

04 - SOL - 12 - PM 24.3/25.2
Program Code 20.10.400.400
EA 04-0G050k
June 2010

PROJECT STUDY REPORT

To

Request for Conceptual Approval

On Route 12 in Solano County

Between 0.42 mile north of Amerada Road

And 0.36 mile south of Church Road

APPROVAL RECOMMENDED:

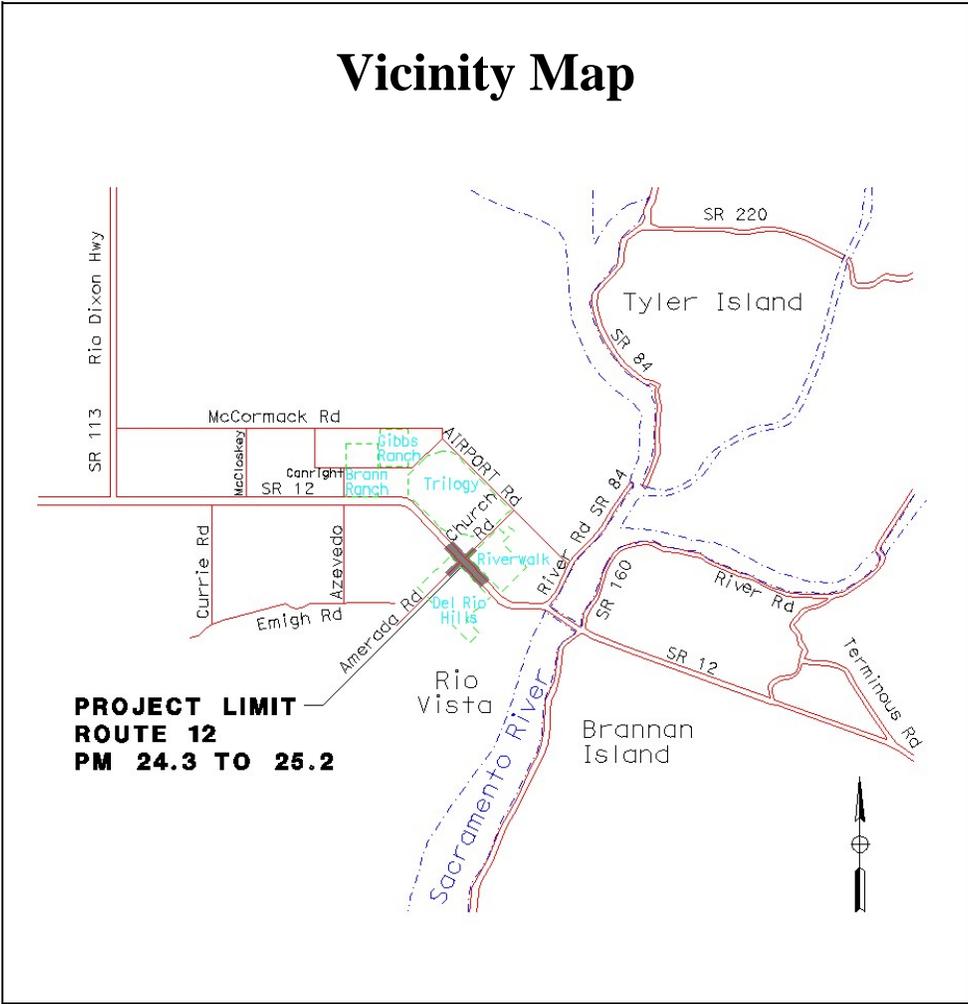
for. Nicolas Endrey

JASON MAC, PROJECT MANAGER

APPROVED:

for Dan McElhinney *June 30, 2010*

BIJAN SARTIPI, DISTRICT DIRECTOR DATE



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This Project Study Report has been prepared under the direction of the following Registered Engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



June 22, 2010

STEPHEN J. MISLINSKI
REGISTERED CIVIL ENGINEER

DATE



Approval Recommended By:



For

PATRICK PANG
Office Chief
Office of Advance Planning

6/22/10

DATE

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1. INTRODUCTION

Project Description

The proposed improvements at the intersection of State Route 12 (SR-12) and Church Road-Amerada Road includes the addition of right turn/ left turn lanes and acceleration/deceleration lanes along SR-12 in the east-west directions, the addition of left turn lane on Church Road approach and realignment of the intersection to eliminate the offset between Church Road and Amerada Road. (See Attachment A, Location Map). Funding for the project will be by the Solano Transportation Authority (STA) in the 2011/2012 fiscal year. The project is defined as Category 4B, according to Chapter 8, Section 5, of the Caltrans Project Development Procedures Manual (PDPM) due to its need for minimal right-of-way and that it does not increase traffic capacity. This Project Study Report considers three viable alternatives and a no-build alternative. The estimated construction costs vary from \$0 for the no-build alternative to \$7,169,819 for Alternative 3. It is anticipated that the improvements will be constructed by the STA and the opening year of the Project is projected to be 2016.



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See the Cost Estimate for specific work items included in this project in Attachment E.

Project Limits (Dist., Co., Rte., PM)	04, SOL, 12, PM 24.3/25.2
Number of Alternatives:	4, including No build
Alternative Recommended for Programming:	Not determined.
Programmed or Proposed Capital Construction Costs	\$5,106,451
Programmed or Proposal Capital Right of Way Costs:	\$2,063,368
Funding Source:	Local, State & Potentially Federal
Type of Facility	Conventional Highway

(conventional, expressway, freeway):	
Anticipated Environmental Determination/Document	Initial Study/ Negative Declaration under the California Environmental Quality Act (CEQA) Routine EA with FONSI under the National Environmental Policy Act (NEPA)
Project Category	4B

Upon approval of this Project Study Report (PSR), a Co-operative Agreement Request will be submitted by STA. The Co-operative agreement between the State and STA will be executed prior to beginning the Project Approval / Environmental Document (PA/ED) phase.

A Project Report and Environmental Document to be prepared subsequent to approval of this PSR in the PA/ED phase will serve as approval of the “selected” alternative.

2. BACKGROUND

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 also strategically located as the only east-west route connecting Solano County to the Sacramento and Stockton areas.

The intersection of SR-12 and Church Road-Amerada Road is located northwest of the downtown area of the City of Rio Vista at Post Mile 24.75. Church Road provides a secondary access to the Trilogy residential development and the majority of existing and future development in City of Rio Vista. SR-12 in this area is aligned northwest to southeast. Church Road runs northeast of its intersection with SR-12 at 90°. Amerada Road is a private road running southwest of its intersection with SR-12 at 90° and connects to the Emigh Road. Amerada Road and its connection to Emigh Road serve as access for Rosetta Resources, an independent oil and gas company. The existing posted speed limit for SR-12 within the project limit is 50 mph.

Currently, the northeast leg, Church Road and the southwest leg, Amerada Road are offset by approximately 75± feet from each other, Church Road to the east and Amerada Road to the west. Both SR-12/Church Road and SR-12/Amerada Road intersections currently do not provide 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 installed in the median. There is a residence at the southeast quadrant of SR-12 and Amerada Road.

There are several utilities that have been identified in the project area. There is a telephone overhead line along the southeast edge of Church Road which intersects electrical and telephone overhead lines along the northeast edge of SR-12. There is a telephone overhead line that crosses SR-12 to the residence on the south. Preliminary research indicates there is an underground gas line within the project limits that runs along the northwest edge of Church Road, crosses under SR-12 at the intersection and continues on the west edge of Amerada Road. Further, Frontier Communications indicates they own an underground cable that is located along the southwest edge of SR 12 and an underground cable that crosses SR-12 to the northeast and along the northwest edge of Church Road.

The SR-12 Major Investment Study (MIS) approved by STA in October 2001 has identified short and long term improvements to the SR-12 corridor between Interstate 80 and the Rio Vista Bridge.

Short-term improvements to SR-12 at the Church Road-Amerada Road intersection have been identified to improve the safety and operational characteristics at this location by providing left turn lanes, acceleration/deceleration lanes for right turns along SR-12, and realigning either Church Road or Amerada Road to eliminate the offset between the two roads. This intersection will serve as one of the two access locations along SR 12 to the Del Rio Hills future master-planned community development planned for the southeast corner of this intersection. Riverwalk, another future master-planned community development planned for the land on the northeast corner of the intersection has had conceptual plans submitted by its developers that provide a land use and circulation framework to the City. The proposed improved intersection will serve as access to these future developments.

Other long-term improvements include the widening of SR-12 in the Project area to four lanes with a horizon year identified to be year 2025 and signalization of the SR12/Church Road intersection projected to meet Caltrans Traffic Signal Warrants in year 2025. If Signal Warrants are met at the completion, or within 5 years of project construction completion, Caltrans reserves the right to require signal installation as part of the project.

3. PURPOSE AND NEED

Need:

Although the intersection of SR-12 and Church Road-Amerada Road has had a lower accident rate than the statewide average for a similar type facility for Fatal + Injury and Total categories, traffic data indicates that within the above time period, approximately 25% of the accidents on the SR-12 segment at Church Road – Amerada Road have occurred within the intersection. Eliminating the existing offset of Church Road and Amerada Road is needed.

Vehicle queuing to enter and exit SR-12 from and to Church Road currently

causes delays to through traffic on SR 12. Constructing exclusive left turn lanes and acceleration and deceleration lanes will provide a refuge area for these vehicles.

Purpose:

The purpose of this project is to reduce the number of rear-end collisions and improve the safety and operational characteristics at the intersection of SR-12 and Church Road-Amerada Road by removing turn movements from the through traffic with the addition of left turn lanes, acceleration/deceleration lanes for right turns, and realigning the intersection to eliminate the offset between Church and Amerada Roads.

4. DEFICIENCIES

Accident Rates:

Accident rates for the study area, for the three-year period starting September 1st, 2005 and ending August 31, 2008, were obtained from the Caltrans Traffic Accident Surveillance and Analysis System (TASAS) Table B, and are shown in Table 1. Actual accident rates, when compared to the statewide average, indicate this intersection has a lower accident rate than the statewide average for a similar type facility for both Fatal + Injury and Total categories. The data indicates that within the above time period, approximately 25% of the accidents on this segment of SR 12 at Church Road – Amerada Road have occurred in the intersection; 50% of the accidents were rear end type, 50% of the accidents had a primary collision factor of “Speeding” and 83.3% occurred during daylight hours. These accidents were caused by conflicts between SR-12 through traffic and motorists stopping to make a left turn into Church Road - Amerada Road.

Table 1 - Accident Rates

Accident Rates (per Million Vehicle Miles)						
Location	Actual			Average		
	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
04-SOL 012-24.30 To 012-25.20	0.0	0.26	0.63	0.021	0.42	1.02

The proposed left turn lanes, acceleration/deceleration lanes and elimination of the offset intersection are anticipated to reduce these types of accidents and will enhance overall highway safety and operational efficiency.

Traffic Volumes:

Existing Average Daily Traffic (ADT) Volumes on SR-12 and Church Road in the vicinity of the study intersection are 18,900 vpd and 2,000 vpd respectively.

The existing two-way Design Hour Volume (DHV) on SR-12 is 1,610 vph while on Church Road the DHV is 130 vph. The current directional split for SR-12 is approximately 53/47 percent, while for Church Road, it is approximately 67/33 percent. Truck traffic volume represents approximately 9% of the peak hour volume on SR-12 and about 2% on Church Road. Projected ADT and DHV on SR-12 is expected to increase up to 24,900 vpd and 2,490 vph respectively by the year 2018 while on Church Road they are expected to increase up to 2,490 vpd and 521 vph respectively.

Table 2 - Year 2007 & 2018 Traffic Data

Traffic Data	Existing Volumes (1)		Year 2018 Forecast (2)(3)(4)	
	SR 12	Church Rd	SR 12	Church Rd
Average Daily Traffic (ADT)	18,900	2000	24,900	5,210
Design Hour Volume (DHV)	1,610	130	2,490	521
Directional Split (DS) (SR12 Eastbound Predominant)	53/47	67/33	51/49	47/53
% Truck in Design Hour (T)	9	2	9	2
(1) 2006 Existing Volumes, Del Rio Hills Planned Development TIA, Fehr & Peers, June 11, 2007. (2) 2018 Forecast (Existing+30% Bseline+40% Project), City of Fairfield Model Forecasts, March 2008. (3) Year 2018 is approximate year in which the intersection "Failure Point", after which, additional improvements are needed. (4) 10% of AADT during Peak PM Period is used, City of Fairfield.				

A Traffic Impact Study (TIS) report has been prepared for this project. The results of the Traffic Impact Study analysis demonstrate that the transportation improvements at the intersection of SR-12 and Church Road will not improve the Level of Service at this intersection, but the Project is expected to improve the safety characteristics at this location by providing left turn lanes, acceleration/deceleration lanes for right turns, and realignment of the intersection to eliminate the offset between Church and Amerada Roads. This will not add capacity to the roadway segments within this Project. In addition, the study indicates that the intersection of SR-12 and Church Road will operate at a satisfactory LOS D in the PM peak hour to an estimated "Failure Point" which is defined by the addition of approximately 30% of the Baseline trips and 40% of Del Rio Hills Development trips, assuming that the intersection is signalized when development commences.

5. CORRIDOR AND SYSTEM COORDINATION

The portion of the route between I-80 and Route 99 in District 10 has been in the State Highway System (SHS) since 1919 and was added to the Freeway and Expressway (F&E) System in its entirety when the F&E System was established in 1959. There is a valid adopted freeway route for the section of Route 12 between Fairfield and Liberty Island Road west of Rio Vista. This freeway route generally follows the existing highway and the adoption dates back to the late

1950's and early 1960's, with the section between Denverton and Liberty Island Road adopted in 1962.

As documented in the SR-12 MIS approved by STA, the Church Road/SR-12 intersection lacks left turn lanes, and inadequate acceleration/deceleration distance is provided for right turning vehicles on SR 12.

Caltrans District 4 has implemented roadway improvements for SR-12 in Solano County between Suisun City and Rio Vista, as identified in the MIS. The plan to install center line channelizers and center line rumble strips has been completed within the project study limits.

The City of Rio Vista has approved development projects for the large parcels (Riverwalk, Gibbs, and Brann Ranches) that constitute the majority of the future residential and commercial growth extending from Church Road westerly to the city limits and north of SR 12. The City of Rio Vista 1990 Amendments to the 1985 General Plan have recognized the need to improve SR-12 throughout the City to meet future traffic demands. A study of the circulation element of the City's General Plan completed in 1992 has determined the impacts of overall traffic flow and traffic operation at critical intersections along SR 12 in the City, including intersection of SR-12 and Church Road.

6. ALTERNATIVES

Four alternatives were studied and Alternative 2, 2A and 3 are designed to meet current standards based on Caltrans Highway Design Manual (HDM) including length for deceleration and acceleration lanes, except where the improvements join the existing roadway condition. Alternative 1 is the “No Build” Alternative to discuss the condition if no improvement is made to this facility. Alternatives 2, 2A and 3 propose to add left turn lanes along the four intersection approaches, acceleration/deceleration lanes for right turns entering and exiting SR-12 and to eliminate the offset between Church Road and Amerada Road at SR-12 (See Attachment C). All three proposed alternatives provide a design speed of 55 mph on SR-12, and 45 mph on Church Road and Amerada Road.

Alternative 1: “No Build” Alternative.

Traffic from Church Road and Amerada Road will continue to enter and exit the SR-12 traffic stream without acceleration and deceleration lanes. Accident rates and delays to through traffic caused by queued left turn traffic on SR-12 are expected to remain an issue and increase as the traffic volume on SR-12 increases. Without the proposed improvements, the accident rate may continue to rise due to an anticipated increase in traffic volumes.

Alternative 2: Realign Church Road with non-symmetrical widening on SR12.

Alternative 2 proposes to widen SR-12 mainly on the northeast edge of SR-12. This alternative minimizes Right of Way acquisition on the southwest side of SR-12 and realigns Church Road to eliminate the offset between Church Road and Amerada Road at SR-12. Left turn lanes will be added along the four intersection approaches, and SR-12 will be widened towards the northeast side to add acceleration/deceleration lanes for right turns entering and exiting SR-12. The roadway widening will include 8-foot shoulders to meet the Caltrans Highway Design Manual (HDM) conventional highway standard. This alternative avoids demolition of the existing residence located at the south corner of SR-12 and Amerada Road, but involves minor modification to the existing Church Road/unpaved road intersection located approximately 700 feet northeast of the SR-12/Church Road intersection. Impacts to the existing earthen ditch, utility poles, trees and Right of Way acquisition along the southwest side of SR-12 would be minimized. The estimated cost for Alternative 2 (including right of way costs of \$1,914,840 but without support cost) is \$6,673,504.

Alternative 2A: Realign Church Road with symmetrical widening on SR12.

Similar to Alternative 2, Alternative 2A proposes to realign Church Road to eliminate the offset between Church Road and Amerada Road at SR-12. Left turn lanes will be added along the four intersection approaches, and SR-12 will be widened almost equally on both sides to add acceleration/deceleration lanes for right turns entering and exiting SR-12. The roadway widening will include 8-foot shoulders to meet the HDM conventional highway standard. Similar to Alternative 2, this alternative avoids demolition of the existing residence located at the south corner of SR-12 and Amerada Road, but involves minor modification to the existing Church Road/unpaved road intersection located approximately 700 feet northeast of the SR-12/Church Road intersection. Existing earthen ditch along the south side of SR-12, existing utility poles and trees at the intersection will be impacted. The estimated cost for Alternative 2A (including right of way costs of \$1,790,272 but without support cost) is \$5,803,479.

Alternative 3: Realign Amerada Road with symmetrical widening on SR12.

This alternative proposes to realign Amerada Road to eliminate the offset between Church Road and Amerada Road at SR-12. Left turn lanes will be added along the four intersection approaches, and SR-12 will be widened almost equally on both sides to add acceleration/deceleration lanes for right turns entering and exiting SR-12. The roadway widening will include 8-foot shoulders to meet the HDM conventional highway standard. This Alternative involves demolition of the existing residence located at the southeast corner of SR-12 and Amerada Road. Similar to Alternative 2, an existing earthen ditch along the south side of SR-12, existing utility poles and trees at the intersection will be impacted. The estimated cost for Alternative 3 (including right of way costs of \$2,063,368 but without support cost) is \$7,169,819.

7. COMMUNITY INVOLVEMENT

As documented in the SR-12 MIS, some of the common, reoccurring themes documented at public meetings included safety concerns arising from high vehicle speeds, a lack of roadway shoulders, heavy truck traffic and poor roadway condition.

There has been no public involvement program as part of the Project Study Report (PSR) phase. Public information meetings may be held as needed during Project Approval/ Environmental Documents (PAED) phase prior to selecting the preferred alternative.

8. CONSIDERATION REQUIRING DISCUSSION

- **Pavement Design Strategy**

Materials within the project area are anticipated to consist of highly plastic clayey soils. Such soils may be expansive in nature with low R-values, necessitating relatively thick pavement structural sections. As such, the preliminary pavement design approach conservatively assumes the lowest support characteristics for clayey soil with an associated low R-value. Because the existing pavement is asphalt concrete, the pavement structure recommended for the widened roadway portion is asphalt concrete with aggregate base. The strategy for rehabilitation of the existing pavement to help ensure that its design life matches new pavement for widened portions, it is recommended that existing pavement be cold planned and overlaid. The proposed improvement is estimated to carry an approximate Equivalent Single Axial Load (ESAL) of 2.5 million and the Traffic Index (TI) used for the pavement design is a TI of 10.

To support the pavement strategy proposed in this PSR, a Pavement Life Cycle Cost Analysis will be completed early in the PA/ED phase. In addition, pavement structure recommendations resulting from the Pavement Life Cycle Cost Analysis will be based on further site investigation. The resulting information will be used in developing final design and construction criteria.

- **Right of Way**

General - A right of way data sheet has been prepared based on scope of work described. Estimated cost information is contained in the Right of Way Data sheet in Attachment G of this report. It is anticipated that agreements between the City of Rio Vista and developers will require the developers to dedicate right of way in fee to accommodate a future 4 lane road facility with 140 feet of right of way, as shown in the Riverwalk Development Final EIR.

Railroad - There is no railroad involvement on this project.

Utility - There is overhead telephone and electrical lines along SR-12. There is also an underground gas line within the project limits. Frontier Communications

indicates they own an underground cable that is located along the southwest edge of SR 12 and an underground cable that crosses SR-12 to the northeast and along the northwest edge of Church Road. Several overhead lines and poles will need to be relocated for the project. Further determination of utilities relocation will be required during PS&E stage.

- **Environmental Determination**

The Preliminary Environmental Analysis Report (PEAR) anticipates the environmental document needed for this project is an Initial Study/ Negative Declaration under CEQA and a Routine EA with FONSI under NEPA. It is anticipated that Caltrans will be the lead agency for both CEQA and NEPA. The major findings from the PEAR are summarized as follows.

Hazardous Waste/ Materials

Reconnaissance of the study site was performed on September 07, 2007 by Taber Consultants. An Initial Site Assessment (ISA) was conducted for the proposed roadway realignment and intersection construction. The ISA includes a government records search and a site survey for potential hazardous wastes and materials. Based on the indicated document reviews and reconnaissance, it has been determined that the potential for the proposed construction to encounter significant hazardous materials within the project Site is generally low. The time between construction of existing intersection and banning of lead additive in gasoline is relatively short, and the potential for significant concentrations of aurally deposited lead (ADL) along the shoulders of the existing roads is considered low, but cannot be ruled out. Studies for aurally deposited lead (ADL) will be conducted prior to construction activities.

If structures are demolished that contain asbestos or lead paint, additional studies will be required to address the extent of the issue and the mitigation/remediation requirements. Project Alternative 3 includes the demolition of the existing farm house. Surveys for asbestos and lead-based paint will be necessary before demolition. Naturally Occurring Asbestos (NOA) does not occur within this region of Solano County, and therefore, not further studies are required.

Air

Potential air quality issues are expected from the roadway realignment and construction of the intersection. Projects must conform (on a regional and project level) to the federal Clean Air Act to gain U.S. Department of Transportation approval. In order to determine project level conformity, an air quality analysis must be performed. For this project, as the project improvements may be considered as a realignment of the existing roadway, then a regional conformity analysis would be necessary. The project is not currently included in the 2035 Regional Transportation Plan but will be added in the next RTP, prior to the PA/ED completion. At the project level, as the region is in non-attainment for PM 2.5, a project-level conformity analysis will be required. Based on preliminary information, the significant increase in traffic volumes to meet Year 2025

conditions or beyond could cause violations of local carbon monoxide (CO) concentration standards. Except for the existing farmhouse, no sensitive receptors for air quality impacts are currently located in the vicinity. An air quality analysis will be required to determine project-specific impacts, conformity and mitigation. In addition, the air quality analysis will include an analysis of Mobile Source Air Toxics, if needed, based on FHWA guidance. This could take approximately 2 months for completion. Standard dust control measures and compliance with Solano Air Quality Management District rules and regulations will be required during construction. No additional permits are required.

Greenhouse Gas Emissions

Greenhouse Gas Emissions will be analyzed in the MND based on project vehicle miles travelled. A brief analysis of the emissions will be provided.

Noise

Potential noise issues are expected from realignment of the intersection. On the northeast corner of SR-12 and Church Road, the Riverwalk project has been approved by the City of Rio Vista. In the event that development occurs, noise mitigation would be implemented consistent with the measures contained in the Final EIR. With the exception of the farmhouse residence located at the corner of SR-12 and Church Road (residence will be removed as a part of Alternative 3 or in conjunction with the Del Rio Hills project) sensitive receptors for noise impacts are not currently located in the vicinity. A technical noise analysis will be required. Noise attenuation will be necessary to protect the farmhouse, in the event that Alternatives 2 or 2A are implemented or that the Del Rio Hills project is delayed or terminated.

A noise barrier may be required for sound attenuation to protect the existing farmhouse residence under Alternatives 2 and 2A. Costs for a noise barrier are included in the construction estimate. A Noise Abatement Decision document would also be required if a noise barrier is proposed to attenuate impacts on the farmhouse.

Water Quality and Erosion Control

The site is not expected to have any unusual water quality problems. No water resources are located within the project area that might be affected by erosion or runoff from new roadway surfaces. The Sacramento River is located approximately 1.5 miles to the east, although is not a direct receiver of runoff from the intersection. Since the roadway and intersection currently exists, drainage conditions are pre-existing for the reconstructed intersection. Additional runoff will be generated by the widening of the SR-12 and the new intersection. However, the additional runoff should not create any new water quality issues and can be addressed through the application of standard water quality measures and Best Management Practices. Nonetheless, a Water Quality Assessment report will be required to characterize the project's contribution to water quality

concerns. Resource agency permits are not expected for this project. An NPDES permit will be required.

Biological Resources

This project may affect sensitive biological resources. A Natural Environment Study will be required to address general biological resources, including both plant and wildlife species. Existing ground squirrel burrows should be inspected for the presence of burrowing owls (surveys can be conducted throughout the year). Swainson's hawk preconstruction surveys should be conducted based on tree removal activities (surveys between March-September). Bird surveys should be completed in the spring/summer season. Suitable branchiopod habitat surveys should be conducted within the project footprint. If habitat for listed branchiopods is present (seasonally ponded areas, vernal pools) then protocol level branchiopod presence/absence surveys will be necessary (wet season surveys between December-April). If branchiopod surveys are positive, formal Section 7 consultation with the USFWS would be necessary. It could take up to six months to get a Biological Opinion (BO) from USFWS. Several native trees may occur near the existing intersection and roadway shoulders and may be removed. There are no other known sensitive plant species in this location.

