulching will be applied to all unfinished disturbed and graded areas.

f. Work areas where temporary disturbance has removed the pre-existing vegetation will be re-seeded with a native seed mix.

g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.

h. A Revegetation Plan will be prepared for restoration of temporary work areas. Pavement and base will be removed; topography blended with the surrounding area; and topsoil will be salvaged from the new alignment area to be placed over the restored area, which will then be revegetated with native grassland species. Invasive, exotic plants will be controlled within the project site to the maximum extent practicable, pursuant to Executive Order 13112.

20. Monofilament Erosion Control. As per Caltrans standards, plastic mono-filament netting (erosion control matting) or similar material will not be used for the project because wildlife may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydrosedding compounds.

Based on our review of Caltrans' April 7, 2016 request for informal consultation; the March 2016 BA; a May 13, 2016 field visit, and our current knowledge of species occurrence data, action area location, and natural history, the Service concurs with the determination that the project as described is not likely to adversely affect the Central California tiger salamander as
the effects are likely to be discountable. Implementation of Caltrans' proposed measures, such as environmental awareness training, preconstruction surveys, and biological monitoring of construction activities will increase the potential that lethal take of the Central California tiger salamander will be avoided and formal consultation will be triggered if the listed amphibian is found in the action area.

This concludes informal consultation on the proposed SR 12 Church Road Intersection Improvement Project. Therefore, unless new information reveals effects of the proposed action that may affect listed species in a manner or to an extent not considered, or a new species is listed, no further action pursuant to the Act is necessary.

If you have questions concerning this consultation, please contact John Cleckler, Caltrans Liaison [john_cleckler@fws.gov, (916) 414-6639] or me [ryan_olah@fws.gov, (916) 414-6623], at the letterhead address, by telephone, or e-mail.

Sincerely,

[Signature]

Ryan Olah
Coast-Bay Division Chief

cc:
Melissa Escaron, California Department of Fish and Wildlife, Napa, California
Andrew Amacher, Caltrans District 4, Oakland, California
Literature Cited


____ 2016a. California Natural Diversity Data Base (CNDDDB) RAREFIND. Central California tiger salamander occurrence 1180. Natural Heritage Division, Sacramento, California.

____ 2016b. BIOSIS. Central California tiger salamander occurrence 1180. Natural Heritage Division, Sacramento, California.

Consultation Code: 08ESMF00-2016-SLI-0201  
Event Code: 08ESMF00-2017-E-00510  
Project Name: State Route 12 (SR-12) / Church Road Intersection Improvements Project

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2)
of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment
Official Species List

Provided by:
Sacramento Fish and Wildlife Office
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

Consultation Code: 08ESMF00-2016-SLI-0201
Event Code: 08ESMF00-2017-E-00510

Project Type: TRANSPORTATION

Project Name: State Route 12 (SR-12) / Church Road Intersection Improvements Project
Project Description: Provide a clear recovery zone off the travel lanes on SR-12 at the Church/Amerada Road intersection. The project includes two alternatives. Alternative 1 would widen SR-12 by approximately 32 feet to the north to accommodate added 8 feet shoulders and turning and acceleration lanes along SR-12. Alternative 2 is identical to Alternative 1 with the exception that the SR-12/Church Road intersection and associated westbound SR-12 turning lanes would be realigned approximately 100 feet to the west.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.
Project Location Map:

**Project Coordinates:** MULTIPOLYGON (((-121.71013204771243 38.17164109237516, -121.70930125359463 38.17101510068048, -121.70866976409087 38.17149975044467, -121.70737720754806 38.17194463093155, -121.70724129791505 38.172052123014346, -121.70703501924451 38.171890106922575, -121.70699260525014 38.17185302777425, -121.70874533381078 38.17049027138294, -121.7056010393016 38.16787611843226, -121.70593891439711 38.16761066394913, -121.7072534028065 38.16899457928111, -121.70937788125691 38.17034102491115, -121.70950487414743 38.17029558111022, -121.70980366594894 38.17054039531898, -121.70971883811671 38.17060940042953, -121.71089603849933 38.17151778136829, -121.7129373975741 38.17319934272895, -121.71260064944299 38.17345865479226, -121.71092211725941 38.17226161281116, -121.7103204771243 38.17164109237516)))