Wetlands

Pursuant to Executive Order 11990, an avoidance alternative analysis is required for wetland losses unless there is no practicable alternative available. A wetlands delineation will be necessary to identify potential impact areas. Wetlands and riparian habitat have not been identified as potential concerns for the project. Field verification will be required to confirm the absence of these resources.

Visual Effects

A visual study is required based on the findings outlined in the Visual Study Decision Tree (Caltrans Standard Environmental Reference, Chapter 27). The project involves the realignment of a section of Church-Amerada Road in the farmland area. In Alternative 2 and 2A this area is currently uninhabited and will not impact adjacent residential uses. However in Alternative 3 the new alignment will displace the existing farmhouse residence on the south east corner of SR-12 and Church-Amerada Road. Nonetheless, there are no existing designated visual or scenic resources present within or adjacent to the project area. Farmland impacts and tree losses (native oak and non-native) along the roadways are expected due to the widening of SR-12 to properly accommodate the new intersection. Although these trees have no scenic designation, the impact may be a local community concern (in addition to biological) and tree replacement options should receive input from the community. It is likely that all tree replacement would occur off-site to eliminate safety concerns for clear recovery within the right-of-way. A total of \$182,000 – \$420,000 has been estimated to accommodate off-site tree replacement, irrigation and monitoring. It should also be noted that the City of Rio Vista's General Plan specifies the preservation of views and aesthetics along SR-12 within the area that includes the project site. Contemplated

improvements to implement this objective include a significant urban treescape, traffic calming measures, landscaped median strips, and a pedestrian overpass and/or underpass at the multiuse pathway crossing planned for the open space corridor located between Church Road and Drouin Drive on SR-12. Accordingly, a Scenic Resources Evaluation should be prepared to document the status of scenic resources in the project area. This may take an estimated 1 month for completion.

Cultural Resources

Cultural resource studies may be needed to address requirements of Section 106 of the National Historic Preservation Act.

The publications and maps reviewed do not mention or depict any cultural resources within or immediately adjacent to the study area. Background research identified a building (existing farmhouse) at the southern corner of Amerada Road and State Route 12. This building appears on the 1952 USGS Rio Vista, Calif. quadrangle, which indicates an age of at least 56 years and, therefore, possibly National Register eligible. However, the modern additions and upgrades to the building likely exempt the building from evaluation as Property Type 6, properties more than 30 years old that have been substantially altered, in Attachment 4 of the Programmatic Agreement.

A Historic Property Survey Report (HPSR) and an Archaeological Survey Report (ASR) should be prepared. Cultural resources in the Area of Potential Effects (APE) would require evaluation for National Register eligibility. Contingent on Caltrans acceptance of the house at the southwestern corner of Amerada Road and State Route 12 as a Property Type 6 under Attachment 4 of the Programmatic Agreement (Caltrans 2004) an Historic Resource Evaluation Report (HRER) will not be necessary to evaluate this cultural resource.

If any resources are eligible for the National Register, a Finding of Effect (FOE) would be prepared to document the project's potential effects on the resource(s). If it is determined that the project would have an adverse effect on the resource(s), a Memorandum of Agreement (MOA) and Historic Property Treatment Plan (HPTP) would be prepared to document mitigation measures agreed upon by Solano County, Caltrans, the Federal Highway Administration, and the State Historic Preservation Officer. Consulting Native American and other potentially interested parties may also be invited to concur on the MOA.

Any subsequent changes in project scope may require additional archaeological or historical review. Although not anticipated, coordination with SHPO may be required if eligible resources are impacted.

Native American Coordination

The Native American Heritage Commission (NAHC) in Sacramento was asked to review the Sacred Lands File for any Native American cultural resources that

might be affected by the project. A review of the Sacred Lands File did not indicate the presence of Native American cultural resources in the immediate study area.

Paleontology

A review of the adjacent Rio Vista Riverwalk Project EIR indicates that according to the Museum of Paleontology and the University of California, Berkeley, unique paleontological resource have been identified in Quaternary-aged alluvial deposits in the Rio Vista area. Although no specific paleontological resources have been identified on the project site a Paleontological Identification Report (PIR) would be prepared and certified by a qualified paleontologist to document the identification efforts for paleontological resources and the need for paleontological monitoring during construction activities based on project design.

Community Impact

The project is not expected to have any effects on the local community or the economy. At present, there are no existing businesses or commercial uses in the intersection area. Proposed improvements, irrespective of the alternatives, do not cause any direct or indirect effects on an established neighborhood, nor affect any known group that might be subject to issues involving environmental justice.

It should be noted that Alternative 3 would require displacement and relocation of the existing residence. This residence will also be displaced as a consequence of the Del Rio Hills project, should the proposed roadway project be delayed. If the residence will be displaced due to the implementation of Alternative 3, the resident will be contacted by a Relocation Agent who will ensure that eligible displaced residents receive their full relocation benefits including advisory assistance, and that all activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources shall be available to all displaced residents free of discrimination. At the time of the first written offer to purchase owner occupants are given a detailed explanation of Caltrans' "Relocation Program and Services."

Section 4(f)

The project may have 4(f) issues should the existing farmhouse be determined as Eligible for the National Register of Historic Places (National Register). Under Alternative 3, the farmhouse will be removed due to the realignment of Amerada Road. Under Alternatives 2 and 2A, the project improvements could have a constructive use impact on the farmhouse due to the proximity of the improvements. A Section 4(f) Evaluation would consider other alternatives, including an avoidance alternative, and alternatives that would reduce or lessen project impacts. A Section 4(f) Evaluation could impact the project schedule if the project is considered controversial by the local community, or if the reviewing agencies disagree with the findings and require additional review and evaluation. If the farmhouse is determined ineligible for the National Register, a Section 4(f)

Evaluation would not be required as no other potential 4(f) resources have been identified.

Floodplains

The project site is not located within the 100-year floodplain, and has no unusual flood or drainage issues.

Farmlands

The project site is almost entirely surrounded by farmlands. These farmlands (to the north and south of the project site) could be affected by the widening of SR-12 and realignment of Church-Amerada Road. Approximately 30-40 trees growing along SR-12 could be impacted. All three build alternatives affect the farmlands by realigning Church Road. A Farmland Conversion Study will be necessary to assess the effects from loss of any prime, unique or local importance farmlands as well as land under Williamson Act Contracts. According to the Solano County General Plan, all soils in the project vicinity are designated as grazing land. None of the lands are designated as Prime Farmland, Farmland of Statewide Importance or Unique Farmland, and there are no Williamson Act Contracts in place. Nevertheless, conversion of farmland is required triggering the Farmland Conversion Study. Coordination with the California Department of Conservation and USDA Natural Resources Conservation Service will be needed. Mitigation measures may be required to offset the loss of the farmland area, including payment of fees to an local fee program or agricultural land conservancy, and acquiring permanent easements over existing unprotected farmland.

Coastal Zone

This project is not within the coastal jurisdiction.

Wild and Scenic Rivers

This project will not affect any federally designated wild and scenic river.

Invasive Plant Species

Executive Order 13112 requires Federal agencies carrying out actions that have the potential to affect the status of invasive species. The project may have the potential to promote the spread of invasive plant species. Non-native plant species observed in the project area would need to be compared to the exotic plant pest list maintained by the California Exotic Pest Plant Council and the list of noxious weeds maintained by the California Department of Food and Agriculture to determine whether or not they are considered invasive species during the PA/ED phase. If invasive species are found in the project area, mitigation measures would need to be developed during the PA/ED phase to prevent the spread of these invasive species to the extent feasible.

Permits

No wetlands or other jurisdictional waters were identified in the project area. As a result, it is not expected that regulatory permits will be required for this project.

However, a formal delineation should be conducted to verify the status of jurisdictional waters in the project area. If it determined jurisdictional waters occur in the project area and will be impacted by the project, regulatory permits from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game may be required.

- **Bicycle and Pedestrian Issues**

The Solano Comprehensive Transportation Plan, County Bicycle Plan, October 2004, proposes a Class II bike lane on State Route 12 from Lanbie Road to the Sacramento River. Per Deputy Directive 64-R1 – Complete Streets, Integrating the Transportation System – a “complete street” is defined as a “transportation facility that is planned, operated, and maintained to provide safe mobility for users, including bicyclists, pedestrians, transit users, and motorists, appropriate to the function and context of the facility.” As part of this directive, roadway improvements are seen as opportunities to improve safety, access, and mobility for bicyclists (among other users). Bike lanes help define road space - especially at the intersections along State Route 12 where conflicts with right-turning vehicles can present a danger to cyclists - and therefore provide safety benefits to bicyclists. As such, design of the project will need to include appropriate space and pavement striping to accommodate bicycle traffic through all intersections, past right turn pockets as shown in the project alternative layouts and Typical Sections provided in Attachments C and D.

- **Transportation Management Plan During Construction**

The TMP for the project will be developed and refined during the PS&E and final design phases, supported by detailed traffic studies to evaluate traffic operations. The need for necessary lane closures during off-peak hours or at night, will be identified, as required. The TMP will include press releases to notify and inform motorists, business, community groups, local entities, emergency services, and politicians of upcoming closures or detours. Various TMP elements such as portable Changeable Message Signs and CHP Construction Zone Enhanced Enforcement Program (COZEEP) will be utilized to alleviate and minimize delay to the traveling public. Preliminary Cost Estimate for TMP for each viable project alternatives is \$184,000. A Preliminary TMP Data Sheet has been prepared for this PSR, see Attachment K.

It is anticipated that construction operations will require the closure of one lane within the project limits on SR 12 during construction. A reversible lane will be needed for traffic handling per Caltrans Standard Plan T-13. The construction period is estimated at 50 days.

9. FUNDING

The estimated total project cost for each alternative is shown below. Complete cost estimates for all alternatives are provided in Attachment E.

	<u>Alternative</u>	<u>2</u>	<u>2A</u>	<u>3</u>
Roadway Items		\$3,728,538	\$3,144,453	\$4,001,038
Structure Items		\$ 0	\$ 0	\$ 0
Subtotal Construction Cost		\$3,728,538	\$3,144,453	\$4,001,038
Construction Cost (5% escalation to mid const. year)		\$4,758,664	\$4,013,207	\$5,106,451
Right-of-Way Items		\$1,914,840	\$1,790,272	\$2,063,368
Total Construction + R/W Cost		\$6,673,504	\$5,803,479	\$7,169,819
PA/ED Engineering Cost		\$ 425,000	\$ 425,000	\$ 425,000
PS&E Engineering Cost		\$ 350,000	\$ 350,000	\$ 350,000
Right-of-Way Support Cost		\$ 40,000	\$ 50,000	\$ 50,000
Construction Support		\$ 610,000	\$ 510,000	\$ 660,000
Total Project Capital Cost		\$8,098,504	\$7,138,479	\$8,654,819

It is anticipated that overall funding for this project (support and capital) will come from a combination of State Transportation Improvement Program (STIP), Local and other funding sources yet to be finalized. Risks associated with cost identified in this study include a shortage of STIP funding, and the potential for right of way dedication from developers to not materialize due to a slowdown in planned development.

Approval of this PSR will enable the Solano Transportation Authority to begin the PA&ED phase of the project upon execution of a cooperative agreement with Caltrans.

10. SCHEDULE

HQ Milestones	Delivery Date (Month, Day, Year)
Begin Environmental	July 2011
Notice of Intent (NOI)	August 2011
Circulate DED	May 2012
PA & ED	August 2012
Regular Right of Way	December 2012
Project PS&E	June 2013
Right of Way Certification	December 2013
Ready to List	December 2013
Approve Contract	March 2014
Contract Acceptance	November 2014
End Project	October 2015

11. FHWA COORDINATION

This project is exempt from FHWA review for design and construction. Federal participation may be required from the State Historic Preservation Office (SHPO) on behalf of the Department of the Interior (Section 106 clearance), United States Fish and Wildlife Service (biological opinion), United States Army Corps of Engineers (jurisdictional delineation), and the Federal Highway Administration USDA Natural Resources Conservation Service. Federal involvement related to the review and obtaining the above permits have been delegated to the State pursuant to the Joint Stewardship and Oversight Agreement between the State and the FHWA.

12. DISTRICT CONTACTS

Jason Mac	Project Manager, Project Management East	(510)622-8891
Patrick Pang	Office Chief, Advance Planning	(510)286-5566
Phillip Cox	Acting Branch Chief, Advance Planning	(510)286-5584
Ying Zhou	Project Engineer, Advance Planning	(510)286-4606
Nancy Tran	Transportation Engineer, Advance Planning	(510)286-6321
Katie Yim	Sr. Transportation Engineer, Traffic Safety	(510)286-4578
Patricia Maurice	Sr. Env. Planner, Advance Planning	(510)286-5563
Michael O' Callaghan	Right of Way Agent, LPA Services	(510)622-8768
Norman Gonsalves	Storm Water Coordinator, Water Quality	(510)286-5930

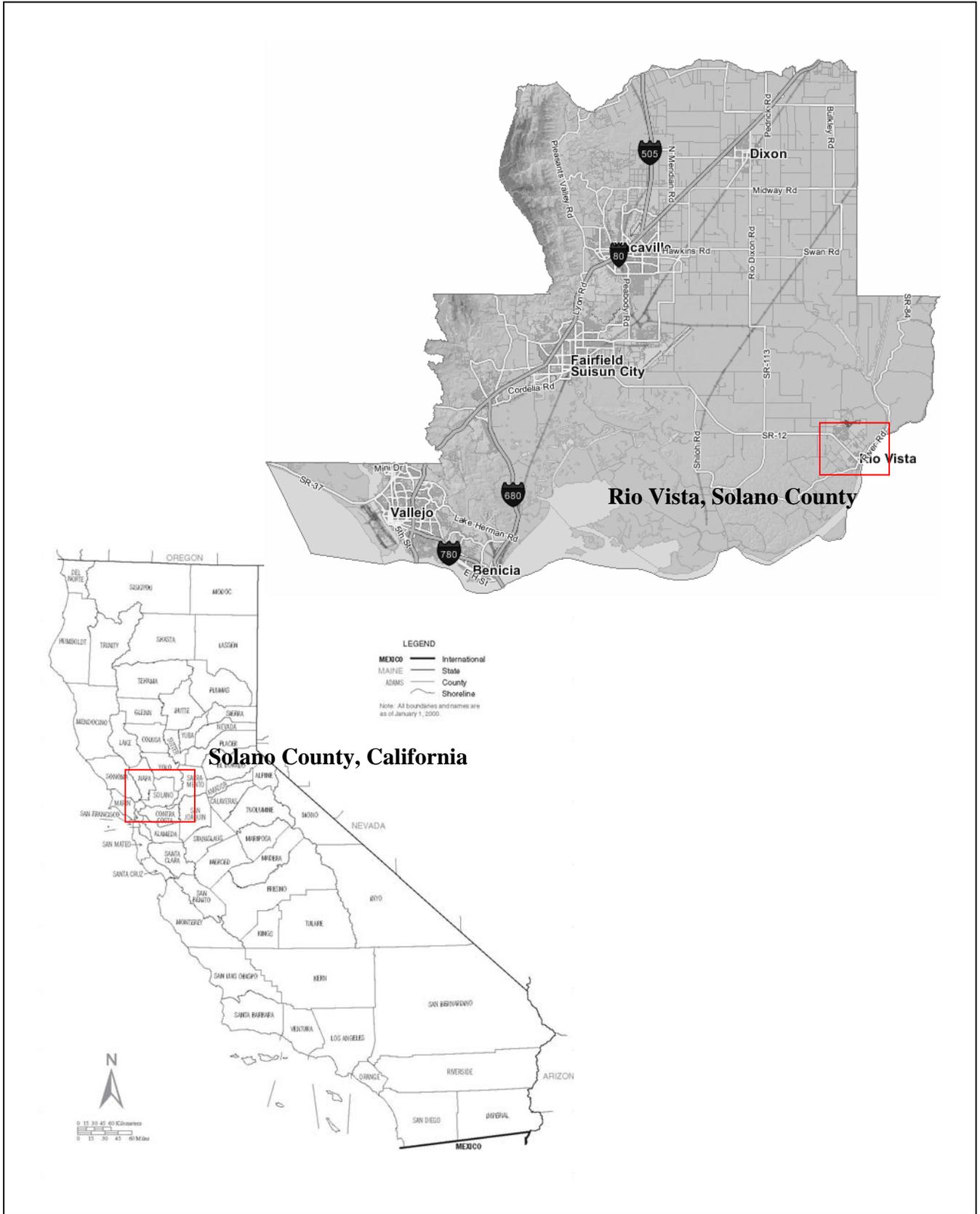
13. PROJECT REVIEWS

Field Review	<u>Nancy Tran / Jerry Morgan</u>	Date <u>05/11/09</u>
District Maintenance	<u>Kim Le</u>	Date <u>03/10/09</u>
District Safety Review	<u>Haixiong Xu</u>	Date <u>03/10/09</u>
Constructability Review	<u>Alan Dadafarian / Stuart Rucker</u>	Date <u>03/10/09</u>
HQ Design Coordinator	<u>Gordon Brown / Mike Thomas</u>	Date <u>03/10/09</u>

14. ATTACHMENTS

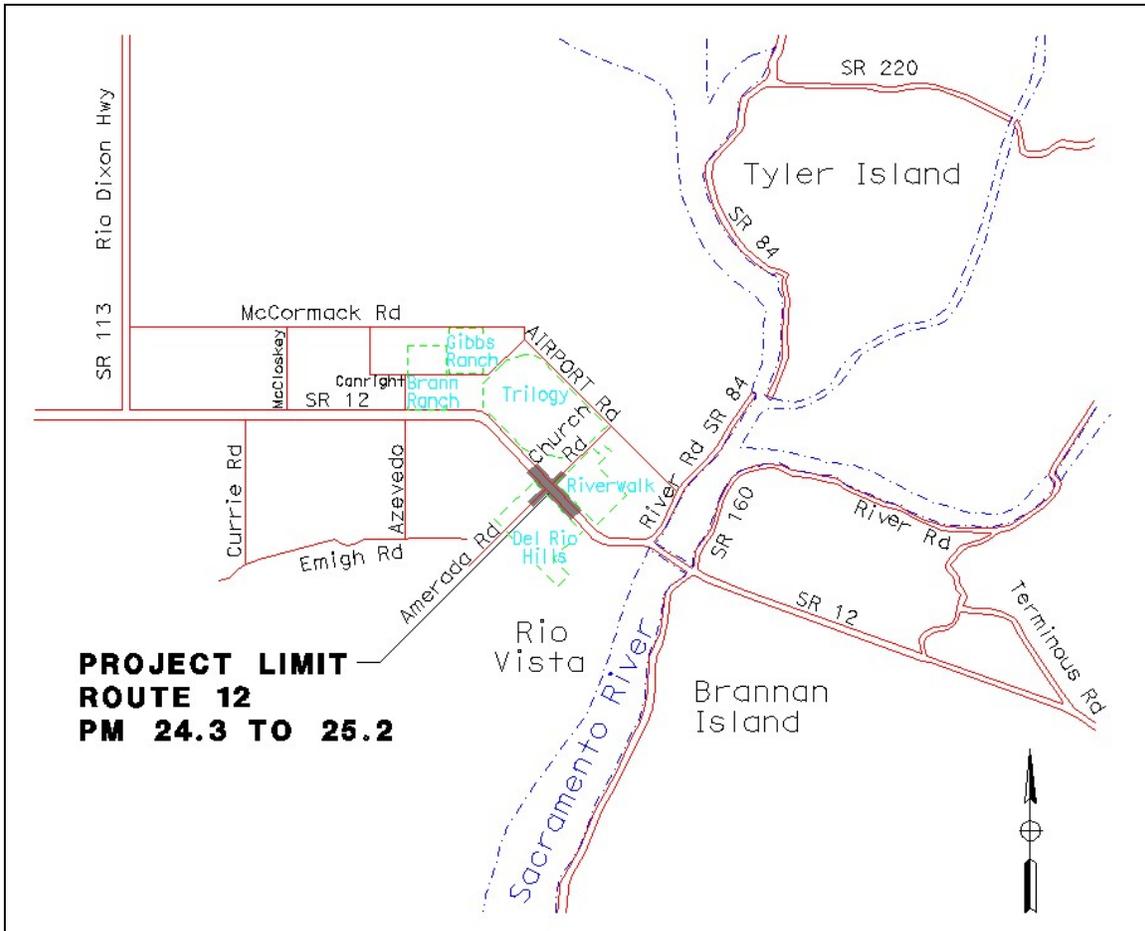
Attachment A
Location Map

ATTACHMENT A LOCATION MAP



Attachment B **Vicinity Map**

**ATTACHMENT B
VICINITY MAP**



**SR-12/ CHURCH ROAD-AMERADA ROAD INTERSECTION
RIO VISTA, SOLANO COUNTY**

Attachment C
Layout Plan -
Alternative 2, 2A & 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SOL	SR 12	24.3-25.2	XX	XX

REGISTERED CIVIL ENGINEER

Keen Poong
No. 66495
Exp. 06/30/10
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

SOLANO TRANSPORTATION AUTHORITY
ONE HARBOR CENTER, SUITE 130
SUISUN CITY, CA 94585

LEE AND MASCHETTO ENGINEERING
11344 COLOMA ROAD, SUITE 590
GOLD RIVER, CA 95670
TEL (916) 635-5233 FAX (916) 635-5243

To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

REVISOR

DATE

DESIGN OVERSIGHT

DESIGN OF TRANSPORTATION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans



CURVE DATA

No.	R	Δ	T	L
(1)	1122.00	14°0'59"	137.93	274.48
(2)	1100.00	13°55'47"	134.38	267.43
(3)	1078.00	14°6'47"	133.44	265.53
(4)	1084.00	13°54'34"	132.23	263.16
(5)	1100.00	13°54'34"	134.18	267.04
(6)	1116.00	13°54'34"	136.13	270.92



USERNAME => \$USER
DGN FILE => \$REQUEST

**PRELIMINARY
GEOMETRIC LAYOUT
ALTERNATIVE 2A**

SCALE: 1"=150'

CU XXXXX EA 0G050K

LAST REVISION DATE PLOTTED => \$DATE
00-00-00 TIME PLOTTED => \$TIME

Attachment D

Typical Cross Sections

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SOL	SR 12	24.3-25.2	XX	XX

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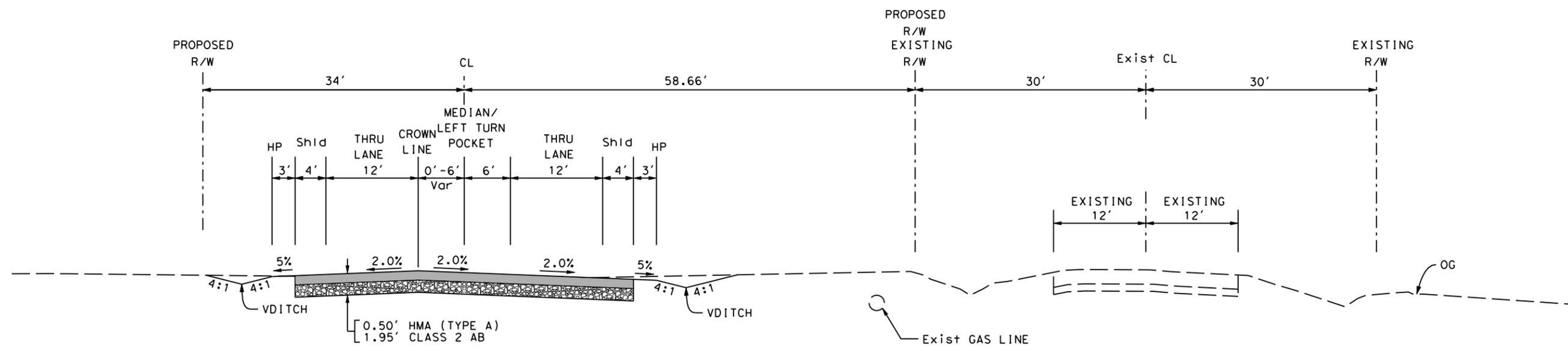
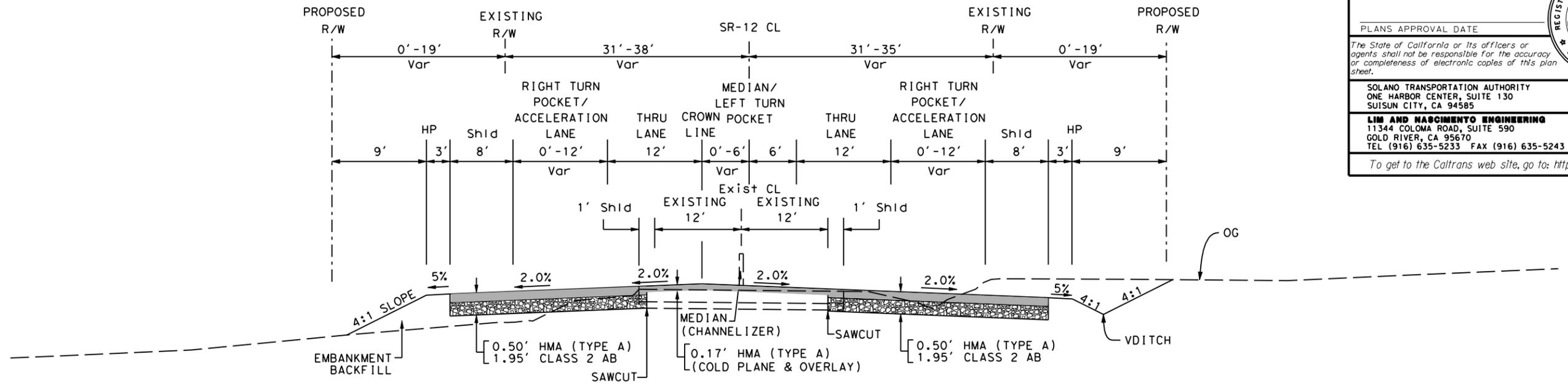
REVISOR: [] DATE: []

DESIGNED BY: [] CHECKED BY: []

DESIGN OVERSIGHT

DEPARTMENT OF TRANSPORTATION

STATE OF CALIFORNIA - **Caltrans**



TYPICAL CROSS SECTIONS
ALTERNATIVE 2A
NO SCALE



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CU XXXXX EA OG050K

LAST REVISION: [] DATE: [] TIME: []

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SOL	SR 12	24.3-25.2	XX	XX

REGISTERED CIVIL ENGINEER

Keen Poong
No. 66495
Exp. 06/30/10
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE _____

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SOLANO TRANSPORTATION AUTHORITY
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DESIGN OVERSIGHT

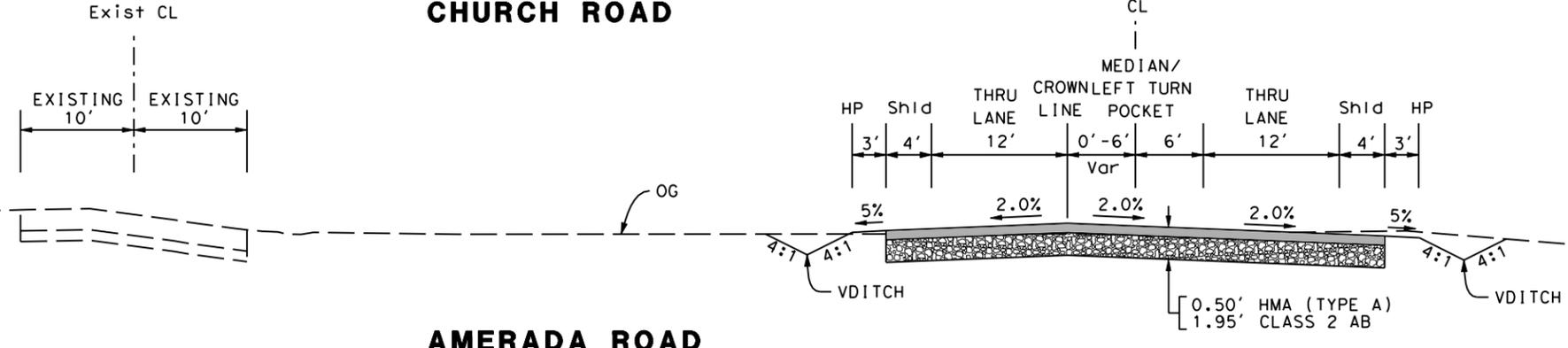
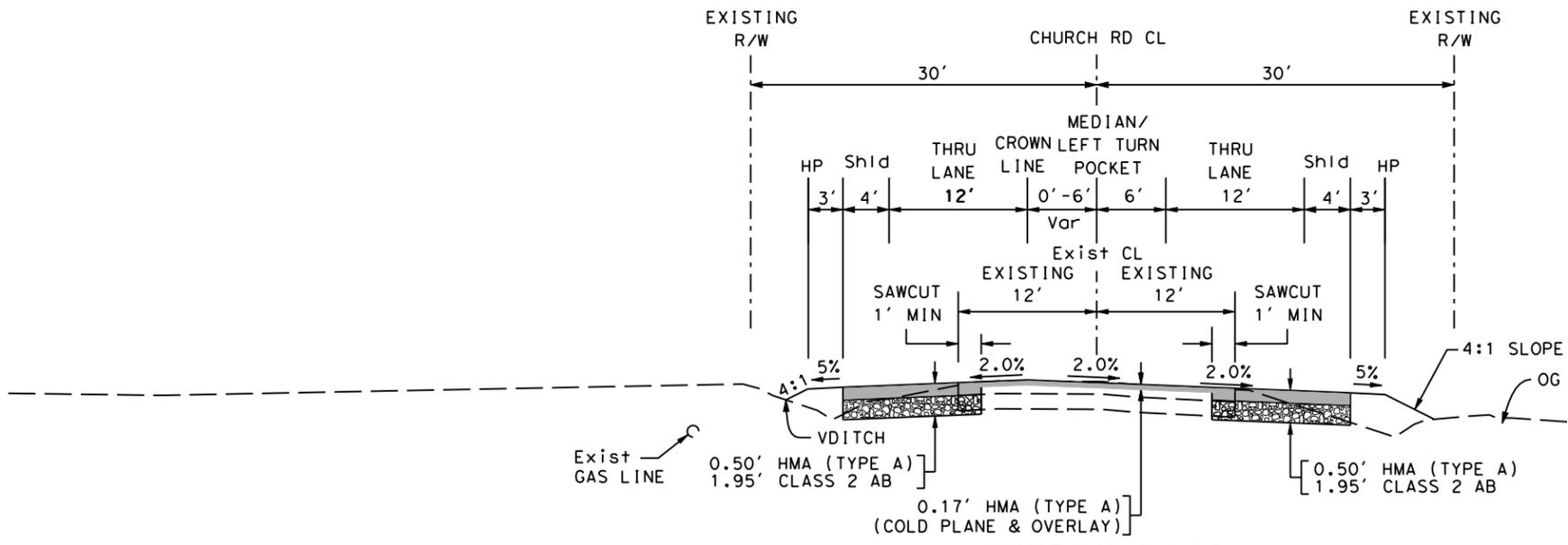
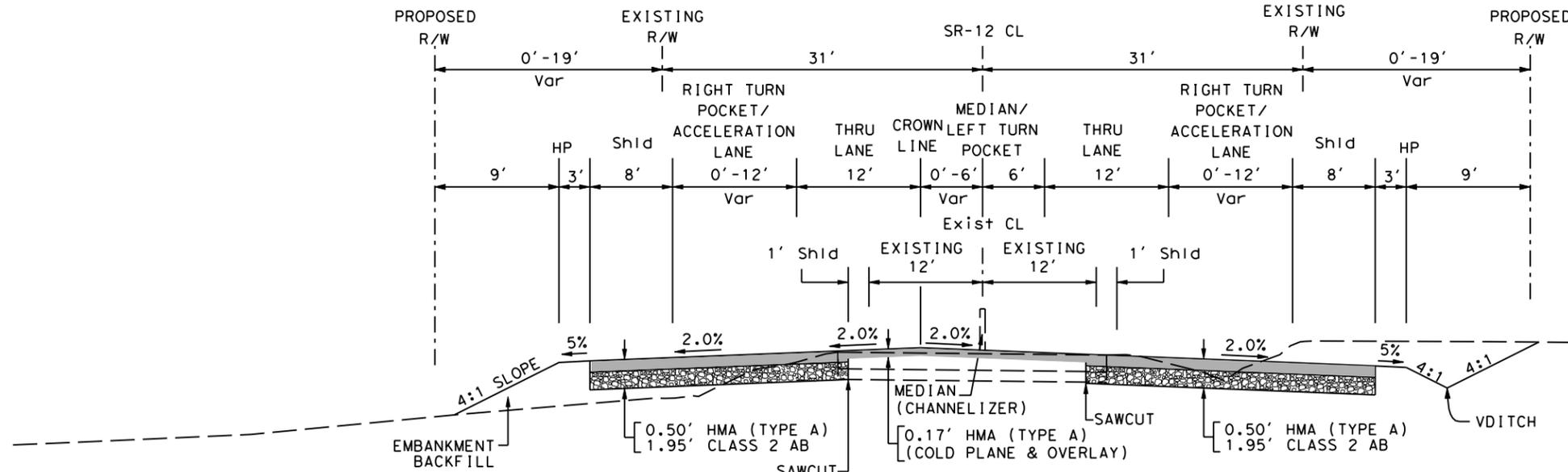
REVISIONS

NO.	DATE	BY	REASON

REVISOR: _____ DATE: _____

CHECKED BY: _____

DESIGNED BY: _____



TYPICAL CROSS SECTIONS
ALTERNATIVE 3
NO SCALE



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DGN FILE => \$REQUEST

CU XXXXX

EA OG050K

LAST REVISION DATE PLOTTED => \$DATE
00-00-00 TIME PLOTTED => \$TIME

Attachment E **Cost Estimates**

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

I. ROADWAY ITEMS

<u>Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
<u>Section 1 - Earthwork</u>					
Roadway Excavation	13,362	CY	\$40	\$534,480	
Imported Borrow	0	CY	\$0	\$0	
Clearing & Grubbing	1	LS	\$20,000	\$20,000	
Develop Water Supply	1	LS	\$15,000	\$15,000	
Top Soil Reapplication				\$0	
Stepped Slopes and Slope				\$0	
Rounding (Contour Grading)				\$0	
			Subtotal Earthwork:		\$569,480
<u>Section 2 - Pavement Structural Section*</u>					
PCC Pvmt <u>Depth</u>	0	CY	\$0	\$0	
PCC Pvmt <u>Depth</u>	0	CY	\$0	\$0	
Hot Mix Asphalt (Type A)	9,362	Tons	\$80	\$748,960	
Lean Concrete Base	0	CY	\$0	\$0	
Cement-Treated Base	0	CY	\$0	\$0	
Aggregate Base	15,402	CY	\$40	\$616,080	
Treated Permeable Base	0	CY	\$0	\$0	
Aggregate Subbase	0	CY	\$0	\$0	
Pavement Reinforcing Fabric	0	FT ²	\$0	\$0	
Edge Drains	0	FT	\$0	\$0	
				\$0	
				\$0	
			Subtotal Structural Section:		\$1,365,040
<u>Section 3 - Drainage</u>					
Large Drainage Facilities	0	LS	\$0	\$0	
Storm Drains	1	LS	\$20,000	\$20,000	
Pumping Plants	0		\$0	\$0	
Project Drainage (X-Drains, overside, etc.)	0		\$0	\$0	
AC Dike	0	FT	\$0	\$0	
CMP	0	FT	\$0	\$0	
RCP	0	FT	\$0	\$0	
			Subtotal Drainage:		\$20,000

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
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 Program Code: 20.10.400.400

<u>Section 4 - Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Retaining Walls	0		\$0	\$0	
Noise Barriers	0		\$0	\$0	
Barriers and Guardrails	0		\$0	\$0	
Equipment/Animal Passes	0		\$0	\$0	
Water Pollution Control	1	LS	\$55,700	\$55,700	
Hazardous Waste Investigation and/or Mitigation Work	0		\$0	\$0	
Environmental Compliance	0		\$0	\$0	
Resident Engineer Office	1	LS	\$100,000	\$100,000	
	0		\$0	\$0	
	0	LS	\$0	\$0	
				\$0	
				Subtotal Specialty Items:	\$155,700

<u>Section 5 - Traffic Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Lighting	0	LS	\$0	\$0	
Traffic Delineation	1	LS	\$15,000	\$15,000	
Traffic Signals	0	LS	\$0	\$0	
Overhead Sign Structures	0	LS	\$0	\$0	
Roadside Signs	1	LS	\$3,000	\$3,000	
Traffic Control Systems	1	LS	\$100,000	\$100,000	
Transportation Management Plan	1	LS	\$184,000	\$184,000	
Construction Area Signs	1	LS	\$15,000	\$15,000	
Traffic Handling (CMS)	1	LS	\$50,000	\$50,000	
Temporary Detection System	0	LS	\$0	\$0	
Staging	0	LS	\$0	\$0	
Maintain Traffic	150	DAY	\$500	\$75,000	
Public Information Office	1	LS	\$25,000	\$25,000	
				Subtotal Traffic Items:	\$467,000

TOTAL ROADWAY ITEMS Sections 1 thru 5 \$2,577,220

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

II. ROADSIDE ITEMS

<u>Section 6 Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Highway Planting	1	LS	\$25,000	\$25,000	
Replacement Planting	0		\$0	\$0	
Irrigation Modification	0		\$0	\$0	
Relocate Existing Irrigation	0		\$0	\$0	
Facilities	0		\$0	\$0	
Irrigation Corssovers	0		\$0	\$0	
	0		\$0	\$0	
	0	LS	\$0	\$0	
	0		\$0	\$0	
	0	LS	\$0	\$0	
				\$0	
Subtotal Planting and Irrigation Section:					\$25,000

Section 7: Roadside Management and Safety Section

Vegetation Control Treatments	0	LS	\$0	\$0	
Gore Area Pavement	0	LS	\$0	\$0	
Pavement beyond the gore area	0	LS	\$0	\$0	
Miscellaneous Paving	0	LS	\$0	\$0	
Errosion Control	29,955	SY	\$3	\$89,865	
Slope Protection	0	LS	\$0	\$0	
Side Slopes/Embankment Slopes	0	LS	\$0	\$0	
Maintenance Vehicle Pullouts	0	LS	\$0	\$0	
Off-freeway Access (gates, stairways, etc.)	0	LS	\$0	\$0	
Roadside Facilities (Vista Points, Transit, Park & Ride)	0	LS	\$0	\$0	
Relocating roadside facilities/features	0	LS	\$0	\$0	
	0	LS	\$0	\$0	
	0	LS	\$0	\$0	
	0	LS	\$0	\$0	
Subtotal Roadside Management and Safety Section:					\$89,865

TOTAL ROADSIDE ITEMS Sections 6 thru 7 \$114,865

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

Section 8 - Minor Items

	<u>\$2,692,085</u>	x	<u>0.10</u>	=	<u>\$269,209</u>
	(Subtotal Sections 1 thru 7)		(5 to 10%)		
				Minor Items:	<u>\$269,209</u>

Section 9 - Roadway Mobilization

	<u>\$2,961,294</u>	x	<u>0.10</u>	=	<u>\$296,129</u>
	(Subtotal Sections 1 thru 8)		(10%)		
				Roadway Mobilization:	<u>\$296,129</u>

Section 10 - Roadway Additions

Supplemental Work

	<u>\$2,961,294</u>	x	<u>0.10</u>	=	<u>\$296,129</u>
	(Subtotal Sections 1 thru 8)		(5 to 10%)		

Contingencies

	<u>\$2,961,294</u>	x	<u>0.25</u>	=	<u>\$740,323</u>
	(Subtotal Sections 1 thru 8)		(**%)		

TOTAL ROADWAY ADDITIONS: \$1,036,453

TOTAL ROADWAY ITEMS: \$3,728,538
 (Subtotal Sections 1 thru 10)

Estimate

Prepared by:	<u>Angela Chen</u>	Phone:	<u>408-886-9500</u>		<u>12/16/09</u>
	(Print or Type Name)				(Date)

Estimate

Checked by:	<u>Keen Poong, PE</u>	Phone:	<u>408-886-9500</u>		<u>12/16/09</u>
	(Print or Type Name)				(Date)

**Use appropriate percentage per PDPM, Part 3 Chapter 20.

<http://www.dot.ca.gov/hq/oppd/pdpm/pdpm.htm> - pdpm

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

II. STRUCTURE ITEMS

	STRUCTURE		
	No. 1	No. 2	No. 3
Bridge Name	_____	_____	_____
Structure Type	_____	_____	_____
Width (out to out) - (ft)	<u>0</u>	<u>0</u>	<u>0</u>
Span Length - (ft)	<u>0</u>	<u>0</u>	<u>0</u>
Total Area - ft ²	<u>0</u>	<u>0</u>	<u>0</u>
Footing Type (pile/spread)	_____	_____	_____
Cost Per ft ² (incl. 10% mobilization & 25% contingencies)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Total Cost for Structure	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Other	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>

* Add additional structures as necessary

SUBTOTAL STRUCTURES ITEMS \$0

Railroad Related Costs (Not incl. in R/W Est) \$0

TOTAL STRUCTURES ITEMS \$0

COMMENTS:

-

Estimate Prepared by: _____ Phone: _____ 0/0/00
 (Print or Type Name) (Date)

(If appropriate, attach additional pages as backup)

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

III. RIGHT OF WAY ITEMS

	Current Values (Future Use)	Escalation Rates	Escalated Values*
Acquisition, including excess lands and damages to remainder(s) and Goodwill	<u>\$1,642,840</u>	0.0%	<u>\$1,642,840</u>
Utility Relocation (State share)	<u>\$0</u>	0.0%	<u>\$0</u>
Clearance/Demolition	<u>\$0</u>	0.0%	<u>\$0</u>
RAP	<u>\$0</u>	0.0%	<u>\$0</u>
Title and Escrow Fees	<u>\$0</u>	0.0%	<u>\$0</u>
Construction Contract Work	<u>\$0</u>	0.0%	<u>\$0</u>
***Environmental Mitigation Cost	<u>\$272,000</u>	0.0%	<u>\$272,000</u>
	<u>\$1,914,840</u>		
TOTAL RIGHT OF WAY**			<u>\$1,914,840</u>

ESCALLATED VALUE*

Date to which Values are Escalated: 0/0/00

* Escalated to assumed year of advertising.

** Current total value for use on Sheet 1

*** Environmental Mitigation Cost Per PEAR (including \$5000 Permit Cost)

Estimate

Prepared by:

Keen Poong
(Print or Type Name)

Phone: 408-886-9500

12/16/09
(Date)

(If appropriate, attach additional pages and backup including Right of Way Data Sheet and Environmental Mitigation and Compliance Cost Estimate Sheet).

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

PROJECT DESCRIPTION:

Limits: On Route 12 in Solano County, between 24.3 mile north of Amerada and 25.2 mile south of Church Road

Proposed Improvement:
 (Scope of Work) Realign Church Road to eliminate the offset between Church Road and Amerada Road intersections on Route 12. Widen both sides of Route 12, Church Road and Amerada Road to provide left turn lanes along the four intersection approaches and acceleration/deceleration lanes along SR-12 in the east-west directions.

Alternative: #2A

SUMMARY OF PROJECT COST ESTIMATE

I. ROADWAY ITEMS	Sections 1 - 5	\$	<u>2,184,260</u>
II. ROADSIDE ITEMS	Sections 6 - 7	\$	<u>86,103</u>
III. ROADWAY ADDITIONS	Sections 8 - 10	\$	<u>874,090</u>
TOTAL ROADWAY	Total of Sections 1 - 10 shown above	\$	<u>3,144,453</u>
TOTAL STRUCTURES		\$	<u>0</u>
	SUBTOTAL CONSTRUCTION COSTS	\$	<u>3,144,453</u>
TOTAL RIGHT OF WAY ITEMS (Not Escallated)		\$	<u>1,790,272</u>
	TOTAL PROJECT CAPITAL OUTLAY COSTS	\$	<u>4,934,725</u>

Approved by Project Manager:

(Signature)

12/17/09

(Date)

Phone Number:

_____ (916) 635-5233

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

I. ROADWAY ITEMS

<u>Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
<u>Section 1 - Earthwork</u>					
Roadway Excavation	9,180	CY	\$40	\$367,200	
Imported Borrow	0	CY	\$0	\$0	
Clearing & Grubbing	1	LS	\$20,000	\$20,000	
Develop Water Supply	1	LS	\$15,000	\$15,000	
Top Soil Reapplication				\$0	
Stepped Slopes and Slope				\$0	
Rounding (Contour Grading)				\$0	
				Subtotal Earthwork:	\$402,200
<u>Section 2 - Pavement Structural Section*</u>					
PCC Pvmt <u>Depth</u>	0	CY	\$0	\$0	
PCC Pvmt <u>Depth</u>	0	CY	\$0	\$0	
Hot Mix Asphalt (Type A)	7,627	Tons	\$80	\$610,160	
Lean Concrete Base	0	CY	\$0	\$0	
Cement-Treated Base	0	CY	\$0	\$0	
Aggregate Base	13,105	CY	\$40	\$524,200	
Treated Permeable Base	0	CY	\$0	\$0	
Aggregate Subbase	0	CY	\$0	\$0	
Pavement Reinforcing Fabric	0	FT ²	\$0	\$0	
Edge Drains	0	FT	\$0	\$0	
				\$0	
				\$0	
				Subtotal Structural Section:	\$1,134,360
<u>Section 3 - Drainage</u>					
Large Drainage Facilities	0	LS	\$0	\$0	
Storm Drains	1	LS	\$25,000	\$25,000	
Pumping Plants	0		\$0	\$0	
Project Drainage (X-Drains, overside, etc.)	0		\$0	\$0	
AC Dike	0	FT	\$0	\$0	
CMP	0	FT	\$0	\$0	
RCP	0	FT	\$0	\$0	
				Subtotal Drainage:	\$25,000

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

<u>Section 4 - Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Retaining Walls	0		\$0	\$0	
Noise Barriers	0		\$0	\$0	
Barriers and Guardrails	0		\$0	\$0	
Equipment/Animal Passes	0		\$0	\$0	
Water Pollution Control	1	LS	\$55,700	\$55,700	
Hazardous Waste Investigation and/or Mitigation Work	1	LS	\$0	\$0	
Environmental Compliance	0		\$0	\$0	
Resident Engineer Office	1	LS	\$100,000	\$100,000	
	0		\$0	\$0	
	0	LS	\$0	\$0	
				\$0	
			Subtotal Specialty Items:		\$155,700
<u>Section 5 - Traffic Items</u>					
Lighting	0	LS	\$0	\$0	
Traffic Delineation	1	LS	\$15,000	\$15,000	
Traffic Signals	0	LS	\$0	\$0	
Overhead Sign Structures	0	LS	\$0	\$0	
Roadside Signs	1	LS	\$3,000	\$3,000	
Traffic Control Systems	1	LS	\$100,000	\$100,000	
Transportation Management Plan	1	LS	\$184,000	\$184,000	
Construction Area Signs	1	LS	\$15,000	\$15,000	
Traffic Handling (CMS)	1	LS	\$50,000	\$50,000	
Temporary Detection System	0	LS	\$0	\$0	
Staging	0	LS	\$0	\$0	
Maintain Traffic	150	DAY	\$500	\$75,000	
Public Information Office	1	LS	\$25,000	\$25,000	
			Subtotal Traffic Items:		\$467,000
TOTAL ROADWAY ITEMS Sections 1 thru 5					\$2,184,260

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

II. ROADSIDE ITEMS

<u>Section 6 Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Highway Planting	1	LS	\$30,000	\$30,000	
Replacement Planting	0		\$0	\$0	
Irrigation Modification	0		\$0	\$0	
Relocate Existing Irrigation	0		\$0	\$0	
Facilities	0		\$0	\$0	
Irrigation Corssovers	0		\$0	\$0	
	0		\$0	\$0	
	0	LS	\$0	\$0	
	0		\$0	\$0	
	0	LS	\$0	\$0	
				\$0	
Subtotal Planting and Irrigation Section:					<u>\$30,000</u>

Section 7: Roadside Management and Safety Section

Vegetation Control Treatments	0	LS	\$0	\$0	
Gore Area Pavement	0	LS	\$0	\$0	
Pavement beyond the gore area	0	LS	\$0	\$0	
Miscellaneous Paving	0	LS	\$0	\$0	
Errosion Control	18,701	SY	\$3	\$56,103	
Slope Protection	0	LS	\$0	\$0	
Side Slopes/Embankment Slopes	0	LS	\$0	\$0	
Maintenance Vehicle Pullouts	0	LS	\$0	\$0	
Off-freeway Access (gates, stairways, etc.)	0	LS	\$0	\$0	
Roadside Facilities (Vista Points, Transit, Park & Ride)	0	LS	\$0	\$0	
Relocating roadside facilities/features	0	LS	\$0	\$0	
	0	LS	\$0	\$0	
	0	LS	\$0	\$0	
	0	LS	\$0	\$0	
Subtotal Roadside Management and Safety Section:					<u>\$56,103</u>

TOTAL ROADSIDE ITEMS Sections 6 thru 7 \$86,103

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

Section 8 - Minor Items

	<u>\$2,270,363</u>	x	<u>0.10</u>	=	<u>\$227,036</u>
	(Subtotal Sections 1 thru 7)		(5 to 10%)		
				Minor Items:	<u>\$227,036</u>

Section 9 - Roadway Mobilization

	<u>\$2,497,399</u>	x	<u>0.10</u>	=	<u>\$249,740</u>
	(Subtotal Sections 1 thru 8)		(10%)		
				Roadway Mobilization:	<u>\$249,740</u>

Section 10 - Roadway Additions

Supplemental Work

	<u>\$2,497,399</u>	x	<u>0.10</u>	=	<u>\$249,740</u>
	(Subtotal Sections 1 thru 8)		(5 to 10%)		

Contingencies

	<u>\$2,497,399</u>	x	<u>0.25</u>	=	<u>\$624,350</u>
	(Subtotal Sections 1 thru 8)		(**%)		

TOTAL ROADWAY ADDITIONS: \$874,090

TOTAL ROADWAY: \$3,144,453
 (Subtotal Sections 1 thru 10)

Estimate Prepared by: Angela Chen Phone: 408-886-9500 12/16/09
 (Print or Type Name) (Date)

Estimate Checked by: Keen Poong, PE Phone: 408-886-9500 12/16/09
 (Print or Type Name) (Date)

**Use appropriate percentage per PDPM, Part 3 Chapter 20.
<http://www.dot.ca.gov/hq/oppd/pdpm/pdpm.htm> - pdpm

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

II. STRUCTURE ITEMS

	STRUCTURE		
	No. 1	No. 2	No. 3
Bridge Name	_____	_____	_____
Structure Type	_____	_____	_____
Width (out to out) - (ft)	<u>0</u>	<u>0</u>	<u>0</u>
Span Length - (ft)	<u>0</u>	<u>0</u>	<u>0</u>
Total Area - ft ²	<u>0</u>	<u>0</u>	<u>0</u>
Footing Type (pile/spread)	_____	_____	_____
Cost Per ft ² (incl. 10% mobilization & 25% contingencies)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Total Cost for Structure	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Other	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>

* Add additional structures as necessary

SUBTOTAL STRUCTURES ITEMS \$0

Railroad Related Costs (Not incl. in R/W Est) \$0

TOTAL STRUCTURES ITEMS \$0

COMMENTS:

-

Estimate Prepared by: _____ Phone: _____ 0/0/00
 (Print or Type Name) (Date)

(If appropriate, attach additional pages as backup)

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

III. RIGHT OF WAY ITEMS

	Current Values (Future Use)	Escalation Rates	-	Escalated Values*
Acquisition, including excess lands and damages to remainder(s) and Goodwill	\$1,280,272	0.0%	-	\$1,280,272
Utility Relocation (State share)	\$0	0.0%	-	\$0
Clearance/Demolition	\$0	0.0%	-	\$0
RAP	\$0	0.0%	-	\$0
Title and Escrow Fees	\$0	0.0%	-	\$0
Construction Contract Work	\$0	0.0%	-	\$0
***Environmental Mitigation Cost	\$510,000	0.0%	-	\$510,000
	<u>\$1,790,272</u>			<u>\$1,790,272</u>
TOTAL RIGHT OF WAY**				\$1,790,272

ESCALLATED VALUE*

Date to which Values are Escalated: 0/0/00

* Escalated to assumed year of advertising.