**Project Counties:** Solano, CA
Endangered Species Act Species List

There are a total of 12 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

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<th>Has Critical Habitat</th>
<th>Condition(s)</th>
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<tr>
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<td>Final designated</td>
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<tr>
<td>Population: Wherever found</td>
<td></td>
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<tr>
<td>California tiger Salamander (<em>Ambystoma californiense</em>)</td>
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<td>Final designated</td>
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<tr>
<td>Population: Wherever found</td>
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<th>Crustaceans</th>
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<tr>
<td>Vernal Pool fairy shrimp (<em>Branchinecta lynchii</em>)</td>
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<tr>
<td>Vernal Pool tadpole shrimp</td>
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<td>Final designated</td>
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</table>
(Lepidurus packardi)
    Population: Wherever found
Fishes
Delta smelt (*Hypomesus transpacificus*)
    Threatened
    Final designated
    Population: Wherever found

steelhead (*Oncorhynchus (=salmo) mykiss*)
    Threatened
    Population: Northern California DPS

Insects
Delta Green Ground beetle (*Elaphrus viridis*)
    Threatened
    Final designated
    Population: Wherever found

San Bruno Elfin butterfly (*Callophrys mossii bayensis*)
    Endangered
    Population: Wherever found

Valley Elderberry Longhorn beetle (*Desmocerus californicus dimorphus*)
    Threatened
    Final designated
    Population: Wherever found

Reptiles
Giant Garter snake (*Thamnophis gigas*)
    Threatened
    Population: Wherever found
Critical habitats that lie within your project area

There are no critical habitats within your project area.
### Intersection of USGS Topographic Quadrangles and NOAA Fisheries ESU/DPS, Critical Habitat, Species Distribution, and Essential Fish Habitat

**X = Present on the Quadrangle**

#### Salmonid ESU / DPS

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<th>STEHEAD (CCV)</th>
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#### Critical Habitat

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#### Anadromous salmonid DISTRIBUTION

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#### Marine / Estuarine Species DISTRIBUTION

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<th>SC (CC)</th>
<th>CCV (S)</th>
<th>CVSR (T)</th>
<th>SONCC (NW)</th>
<th>SRWR (E)</th>
<th>UKTR (NW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio Vista</td>
<td>38121-B6</td>
<td>X</td>
<td>X</td>
<td>X</td>
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#### Essential Fish HABITAT

<table>
<thead>
<tr>
<th>Quad Name</th>
<th>Quad Number</th>
<th>COHO (SONCC)</th>
<th>CCC (KMP)</th>
<th>KMP (NC)</th>
<th>STEHEAD (CCV)</th>
<th>CCC (SCC)</th>
<th>SC (CC)</th>
<th>CCV (S)</th>
<th>CVSR (T)</th>
<th>SONCC (NW)</th>
<th>SRWR (E)</th>
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<td>Rio Vista</td>
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<td>X</td>
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</table>

#### Glossary

<table>
<thead>
<tr>
<th>ESU / DPS</th>
<th>Boundary files for species population (NMFS) <a href="http://www.westcoast.fisheries.noaa.gov/maps_data/species_population_boundaries.html">http://www.westcoast.fisheries.noaa.gov/maps_data/species_population_boundaries.html</a></th>
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</thead>
<tbody>
<tr>
<td>ESU</td>
<td>Evolutionarily Significant Unit</td>
</tr>
<tr>
<td>DPS</td>
<td>Distinct Population Segment</td>
</tr>
<tr>
<td>CVSR</td>
<td>Sacramento River Winter-run</td>
</tr>
<tr>
<td>CCC</td>
<td>California Coastal</td>
</tr>
<tr>
<td>CC</td>
<td>Central California Coast</td>
</tr>
<tr>
<td>CVF</td>
<td>Central Valley Fall / Late Fall</td>
</tr>
<tr>
<td>CVSR</td>
<td>Central Valley Spring-run</td>
</tr>
<tr>
<td>KMP</td>
<td>Klamath Mountains Province</td>
</tr>
<tr>
<td>NC</td>
<td>Northern California</td>
</tr>
<tr>
<td>SC</td>
<td>Southern California</td>
</tr>
<tr>
<td>SONCC</td>
<td>Southern Oregon / Northern California Coast</td>
</tr>
<tr>
<td>SRWR</td>
<td>Sacramento River Winter-run</td>
</tr>
<tr>
<td>UKTR</td>
<td>Upper Klamath / Trinity River</td>
</tr>
</tbody>
</table>