** Current total value for use on Sheet 1

*** Environmental Mitigation Cost Per PEAR (including \$5000 Permit Cost)

Estimate

Prepared by:

Keen Poong
(Print or Type Name)

Phone: 408-886-9500

12/16/09
(Date)

(If appropriate, attach additional pages and backup including Right of Way Data Sheet and Environmental Mitigation and Compliance Cost Estimate Sheet).

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

PROJECT DESCRIPTION:

Limits: On Route 12 in Solano County, between 24.3 mile north of Amerada and 25.2 mile south of Church Road

Proposed Improvement:
 (Scope of Work) Realign Amerada Road to eliminate the offset between Church Road and Amerada Road intersections on Route 12. Widen both sides of Route 12, Church Road and Amerada Road to provide left turn lanes along the four intersection approaches and acceleration/deceleration lanes along SR-12 in the east-west directions.

Alternative: #3

SUMMARY OF PROJECT COST ESTIMATE

I. ROADWAY ITEMS	Sections 1 - 5	\$ 2,788,020
II. ROADSIDE ITEMS	Sections 6 - 7	\$ 100,816
III. ROADWAY ADDITIONS	Sections 8 - 10	\$ 1,112,202
TOTAL ROADWAY	Total of Sections 1 - 10 shown above	\$ 4,001,038
TOTAL STRUCTURES		\$ 0
	SUBTOTAL CONSTRUCTION COSTS	\$ 4,001,038
	TOTAL RIGHT OF WAY ITEMS (Not Escallated)	\$ 2,063,368
	TOTAL PROJECT CAPITAL OUTLAY COSTS	\$ 6,064,406

Approved by Project Manager: _____
 (Signature)

Phone Number: _____ (916) 635-5233

12/17/09
 (Date)

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

I. ROADWAY ITEMS

<u>Section 1 - Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	19,800	CY	\$40	\$792,000	
Imported Borrow	0	CY	\$0	\$0	
Clearing & Grubbing	1	LS	\$20,000	\$20,000	
Develop Water Supply	1	LS	\$15,000	\$15,000	
Top Soil Reapplication				\$0	
Stepped Slopes and Slope				\$0	
Rounding (Contour Grading)				\$0	
				Subtotal Earthwork:	\$827,000
 <u>Section 2 - Pavement Structural Section*</u>					
PCC Pvmt Depth	0	CY	\$0	\$0	
PCC Pvmt Depth	0	CY	\$0	\$0	
Hot Mix Asphalt (Type A)	8,666	Tons	\$80	\$693,280	
Lean Concrete Base	0	CY	\$0	\$0	
Cement-Treated Base	0	CY	\$0	\$0	
Aggregate Base	15,101	CY	\$40	\$604,040	
Treated Permeable Base	0	CY	\$0	\$0	
Aggregate Subbase	0	CY	\$0	\$0	
Pavement Reinforcing Fabric	0	FT ²	\$0	\$0	
Edge Drains	0	FT	\$0	\$0	
				\$0	
				\$0	
				Subtotal Structural Section:	\$1,297,320
 <u>Section 3 - Drainage</u>					
Large Drainage Facilities	0	LS	\$0	\$0	
Storm Drains	1	LS	\$40,000	\$40,000	
Pumping Plants	0		\$0	\$0	
Project Drainage (X-Drains, overside, etc.)	0		\$0	\$0	
AC Dike	0	FT	\$0	\$0	
CMP	0	FT	\$0	\$0	
RCP	0	FT	\$0	\$0	
				Subtotal Drainage:	\$40,000

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

<u>Section 4 - Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Retaining Walls	0		\$0	\$0	
Noise Barriers	0		\$0	\$0	
Barriers and Guardrails	0		\$0	\$0	
Equipment/Animal Passes	0		\$0	\$0	
Water Pollution Control	1	LS	\$55,700	\$55,700	
Hazardous Waste Investigation and/or Mitigation Work	0		\$0	\$0	
Environmental Compliance		LS	\$0	\$0	
Resident Engineer Office	1	LS	\$100,000	\$100,000	
	0		\$0	\$0	
	0	LS	\$0	\$0	
				\$0	
				Subtotal Specialty Items:	\$155,700

<u>Section 5 - Traffic Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Lighting	0	LS	\$0	\$0	
Traffic Delineation	1	LS	\$15,000	\$15,000	
Traffic Signals	0	LS	\$0	\$0	
Overhead Sign Structures	0	LS	\$0	\$0	
Roadside Signs	1	LS	\$4,000	\$4,000	
Traffic Control Systems	1	LS	\$100,000	\$100,000	
Transportation Management Plan	1	LS	\$184,000	\$184,000	
Construction Area Signs	1	LS	\$15,000	\$15,000	
Traffic Handling (CMS)	1	LS	\$50,000	\$50,000	
Temporary Detection System	0	LS	\$0	\$0	
Staging	0	LS	\$0	\$0	
Maintain Traffic	150	DAY	\$500	\$75,000	
Public Information Office	1	LS	\$25,000	\$25,000	
				Subtotal Traffic Items:	\$468,000

TOTAL ROADWAY ITEMS Sections 1 thru 5 \$2,788,020

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

Section 8 - Minor Items

				<u>Item Cost</u>	<u>Section Cost</u>
	<u>\$2,888,836</u>	x	<u>0.10</u>	=	<u>\$288,884</u>
	(Subtotal Sections 1 thru 7)		(5 to 10%)		
				Minor Items:	<u>\$288,884</u>

Section 9 - Roadway Mobilization

	<u>\$3,177,720</u>	x	<u>0.10</u>	=	<u>\$317,772</u>
	(Subtotal Sections 1 thru 8)		(10%)		
				Roadway Mobilization:	<u>\$317,772</u>

Section 10 - Roadway Additions

Supplemental Work

	<u>\$3,177,720</u>	x	<u>0.10</u>	=	<u>\$317,772</u>
	(Subtotal Sections 1 thru 8)		(5 to 10%)		

Contingencies

	<u>\$3,177,720</u>	x	<u>0.25</u>	=	<u>\$794,430</u>
	(Subtotal Sections 1 thru 8)		(**%)		

TOTAL ROADWAY ADDITIONS: \$1,112,202

TOTAL ROADWAY: \$4,001,038
 (Subtotal Sections 1 thru 10)

Estimate

Prepared by: Angela Chen Phone: 408-886-9500 12/16/09
 (Print or Type Name) (Date)

Estimate

Checked by: Keen Poong, PE Phone: 408-886-9500 12/16/09
 (Print or Type Name) (Date)

**Use appropriate percentage per PDPM, Part 3 Chapter 20.

<http://www.dot.ca.gov/hq/oppd/pdpm/pdpm.htm> - pdpm

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

II. STRUCTURE ITEMS

	STRUCTURE		
	No. 1	No. 2	No. 3
Bridge Name	_____	_____	_____
Structure Type	_____	_____	_____
Width (out to out) - (ft)	0	0	0
Span Length - (ft)	0	0	0
Total Area - ft ²	0	0	0
Footing Type (pile/spread)	_____	_____	_____
Cost Per ft ² (incl. 10% mobilization & 25% contingencies)	\$0	\$0	\$0
Total Cost for Structure	\$0	\$0	\$0
Other	\$0	\$0	\$0

* Add additional structures as necessary

SUBTOTAL STRUCTURES ITEMS _____ \$0

Railroad Related Costs (Not incl. in R/W Est) _____ \$0

TOTAL STRUCTURES ITEMS _____ \$0

COMMENTS:

-

Estimate
 Prepared by: _____ (Print or Type Name) Phone: _____ 0/0/00
(Date)

(If appropriate, attach additional pages as backup)

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 04-Sol-12
 PM: PM 24.3/25.2
 EA: 04-0G050K
 Program Code: 20.10.400.400

III. RIGHT OF WAY ITEMS

	Current Values (Future Use)	Escalation Rates		Escalated Values*
Acquisition, including excess lands and damages to remainder(s) and Goodwill	\$1,518,368	0.0%	-	\$1,518,368
Utility Relocation (State share)	\$0	0.0%	-	\$0
Clearance/Demolition	\$0	0.0%	-	\$0
RAP	\$50,000	0.0%	-	\$50,000
Title and Escrow Fees	\$0	0.0%	-	\$0
Construction Contract Work	\$0	0.0%	-	\$0
***Environmental Mitigation Cost	\$495,000	0.0%	-	\$495,000
	<u>\$2,063,368</u>			
TOTAL RIGHT OF WAY**				<u>\$2,063,368</u>

ESCALLATED VALUE*

Date to which Values are Escalated: 0/0/00

* Escalated to assumed year of advertising.

** Current total value for use on Sheet 1

*** Environmental Mitigation Cost Per PEAR (including \$5000 Permit Cost)

Estimate

Prepared by:

Keen Poong
(Print or Type Name)

Phone: 408-886-9500

12/16/09
(Date)

(If appropriate, attach additional pages and backup including Right of Way Data Sheet and Environmental Mitigation and Compliance Cost Estimate Sheet).

Attachment F
Preliminary
Environmental Analysis
Report (PEAR)



Preliminary Environmental Analysis Report

Project Information

District 4 County Solano Route SR-12 Post Mile 24.3/25.2 EA 04-0G050K

Project Title: State Route-12 and Church-Amerada Road Improvements

Project Manager: Jason Mac Phone # (510) 622-8891

Project Engineer: Steve Mislinski Phone # (916) 635-5233

Environmental Manager: Bill Mayer Phone # (916) 630-4600

PEAR Prepared by: Bill Mayer, Amberly Morgan Phone # (916) 630-4600

Project Description

Purpose and Need: This project was initiated by the Solano Transportation Authority (STA), inline with the SR-12 Major Investment Study (MIS) completed in October 2001 to improve physical and management practices to serve future travel demand. Although the intersection of SR-12 and Church Road-Amerada Road has had a lower accident rate than the statewide average for a similar type facility for Fatal + Injury and Total categories, traffic data indicates that within the above time period, approximately 25% of the accidents on these segments of SR-12 and Church Road – Amerada Road have occurred within the intersection. The traffic studies also indicate that the intersection of SR-12 and Church Road will operate at a satisfactory LOS D in the PM peak hour to an estimated “Failure Point” which is defined by the addition of approximately 30% of the Baseline trips and 40% of Del Rio Hills Development trips, assuming that the intersection is signalized when development commences. To assist minor street traffic in entering and exiting the main-line traffic stream at the Church Road intersection, the construction of exclusive left turn lanes and acceleration and deceleration lanes is proposed. This improvement will also eliminate delay to through traffic caused by queued left turn traffic on SR-12.

The purpose of this project is to improve the safety and operational characteristics at the intersection of SR-12 and Church Road-Amerada Road by removing turn movements from the through traffic with the addition of left turn lanes, acceleration/deceleration lanes for right turns, and realigning the intersection to eliminate the offset between Church and Amerada Roads.

Description of work: The purpose of this project is to improve the safety and operational characteristics on State Route 12 (SR-12) from PM 24.3 to 25.2 in the City of Rio Vista, Solano County. The proposed improvement at the intersection of SR-12 and Church Road-Amerada Road includes the addition of left turn lanes along the four intersection approaches, acceleration/deceleration lanes along SR-12 in the east-west directions, and realignment of the intersection to eliminate the offset between Church Road and Amerada Road. A traffic signal at the intersection is expected to be constructed in 2025 or earlier when the traffic projections meet Caltrans Traffic Signal Warrants. The Project Study Report considers three viable build alternatives and a no-build alternative. The estimated costs vary from \$0 for the No Build Alternative to \$6,064,406 for Alternative 3. It is anticipated that the improvements will be constructed by the STA and the opening year of the Project is projected to be 2013.

Alternatives:

Four alternatives were studied as shown below. Alternative 1 is the “No Build” Alternative to discuss the condition if no improvement is made to this facility. Alternatives 2, 2A and 3 propose to eliminate the offset between Church Road and Amerada Road at SR-12, adding left turn lanes along the four intersection approaches and acceleration/deceleration lanes for right turns entering and exiting SR-12. Exhibit A shows a combined project footprint of all three build alternatives in addition to potential construction easements. The existing farmhouse located at the south-east corner of SR-12 and Amerada Road could be potentially impacted or avoided depending on the build alternative chosen.

Alternative 1: “No Build” Alternative.

Traffic from Church Road and Amerada Road will continue to enter and exit the SR-12 main-line traffic stream without acceleration and deceleration lanes. Accident rates and delays to through traffic caused by queued left turn traffic on SR-12 is expected to remain an issue and increase as the traffic volume on SR-12 increases. The number of accidents along this section of roadway would be expected to remain the same or increase if no improvements are made to the facility.

Alternative 2: Realign Church Road with non-symmetrical widening on SR-12.

Alternative 2 proposes to widen SR-12 mainly on the north side of SR-12. This alternative minimizes Right of Way acquisition on the south side of SR-12 and realigns Church Road to eliminate the offset between Church Road and Amerada Road at SR-12. Left turn lanes will be added along the four intersection approaches, and SR-12 will be widened towards the north side to add acceleration/deceleration lanes for right turns entering and exiting SR-12. The roadway widening will include 8-foot shoulders to meet the conventional highway standard. This alternative avoids demolition of the existing farm house located at the south-east corner of SR-12 and Amerada Road, but involves minor modification to the existing Church Road/unpaved road intersection at about 700 feet north from the SR-12/Church Road intersection. Impact on the existing earthen ditch, utilities poles, trees and Right of Way acquisition along the south side of SR-12 could be minimized. The estimated cost for Alternative 2 (including right of way costs of \$1,914,840) is \$5,643,378. (Figure 2)

Alternative 2A: Realign Church Road with symmetrical widening on SR-12.

Similar to Alternative 2, Alternative 2A proposes to realign Church Road to eliminate the offset between Church Road and Amerada Road at SR-12. Left turn lanes will be added along the four intersection approaches, and SR-12 will be widened almost equally on both sides to add acceleration/deceleration lanes for right turns entering and exiting SR-12. The roadway widening will include 8-foot shoulders to meet the conventional highway standard. Similar to Alternative 2, this alternative avoids demolition of the existing farm house located at the southeast corner of SR-12 and Amerada Road, but involves minor modification to the existing Church Road/unpaved road intersection at about 700 feet north from the SR-12/Church Road intersection. Impact on the existing earthen ditch, utilities poles, trees and Right of Way acquisition along the south side of SR-12 could be minimized. The estimated cost for Alternative 2 (including right of way costs of \$1,790,272) is \$4,934,725. (Figure 3)

Alternative 3: Realign Amerada Road with symmetrical widening on SR-12. This alternative proposes to realign Amerada Road to eliminate the offset between Church Road and Amerada Road at SR-12. Left turn lanes will be added along the four intersection approaches, and SR-12 will be widened almost equally on both sides to add acceleration/deceleration lanes for right turns entering and exiting SR-12. The roadway widening will include 8-foot shoulders to meet the conventional highway standard. This Alternative involves demolition of the existing farm house located at the south-east corner of SR-12 and Amerada Road. Similar to Alternative 2, existing earthen ditch along the south side of SR-12, existing utilities poles and trees at the intersection will be impacted. The estimated cost for Alternative 3 (including right of way costs of \$2,063,368) is \$6,064,406 (Figure 4)

Funding

It is likely that federal funding could be utilized as a source for the project, and would require NEPA review. It is anticipated that the project PA&ED phase will be funded by the State with a design engineering cost of approximately \$425,000. The project engineering support and construction cost will be funded through a combination of local funding. Right-of-Way is expected to be mostly dedicated by developers as part of their development agreements (in process) with the City of Rio Vista. STA has committed to administering this project through PA/ED, PS&E, Right-of-Way and Construction, and Caltrans will provide resources for oversight.

Assumptions and Risks**Assumptions:**

- Scope as defined in current build alternatives
- New right-of-way acquisition will be required for the proposed project, depending on the build alternative.
- Federal Funding is available to fund a portion of the improvements.
- Biological Resources:
 - No federally listed species are expected to be present
 - Mitigation is required for oak trees
- Cultural resources:
 - ASR, HPSR will be completed. If no resources are determined eligible this portion of the Section 106 process will require six months to complete.
 - Native American consulting parties do not object to methods/findings.
 - An HRER is not required.
- No hazardous waste issues.
- No cumulative impacts associated with traffic congestion.
- No visual impacts.
- No air quality impact due to carbon dioxide.
- With mitigation, no noise impacts due to exceedance of noise standards.

Risks:

- Moderate Probability/High Impact: Design plans change to include activities not currently identified in the request (December 2008) would increase project costs and schedule delay for cultural resources (1 additional year).
- Low Probability/High Impact: Impacts to additional federally listed species would increase mitigation costs and the proposed schedule (up to 1 year).
- Low Probability/High Impact: If resources are determined eligible, a Finding of Effect (FOE) will be required. If impacts are adverse a Memorandum of Agreement (MOA) and Historic Property Treatment Plan (HPTP) will address mitigation requirements. As a result of multi-agency participation, this portion of the Section 106 process can take an additional six months. If FHWA/SHPO disagrees with cultural resources effects finding and require extended MOA consultation, then increased project costs and schedule delay (up to 6 months) would occur.
- Low Probability/High Impact: Significant Native American controversy would increase costs and delay schedule 6 months to 1 year.
- Low Probability/High Impact: If unforeseen issues of hazardous waste, cumulative air quality, or traffic impacts are encountered, then increased project costs, schedule delay (up to 6 months) would occur.
- Low Probability/Moderate Risk: Significant public controversy necessitating a public meeting would add 4-6 months to schedule.

- Low Probability/Low Risk: Farmland conversion would exceed the maximum rating allowed in the Farmland Conversion Impact Rating form triggering an alternatives analysis.
- Low Probability/Moderate Risk: Impacts to local native/non-native trees (30-40 trees) would generate public controversy for visual concerns.
- Low Probability/Low Risk: Potential cumulative impacts from multiple projects increase the significance of environmental impact.
- Low Probability/Moderate Risk: Combination of all worst-case risk factors result in extended environmental review delaying environmental clearance for up to 24-26 months.

Mitigation

Several native trees may occur near the existing intersection and roadway shoulders and may be removed. Any native trees that are removed as a result of this project will be in accordance with Caltrans regulations. Oak tree replacement is estimated to range from \$182,000 (Alternative 2) to \$420,000 (Alternatives 2A and 3). An additional \$5,000 has been estimated for burrowing owl mitigation tasks. A total of \$30,000 is budgeted for noise attenuation improvements (Alternative 2& 2A only), due to potential noise impacts at the farmhouse. For archaeological resources, a total of \$25,000 is budgeted in the event that mitigation is required for buried resources. A total of \$30,000 has been included to address hazardous waste and contamination issues (and an additional \$15,000 for Alternative 3 to address asbestos and lead paint)

Anticipated Environmental Approval

Based on past experience with similar actions and information provided to date, environmental review for CEQA is expected to require the preparation of an Initial Study leading to a Mitigated Negative Declaration. The class of action (COA) for NEPA is expected to be an Environmental Assessment (EA, Class III) leading to a Finding of No Significant Impact. The potential for issues/impacts relating to noise, farmland, cumulative effects and growth inducement, as well as the potential impacts associated with relocating the existing residence (cultural/historic and Section 4f resource) indicate that an Environmental Assessment is appropriate. A COA determination is attached for reference.

CEQA

- Categorical Exemption**
- Initial Study/Negative Declaration/
Mitigated ND**
- Environmental Impact Report**

NEPA

- Categorical Exclusion**
- Routine Environmental Assessment with
a Finding of No Significant Impact**
- Complex Environmental Assessment with
a Finding of No Significant Impact***
- Environmental Impact Statement**

Lead Agency	The California Department of Transportation (Caltrans) is the CEQA and NEPA Lead Agency for this project.	
Estimated time to obtain environmental approval	24 to 30 months after receiving the information necessary to begin study per Felker memo	
Estimated person hours to complete environmental document	Review Project Scope Circulate, Review, & Approve	32

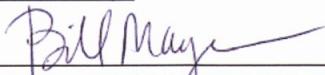
* Environmental Document with a EA or higher will require a Class of Action (COA) Concurrence from the District Headquarters Liaison.

Draft Project Report	60
Review Project Information	70
Perform General Environmental Studies	100
Perform Surveys & Mapping for Environmental Studies	15
Perform Visual Impact Analysis	40
Perform Noise Study	160
Perform Air Quality Study	160
Perform Water Quality Studies	20
Perform Energy Studies	20
Perform Preliminary Site Investigation for Hazardous Wastes	30
Perform Biological Studies	80
Perform Cultural Studies	60
Prepare & Process Cultural Resource Compliance Documents	24
Prepare & Approve Draft Environmental Document	208
Circulate DED & Select Preferred Project Alternative	270
Prepare & Approve Project Report & Final Environmental Document	234
Obtain Permits, Agreements and Route Adoptions	102
Mitigate Environmental Impacts & Clean-up Hazardous Waste	210
Circulate, Review & Prepare Final District PS&E Package	168
Perform Construction Engineering & General Contract Administration	30
Total (1.2PYs)	2,093 hours

Disclaimer

This Preliminary Environmental Analysis Report (PEAR) provides information to support programming of the proposed project. It is not an environmental document for environmental approval. Preliminary analyses, determinations, and mitigation cost estimates are based on the scope of the project as described in this Project Study Report (PSR). The estimates and conclusions in this PEAR are approximate and based on cursory analyses of probable effects. A re-evaluation of the PEAR will be needed for changes in scope, alternatives, or environmental laws, regulations, and guidelines.

Reviewed by:


 Environmental Manager (Consultant)

Date: 03/09/2010


 Project Manager

Date: 03/24/2010

Environmental Technical Reports or Studies Required

	Study*	Document*	N/A*
Community Impact Study	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Farmland	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section 4(f) Evaluation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Visual Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floodplain Evaluation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Noise Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air Quality Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paleontology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wild and Scenic River Consistency	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cumulative Impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Growth Inducing/Indirect Impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cultural			
Archaeological Survey Reports (ASR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Resources Evaluation Report (HRER)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Historic Property Survey Report (HPSR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historical Resource Compliance Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SHPO/PRC 5024.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Native American Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other Findings of Effect:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Data Recovery Plan_____	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Memorandum of Agreement	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(*if Federal Permit is required)			
Hazardous Waste			
ISA (Additional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PSI	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biological			
Endangered Species (Federal)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Endangered Species (State)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Species of Concern (CNPS, USFS, BLM, S, F)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biological Assessment (USFWS, NMFS, State)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fish Passage Barriers Assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wetlands/Jurisdictional Delineation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive Species	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Environment Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NEPA 404 Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Migratory Bird Treaty Act	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat Assessment_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* Study – requires thorough analysis including field surveys, database searches, and reports.

* Document – does not require field surveys; issue is incidental and may only require memo to file and brief explanation in the environmental document.

* Not Anticipated – issue is not applicable to the proposed project.