#### Data Sources

- **Quads** - 1,240,000 USGS Topographic Quadrangles (USGS 2014)
- **ESU / DPS** - Boundary files for species population (NMFS) [http://www.westcoast.fisheries.noaa.gov/maps_data/species_population_boundaries.html](http://www.westcoast.fisheries.noaa.gov/maps_data/species_population_boundaries.html)
- **Critical Habitat** - spatial or narrative CH reference [http://www.westcoast.fisheries.noaa.gov/maps_data/endangered_species_act_critical_habitat.html](http://www.westcoast.fisheries.noaa.gov/maps_data/endangered_species_act_critical_habitat.html)
- **Cohos** - [http://www.calfish.org/](http://www.calfish.org/)
- **Steelheads** - [http://www.calfish.org/](http://www.calfish.org/)
- **Chinooks** - [http://www.calfish.org/](http://www.calfish.org/)
- **Pinnipeds** - [http://www.westcoast.fisheries.noaa.gov/maps_data/pinnipeds.html](http://www.westcoast.fisheries.noaa.gov/maps_data/pinnipeds.html)
- **Highly Migratory Species** - [http://www.habitat.noaa.gov/protection/efh/newInv/index.html](http://www.habitat.noaa.gov/protection/efh/newInv/index.html)

#### Distribution

- **Coho Salmon** (CDFW 2012) [http://www.calfish.org/](http://www.calfish.org/)
- **Steelhead** (CDFW 2012) [http://www.calfish.org/](http://www.calfish.org/)
- **Chinook Salmon** (NMFS 2005) [http://www.calfish.org/](http://www.calfish.org/)
- **Cetaceans** (SWFSC 2012) [http://marinecadastre.gov/](http://marinecadastre.gov/)
- **Sea Turtles** (NMFS 2010)
- **Black Abalone** (NMFS 2010)
- **White Abalone** (NMFS 2010)
- **Eulachon** (NMFS 2012)
- **Green Sturgeon** (NMFS 2013)
- **Steller Sea Lion** (NMFS 2010)
- **Guadalupe Fur Seal** (NMFS 2010)

#### Essential Fish Habitat

- **Salmon** (NMFS 2014) [http://www.westcoast.fisheries.noaa.gov/maps_data/essential_fish_habitat.html](http://www.westcoast.fisheries.noaa.gov/maps_data/essential_fish_habitat.html)
- **Coastal Pelagics** (NMFS 2014) [http://www.habitat.noaa.gov/protection/efh/newInv/index.html](http://www.habitat.noaa.gov/protection/efh/newInv/index.html)
- **Highly Migratory Species** (NMFS 2013) [http://www.habitat.noaa.gov/protection/efh/newInv/index.html](http://www.habitat.noaa.gov/protection/efh/newInv/index.html)
Appendix F

Flood Insurance Rate Map

Map Number 06095C0537E
Appendix G

Title VI Non-Discrimination Policy
March 2013

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

[Signature]
MALCOLM DOUGHERTY
Director

"Caltrans improves mobility across California"
Appendix H

Environmental Commitments Record
### Environmental Commitments for State Route 12/Church Road Intersection Improvements Project

**December 2016**  
**Project ID No. 0400000305**

**Project Timing/Phase**  
(PS&E, Pre-Construction, Construction, Post-Construction)

<table>
<thead>
<tr>
<th>Resource</th>
<th>COMMITMENT</th>
<th>Source</th>
<th>SSP/NSSP</th>
<th>RESPONSIBLE STAFF (Sponsor, Caltrans)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Quality</td>
<td>The project will follow Caltrans Standard Specification 14-9.01, Standard Specification 10, and Standard Specification 18, which address the requirements of the Yolo-Solano Air Quality Management District (YSAQMD) and dust control and dust palliative application, respectively.</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Air Quality</td>
<td>The project will implement all feasible PM$_{10}$ control measures recommended by YSAQMD.</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Water all active construction sites at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Haul trucks shall maintain at least 2 feet of freeboard.</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Cover all trucks hauling dirt, sand, or loose materials.</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area.</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Cover inactive storage piles.</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Sweep streets if visible soil material is carried out from the construction site</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
</tbody>
</table>
## Environmental Commitments for State Route 12/Church Road Intersection Improvements Project