Permits

401 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
404 Permit Coordination (NW)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1602 SAA Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
City/County Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NPDES Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
US Coast Guard (Section 10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State 2081 Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion of Technical Review

PSR Summary Statement

Based on past experience with similar actions and information provided by reviewers to date, the Preliminary Environmental Analysis Report (PEAR) anticipates the environmental document needed for this project is an Initial Study/Mitigated Negative Declaration under CEQA (14 California Code of Regulations, Section 15304 (h)) and, if NEPA applies, an Environmental Assessment under federal regulations (Section 6005 of 23 CFR 771.119 for Environmental Assessments and 23 CFR 771.121 for Findings of No Significant Impact). Environmental review is expected to start in March 2010. It is expected that Project Approval and Environmental Document (PA/ED) approval will take 24 to 30 months to complete after receiving information necessary to begin study per Felker memo. Resource allocations are described in the Preliminary Environmental Analysis Report and are for Caltrans oversight purposes. A total of approximately 2,093 person hours have been estimated to complete the identified tasks. The project is located in a rural area, although urbanization has occurred in the vicinity and development projects are approved and/or proposed directly within the project footprint. The major environmental issues to be addressed include water quality and erosion, floodplain, air quality and noise, cultural resources, hazardous waste/materials, farmland conversion, visual, and biological resources. Any changes in scope will require further project review and reassessment of the level of environmental documentation.

Air Quality

Potential air quality issues are expected from the roadway realignment and construction of the intersection. Projects must conform (on a regional and project level) to the federal Clean Air Act to gain U.S. Department of Transportation approval. In order to determine project level conformity, an air quality analysis must be performed. For this project, as the project improvements may be considered as a realignment of the existing roadway, then a regional conformity analysis would be necessary. The project is not currently included in the 2035 Regional Transportation Plan but will be added in the next RTP, prior to the PA/ED completion. At the project level, as the region is in non-attainment for PM 2.5, a project-level conformity analysis will be required. Based on preliminary information, the significant increase in traffic volumes to meet Year 2025 conditions or beyond could cause violations of local carbon monoxide (CO) concentration standards. Except for the existing farmhouse, no sensitive receptors for air quality impacts are currently located in the vicinity. An air quality analysis will be required to determine project-specific impacts, conformity and mitigation. In addition, the air quality analysis will include an analysis of Mobile Source Air Toxics, if needed, based on FHWA guidance. This could take approximately 2 months for completion. Standard dust control measures and compliance with Solano Air Quality Management District rules and regulations will be required during construction. No additional permits are required.

Noise

Potential noise issues are expected from realignment of the intersection. On the northeast corner of SR-12 and Church Road, the Riverwalk project has been approved by the City of Rio Vista. In the event that development occurs, noise mitigation would be implemented consistent with the measures contained in the Final EIR. With the exception of the farmhouse residence located at the corner of SR-12 and Church Road (residence will be removed as a part of Alternative 3 or in conjunction with the Del Rio Hills project) sensitive receptors for noise impacts are not currently located in the vicinity. A technical noise analysis will be required. Noise attenuation will be necessary to protect the farmhouse (unless Alternative 3 is implemented requiring demolition of the farmhouse), or that the Del Rio Hills project (which would also result in the farmhouse demolition) is delayed or terminated. This may take an estimated 1-2 weeks for completion. No additional permits or agency coordination required.

A noise barrier may be required for sound attenuation to protect the existing farmhouse residence under Alternatives 2 and 2A. Costs for a noise barrier are included in the construction estimate. A Noise Abatement Decision document would also be required if a noise barrier is proposed to attenuate impacts on the farmhouse.

Greenhouse Gas Emissions

Greenhouse Gas Emissions will be analyzed in the MND based on project vehicle miles travelled. A brief analysis of the emissions will be provided.

Hazardous Waste/Materials

An Initial Site Assessment (ISA) was conducted for the proposed roadway realignment and intersection construction. The ISA includes a government records search and a site survey for potential hazardous wastes and materials. Based on the indicated document reviews and reconnaissance, it has been determined that the potential for the proposed construction to encounter significant hazardous materials within the project Site is generally low. The time between construction of existing intersection and banning of lead additive in gasoline is relatively short, and the potential for significant concentrations of aurally deposited lead (ADL) along the shoulders of the existing roads is considered low, but cannot be ruled out. Studies for aurally deposited lead (ADL) will be conducted prior to construction activities. A cost estimate of \$5,000 has been included to address this issue. Additional costs associated with "off-hauling" contaminated soils are not expected.

If structures are demolished that contain asbestos or lead paint, additional studies will be required to address the extent of the issue and the mitigation/remediation requirements. Project alternative 3 includes the demolition of the existing farm house. Surveys for asbestos and lead-based paint will be necessary before demolition. Naturally Occurring Asbestos (NOA) does not occur within this region of Solano County, and therefore, not further studies are required. For all alternatives, costs related to removal of thermoplastic striping, testing of properties to be acquired, and ADL are estimated at approximately \$25,000. For Alternative 3, costs to conduct surveys for asbestos and lead paint at the existing farmhouse are estimated at \$15,000. These surveys may take an estimated 1 month for completion. No additional permits or agency coordination required.

Water Quality and Erosion

The site is not expected to have any unusual water quality problems. The project site is located within a small drainage shed where an unnamed arroyo conveys surface runoff in an easterly direction into larger drainage basins that extend around the north side of Rio Vista, and ultimately discharge runoff into the Sacramento River (approximately 1.5 miles to the east). The unnamed arroyo crosses Route 12 approximately 1200-feet southwest of the project intersection. Runoff occurring within the project site is ultimately conveyed into the unnamed arroyo through surface drainages along Route 12.

However, in light of the distance and size of the arroyo, additional project-related runoff is not expected to generate sufficient flow or velocity to create significant erosion concerns for the unnamed arroyo. Since the roadway and intersection currently exists, drainage conditions are pre-existing for the reconstructed intersection and roadway features. While additional runoff will be generated by the widening of the SR-12 and the new intersection, the additional runoff is not expected to create any new water quality issues and can be addressed through the application of standard water quality measures and Best Management Practices.

This project complies with Caltrans statewide National Pollution Discharge Elimination System (NPDES) permit and the Construction General Permit. Best Management Practices (BMPs) will be incorporated into this project to reduce the discharge of pollutants during construction as well as permanently after the completion of project. These BMPs fall into four categories, i.e., (I) Permanent Design Pollution Prevention BMPs, (II) Temporary Construction Site BMPs, (III) Permanent Treatment BMPs and (IV) if needed maintenance BMPs. Design Pollution Prevention BMPs are permanent measures to improve storm water quality by reducing erosion, stabilize disturbed soil areas, and maximize vegetated surfaces. Erosion control measures will be provided on all disturbed areas. Permanent impacts to the creeks/arroyos are not anticipated due to the distance from the site and low volume of additional project-related runoff. Temporary Construction Site BMPs are applied during construction activities to control sedimentation, erosion and the discharge of other pollutants throughout construction.

Based on the proposed project scope and the resulting potential water quality impacts, the project is not exempt from incorporating Treatment BMPs (TBMPs). Treatment BMPs are permanent devices and facilities treating storm water runoff. Caltrans approved Treatment BMPs are Biofiltration Strips/Swales, Infiltration Basins, Detention Basins, Traction Sand Traps, Dry Weather Flow Diversions, Media Filters, Gross Solids Removal Devices (GSRDs), Multi-Chamber Treatment Trains (MCTT), and Wet Basins. Those most feasible in the Bay Area are Biofiltration Strips/Swales, Infiltration Basins, Detention Basins, Media Filters and MCTT.

A Water Quality Assessment Report will be required to characterize the project's contribution to water quality concerns. This may take an estimated 1 month for completion. No additional permits, including Section 404 (USACE), Section 401 (Regional Water Quality Control Board), and Section 1602 (CDFG) are required.

Biological Resources

This project may affect sensitive biological resources. A Natural Environment Study will be required to address general biological resources, including both plant and wildlife species. Species expected to occur within the project area include:

- Burrowing owl (*Athene cunicularia*)
- California tiger salamander (*Ambystoma californiense*)
- Conservancy fairy shrimp (*Branchinecta conservatio*)
- Vernal Pool fairy shrimp (*Branchinecta lynchi*)
- Vernal Pool tadpole shrimp (*Lepidurus packardii*)
- Swainson's hawk (*Buteo swainsoni*)
- Contra Costa goldfields (*Lasthenia conjungens*)

Existing ground squirrel burrows should be inspected for the presence of burrowing owls (surveys can be conducted throughout the year). Tiger salamander surveys will require two aquatic spring survey for larva (March-April) and one fall-winter upland surveys for adult species (December-February). Swainson's hawk preconstruction surveys should be conducted based on tree removal

activities (surveys between March-September). Bird surveys should be completed in the spring/summer season. Suitable branchiopod habitat surveys should be conducted within the project footprint. Habitat assessments should be conducted for federal and State listed species that have the potential to occur in the project footprint and surrounding areas. If habitat is present, technical assistance with CDFG/USFWS will be necessary to determine if informal or formal consultation is required. For listed branchiopods, if habitat is present (seasonally ponded areas, vernal pools) then protocol level branchiopod presence/absence surveys will be necessary (wet season surveys between December-April). If branchiopod surveys are positive, formal Section 7 consultation with the USFWS would be necessary to determine species presence or absence. Depending on the project's potential effects determinations, a Biological Assessment (BA)/Biological Opinion (BO) and/or a Consistency Determination/Incidental Take Permit may be required. It could take at least 6 months to get a BO from USFWS. Rare plant surveys will also need to be conducted due to the potential presence within the project footprint (including staging and utility relocations). Contra Costa goldfields (special status plant species) should be surveyed during the early spring (March-April). Several native and non-native trees that provide some habitat value occur near the existing intersection and roadway shoulders and may be removed. There are no other known sensitive plant species in this location (please see Appendix C for California Natural Diversity Database list). For mitigation estimates, the costs of permanent and temporary impacts to species in the project area, especially for special status species, are generally calculated based on mitigation bank costs for species per acre. Resource agencies may require mitigation ratios up to 3:1 to offset project impacts. Accordingly, if determined present and impacted by the project during PA/ED, mitigation estimates (per acre) are provided for the following species/habitat:

SPECIES	ACREAGE COST PER CREDIT FOR MITIGATION
California Tiger Salamander Upland Habitat	\$12,500
California Tiger Salamander Breeding Habitat	\$125,000 - \$150,000
Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp	\$130,000
Contra Costa Goldfields	\$200,000 - \$250,000

An estimated additional \$187,000 (Alternative 2) or \$425,000 (Alternatives 2A and 3) is budgeted for biological resource issues to address oak tree replacement and burrowing owl mitigation tasks. Implementation of mitigation tasks may take an estimated 1-2 months (including consultation with federal agencies) for completion.

Wetlands

Pursuant to Executive Order 11990, an avoidance alternative analysis is required for wetland losses unless there is no practicable alternative available. A wetlands delineation will be necessary to identify potential impact areas. Wetlands and riparian habitat have not been identified as significant concerns for the project. Field verification will be required to confirm the presence of these resources.

Visual Effects

A visual study is required based on the findings outlined in the Visual Study Decision Tree (Caltrans Standard Environmental Reference, Chapter 27). The project involves the realignment of a section of Church-Amerada Road in the farmland area. In Alternative 2 and 2A this area is currently uninhabited and will not impact adjacent residential uses. However in Alternative 3 the new alignment will displace the existing farmhouse residence on the south east corner of SR-12 and Church-Amerada Road. Farmland impacts and tree losses (native oak and non-native) along the roadways are expected due to the widening of SR-12 to properly accommodate the new intersection. Although these trees have no scenic designation, the impact may be a local community concern (in

addition to biological) and tree replacement options should receive input from the community. It is likely that all tree replacement would occur off-site to eliminate safety concerns for clear recovery within the right-of-way. A total of \$182,000 – \$420,000 has been estimated to accommodate off-site tree replacement, irrigation and monitoring. It should also be noted that the City of Rio Vista's General Plan specifies the preservation of views and aesthetics along SR-12 within the area that includes the project site. Contemplated improvements to implement this objective include a significant urban treescape, traffic calming measures, landscaped median strips, and a pedestrian overpass and/or underpass at the multiuse pathway crossing planned for the open space corridor located between Church Road and Drouin Drive on SR-12. Accordingly, a Scenic Resources Evaluation should be prepared to document the status of scenic resources in the project area. This may take an estimated 1 month for completion.

Cultural Resources

Cultural resource studies may be needed to address requirements of Section 106 of the National Historic Preservation Act, in accordance with the Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (Caltrans 2004).

The publications and maps reviewed do not mention or depict any cultural resources within or immediately adjacent to the study area. Background research identified a building (existing farmhouse) at the southern corner of Amerada Road and State Route 12. This building appears on the 1952 USGS Rio Vista, Calif. quadrangle, which indicates an age of at least 56 years and, therefore, possibly National Register eligible. However, the modern additions and upgrades to the building likely exempt the building from evaluation as Property Type 6, properties more than 30 years old that have been substantially altered, in Attachment 4 of the Programmatic Agreement.

A Historic Property Survey Report (HPSR) and an Archaeological Survey Report (ASR) should be prepared. Cultural resources in the Area of Potential Effects (APE) would require evaluation for National Register eligibility. Contingent on Caltrans acceptance of the house at the southwestern corner of Amerada Road and State Route 12 as a Property Type 6 under Attachment 4 of the Programmatic Agreement (Caltrans 2004) an Historic Resource Evaluation Report (HRER) will not be necessary to evaluate this cultural resource. During the PA/ED phase, a determination will be made regarding exemption of properties in consultation with Caltrans Professionally Qualified Staff (PQS). If Caltrans does not accept the house at the southwestern corner of Amerada Road and State Route 12 as a Property Type 6 then an HRER may be necessary.

An HPSR with Area of Potentially Effect (APE) maps signed by Caltrans PQS and the Project Manager are also required documents. Early coordination with Caltrans PQS is needed to delineate the APE and determine the level of documentation necessary.

If any resources are eligible for the National Register, a Finding of Effect (FOE) would be prepared to document the project's potential effects on the resource(s). If it is determined that the project would have an adverse effect on the resource(s), a Memorandum of Agreement (MOA) and Historic Property Treatment Plan (HPTP) would be prepared to document mitigation measures agreed upon by Solano County, Caltrans, the Federal Highway Administration, and the State Historic Preservation Officer. Consulting Native American and other potentially interested parties may also be invited to concur on the MOA.

If eligible cultural resources are not impacted by the project, the project's Section 106 responsibilities would be fulfilled. This portion of the Section 106 process may take up to six months to complete. Any subsequent changes in project scope may require additional archaeological or historical review. Although not anticipated, coordination with SHPO may be required if eligible resources are impacted. A total of \$25,000 has been estimated to mitigate the potential project impacts on buried resources.

Native American Coordination

The agency official shall involve the consulting parties described in paragraph (c) of in the Code of Regulations (36 CFR 800) Consultation section and the Programmatic Agreement in findings and determinations made during the section 106 process. The agency official should plan consultations appropriate to the scale of the undertaking and the scope of Federal involvement and coordinated with other requirements of other statutes, as applicable, such as the National Environmental Policy Act, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, the Archeological Resources Protection Act and agency-specific legislation. The Advisory Council encourages the agency official to use to the extent possible existing agency procedures and mechanisms to fulfill the consultation requirements section 106. Consultation with appropriate parties will need to be documented in the HPSR and should be continued throughout the PA/ED phase.

On July 24, 2008, LSA sent a letter with maps depicting the project area to the Native American Heritage Commission (NAHC) in Sacramento asking the commission to review their sacred lands file for any Native American cultural resources that might be affected by the project. A fax from a NAHC Program Analyst informed LSA that a review of the Sacred Lands File did not "indicate the presence of Native American cultural resources in the immediate project area." A list of Native American contacts was also provided. Those individuals from the list have been contacted and no concerns were identified.

Paleontology

A review of the adjacent Rio Vista Riverwalk Project EIR indicates that according to the Museum of Paleontology and the University of California, Berkeley, unique paleontological resources have been identified in Quaternary-aged alluvial deposits in the Rio Vista area. Although no specific paleontological resources have been identified on the project site a Paleontological Identification Report (PIR) would be prepared and certified by a qualified paleontologist to document the identification efforts for paleontological resources and the need for paleontological monitoring during construction activities based on project design. If paleontological resources are identified during construction monitoring, a Paleontological Evaluation Report (PER) will be prepared by a qualified paleontologist to evaluate the significance of the paleontological resource within the project area. This may take an estimated 3 months for completion. No additional permits or agency coordination required.

Socio-Economic and Community Effects

The project is not expected to have any effects on the local community or the economy. At present, there are no existing businesses or commercial uses in the intersection area. Proposed improvements, irrespective of the alternatives, do not cause any direct or indirect effects on an established neighborhood, nor affect any known group that might be subject to issues involving environmental justice.

It should be noted that Alternative 3 would require displacement and relocation of the existing residence. This residence will also be displaced as a consequence of the Del Rio Hills project, should the proposed roadway project be delayed. If the residence will be displaced due to the implementation of Alternative 3, the resident will be contacted by a Relocation Agent who will ensure that eligible displaced residents receive their full relocation benefits including advisory assistance, and that all

activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources shall be available to all displaced residents free of discrimination. At the time of the first written offer to purchase owner occupants are given a detailed explanation of Caltrans' "Relocation Program and Services."

No additional permits or agency coordination required.

Context Sensitive Solutions

The design of this project is based on traffic forecast and safety consideration therefore, it is not considered to be a Context Sensitive Solution project. The community will have input on the project, including the mitigation strategies involving loss of tree resources, during a public meeting.

Cumulative Impacts

"Cumulative impacts" refers to two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts:

- The individual effects may be changes resulting from a single project or a number of separate projects.
- The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Any project related cumulative impacts resulting from the proposed project, combined with the approved Riverwalk project (potentially initiating construction in 2010) and pending Del Rio Hills project (Draft EIR has been circulated; Final EIR has not been certified) will be evaluated in the MND based on project design. Cumulative impacts would include traffic, noise, farmland conversion, air quality, water quality, biological resources, cultural resources and visual/aesthetics. It should be noted that mitigation measures for noise and farmland conversion may not be feasible and/or reasonable.

Growth Inducing

The proposed project provides primary access into future developments anticipated in the vicinity of Church Road/Amerada Road and SR-12. Specifically, the improvements made to the project intersection/roadways will facilitate the development of the approved Riverwalk Project (on the southeast corner of SR-12/Church Road) and the planned Del Rio Hills project (to the south of SR-12). Without the project improvements, the traffic from these developments will cause significant congestion and a decline of level of service at the project intersection. By providing the project improvements, these developments will not be constrained and growth will be induced. As a result, the project may be considered growth inducing and the impacts must be addressed during PA/ED, including appropriate mitigation measures.

Right-of-Way Relocation or Staging Area

New right-of-way will be required for this project. It is expected that staging will occur primarily within the open areas of the existing roadway, although some adjacent lands may also be required. Material sites and disposal sites may be required although have not been identified. Right-of-way acquisition properties and staging areas will require complete environmental evaluation as part of this project. One (1) full take will be required under Alternative 3, and relocation is expected with the project. If the project is delayed, then relocation will occur in conjunction with the Del Rio Hills development project. This may take an estimated 2-3 months for completion. No additional permits or agency coordination required.

Utilities

Any impacts to above or below ground utilities will be evaluated in the MND based on project design. It is anticipated that utilities would need to be relocated due to widening of the roadway. Relocation would be expected within the right-of-way identified for project improvements.

Section 4(f) Impacts

Section 4(f) "use" is defined and addressed in the FHWA/FTA Regulations at 23 C.F.R. 771.135(p). A "use" occurs when:

1. Land from a 4(f) site is permanently incorporated into a transportation facility,
2. There is a temporary occupancy of land that is adverse in terms of the Section 4(f) statute's preservationist purposes (23 C.F.R. 771.135(p)(7)), or
3. When there is a constructive use of land (23 C.F.R. 771.135(p)(2)).

The project may have 4(f) issues should the existing farmhouse be determined as Eligible for the National Register of Historic Places (National Register). Under Alternative 3, the farmhouse will be removed due to the realignment of Amerada Road. Under Alternatives 2 and 2A, the project improvements could have a constructive use impact on the farmhouse due to the proximity of the improvements. A Section 4(f) Evaluation would consider other alternatives, including an avoidance alternative, and alternatives that would reduce or lessen project impacts. A Section 4(f) Evaluation could impact the project schedule if the project is considered controversial by the local community, or if the reviewing agencies disagree with the findings and require additional review and evaluation. If the farmhouse is determined ineligible for the National Register, a Section 4(f) Evaluation would not be required as no other potential 4(f) resources have been identified.

Farmlands

The project site is almost entirely surrounded by farmlands. These farmlands (to the north and south of the project site) could be affected by the widening of SR-12 and realignment of Church-Amerada Road. Approximately 30-40 trees growing along SR-12 could be impacted. All three build alternatives affect the farmlands by realigning Church Road. A Farmland Conversion Study will be necessary to assess the effects from loss of any prime, unique or local importance farmlands as well as land under Williamson Act Contracts. According to the Solano County General Plan, all soils in the project vicinity are designated as grazing land. None of the lands are designated as Prime Farmland, Farmland of Statewide Importance or Unique Farmland, and there are no Williamson Act Contracts in place. Nevertheless, conversion of farmland is required triggering the Farmland Conversion Study. This may take an estimated 2-3 months for completion. Coordination with the California Department of Conservation and USDA Natural Resources Conservation Service will be needed. Mitigation measures may be required to offset the loss of the farmland area, including payment of fees to a local fee program or agricultural land conservancy, and acquiring permanent easements over existing unprotected farmland. No additional permits are required.

Floodplain

The project site is not located within the 100-year floodplain, and has no unusual flood or drainage issues. The project's effect from implementing the build alternatives on local drainage should be discussed. A technical hydrologic/storm drain analysis will be conducted by the project engineer as needed to estimate additional runoff, and define a strategy/design concept for accommodating additional stormwater. This may take an estimated 1-2 months for completion. No additional permits are required.

Wild and Scenic River

(Not Applicable) This project will not affect any federally designated wild and scenic river.

Invasive Pest Plant Species

Executive Order 13112 requires Federal agencies carrying out actions that have the potential to affect the status of invasive species 1) identify such actions, 2) not authorize, fund, or carry out such actions that it believes are likely to cause or promote the introduction or spread of invasive species, and 3) if feasible prevent the spread of invasive species by detecting, controlling, and monitoring, the spread of invasive species, providing for the restoration of native habitats, conducting research on invasive species to prevent their spread, and educating the public on invasive species issues. The project may have the potential to promote the spread of invasive plant species. Non-native plant species observed in the project area would need to be compared to the exotic plant pest list maintained by the California Exotic Pest Plant Council and the list of noxious weeds maintained by the California Department of Food and Agriculture to determine whether or not they are considered invasive species during the PA/ED phase. If invasive species are found in the project area, mitigation measures would need to be developed during the PA/ED phase to prevent the spread of these invasive species to the extent feasible.

Coastal Zone

(Not Applicable) This project is not within the coastal jurisdiction. No additional permits or agency coordination required.

Permits

Wetlands and/or other jurisdictional waters may be present within the project area. As a result, it is expected that regulatory permits may be required for this project. A formal delineation should be conducted to verify the status of jurisdictional waters in the project area. Any culvert replacements required as a result of project improvements will likely require a Section 404 permit from U.S. Army Corps of Engineers. Likewise, a Section 401 water quality certification may be required from the Regional Water Quality Control Board. Based on observations and literature review, it is unlikely that a Section 1602 Streambed Alteration Agreement will be required from the California Department of Fish and Game. Any impacts would likely be minor. Permits/agreements to authorize minor impacts typically take an estimated 2 to 3 months to obtain.

List of Preparers

LSA Associates, Inc.

Bill Mayer, Principal: PEAR documentation, project management

Amberly Morgan, Assistant Environmental Planner: PEAR documentation

Laura Belt, Assistant Wildlife Biologist: Hazardous waste/materials research

Mike Trueblood, Assistant Biologist: PEAR documentation, biological review

Neal Kaptain, Cultural Resource Manager: Cultural resource documentation

Mike Konsak, Archaeologist: Cultural resource documentation

Hazardous Waste Review by: Thomas Ballard, Taber Consultants	Date 2008
Cultural Review by: Neal Kaptain, Cultural Resource Manager	Date 2008

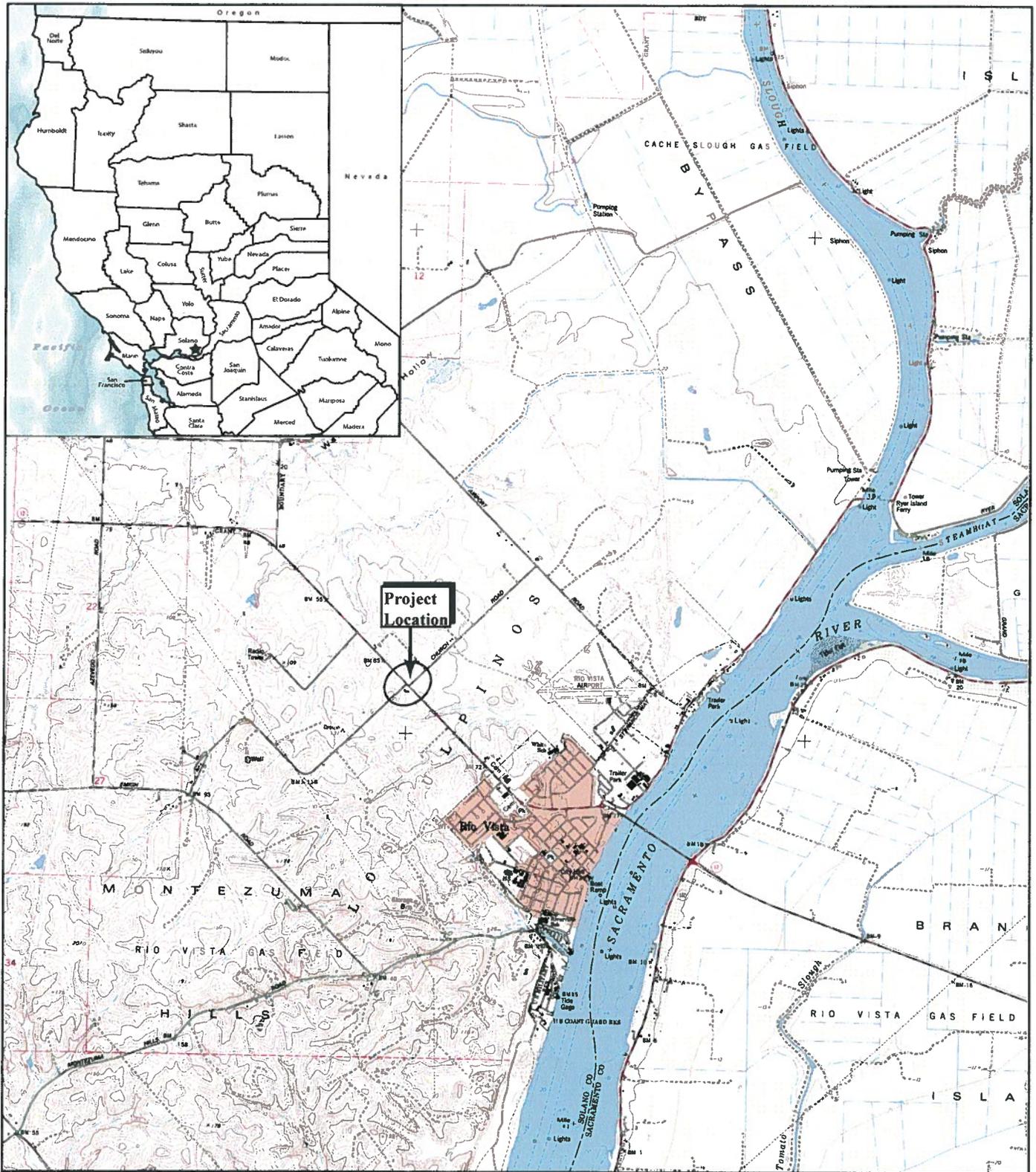


FIGURE 1

LSA



0 2000 4000

FEET

SOURCE: USGS 7.5 Minute Topographical Maps (Rio Vista)

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SR 12/Church Road Realignment
Project Location and Vicinity



FIGURE 2

LSA



SR 12/Church Road Realignment
Alternative 2

(Realign Church Road With Non-Symmetrical Widening on SR 12)

SOURCE: Lim and Nascimento Engineering

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FIGURE 3

LSA



SR 12/Church Road Realignment
Alternative 2A
(Realign Church Road With Symmetrical Widening on SR 12)



FIGURE 4

LSA



SR 12/Church Road Realignment
 Alternative 3
 (Realign Amerada Road with Symmetrical Widening on SR 12)

SOURCE: Lim and Nascimento Engineering

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PEAR Mitigation and Compliance Cost Estimate*

District: 4	County: Solano	Route: SR- 12	PM : Jason Mac	EA: 04-0G050K
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Description of Work

The purpose of this project is to improve the safety and operational characteristics on State Route 12 (SR-12) from PM 24.3 to 25.2 in the City of Rio Vista, Solano County. This project was initiated by the Solano Transportation Authority (STA), inline with the SR-12 Major Investment Study (MIS) completed in October 2001 to improve physical and management practices to serve future travel demand. The proposed improvement at the intersection of SR-12 and Church Road-Amerada Road includes the addition of left turn lanes along the four intersection approaches, acceleration/deceleration lanes along SR-12 in the east-west directions, and realignment of the intersection to eliminate the offset between Church Road and Amerada Road. A Traffic signal at the intersection is expected to be constructed in 2025 or earlier when the traffic projections meet Caltrans Traffic Signal Warrants. The Project Study Report considers three viable build alternatives and a no-build alternative. The estimated costs vary from \$0 for the No Build Alternative to \$6,064,406 for Alternative 3. It is anticipated that the improvements will be constructed by the STA and the opening year of the Project is projected to be 2013.

Project Manager	<u>Jason Mac</u>	Date	<u>3/24/2010</u>
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Prepared by	<u>Bill Mayer, Amberly Morgan</u>	Date	<u>03/09/2010</u>
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	Mitigation (\$1,000s)			Compliance
	Project Feature ¹	Enviro. Obligation ²	Statutory Require. ³	Permit & Agreement ⁴
Fish & Game 1602 Agreement	0	0	0	0
Coastal Development Permit	0	0	0	0
State Lands Agreement	0	0	0	0
NPDES Permit	0	0	5	0
COE 404 Permit- Nationwide	0	0	0	0
COE 404 Permit- Individual	0	0	0	0
COE Section 10 Permit	0	0	0	0
COE Section 9 Permit	0	0	0	0
Other:	0	0	0	0
Right-of-Way (excludes relocation costs)	0	0	0	0
Noise attenuation (Alternatives 2 & 2A)	0	30	0	0
Special landscaping	0	0	0	0
Archaeological	0	25	0	0
Biological				
Alternative 2	0	187	0	0
Alternative 2A	0	425	0	0
Alternative 3	0	425	0	0

Wetland/riparian	0	0	0	0
Historical	0	0	0	0
Scenic resources	0	0	0	0
Other: Hazardous Wastes/Materials				
Alternative 2	0	25	0	0
Alternative 2A	0	25	0	0
Alternative 3	0	40	0	0
TOTAL (Enter zeros if no cost)	0	267 - 505	5	0

Costs are to include all costs to complete the commitment including: 1) capital outlay and staff support; 2) cost of right-of-way or easements; 3) long-term monitoring and reporting; and 4) any follow-up maintenance.

¹ Mitigation that Caltrans would normally do if not required by a permit or environmental agreement.

² Mitigation that Caltrans would not normally do but is required by conditions of a permit or environmental agreement.

³ Mitigation that Caltrans would not normally do and is not required by a permit or Environ. Agreement, but is required by a law.

⁴ Non-mitigation Caltrans would not normally do but is required by conditions of a permit or agreement.

*Prepare a separate form for each practicable alternative in the PSR.

Conclusions

District: 4	County: Solano	Route: SR- 12	PM : Jason Mac	EA: 04-0G050K
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Project Title	<u>State Route 12/Church-Amerada Road Improvements</u>
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Description of Work:

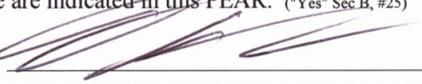
The purpose of this project is to improve the safety and operational characteristics on State Route 12 (SR-12) from PM 24.3 to 25.2 in the City of Rio Vista, Solano County. This project was initiated by the Solano Transportation Authority (STA), inline with the SR-12 Major Investment Study (MIS) completed in October 2001 to improve physical and management practices to serve future travel demand. The proposed improvement at the intersection of SR-12 and Church Road-Amerada Road includes the addition of left turn lanes along the four intersection approaches, acceleration/deceleration lanes along SR-12 in the east-west directions, and realignment of the intersection to eliminate the offset between Church Road and Amerada Road. A Traffic signal at the intersection is expected to be constructed in 2025 or earlier when the traffic projections meet Caltrans Traffic Signal Warrants. The Project Study Report considers three viable build alternatives and a no-build alternative. The estimated costs vary from \$0 for the No Build Alternative to \$5,885,921 for Alternative 3. It is anticipated that the improvements will be constructed by the STA and the opening year of the Project is projected to be 2013.

CALTRANS DISTRICT PROFESSIONALLY QUALIFIED STAFF (PQS) SIGNATURE

- Project does not meet definition of an "undertaking". No further review is necessary under Section 106. ("No" Sec B, #25)
- Project meets the definition of an "undertaking," involves the types of activities listed in Attachment 2 of the Section 106 PA, and, based on the project description above, does not have the potential to affect historic properties. ("No" Sec B, #25)
- Project meets the definition of an "undertaking" and involves the types of activities listed in Attachment 2 of the Section 106 PA, but the following additional procedures or information is needed, to determine the potential for effect: ("To Be Determined" Sec B, #25)
- Records Search _____ _____ _____

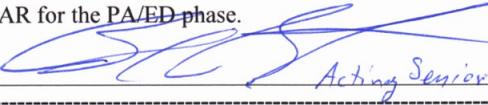
The additional procedures conducted or information generated shall occur during PA/ED.

- The proposed undertaking is considered to have the potential to affect historic properties. Further studies for 106 compliance are indicated in this PEAR. ("Yes" Sec B, #25)

Signature PQS:  Date: 3/23/10 Telephone #: 622-8765

CALTRANS DISTRICT BIOLOGY STAFF SIGNATURE

- Based on the scope of the project and the information generated for the PEAR, the project does not have the potential to affect biological resources.
- The following additional procedures or information is needed, to determine the potential for effect to biological resources:
- Records Search _____ _____ _____
- The proposed undertaking is considered to have the potential to affect biological resources. Further studies are indicated in this PEAR for the PA/ED phase.

Signature:  *Acting Senior* Date: 3/23/10 Telephone #: 510-622-1745

CALTRANS DISTRICT HAZARDOUS WASTE STAFF SIGNATURE

- Based on the information provided in the project description above, the project does not have the potential to be affected by hazardous wastes and materials.
- The following additional procedures or information is needed, to determine the potential for effect:
 - Records Search _____ _____ _____
- The proposed undertaking is considered to have the potential to be affected by hazardous wastes and materials. Further studies are indicated in this PEAR for the PA/ED and PS&E phases.

Signature: Christopher Wilson Date: 3/23/10 Telephone #: 286-5647

**EXHIBIT A – INTERSECTION PROJECT FOOTPRINT &
CONSTRUCTION STAGING AREA**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DESIGN OVERSIGHT
 CALCULATED/DESIGNED BY
 CHECKED BY

REVISOR
 DATE
 REVISIONS



DIST	COUNTY	ROUTE	POST MILE TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SOL	SR 12	XX	XX	XX

REGISTERED CIVIL ENGINEER

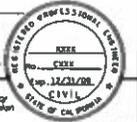
PLANS APPROVAL 06/26

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

SOLANO TRANSPORTATION AUTHORITY
 ONE HARBOR CENTER, SUITE 130
 SUISUN CITY, CA 94585

LEE AND MACHENET ENGINEERING
 11566 COLOMA ROAD, SUITE 590
 SUISEWATER, CA 95620
 TEL (916) 635-5233 FAX (916) 635-5243

To get to the Caltrans web site, go to: <http://www.dot.ca.gov>



LEGENDS

- ALTERNATIVE 2
- ALTERNATIVE 2A
- ALTERNATIVE 3
- PROJECT FOOTPRINT
- CONSTRUCTION STAGING AREA

**SR-12/CHURCH RD
 INTERSECTION
 PROJECT FOOTPRINT &
 CONSTRUCTION STAGING AREA**



USERNAME => MUSR
 DDM FILE => MREQUEST

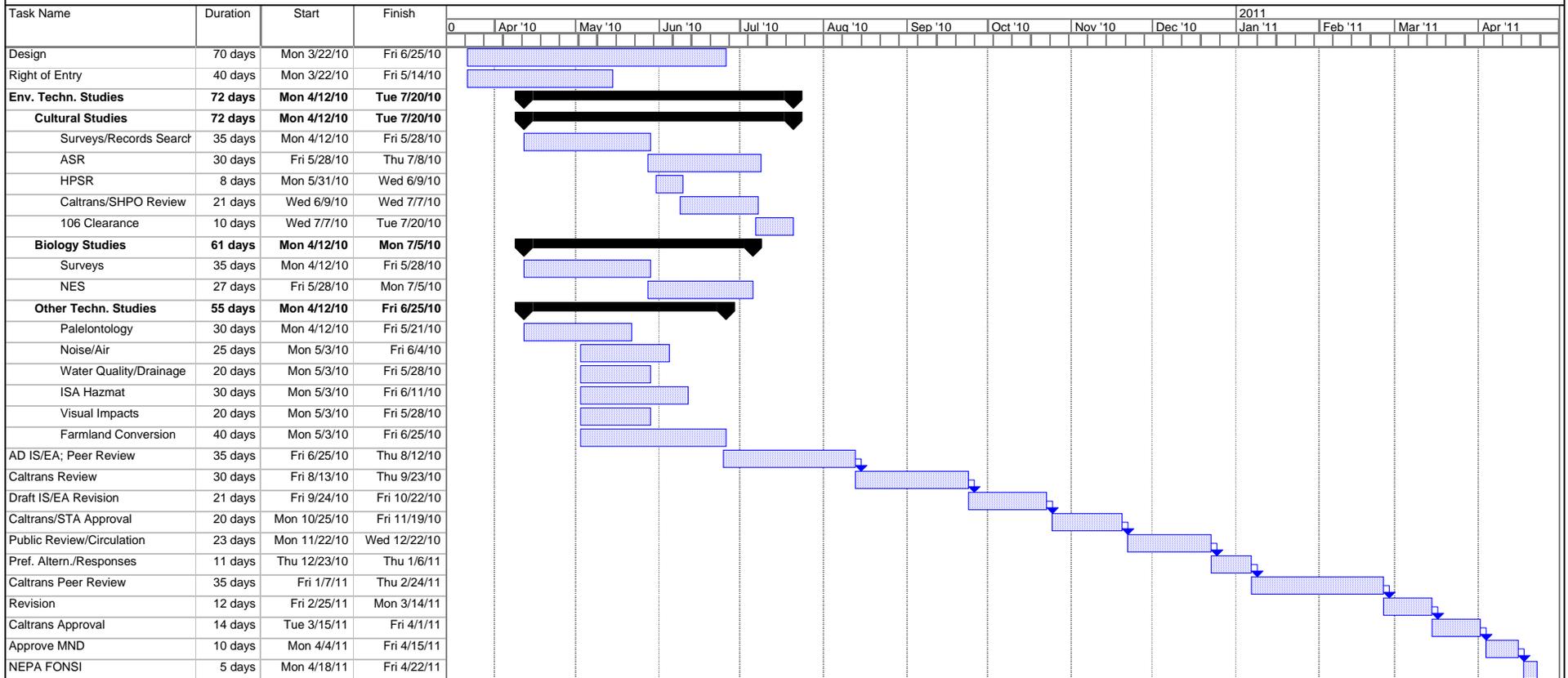
CU 12208

EA 040361

DATE PLOTTED => 06/26/08
 TIME PLOTTED => 11:16

ATTACHMENT A – PROJECT TIMELINE

Church Road/SR-12 Intersection Reconstruction Schedule



Project: Project_timeline 2-4-10
Date: Wed 2/3/10

Task
Split



Progress
Milestone



Summary
Project Summary



External Tasks
External Milestone



Deadline



**ATTACHMENT B – CALIFORNIA NATURAL DIVERSITY DATABASE
LIST.**

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Landscape
LIM0708 Church Road/Amerada Road
Dozier, Liberty Island, Corutland, Birds Landing, Rio Vista, Isleton, Antioch North, Jersey Island, and Bouldin Island quads

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
1 <i>Actinemys marmorata</i>	western pond turtle	ARAAD02030			G3G4	S3		SC
2 <i>Actinemys marmorata</i>	western pond turtle	ARAAD02030			G3G4	S3		SC
3 <i>Agelaius tricolor</i>	tricolored blackbird	ABPBXB0020			G2G3	S2		SC
4 <i>Agelaius tricolor</i>	tricolored blackbird	ABPBXB0020			G2G3	S2		SC
5 <i>Ambystoma californiense</i>	California tiger salamander	AAAAA01180	Threatened	unknown code...	G2G3	S2S3		SC
6 <i>Ambystoma californiense</i>	California tiger salamander	AAAAA01180	Threatened	unknown code...	G2G3	S2S3		SC
7 <i>Andrena blennospermatis</i>	Blennosperma vernal pool andrenid bee	IIHYM35030			G2	S2		
8 <i>Andrena blennospermatis</i>	Blennosperma vernal pool andrenid bee	IIHYM35030			G2	S2		
9 <i>Anniella pulchra pulchra</i>	silvery legless lizard	ARACC01012			G3G4T3T4 Q	S3		SC
10 <i>Anniella pulchra pulchra</i>	silvery legless lizard	ARACC01012			G3G4T3T4 Q	S3		SC
11 <i>Anthicus antiochensis</i>	Antioch Dunes anthicid beetle	IICOL49020			G1	S1		
12 <i>Anthicus antiochensis</i>	Antioch Dunes anthicid beetle	IICOL49020			G1	S1		
13 <i>Anthicus sacramento</i>	Sacramento anthicid beetle	IICOL49010			G1	S1		
14 <i>Anthicus sacramento</i>	Sacramento anthicid beetle	IICOL49010			G1	S1		
15 <i>Apodemia mormo langei</i>	Lange's metalmark butterfly	IILEPH7012	Endangered		G5T1	S1		
16 <i>Apodemia mormo langei</i>	Lange's metalmark butterfly	IILEPH7012	Endangered		G5T1	S1		
17 <i>Archoplites interruptus</i>	Sacramento perch	AFCQB07010			G3	S1		SC
18 <i>Archoplites interruptus</i>	Sacramento perch	AFCQB07010			G3	S1		SC
19 <i>Arctostaphylos auriculata</i>	Mt. Diablo manzanita	PDERI04040			G2	S2.2	1B.3	
20 <i>Arctostaphylos auriculata</i>	Mt. Diablo manzanita	PDERI04040			G2	S2.2	1B.3	
21 <i>Ardea alba</i>	great egret	ABNGA04040			G5	S4		
22 <i>Ardea alba</i>	great egret	ABNGA04040			G5	S4		
23 <i>Ardea herodias</i>	great blue heron	ABNGA04010			G5	S4		
24 <i>Ardea herodias</i>	great blue heron	ABNGA04010			G5	S4		
25 <i>Astragalus tener var. ferrisiae</i>	Ferris' milk-vetch	PDFAB0F8R3			G1T1	S1.1	1B.1	
26 <i>Astragalus tener var. ferrisiae</i>	Ferris' milk-vetch	PDFAB0F8R3			G1T1	S1.1	1B.1	
27 <i>Astragalus tener var. tener</i>	alkali milk-vetch	PDFAB0F8R1			G1T1	S1.1	1B.2	
28 <i>Astragalus tener var. tener</i>	alkali milk-vetch	PDFAB0F8R1			G1T1	S1.1	1B.2	
29 <i>Athene cunicularia</i>	burrowing owl	ABNSB10010			G4	S2		SC
30 <i>Athene cunicularia</i>	burrowing owl	ABNSB10010			G4	S2		SC
31 <i>Atriplex cordulata</i>	heartscale	PDCHE040B0			G2?	S2.2?	1B.2	

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Landscape
LIM0708 Church Road/Amerada Road
Dozier, Liberty Island, Corutland, Birds Landing, Rio Vista, Isleton, Antioch North, Jersey Island, and Bouldin Island quads

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
32 <i>Atriplex cordulata</i>	heartscale	PDCHE040B0			G2?	S2.2?	1B.2	
33 <i>Atriplex depressa</i>	brittlescale	PDCHE042L0			G2Q	S2.2	1B.2	
34 <i>Atriplex depressa</i>	brittlescale	PDCHE042L0			G2Q	S2.2	1B.2	
35 <i>Atriplex joaquiniana</i>	San Joaquin spearscale	PDCHE041F3			G2	S2	1B.2	
36 <i>Atriplex joaquiniana</i>	San Joaquin spearscale	PDCHE041F3			G2	S2	1B.2	
37 <i>Atriplex persistens</i>	vernal pool smallscale	PDCHE042P0			G2	S2.2	1B.2	
38 <i>Atriplex persistens</i>	vernal pool smallscale	PDCHE042P0			G2	S2.2	1B.2	
39 <i>Blepharizonia plumosa</i>	big tarplant	PDAST1C011			G1	S1.1	1B.1	
40 <i>Blepharizonia plumosa</i>	big tarplant	PDAST1C011			G1	S1.1	1B.1	
41 <i>Branchinecta conservatio</i>	Conservancy fairy shrimp	ICBRA03010	Endangered		G1	S1		
42 <i>Branchinecta conservatio</i>	Conservancy fairy shrimp	ICBRA03010	Endangered		G1	S1		
43 <i>Branchinecta lynchi</i>	vernal pool fairy shrimp	ICBRA03030	Threatened		G3	S2S3		
44 <i>Branchinecta lynchi</i>	vernal pool fairy shrimp	ICBRA03030	Threatened		G3	S2S3		
45 <i>Branchinecta mesovallensis</i>	midvalley fairy shrimp	ICBRA03150			G2	S2		
46 <i>Branchinecta mesovallensis</i>	midvalley fairy shrimp	ICBRA03150			G2	S2		
47 <i>Buteo swainsoni</i>	Swainson's hawk	ABNKC19070		Threatened	G5	S2		
48 <i>Buteo swainsoni</i>	Swainson's hawk	ABNKC19070		Threatened	G5	S2		
49 <i>California macrophylla</i>	round-leaved filaree	PDGER01070			G3	S3.1	1B.1	
50 <i>California macrophylla</i>	round-leaved filaree	PDGER01070			G3	S3.1	1B.1	
51 <i>Carex comosa</i>	bristly sedge	PMCYP032Y0			G5	S2?	2.1	
52 <i>Carex comosa</i>	bristly sedge	PMCYP032Y0			G5	S2?	2.1	
53 <i>Centromadia parryi ssp. parryi</i>	pappose tarplant	PDAST4R0P2			G4T2	S2.2	1B.2	
54 <i>Centromadia parryi ssp. parryi</i>	pappose tarplant	PDAST4R0P2			G4T2	S2.2	1B.2	
55 <i>Charadrius montanus</i>	mountain plover	ABNNB03100			G2	S2?		SC
56 <i>Charadrius montanus</i>	mountain plover	ABNNB03100			G2	S2?		SC
57 <i>Cicuta maculata var. bolanderi</i>	Bolander's water-hemlock	PDAP10M051			G5T3T4	S2	2.1	
58 <i>Cicuta maculata var. bolanderi</i>	Bolander's water-hemlock	PDAP10M051			G5T3T4	S2	2.1	
59 <i>Coastal Brackish Marsh</i>	Coastal Brackish Marsh	CTT52200CA			G2	S2.1		
60 <i>Coastal Brackish Marsh</i>	Coastal Brackish Marsh	CTT52200CA			G2	S2.1		
61 <i>Coastal and Valley Freshwater Marsh</i>	Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1		
62 <i>Coastal and Valley Freshwater Marsh</i>	Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1		
63 <i>Coelus gracilis</i>	San Joaquin dune beetle	IICOL4A020			G1	S1		
64 <i>Coelus gracilis</i>	San Joaquin dune beetle	IICOL4A020			G1	S1		
65 <i>Cordylanthus mollis ssp. mollis</i>	soft bird's-beak	PDSCR0J0D2	Endangered	Rare	G2T1	S1.1	1B.2	