**Project ID No. 040000305**

<table>
<thead>
<tr>
<th>Project Timing/Phase (PS&amp;E, Pre-Construction, Construction, Post-Construction)</th>
<th>Resource</th>
<th>COMMITMENT</th>
<th>Source</th>
<th>SSP/NSSP</th>
<th>RESPONSIBLE STAFF (Sponsor, Caltrans)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Air Quality</td>
<td>All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.</td>
<td>Air Quality Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Biology</td>
<td>An agency-approved biologist(s) will be on-site during initial ground-disturbing activities, and thereafter as needed to fulfill the role of the approved biologist as specified in these measures. Through the Resident Engineer or their designee, the approved biologist(s) will be given the authority to communicate either verbally, by telephone, electronic mail or hardcopy with all project personnel to ensure that the risk of take to listed species is minimized. Through the Resident Engineer or their designee, the approved biologist(s) will have the authority to stop project activities to minimize take of listed species.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Caltrans approved biologist</td>
</tr>
<tr>
<td>Pre-Construction</td>
<td>Biology</td>
<td>Prior to working on the project, all construction personnel will attend a mandatory environmental education program delivered by an approved biologist. At a minimum the training will include a description of California tiger salamander and other listed species, migratory birds and their habitats. The training will also discuss the potential occurrence of these species within the action area; an explanation of the status of these species and protection under the Act and other laws; the measures to be implemented to conserve listed species and their habitats as they relate to the work site; and boundaries within which construction may occur.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Caltrans</td>
</tr>
<tr>
<td>Pre-construction</td>
<td>Biology</td>
<td>Prior to any ground disturbance, pre-construction surveys for wildlife species will be conducted by an approved biologist. These surveys will consist of walking surveys of the project limits and, if possible, accessible adjacent areas within at least</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Caltrans approved biologist</td>
</tr>
<tr>
<td>Project Timing/Phase (PS&amp;E, Pre-Construction, Construction, Post-Construction)</td>
<td>Resource</td>
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<td>RESPONSIBLE STAFF (Sponsor, Caltrans)</td>
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<tr>
<td>Construction</td>
<td>Biology</td>
<td>To prevent inadvertent entrapment of wildlife species during construction, excavated holes or trenches more than one foot deep with walls steeper than 30 degrees will be covered at the Natural Environment Study</td>
<td>NSSF</td>
<td>Construction Contractor</td>
<td></td>
</tr>
<tr>
<td>Pre-construction</td>
<td>Biology</td>
<td>Pre-construction surveys will be completed within 15 days prior to the start of construction activities, with the express purpose of identifying any potential nesting by burrowing owls within 300 feet of the project area. Implementation of these surveys will be consistent with the guidelines outlined in Appendix D of California Department of Fish and Wildlife’s (CDFW) Staff Report on Burrowing Owl Mitigation.</td>
<td>NSSF</td>
<td>Caltrans approved biologist</td>
<td></td>
</tr>
<tr>
<td>Pre-construction</td>
<td>Biology</td>
<td>Pre-construction surveys will be completed within 0.5 mile of the project area. Implementation of these surveys will be consistent with the Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley produced in 2000 by the Swainson’s Hawk Technical Advisory Committee.</td>
<td>NSSF</td>
<td>Caltrans approved biologist</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Biology</td>
<td>The Resident Engineer will immediately contact the agency-approved project biologist(s) if listed species are observed within a construction zone. The Resident Engineer will suspend construction activities and regulatory agencies will be contacted. Caltrans will initiate formal consultation with the United States Fish and Wildlife Service (USFWS) if the California tiger salamander is encountered within the action area.</td>
<td>Natural Environment Study</td>
<td>NSSF</td>
<td>Resident Engineer</td>
</tr>
<tr>
<td>Project Timing/Phase (PS&amp;E, Pre-Construction, Construction, Post-Construction)</td>
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<tr>
<td>Construction</td>
<td>Biology</td>
<td>close of each working day by plywood or similar materials. Alternatively, an additional four-foot high vertical barrier, independent of exclusionary fences, will be used to further prevent the inadvertent entrapment of wildlife species. If it is not feasible to cover an excavation or provide an additional four-foot high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks will be installed. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist will immediately place escape ramps or other appropriate structures to allow the animal to escape. If the animal is a listed species, the CDFW or USFWS will be contacted by telephone for guidance.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Pre-construction</td>
<td>Biology</td>
<td>To the extent practicable, clearing and grubbing activities and any tree removal will be conducted during the non-nesting season, from September 1 to February 14.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Caltrans approved biologist</td>
</tr>
<tr>
<td>Pre-construction, construction</td>
<td>Biology</td>
<td>Pre-construction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction for activities.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Caltrans approved biologist</td>
</tr>
<tr>
<td>Pre-construction, construction</td>
<td>Biology</td>
<td>If an active Swainson’s hawk nest or burrowing owl nest is identified during the construction period a non-disturbance buffer will be established in coordination with CDFW. The non-disturbance nest buffer will be a distance sufficient to minimize disturbance based on the nest location, topography, cover, the apparent level of habituation to disturbance, and the intensity/type of potential work activities. This buffer will be at least 300 feet.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Caltrans approved biologist</td>
</tr>
<tr>
<td>Pre-construction, construction</td>
<td>Biology</td>
<td>If active nests are observed, a non-disturbance buffer will be established by the Biological Monitor in coordination with CDFW. The non-disturbance buffers will be, at a minimum, 300 feet for active raptor nests or 50 feet for active non-raptor</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Caltrans approved biologist</td>
</tr>
<tr>
<td>Project Timing/Phase (PS&amp;E, Pre-Construction, Construction, Post-Construction)</td>
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</tr>
<tr>
<td>Construction</td>
<td>Biology</td>
<td>nests, but may, through consultation with CDFW, be reduced based on the nest location, topography, cover, the species’ sensitivity to disturbance, and the intensity/type of potential work activities.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Biology</td>
<td>Project employees will be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Biology</td>
<td>To the extent practicable, nighttime construction will be minimized.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Biology</td>
<td>Artificial lighting of the project site during nighttime hours will be minimized and directed away from non-paved surfaces to the maximum extent practicable.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Biology</td>
<td>All food-related items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed at least once a day from the work area.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Biology</td>
<td>No firearms will be allowed in the project area except for those carried by authorized security personnel, or local, State, or federal law enforcement officials.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Biology</td>
<td>To prevent harassment, injury or mortality of sensitive species, no pets will be permitted on the project site.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Biology</td>
<td>The potential for adverse impacts to water quality will be avoided by implementing temporary and permanent Best Management Practices (BMPs) outlined in Section 7-1.01G of the Caltrans Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind or water-related erosion. The State Water Resources Control Board (SWRCB) has issued a National Pollution Discharge Elimination System (NPDES) Statewide Storm Water Permit to Caltrans to regulate stormwater and non-stormwater discharges from Caltrans facilities. A Storm Water Pollution Prevention Plan</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Caltrans/Construction Contractor</td>
</tr>
</tbody>
</table>
### Project Timing/Phase (PS&E, Pre-Construction, Construction, Post-Construction)