California Department of Fish and Game
Natural Diversity Database
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Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
66 <i>Cordylanthus mollis ssp. mollis</i>	soft bird's-beak	PDSCR0J0D2	Endangered	Rare	G2T1	S1.1	1B.2	
67 <i>Cryptantha hooveri</i>	Hoover's cryptantha	PDBOR0A190			GH	SH	1A	
68 <i>Cryptantha hooveri</i>	Hoover's cryptantha	PDBOR0A190			GH	SH	1A	
69 <i>Downingia pusilla</i>	dwarf downingia	PDCAM060C0			G3	S3.1	2.2	
70 <i>Downingia pusilla</i>	dwarf downingia	PDCAM060C0			G3	S3.1	2.2	
71 <i>Efferia antiochi</i>	Antioch efferian robberfly	IIDIP07010			G1G3	S1S3		
72 <i>Efferia antiochi</i>	Antioch efferian robberfly	IIDIP07010			G1G3	S1S3		
73 <i>Elanus leucurus</i>	white-tailed kite	ABNKC06010			G5	S3		
74 <i>Elanus leucurus</i>	white-tailed kite	ABNKC06010			G5	S3		
75 <i>Elaphrus viridis</i>	Delta green ground beetle	IICOL36010	Threatened		G1	S1		
76 <i>Elaphrus viridis</i>	Delta green ground beetle	IICOL36010	Threatened		G1	S1		
77 <i>Eriogonum truncatum</i>	Mt. Diablo buckwheat	PDPGN085Z0			G1	S1.1	1B.1	
78 <i>Eriogonum truncatum</i>	Mt. Diablo buckwheat	PDPGN085Z0			G1	S1.1	1B.1	
79 <i>Erysimum capitatum var. angustatum</i>	Contra Costa wallflower	PDBRA16052	Endangered	Endangered	G5T1	S1.1	1B.1	
80 <i>Erysimum capitatum var. angustatum</i>	Contra Costa wallflower	PDBRA16052	Endangered	Endangered	G5T1	S1.1	1B.1	
81 <i>Eschscholzia rhombipetala</i>	diamond-petaled California poppy	PDPAP0A0D0			G1	S1.1	1B.1	
82 <i>Eschscholzia rhombipetala</i>	diamond-petaled California poppy	PDPAP0A0D0			G1	S1.1	1B.1	
83 <i>Eucerceris ruficeps</i>	redheaded sphecid wasp	IHYM18010			G1G3	S1S2		
84 <i>Eucerceris ruficeps</i>	redheaded sphecid wasp	IHYM18010			G1G3	S1S2		
85 <i>Fritillaria liliacea</i>	fragrant fritillary	PMLIL0V0C0			G2	S2.2	1B.2	
86 <i>Fritillaria liliacea</i>	fragrant fritillary	PMLIL0V0C0			G2	S2.2	1B.2	
87 <i>Geothlypis trichas sinuosa</i>	saltmarsh common yellowthroat	ABPBX1201A			G5T2	S2		SC
88 <i>Geothlypis trichas sinuosa</i>	saltmarsh common yellowthroat	ABPBX1201A			G5T2	S2		SC
89 <i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	PDSCR0R060		Endangered	G3	S3.1	1B.2	
90 <i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	PDSCR0R060		Endangered	G3	S3.1	1B.2	
91 <i>Hesperolinon breweri</i>	Brewer's western flax	PDLIN01030			G2	S2.2	1B.2	
92 <i>Hesperolinon breweri</i>	Brewer's western flax	PDLIN01030			G2	S2.2	1B.2	
93 <i>Hibiscus lasiocarpus</i>	woolly rose-mallow	PDMAL0H0Q0			G4	S2.2	2.2	
94 <i>Hibiscus lasiocarpus</i>	woolly rose-mallow	PDMAL0H0Q0			G4	S2.2	2.2	
95 <i>Hydrochara rickseckeri</i>	Ricksecker's water scavenger beetle	IICOL5V010			G1G2	S1S2		
96 <i>Hydrochara rickseckeri</i>	Ricksecker's water scavenger beetle	IICOL5V010			G1G2	S1S2		
97 <i>Hygrotus curvipes</i>	curved-foot hygrotus diving beetle	IICOL38030			G1	S1		
98 <i>Hygrotus curvipes</i>	curved-foot hygrotus diving beetle	IICOL38030			G1	S1		
99 <i>Hypomesus transpacificus</i>	Delta smelt	AFCHB01040	Threatened	Threatened	G1	S1		

California Department of Fish and Game

Natural Diversity Database

Selected Elements by Scientific Name - Landscape

LIM0708 Church Road/Amerada Road

Dozier, Liberty Island, Corutland, Birds Landing, Rio Vista, Isleton, Antioch North, Jersey Island, and Bouldin Island quads

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
100 <i>Hypomesus transpacificus</i>	Delta smelt	AFCHB01040	Threatened	Threatened	G1	S1		
101 <i>Idiostatus middlekauffi</i>	Middlekauff's shieldback katydid	IIORT31010			G1G2	S1		
102 <i>Idiostatus middlekauffi</i>	Middlekauff's shieldback katydid	IIORT31010			G1G2	S1		
103 <i>Isocoma arguta</i>	Carquinez goldenbush	PDAST57050			G1	S1.1	1B.1	
104 <i>Isocoma arguta</i>	Carquinez goldenbush	PDAST57050			G1	S1.1	1B.1	
105 <i>Juglans hindsii</i>	Northern California black walnut	PDJUG02040			G1	S1.1	1B.1	
106 <i>Juglans hindsii</i>	Northern California black walnut	PDJUG02040			G1	S1.1	1B.1	
107 <i>Lasiurus blossevillii</i>	western red bat	AMACC05060			G5	S3?		SC
108 <i>Lasiurus blossevillii</i>	western red bat	AMACC05060			G5	S3?		SC
109 <i>Lasiurus cinereus</i>	hoary bat	AMACC05030			G5	S4?		
110 <i>Lasiurus cinereus</i>	hoary bat	AMACC05030			G5	S4?		
111 <i>Lasthenia conjugens</i>	Contra Costa goldfields	PDAST5L040	Endangered		G1	S1.1	1B.1	
112 <i>Lasthenia conjugens</i>	Contra Costa goldfields	PDAST5L040	Endangered		G1	S1.1	1B.1	
113 <i>Laterallus jamaicensis coturniculus</i>	California black rail	ABNME03041		Threatened	G4T1	S1		
114 <i>Laterallus jamaicensis coturniculus</i>	California black rail	ABNME03041		Threatened	G4T1	S1		
115 <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea	PDFAB250D2			G5T2	S2.2	1B.2	
116 <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea	PDFAB250D2			G5T2	S2.2	1B.2	
117 <i>Legenere limosa</i>	legenere	PDCAM0C010			G2	S2.2	1B.1	
118 <i>Legenere limosa</i>	legenere	PDCAM0C010			G2	S2.2	1B.1	
119 <i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard's pepper-grass	PDBRA1M0K1			G4T1	S1.2	1B.2	
120 <i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard's pepper-grass	PDBRA1M0K1			G4T1	S1.2	1B.2	
121 <i>Lepidurus packardi</i>	vernal pool tadpole shrimp	ICBRA10010	Endangered		G3	S2S3		
122 <i>Lepidurus packardi</i>	vernal pool tadpole shrimp	ICBRA10010	Endangered		G3	S2S3		
123 <i>Lilaeopsis masonii</i>	Mason's lilaeopsis	PDAP119030		Rare	G3	S3.1	1B.1	
124 <i>Lilaeopsis masonii</i>	Mason's lilaeopsis	PDAP119030		Rare	G3	S3.1	1B.1	
125 <i>Limosella subulata</i>	Delta mudwort	PDSCR10050			G4?Q	S2.1	2.1	
126 <i>Limosella subulata</i>	Delta mudwort	PDSCR10050			G4?Q	S2.1	2.1	
127 <i>Linderiella occidentalis</i>	California linderiella	ICBRA06010			G3	S2S3		
128 <i>Linderiella occidentalis</i>	California linderiella	ICBRA06010			G3	S2S3		
129 <i>Melospiza melodia maxillaris</i>	Suisun song sparrow	ABPBXA301K			G5T2	S2		SC
130 <i>Melospiza melodia maxillaris</i>	Suisun song sparrow	ABPBXA301K			G5T2	S2		SC
131 <i>Metapogon hurdi</i>	Hurd's metapogon robberfly	IIDIP08010			G1G3	S1S3		
132 <i>Metapogon hurdi</i>	Hurd's metapogon robberfly	IIDIP08010			G1G3	S1S3		
133 <i>Myrmosula pacifica</i>	Antioch multilid wasp	IIHYM15010			GH	SH		

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Landscape
LIM0708 Church Road/Amerada Road
Dozier, Liberty Island, Corutland, Birds Landing, Rio Vista, Isleton, Antioch North, Jersey Island, and Bouldin Island quads

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
134 <i>Myrmosula pacifica</i>	Antioch multilid wasp	IIHYM15010			GH	SH		
135 <i>Navarretia leucocephala ssp. bakeri</i>	Baker's navarretia	PDPLM0C0E1			G4T2	S2.1	1B.1	
136 <i>Navarretia leucocephala ssp. bakeri</i>	Baker's navarretia	PDPLM0C0E1			G4T2	S2.1	1B.1	
137 <i>Neostapfia colusana</i>	Colusa grass	PMPOA4C010	Threatened	Endangered	G3	S3.1	1B.1	
138 <i>Neostapfia colusana</i>	Colusa grass	PMPOA4C010	Threatened	Endangered	G3	S3.1	1B.1	
139 <i>Northern Claypan Vernal Pool</i>	Northern Claypan Vernal Pool	CTT44120CA			G1	S1.1		
140 <i>Northern Claypan Vernal Pool</i>	Northern Claypan Vernal Pool	CTT44120CA			G1	S1.1		
141 <i>Oenothera deltoides ssp. howellii</i>	Antioch Dunes evening-primrose	PDONA0C0B4	Endangered	Endangered	G5T1	S1.1	1B.1	
142 <i>Oenothera deltoides ssp. howellii</i>	Antioch Dunes evening-primrose	PDONA0C0B4	Endangered	Endangered	G5T1	S1.1	1B.1	
143 <i>Perdita scitula antiochensis</i>	Antioch andrenid bee	IIHYM01031			G1T1	S1		
144 <i>Perdita scitula antiochensis</i>	Antioch andrenid bee	IIHYM01031			G1T1	S1		
145 <i>Phalacrocorax auritus</i>	double-crested cormorant	ABNFD01020			G5	S3		
146 <i>Phalacrocorax auritus</i>	double-crested cormorant	ABNFD01020			G5	S3		
147 <i>Philanthus nasalis</i>	Antioch specid wasp	IIHYM20010			G1	S1		
148 <i>Philanthus nasalis</i>	Antioch specid wasp	IIHYM20010			G1	S1		
149 <i>Plagiobothrys hystriculus</i>	bearded popcorn-flower	PDBOR0V0H0			G1	S1.1	1B.1	
150 <i>Plagiobothrys hystriculus</i>	bearded popcorn-flower	PDBOR0V0H0			G1	S1.1	1B.1	
151 <i>Pogonichthys macrolepidotus</i>	Sacramento splittail	AFCJB34020			G2	S2		SC
152 <i>Pogonichthys macrolepidotus</i>	Sacramento splittail	AFCJB34020			G2	S2		SC
153 <i>Potamogeton zosteriformis</i>	eel-grass pondweed	PMPOT03160			G5	S2.2?	2.2	
154 <i>Potamogeton zosteriformis</i>	eel-grass pondweed	PMPOT03160			G5	S2.2?	2.2	
155 <i>Reithrodontomys raviventris</i>	salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2		
156 <i>Reithrodontomys raviventris</i>	salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2		
157 <i>Riparia riparia</i>	bank swallow	ABPAU08010		Threatened	G5	S2S3		
158 <i>Riparia riparia</i>	bank swallow	ABPAU08010		Threatened	G5	S2S3		
159 <i>Sagittaria sanfordii</i>	Sanford's arrowhead	PMALI040Q0			G3	S3.2	1B.2	
160 <i>Sagittaria sanfordii</i>	Sanford's arrowhead	PMALI040Q0			G3	S3.2	1B.2	
161 <i>Scutellaria galericulata</i>	marsh skullcap	PDLAM1U0J0			G5	S2.2?	2.2	
162 <i>Scutellaria galericulata</i>	marsh skullcap	PDLAM1U0J0			G5	S2.2?	2.2	
163 <i>Scutellaria lateriflora</i>	side-flowering skullcap	PDLAM1U0Q0			G5	S1.2	2.2	
164 <i>Scutellaria lateriflora</i>	side-flowering skullcap	PDLAM1U0Q0			G5	S1.2	2.2	
165 <i>Sidalcea keckii</i>	Keck's checkerbloom	PDMAL110D0	Endangered		G1	S1.1	1B.1	
166 <i>Sidalcea keckii</i>	Keck's checkerbloom	PDMAL110D0	Endangered		G1	S1.1	1B.1	
167 <i>Sphecodogastra antiochensis</i>	Antioch Dunes halcetid bee	IIHYM78010			G1	S1		

California Department of Fish and Game
 Natural Diversity Database
 Selected Elements by Scientific Name - Landscape
 LIM0708 Church Road/Amerada Road
 Dozier, Liberty Island, Corutland, Birds Landing, Rio Vista, Isleton, Antioch North, Jersey Island, and Bouldin Island quads

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
168 <i>Sphecodogastra antiochensis</i>	Antioch Dunes halcetid bee	IIHYM78010			G1	S1		
169 <i>Stabilized Interior Dunes</i>	Stabilized Interior Dunes	CTT23100CA			G1	S1.1		
170 <i>Stabilized Interior Dunes</i>	Stabilized Interior Dunes	CTT23100CA			G1	S1.1		
171 <i>Symphotrichum lentum</i>	Suisun Marsh aster	PDASTE8470			G2	S2	1B.2	
172 <i>Symphotrichum lentum</i>	Suisun Marsh aster	PDASTE8470			G2	S2	1B.2	
173 <i>Taxidea taxus</i>	American badger	AMAJF04010			G5	S4		SC
174 <i>Taxidea taxus</i>	American badger	AMAJF04010			G5	S4		SC
175 <i>Thamnophis gigas</i>	giant garter snake	ARADB36150	Threatened	Threatened	G2G3	S2S3		
176 <i>Thamnophis gigas</i>	giant garter snake	ARADB36150	Threatened	Threatened	G2G3	S2S3		
177 <i>Tuctoria mucronata</i>	Crampton's tuctoria or Solano grass	PMPOA6N020	Endangered	Endangered	G1	S1.1	1B.1	
178 <i>Tuctoria mucronata</i>	Crampton's tuctoria or Solano grass	PMPOA6N020	Endangered	Endangered	G1	S1.1	1B.1	
179 <i>Valley Needlegrass Grassland</i>	Valley Needlegrass Grassland	CTT42110CA			G1	S3.1		
180 <i>Valley Needlegrass Grassland</i>	Valley Needlegrass Grassland	CTT42110CA			G1	S3.1		

ATTACHMENT C – CLASS OF ACTION

Dale
Jones/HQ/Caltrans/CAGov
11/04/2009 07:14 PM

To: Patricia Maurice/D04/Caltrans/CAGov@DOT
cc: Howell Chan/D04/Caltrans/CAGov@DOT,
scott_m_williams@dot.ca.gov, Cindy.Adams@dot.ca.gov
bcc:
Subject: Routine EA COA Sol 12 @ Church intersection (0G050K)

Patricia,

Based on our discussion today and the information below, this project does not meet the description of a complex Environmental Assessment (EA) under Section 6005. I concur that this project is a routine EA.

Under Section 6005, EAs have been divided into two categories: complex EAs and routine EAs. Complex EAs are defined as those EAs that include multiple location alternatives, debate related to purpose and need, strong public controversy, issues related to logical termini or independent utility, individual Section 4(f) determinations, complex Endangered Species Act issues, numerous cumulative impacts or high mitigation costs.

Please note that the HQ/DEA portions of the quality process outlined in the "Review Procedures for Environmental Impact Statements and Environmental Assessments under NEPA Delegation Pilot Program" are not required.

However, the project schedule should reflect the duration required for the District Quality Control process for both the draft and final environmental document. The process includes items required under NEPA Delegation Pilot Program.

All EA documents require:

- completion of the District/Region Quality Control Review process
- completion of the applicable Quality Control Review Certification form (s)
- concurrence from FHWA for Air Quality Conformity
- completion of the Environmental Document Preparation and Review Tool checklist
- completion of the draft Environmental Commitments Record at Final ED
- record keeping per the Uniform Environmental File System
- a copy of this Class of Action Concurrence in the project file

Additional information can be found at:

<http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/chap38.htm>

Please note that coordination with Kelly Dunlap, as the Department's climate change technical expert, is required before the document is approved at draft and at final.

Thank you,

Dale Jones

Environmental Coordinator - District 4 & 7

(916) 531-0058

<http://www.dot.ca.gov/ser/>

Attachment G
Right of Way Data
Sheets

To: District Division Chief
Division of Right of Way and Land Surveys

Date: 12/23/09

Attn: District Branch Chief
R/W Local Programs

Co. Sol Rte. 12
Expense Authorization 0G050K

Subject: **RIGHT OF WAY DATA SHEET – LOCAL PUBLIC AGENCIES**

Project Description: SR 12/ Church Road Realignment - Alternative 2

Right of way necessary for the subject project will be the responsibility of the **Solano Transportation Authority**.

The information in this data sheet was developed by Ray Armstrong, SR/WA, of Overland, Pacific & Cutler, Inc.

I. Right of Way Engineering

Will Right of Way Engineering be required for this project?

- No
- Yes (If yes, submit a copy of the *Right of Way Engineering Surveys and Mapping Services checklist for Locally Funded Projects*. This checklist includes, but is not limited to, the following items.)

- Hard copy (base map)
- Appraisal map
- Acquisition documents
- Property Transfer Documents
- R/W Record Map
- Record of Survey

II. Engineering Surveys

1. Is any surveying or photogrammetric mapping required?
No Yes if yes, complete the following:

2. Datum Requirements

Yes Project will adhere to the following criteria:

- Horizontal
- Vertical
- Units

3. Will land survey monument perpetuation be scoped into the project, if required?

Yes
 No Provide explanation on additional page.

III. Parcel Information (Land and Improvements)

Are there any property rights required within the proposed project limits?

No Yes (Complete the following.)

	Part Take	Full Take	Estimate \$
A. Number of Vacant Land Parcels	0	0	\$ 0
B. Number of Single Family Residential Units	2	0	\$ 35,392
C. Number of Multifamily Residential Units		0	\$
D. Number of Commercial/Industrial Parcels	4	0	\$ 1,607,448
E. Number of Farm/Agricultural Parcels	0	0	\$ 0
F. Permanent and/or Temporary Easements	0	0	\$ 0
G. Other Parcels (define in "Remarks" section)	0	0	\$ 0
Totals	0	0	\$ 1,642,840

Provide a general description of the right of way and excess lands required (zoning, use, improvements, critical, or sensitive parcels, etc.).

The right of way acquisitions needed for the project involve minor takings off of large, vacant and partially developed properties. Improvements within the developed properties are set back off of the existing roadways so no structures are impacted. Impacted lands include vacant, formerly-farmed properties, and developed single family properties.

IV. Dedications

Are there any property rights which have been acquired, or anticipate will be acquired, through the "dedication" process for the Project?

No Yes (Complete the following.)

Number of dedicated parcels 5 parcels. APN 176-010-610, 176-010-620, 178-010-070, 049-310-020, 049-310-010

Have the dedication parcel(s) been accepted by the municipality involved? No.

V. Excess Lands/Relinquishments

Are there Caltrans property rights which may become excess lands or potential relinquishment areas?

No Yes (Provide an explanation on additional page.)
 Church Road is shifted to align with Amerada Road, there will be potential corner area of existing intersection will be relinquished to City.

VI. Relocation Information

Are relocation displacements anticipated?

No Yes (Complete the Following.)

A. Number of Single Family Residential Units		
Estimated RAP Payments	0	\$ 0
B. Number of Multifamily Residential Units		
Estimated RAP Payments	0	\$ 0
C. Number of Business/Nonprofit		
Estimated RAP Payments	0	\$ 0
D. Number of Farms		
Estimated RAP Payments	0	\$ 0
E. Other (define in the "Remarks" section)		
Estimated RAP Payments	0	\$ 0
Totals	0	\$ 0

VII. Utility Relocation Information

Do you anticipate any utility facilities or utility rights of way to be affected?

No Yes (Complete the following.)

		Estimated Relocation Expense			
	Facility	Owner	State Obligation	Local Obligation	Utility Owner Obligation
A	Overhead Power Line & Poles	PG&E	\$0		\$180,000
B			\$0		\$
C			\$0		\$
D			\$0		\$
E			\$		\$
F			\$		\$
G			\$		\$
	Sub-Total		\$0		\$
	3% annual Escalation, 2 years		\$0		\$
	Totals		\$0 *		\$180,000
	Number of Facilities				

* This amount reflects the estimated total financial obligation by the State.

Any additional information concerning utility involvement on this project?

Approximately 18 power poles need to be relocated for the widening .

VIII. Rail Information

Are railroad facilities or railroad rights of way affected?

No Yes (Complete the following.)

Describe the railroad facilities to be affected.

Owner's Name	Transverse Crossing	Longitudinal Encroachment
A.		

Discuss types of agreements and rights required from railroads. Are grade crossings that require services contracts, or grade separations that require construction and maintenance agreements involved?

IX. Clearance Information

Are there improvements that require clearance?

No Yes (Complete the following.)

A. Number of structures to be Demolished 0
 Estimated Cost of Demolition 0

X. Hazardous Materials/Waste

Are there any site(s) and/or improvements(s) in the Project Limits that are known to contain

hazardous materials? None Yes (Explain in the "Remarks" section.)

Are there any site(s) and or improvement(s) in the Project Limits that are suspected to contain

hazardous waste? None Yes (Explain in the "Remarks" section.)

XI. Project Scheduling

	Proposed lead time	Completion Date
* Preliminary Engineering Surveys	<u>3</u> (months)	<u> </u>
* R/W Engineering Submittals	<u>6</u> (months)	<u> </u>
* R/W Appraisals/Acquisition	<u>12</u> (months)	<u> </u>
Proposed Environmental Clearance		<u>March 2011</u>
Proposed R/W Certification		<u>December 2012</u>

XII. Proposed Funding

	Local		State		Federal		Other
Acquisition							
Utilities							
Relocation Assistance Program							
Loss of Business Goodwill							
Structures Testing + Demolition							
Condemnation							
R/W Support Cost (appraisals, title/escrow, ROWE, consultants)							\$40,000
TOTAL							\$40,000
COMBINED TOTAL							

XIII. Remarks

Caltrans Right of Way Engineering should be contacted concerning Datum and Epoch before performing survey.

Environmental Mitigation Cost (including Permit) = \$272,000.

Project Sponsor Consultant
 Prepared by:



Ray Armstrong, SR/WA, Principal
 Overland, Pacific & Cutler, Inc.

12/15/2009

Date

Project Sponsor
 Reviewed and Approved by:

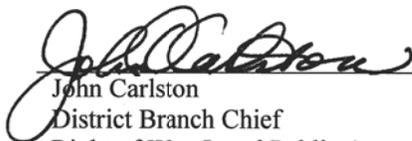


Janet Adams
 Solano Transportation Authority

2/18/10

Date

Caltrans
 Reviewed and approved based on information provided to date:



John Carlston
 District Branch Chief
 Right of Way Local Public Agency Services

2/26/10

Date

To: District Division Chief
Division of Right of Way and Land Surveys

Date: 12/23/09

Attn: District Branch Chief
R/W Local Programs

Co. Sol Rte. 12
Expense Authorization 0G050K

Subject: **RIGHT OF WAY DATA SHEET – LOCAL PUBLIC AGENCIES**

Project Description: SR 12/ Church Road Realignment - Alternative 2A

Right of way necessary for the subject project will be the responsibility of the **Solano Transportation Authority**.

The information in this data sheet was developed by Ray Armstrong, SR/WA, of Overland, Pacific & Cutler, Inc.

I. Right of Way Engineering

Will Right of Way Engineering be required for this project?

- No
- Yes (If yes, submit a copy of the *Right of Way Engineering Surveys and Mapping Services checklist for Locally Funded Projects*. This checklist includes, but is not limited to, the following items.)
 - Hard copy (base map)
 - Appraisal map
 - Acquisition documents
 - Property Transfer Documents
 - R/W Record Map
 - Record of Survey

II. Engineering Surveys

1. Is any surveying or photogrammetric mapping required?

No Yes if yes, complete the following:

2. Datum Requirements

Yes Project will adhere to the following criteria:

- Horizontal
- Vertical
- Units

3. Will land survey monument perpetuation be scoped into the project, if required?

Yes
 No Provide explanation on additional page.

III. Parcel Information (Land and Improvements)

Are there any property rights required within the proposed project limits?

No Yes (Complete the following.)

	Part Take	Full Take	Estimate \$
A. Number of Vacant Land Parcels	0	0	\$ 0
B. Number of Single Family Residential Units	4	0	\$ 393,800
C. Number of Multifamily Residential Units	0	0	\$ 0
D. Number of Commercial/Industrial Parcels	3	0	\$ 886,472
E. Number of Farm/Agricultural Parcels	0	0	\$ 0
F. Permanent and/or Temporary Easements	0	0	\$ 0
G. Other Parcels (define in "Remarks" section)	0	0	\$ 0
Totals	0	0	\$ 1,280,272

Provide a general description of the right of way and excess lands required (zoning, use, improvements, critical, or sensitive parcels, etc.).

The right of way acquisitions needed for the project involve minor takings off of large, vacant and partially developed properties. Improvements within the developed properties are set back off of the existing roadways so no structures are impacted. Impacted lands include vacant, formerly-farmed properties, and developed single family properties.

IV. Dedications

Are there any property rights which have been acquired, or anticipate will be acquired, through the "dedication" process for the Project?

No Yes (Complete the following.)

Number of dedicated parcels 6 parcels. APN 176-010-620, 176-010-610, 178-010-070, 049-310-020, 049-310-010, 049-310-300

Have the dedication parcel(s) been accepted by the municipality involved? No.

V. Excess Lands/Relinquishments

Are there Caltrans property rights which may become excess lands or potential relinquishment areas?

No Yes (Provide an explanation on additional page.)

Church Road is shifted to align with Amerada Road, there will be potential corner area of existing intersection will be relinquished to City.

VI. Relocation Information

Are relocation displacements anticipated?

No Yes (Complete the Following.)

A. Number of Single Family Residential Units			
Estimated RAP Payments	0	\$	0
B. Number of Multifamily Residential Units			
Estimated RAP Payments	0	\$	0
C. Number of Business/Nonprofit			
Estimated RAP Payments	0	\$	0
D. Number of Farms			
Estimated RAP Payments	0	\$	0
E. Other (define in the "Remarks" section)			
Estimated RAP Payments	0	\$	0
Totals	0	\$	0

VII. Utility Relocation Information

Do you anticipate any utility facilities or utility rights of way to be affected?

No Yes (Complete the following.)