<table>
<thead>
<tr>
<th>Resource</th>
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</tr>
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<tbody>
<tr>
<td></td>
<td>(SWPPP) will be developed for the project, as one is required for all projects that have at least 1.0 acre of soil disturbance. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for Design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges. The SWPPP will reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges and can be found at the following website: <a href="http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm">http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm</a></td>
</tr>
<tr>
<td></td>
<td>Protective measures will be included in the contract, including, at a minimum:</td>
</tr>
<tr>
<td></td>
<td>a. No discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses.</td>
</tr>
<tr>
<td></td>
<td>b. Vehicle and equipment fueling and maintenance operations must be at least 50 feet away from water courses.</td>
</tr>
<tr>
<td></td>
<td>c. Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses.</td>
</tr>
<tr>
<td></td>
<td>d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocked temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.</td>
</tr>
<tr>
<td></td>
<td>e. Coir rolls will be installed along or at the base of slopes during construction to capture sediment and</td>
</tr>
</tbody>
</table>

### Source | SSP/NSSP | RESPONSIBLE STAFF (Sponsor, Caltrans)
<table>
<thead>
<tr>
<th>Project Timing/Phase (PS&amp;E, Pre-Construction, Construction, Post-Construction)</th>
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<tr>
<td>Environmental Commitments for State Route 12/Church Road Intersection Improvements Project</td>
<td>Resource</td>
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<td>SSP/NSSP</td>
<td>RESPONSIBLE STAFF (Sponsor, Caltrans)</td>
</tr>
<tr>
<td>temporary organic hydromulching will be applied to all unfinished disturbed and graded areas.</td>
<td>Resource</td>
<td>COMMITMENT</td>
<td>Source</td>
<td>SSP/NSSP</td>
<td>RESPONSIBLE STAFF (Sponsor, Caltrans)</td>
</tr>
<tr>
<td>f. Work areas where temporary disturbance has removed the pre-existing vegetation will be re-seeded with a native seed mix.</td>
<td>Resource</td>
<td>COMMITMENT</td>
<td>Source</td>
<td>SSP/NSSP</td>
<td>RESPONSIBLE STAFF (Sponsor, Caltrans)</td>
</tr>
<tr>
<td>g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.</td>
<td>Resource</td>
<td>COMMITMENT</td>
<td>Source</td>
<td>SSP/NSSP</td>
<td>RESPONSIBLE STAFF (Sponsor, Caltrans)</td>
</tr>
<tr>
<td>h. A Revegetation Plan will be prepared for restoration of temporary work areas. Pavement and base will be removed; topography blended with the surrounding area; and topsoil will be salvaged from the new alignment area to be placed over the restored area, which will then be revegetated with native grassland species. Invasive, exotic plants will be controlled within the project site to the maximum extent practicable, pursuant to Executive Order 13112.</td>
<td>Resource</td>
<td>COMMITMENT</td>
<td>Source</td>
<td>SSP/NSSP</td>
<td>RESPONSIBLE STAFF (Sponsor, Caltrans)</td>
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<tr>
<td>Construction</td>
<td>Biology</td>
<td>As per Caltrans standards, plastic monofilament netting (erosion control matting) or similar material will not be used for the project because wildlife may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.</td>
<td>Natural Environment Study</td>
<td>NSSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Plans, Specifications, and Estimates</td>
<td>Community</td>
<td>A Transportation Management Plan (TMP) will be developed to maintain property access during construction. The objective of the TMP would be to minimize the effects that construction activities would have on the traveling public. At a minimum, the TMP should include outreach and coordination with affected property owners to minimize the impacts of access disruption of alterations as part of both project design and during construction. Caltrans will notify affected residences, police, and emergency services at least</td>
<td>Community Impact Assessment/Memo</td>
<td>SSP</td>
<td>Caltrans</td>
</tr>
<tr>
<td>Project Timing/Phase (PS&amp;E, Pre-Construction, Construction, Post-Construction)</td>
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<tr>
<td>Plans, Specifications, and Estimate</td>
<td>Hazards</td>
<td>one week in advance of any land or roadway closures or impacts related to access. The TMP and construction documents will specify timeframes for roadway and lane closures.</td>
<td>Preliminary Site Investigation</td>
<td>SSP</td>
<td>Project Sponsor, Caltrans</td>
</tr>
<tr>
<td>Plans, Specifications, and Estimate, Construction</td>
<td>Hydrology</td>
<td>A Stormwater Pollution Prevention Plan is required to reduce the potential for adverse effects of erosion and sedimentation. Typical contract specifications require that Caltrans, through their construction contractors, provide temporary site drainage controls and source and sediment controls to prevent and minimize soil erosion. Construction storm water pollution prevention measures (referred to as BMPs) are focused at specific areas within each construction area to prevent sewer system backup or flow damage to property. The SWPPP is required to identify any potential pollutant sources that may affect the quality of the runoff and identify, construct, and implement BMPs to reduce pollutants in storm water discharges from a construction site.</td>
<td>Water Quality Assessment and Technical Report</td>
<td>SSP</td>
<td>Caltrans</td>
</tr>
<tr>
<td>Plans, Specifications, and Estimates, Construction</td>
<td>Hydrology</td>
<td>A Stormwater Management Plan (SWMP) is required to address water quality concerns both during and after construction. Caltrans will implement maximum extent practicable (MEP) pollutant control for roadway runoff. In addition, construction site runoff must be controlled using best available technology economically achievable (BAT) for toxic pollutants, and best conventional pollutant control technology (BCT) for other pollutants. Procedures to achieve</td>
<td>Water Quality Assessment and Technical Report</td>
<td>SSP</td>
<td>Caltrans</td>
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</tbody>
</table>
### Environmental Commitments for State Route 12/Church Road Intersection Improvements Project

<table>
<thead>
<tr>
<th>Project Timing/Phase (PS&amp;E, Pre-Construction, Construction, Post-Construction)</th>
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<th>Source</th>
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<th>RESPONSIBLE STAFF (Sponsor, Caltrans)</th>
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<tbody>
<tr>
<td></td>
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<td>compliance with water quality standards are specified in the Caltrans Construction General Permit issued by the State Water Resources Control Board (2009-0009-DWQ, CAS000002, as amended by 2010-0014-DWQ and 2012-0006-DWQ), and the National Pollutant Discharge Elimination System General Permit (Order No. 2012-0011-DWQ, as amended by 2014-0077-DWQ).</td>
<td>Water Quality Assessment and Technical Report</td>
<td>SSP</td>
<td>Caltrans</td>
</tr>
<tr>
<td>Plans, Specifications, and Estimates, Construction</td>
<td>Hydrology</td>
<td>The City of Rio Vista administers the local Municipal Stormwater Permitting Program, and implements water quality controls through its Municipal Code. Section 13.20.100, which includes requirements for Long-Term Post Construction Storm Water Discharges, states that any person performing construction in the city shall implement controls as appropriate to minimize the long-term, post construction discharge of storm water pollutants from new development(s) or modifications to existing development(s). Controls shall include source control measures, low impact development design standards, and hydromodification management to prevent pollution of storm water and/or treatment controls designed to remove pollutants from storm water.</td>
<td>Water Quality Assessment and Technical Report</td>
<td>SSP</td>
<td>Construction Contractor</td>
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<tr>
<td>Construction</td>
<td>Noise</td>
<td>Require all construction equipment to conform to Section 14-8.02, Noise Control, of the latest Caltrans Standard Specifications.</td>
<td>Noise Memo</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Noise</td>
<td>Noise-generating construction activities will be restricted to the allowable hours of construction as identified by local jurisdictions, where feasible. The City of Rio Vista Policy 11.15.C, limits the generation of loud noises on construction sites adjacent to existing development to the hours between 7:00 AM and 5:00 PM.</td>
<td>Noise Memo</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Noise</td>
<td>The contractor(s) will equip all internal combustion engine equipment with intake and exhaust mufflers that are in good</td>
<td>Noise Memo</td>
<td>SSP</td>
<td>Construction Contractor</td>
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<td>Project Timing/Phase (PS&amp;E, Pre-Construction, Construction, Post-Construction)</td>
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<tr>
<td>Construction</td>
<td>Noise</td>
<td>Unnecessary idling of internal combustion engines within 100 feet of residences will be strictly prohibited.</td>
<td>Noise Memo</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Noise</td>
<td>The contractor(s) will locate stationary noise generating equipment as far as possible from sensitive receptors.</td>
<td>Noise Memo</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Construction</td>
<td>Noise</td>
<td>The contractor(s) will utilize &quot;quiet&quot; air compressors and other &quot;quiet&quot; equipment, where such technology exists.</td>
<td>Noise Memo</td>
<td>SSP</td>
<td>Construction Contractor</td>
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<tr>
<td>Pre-construction</td>
<td>Noise</td>
<td>The contractor(s) will prepare a detailed construction plan identifying the schedule for major noise-generating construction activities and distribute this plan to adjacent noise-sensitive receptors. The construction plan would also list the construction noise reduction measures listed above, as applicable.</td>
<td>Noise Memo</td>
<td>SSP</td>
<td>Construction Contractor</td>
</tr>
<tr>
<td>Pre-construction, Construction</td>
<td>Noise</td>
<td>If work is necessary outside of allowable hours, Caltrans will require the contractor(s) implement a construction noise monitoring program and, if feasible, provide additional avoidance measures as necessary (in the form of noise control blankets or other temporary noise barriers, etc.) for affected receptors.</td>
<td>Noise Memo</td>
<td>SSP</td>
<td>Construction Contractor</td>
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