		Estimated Relocation Expense			
	Facility	Owner	State Obligation	Local Obligation	Utility Owner Obligation
A	Overhead Power Line & Poles	PG&E	\$0		\$130,000
B			\$0		\$
C			\$0		\$
D			\$0		\$
E			\$		\$
F			\$		\$
G			\$		\$
	Sub-Total		\$0		\$
	3% annual Escalation, 2 years		\$0		\$
		Totals	\$0 *		\$130,000
		Number of Facilities			

* This amount reflects the estimated total financial obligation by the State.

Any additional information concerning utility involvement on this project?

Approximately 13 power poles need to be relocated for the widening .

VIII. Rail Information

Are railroad facilities or railroad rights of way affected?

No Yes (Complete the following.)

Describe the railroad facilities to be affected.

Owner's Name	Transverse Crossing	Longitudinal Encroachment
A.		

Discuss types of agreements and rights required from railroads. Are grade crossings that require services contracts, or grade separations that require construction and maintenance agreements involved?

IX. Clearance Information

Are there improvements that require clearance?

No Yes (Complete the following.)

A. Number of structures to be Demolished 0
 Estimated Cost of Demolition 0

X. Hazardous Materials/Waste

Are there any site(s) and/or improvements(s) in the Project Limits that are known to contain hazardous materials? None Yes (Explain in the "Remarks" section.)

Are there any site(s) and or improvement(s) in the Project Limits that are suspected to contain hazardous waste? None Yes (Explain in the "Remarks" section.)

XI. Project Scheduling

	Proposed lead time	Completion Date
* Preliminary Engineering Surveys	<u>3</u> (months)	<u> </u>
* R/W Engineering Submittals	<u>6</u> (months)	<u> </u>
* R/W Appraisals/Acquisition	<u>12</u> (months)	<u> </u>
Proposed Environmental Clearance		<u>March 2011</u>
Proposed R/W Certification		<u>December 2012</u>

XII. Proposed Funding

	Local	State	Federal	Other
Acquisition				
Utilities				
Relocation Assistance Program				
Loss of Business Goodwill				
Structures Testing + Demolition				
Condemnation				
R/W Support Cost (appraisals, title/escrow, ROWE, consultants)				\$50,000
TOTAL				\$50,000
COMBINED TOTAL				

XIII. Remarks

Caltrans Right of Way Engineering should be contacted concerning Datum and Epoch before performing survey.

Environmental Mitigation Cost (including Permit) = \$510,000.

Project Sponsor Consultant
 Prepared by:



Ray Armstrong, SR/WA, Principal
 Overland, Pacific & Cutler, Inc.

12/15//2009

Date

Project Sponsor
 Reviewed and Approved by:

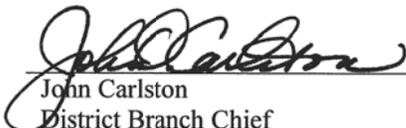


Janet Adams
 Solano Transportation Authority

2/18/10

Date

Caltrans
 Reviewed and approved based on information provided to date:



John Carlston
 District Branch Chief
 Right of Way Local Public Agency Services

2/26/10

Date

To: District Division Chief
Division of Right of Way and Land Surveys

Date: 12/23/09

Attn: District Branch Chief
R/W Local Programs

Co. Sol Rte. 12
Expense Authorization 0G050K

Subject: **RIGHT OF WAY DATA SHEET – LOCAL PUBLIC AGENCIES**

Project Description: SR 12/ Church Road Realignment - Alternative 3

Right of way necessary for the subject project will be the responsibility of the **Solano Transportation Authority**.

The information in this data sheet was developed by Ray Armstrong, SR/WA, of Overland, Pacific & Cutler, Inc.

I. Right of Way Engineering

Will Right of Way Engineering be required for this project?

- No
- Yes (If yes, submit a copy of the *Right of Way Engineering Surveys and Mapping Services checklist for Locally Funded Projects*. This checklist includes, but is not limited to, the following items.)

- Hard copy (base map)
- Appraisal map
- Acquisition documents
- Property Transfer Documents
- R/W Record Map
- Record of Survey

II. Engineering Surveys

1. Is any surveying or photogrammetric mapping required?
No Yes if yes, complete the following:

2. Datum Requirements

Yes Project will adhere to the following criteria:

- Horizontal
- Vertical
- Units

3. Will land survey monument perpetuation be scoped into the project, if required?

Yes
 No Provide explanation on additional page.

III. Parcel Information (Land and Improvements)

Are there any property rights required within the proposed project limits?

No Yes (Complete the following.)

	Part Take	Full Take	Estimate \$
A. Number of Vacant Land Parcels	0	0	\$ 0
B. Number of Single Family Residential Units	4	1	\$ 1,163,024
C. Number of Multifamily Residential Units	0	0	\$ 0
D. Number of Commercial/Industrial Parcels	2	0	\$ 355,344
E. Number of Farm/Agricultural Parcels	0	0	\$ 0
F. Permanent and/or Temporary Easements	0	0	\$ 0
G. Other Parcels (define in "Remarks" section)	0	0	\$ 0
Totals	0	0	\$ 1,518,368

Provide a general description of the right of way and excess lands required (zoning, use, improvements, critical, or sensitive parcels, etc.).

The right of way acquisitions needed for the project involve minor takings off of large, vacant and partially developed properties. There is one full acquisition of a SFR in this alternative necessitated by the removal of the SFR structure from the larger parcel. There is a possibility of a carve-out upon further study of the usability and economic reuse of the remaining real property. Impacted lands include vacant, formerly-farmed properties, and developed single family properties.

IV. Dedications

Are there any property rights which have been acquired, or anticipate will be acquired, through the "dedication" process for the Project?

No Yes (Complete the following.)

Number of dedicated parcels 5 parcels. APN 176-010-620, 178-010-070, 049-310-020, 049-310-010, 049-310-300

Have the dedication parcel(s) been accepted by the municipality involved? No.

V. Excess Lands/Relinquishments

Are there Caltrans property rights which may become excess lands or potential relinquishment areas?

No Yes (Provide an explanation on additional page.)

VI. Relocation Information

Are relocation displacements anticipated?

No Yes (Complete the Following.)

A. Number of Single Family Residential Units		
Estimated RAP Payments	1	\$ 50,000
B. Number of Multifamily Residential Units		
Estimated RAP Payments	0	\$ 0
C. Number of Business/Nonprofit		
Estimated RAP Payments	0	\$ 0
D. Number of Farms		
Estimated RAP Payments	0	\$ 0
E. Other (define in the "Remarks" section)		
Estimated RAP Payments	0	\$ 0
Totals	0	\$ 50,000

VII. Utility Relocation Information

Do you anticipate any utility facilities or utility rights of way to be affected?

No Yes (Complete the following.)

		Estimated Relocation Expense			
	Facility	Owner	State Obligation	Local Obligation	Utility Owner Obligation
A	Overhead Power Line & Poles	PG&E	\$0		\$130,000
B			\$0		\$
C			\$0		\$
D			\$0		\$
E			\$		\$
F			\$		\$
G			\$		\$
	Sub-Total		\$0		\$
	3% annual Escalation, 2 years		\$0		\$
	Totals		\$0 *		\$130,000
	Number of Facilities				

* This amount reflects the estimated total financial obligation by the State.

Any additional information concerning utility involvement on this project?

Approximately 13 power poles need to be relocated for the widening .

VIII. Rail Information

Are railroad facilities or railroad rights of way affected?

No Yes (Complete the following.)

Describe the railroad facilities to be affected.

Owner's Name	Transverse Crossing	Longitudinal Encroachment
A.		

Discuss types of agreements and rights required from railroads. Are grade crossings that require services contracts, or grade separations that require construction and maintenance agreements involved?

IX. Clearance Information

Are there improvements that require clearance?

No Yes (Complete the following.)

A. Number of structures to be Demolished 0
 Estimated Cost of Demolition 0

X. Hazardous Materials/Waste

Are there any site(s) and/or improvements(s) in the Project Limits that are known to contain hazardous materials? None Yes (Explain in the "Remarks" section.)

Are there any site(s) and or improvement(s) in the Project Limits that are suspected to contain hazardous waste? None Yes (Explain in the "Remarks" section.)

XI. Project Scheduling

	Proposed lead time	Completion Date
* Preliminary Engineering Surveys	<u>3</u> (months)	<u> </u>
* R/W Engineering Submittals	<u>6</u> (months)	<u> </u>
* R/W Appraisals/Acquisition	<u>12</u> (months)	<u> </u>
Proposed Environmental Clearance		<u>March 2011</u>
Proposed R/W Certification		<u>December 2012</u>

XII. Proposed Funding

	Local	State	Federal	Other
Acquisition				
Utilities				
Relocation Assistance Program				
Loss of Business Goodwill				
Structures Testing + Demolition				
Condemnation				
R/W Support Cost (appraisals, title/escrow, ROWE, consultants)				\$50,000
TOTAL				\$50,000
COMBINED TOTAL				

XIII. Remarks

Caltrans Right of Way Engineering should be contacted concerning Datum and Epoch before performing survey.

Environmental Mitigation Cost Per PEAR (including Permit) = \$495,000.

Project Sponsor Consultant
 Prepared by:



Ray Armstrong, SR/WA, Principal
 Overland, Pacific & Cutler, Inc.

12/15/2009

Date

Project Sponsor
 Reviewed and Approved by:



Janet Adams
 Solano Transportation Authority

2/18/10

Date

Caltrans
 Reviewed and approved based on information provided to date:



John Carlston
 District Branch Chief
 Right of Way Local Public Agency Services

2/26/10

Date

Attachment H
Preliminary Right of
Way Requirement Maps

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SOL	SR 12	24.3-25.2	XX	XX

REGISTERED CIVIL ENGINEER
 Keen Poong
 No. 66495
 Exp. 06/30/10
 CIVIL
 STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

SOLANO TRANSPORTATION AUTHORITY
 ONE HARBOR CENTER, SUITE 130
 SUISUN CITY, CA 94585

LEE AND MASCHETTO ENGINEERING
 11344 COLOMA ROAD, SUITE 590
 GOLD RIVER, CA 95670
 TEL (916) 635-5233 FAX (916) 635-5243

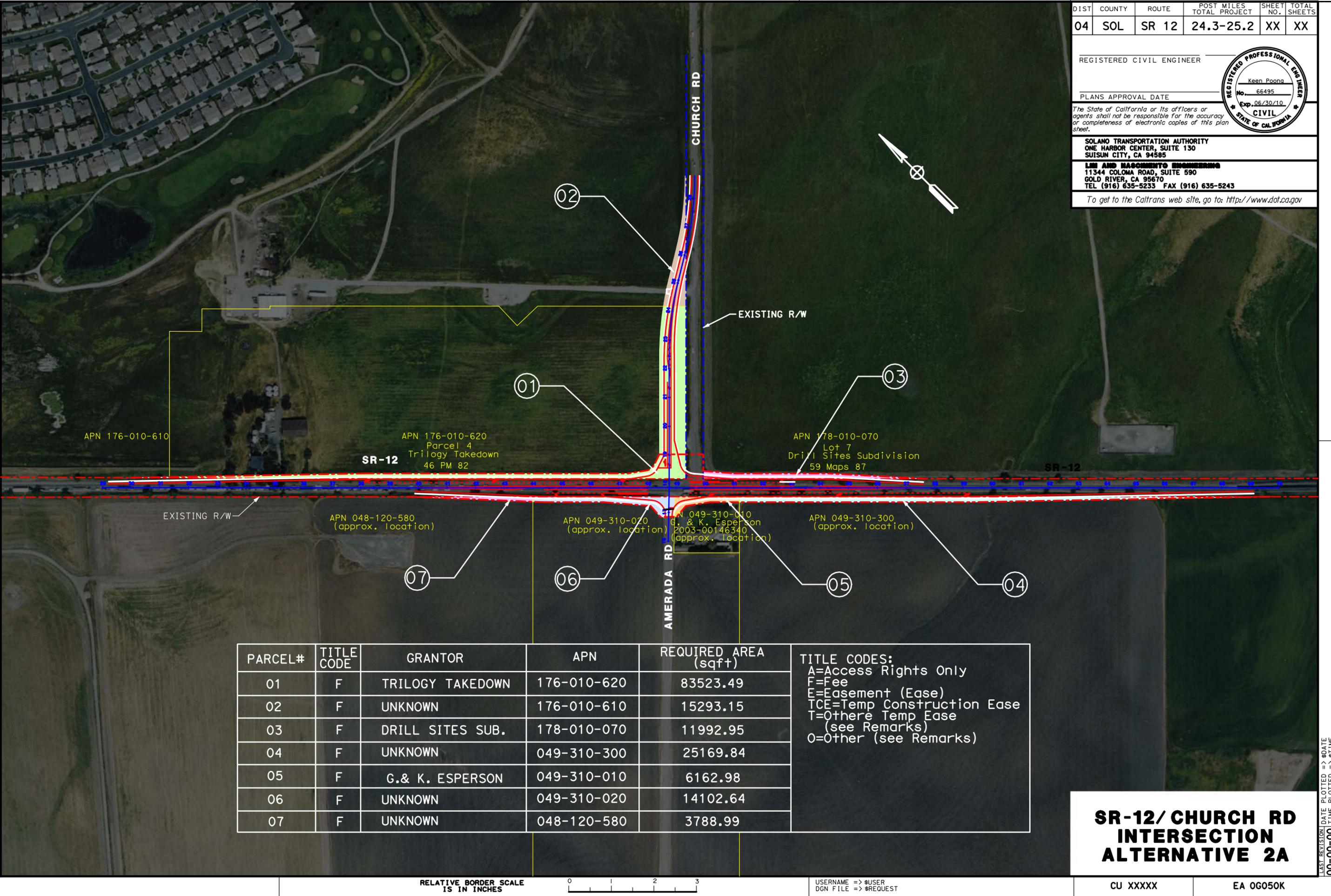
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DESIGN OVERSIGHT

REVISIED BY DATE REVISIED BY DATE REVISIED BY DATE

CALCULATED/DESIGNED BY CHECKED BY



PARCEL#	TITLE CODE	GRANTOR	APN	REQUIRED AREA (sqft)	TITLE CODES:
01	F	TRILOGY TAKEDOWN	176-010-620	83523.49	A=Access Rights Only
02	F	UNKNOWN	176-010-610	15293.15	F=Fee
03	F	DRILL SITES SUB.	178-010-070	11992.95	E=Easement (Ease)
04	F	UNKNOWN	049-310-300	25169.84	TCE=Temp Construction Ease
05	F	G. & K. ESPERSON	049-310-010	6162.98	T=Other Temp Ease (see Remarks)
06	F	UNKNOWN	049-310-020	14102.64	O=Other (see Remarks)
07	F	UNKNOWN	048-120-580	3788.99	



USERNAME => #USER
 DGN FILE => #REQUEST

SR-12/ CHURCH RD INTERSECTION ALTERNATIVE 2A

CU XXXXX EA 0G050K

LAST REVISION DATE PLOTTED => \$DATE
 00-00-00 TIME PLOTTED => \$TIME

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SOL	SR 12	24.3-25.2	XX	XX

REGISTERED CIVIL ENGINEER

Keen Poong
No. 66495
Exp. 06/30/10
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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SOLANO TRANSPORTATION AUTHORITY
ONE HARBOR CENTER, SUITE 130
SUISUN CITY, CA 94585

LEE AND MASCHETTO ENGINEERING
11344 COLOMA ROAD, SUITE 590
GOLD RIVER, CA 95670
TEL (916) 635-5233 FAX (916) 635-5243

To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN OVERSIGHT

REVISIED BY

DATE

CALCULATED/DESIGNED BY

CHECKED BY



PARCEL#	TITLE CODE	GRANTOR	APN	REQUIRED AREA (sqft)	TITLE CODES: A=Access Rights Only F=Fee E=Easement (Ease) TCE=Temp Construction Ease T=Other Temp Ease (see Remarks) O=Other (see Remarks)
01	F	TRILOGY TAKEDOWN	176-010-620	28859	
02	F	DRILL SITES SUB.	178-010-070	15559.10	
03	F	UNKNOWN	049-310-300	26955.85	
04	F	G. & K. ESPERSON	049-310-010	44131.25	
05	F	UNKNOWN	049-310-020	61693.33	
06	F	UNKNOWN	049-310-020	10108.54	
07	F	UNKNOWN	048-120-580	2488.58	

RELATIVE BORDER SCALE IS IN INCHES

0 1 2 3

USERNAME => \$USER
DGN FILE => \$REQUEST

SR-12/ CHURCH RD INTERSECTION ALTERNATIVE 3

CU XXXXX EA 0G050K

LAST REVISION DATE PLOTTED => \$DATE
00-00-00 TIME PLOTTED => \$TIME

Attachment I
Signed Cover Page of
Storm Water Data
Report

Long Form - Storm Water Data Report



Dist-County-Route: 04 – SOL – 12

Post Mile (Kilometer Post) Limits:
PM 24.3/25.2

Project Type: Widening

EA: 04-0G050k

RU: 218

Program Identification: 218

Phase: PID PA/ED PS&E

Regional Water Quality Control Board(s): Central Valley Region 5

Is the project required to consider incorporating Treatment BMPs? Yes No

If yes, can Treatment BMPs be incorporated into the project? Yes No

If No, a Technical Data Report must be submitted to the RWQCB
at least 60 days prior to PS&E Submittal. List submittal date: _____

Total Disturbed Soil Area: 12.7 AC

Estimated Construction Start Date: 2013 Construction Completion Date: 2013

Notification of Construction (NOC) Date to be submitted: TBD

Notification of ADL reuse (if Yes, provide date) Yes Date: _____ No

Separate Dewatering Permit (if Yes, permit number) Yes Permit #: _____ No

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

[Signature]
Edward Ng, Registered Project Engineer

12/3/09
Date

I have reviewed the storm water quality design issues and find this report to be complete, current, and accurate:



[Signature] 1/14/10
Jason Mac, Project Manager Date

[Signature] 1/7/10
Bob Braga, Designated Maintenance Representative Date

[Signature] 1/14/2010
FOR David Yam, Designated Landscape Architect Representative Date

[Signature] 01/14/2010
Norman Gonsalves, District/Regional SW Coordinator or Designee Date

Attachment J **Risk Management Plan**

PROJECT RISK MANAGEMENT PLAN																	
Priority	Identification						Qualitative Analysis				OPTIONAL Quantitative Analysis			Response Strategy		Monitoring and Control	
	Status	ID #	Date Identified Project Phase	Functional Assignment	Threat/Opportunity Event	Risk Trigger	Type	Probability	Impact	Risk Matrix	Probability (%)	Impact (\$ or days)	Effect (\$ or days)	Strategy	Response Actions including advantages and disadvantages	Responsibility (Task Manager)	Last date changes made to risk and Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)=(12)x(13)	(15)	(16)	(17)	(18)
	Active		PA&ED	Environmental	Discover significant cultural resources	Field surveys/cultural resources present	Schedule	Low	High					Mitigation	Provide additional manpower to accelerate studies; Create Action Plan with Caltrans to identify critical milestones	Caltrans/LSA	
	Active		PA&ED	Environmental	Discover federally listed species	Field surveys/protocol surveys establishing presence	Schedule	Low	High					Mitigation	Create Action Plan with Caltrans to identify critical milestones.	Caltrans/LSA	
	Active		PA&ED	Environmental	Significant Native American controversy	Native American consultation process/response to project	Schedule	Low	High					Mitigation	Involve Native American community with follow-up strategies.	Caltrans/LSA	
	Active		PA&ED	Environmental	Discover hazardous waste materials, cumulative air quality impacts, cumulative traffic impacts	Technical studies produce unexpected results	Schedule	Low	High					Mitigation	Re-scope/identify issue areas for future study; Create Action Plan with Caltrans to identify critical milestones	PDT/LAN/LSA	
	Active		PA&ED	Environmental	Public controversy regarding project in general	Public meetings/public review	Schedule	Low	Moderate					Mitigation	Provide additional stakeholder input/public workshops; Obtain group consensus on addressing issues.	STA	
	Active		PA&ED	Environmental	Farmland conversion rating exceeds threshold	Rating exceeds 160 points on farmland conversion form	Schedule	Low	Low					Mitigation	Identify additional steps needed to evaluate alternatives; Create Action Plan with Caltrans to identify critical milestones.	PDT/LSA	
	Active		PA&ED	Environmental	Loss of trees causes visual impact/public controversy	Public response to loss of trees	Schedule	Low	Moderate					Mitigation	Provide additional stakeholder input/public workshops	STA	
	Active		PA&ED	Environmental	Cumulative impacts from multiple concurrent projects	Identification of significant impacts causing elevated CEQA process	Scope	Low	Low					Mitigation	Re-scope/identify specific areas with elevated concern.	PDT	
	Active		PA&ED	Environmental	Combination of all environmental risks occurring concurrently	Worst-case scenario findings	Scope	Low	Moderate					Mitigation	Re-scope/identify specific areas with elevated concern; Stay aware of the changes and maintain an understanding of how the findings could impact the project.	PDT	
	Active		Construction	Planning	Ponding / poor drainage / wet soil during construction	Wet weather construction	Scope	Moderate	Moderate					Avoidance	Plan construction during dry weather or be prepared for remediation (time delays, lime treatment, etc.)	Residential Engineer	
	Active		PS&E	Design	Expansive soil	Wetting / drying of soil after construction	Scope	Moderate	Very Low					Mitigation	May need to design pavement sections for expansion pressures instead of traditional R-Value method or use lime-treatment, can identify this during our geotechnical investigation	Geotechnical Engineer	
	Active		PS&E	Design	Soft subgrade soils	Soft soils encountered during construction	Schedule	Moderate	Very Low					Mitigation	May need to perform additional excavation to remove soft soils or perform lime treatment to modify soil condition during construction, can identify during our geotechnical investigation	Geotechnical Engineer	

Attachment K
Transportation
Management Plan
(TMP) Data Sheet

Memorandum

To: Project File

Date: May 20, 2009

From: Steve Mislinski

Subject: REQUEST FOR TRANSPORTATION MANAGEMENT PLAN DATA SHEET

Project Data

PROJECT MANAGER: Jason Mac	510-622-8891
PROJECT ENGINEER: Keen Poong	408-886-9500
DIST-EA: 04-SOL-12 PROGRAM (HB1, HE11, etc.): HB1	
PROJECT COMMON NAME SR-12 and Church Road Intersection	
CO-RTE-PM (KP): 24.3/25.2	
LEGAL DESCRIPTION: State Route 12 between 0.42 mile north of Amerada Road and 0.36 mile south of Church Road.	
DETAILED WORK DESCRIPTION: The proposed improvements at the intersection of State Route 12 (SR-12) and Church Road- Amerada Road includes the addition of right turn/ left turn lanes and acceleration/deceleration lanes along SR-12 in the east-west directions, the addition of left turn lane on Church Road approach and realignment of the intersection to eliminate the offset between Church Road and Amerada Road.	
CONSTRUCTION COST ESTIMATE: Alt. 2= \$3,742,000 Alt. 2A=\$2,951,000 Alt. 3 = \$3,807,600	
PROJECT PHASE:	PSR <input checked="" type="checkbox"/> PR <input type="checkbox"/> PS&E <input type="checkbox"/> %

Traffic Impact Description

- A) The Project includes the following:
(Check applicable type of facility closures)

- Highway or freeway lanes
 Highway or freeway shoulders
 Freeway connectors
 Freeway off-ramps
 Freeway on-ramps
 Local streets

- B) Major operations requiring traffic control and working days for each

Operation

of working days

<input type="checkbox"/> Clearing and grubbing	3
<input type="checkbox"/> Existing feature removal	5
<input type="checkbox"/> Excavation of embankments construction	20
<input type="checkbox"/> Structural section construction	10
<input type="checkbox"/> Drainage feature construction	5
<input type="checkbox"/> Structures construction	0
<input type="checkbox"/> MBGR/Barrier construction	5
<input type="checkbox"/> Striping	2
<input type="checkbox"/> Electrical component construction	_____
<input type="checkbox"/> Other	_____
Total days requiring traffic control	50

C. Project staging description and # of working days required per stage:

<u>Stage Description</u>	<u># of working days per stage</u>
1. Clearing and removal of existing features	8
2. Embankments & Drainage Construction	25
3. Structural section construction	10
4. MBGR and Striping	7
Total construction days	50

D. Have you considered any construction strategies that can restore existing number of lanes?

- Temporary Roadway Widening Structure Involvement?
Yes _____ No X if "yes", notify Project Manager
- Lane Restriping (Temporary narrow lane widths) Yes
- Roadway Realignment (Detour around work area) Yes
- Median and/or Right Shoulder Utilization. Yes
- Use of HOV lane as a Temporary Mixed Flow Lane
- Staging alternatives (Explain below)

Attachments

- Draft PSR dated 09-24-2009

Keen Poong
Project Design Engineer

(408) 886-9500
Contact Phone Number

Steve Mislinski
Senior Engineer

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

(Preliminary TMP Elements and Costs)

Co/Rte/PM 04-SOL-12, PM 24.3/25.2 EA 0G050K Project Engineer
 Project Limit State Route 12 between 0.42 mile north of Amerada Road and 0.36 mile south of Church Road
 Project Description

The proposed improvements at the intersection of State Route 12 (SR-12) and Church Road- Amerada Road includes the addition of right turn/ left turn lanes and acceleration/deceleration lanes along SR-12 in the east-west directions, the addition of left turn lane on Church Road approach and realignment of the intersection to eliminate the offset between Church Road and Amerada Road.

1) Public Information

- | | | |
|-------------------------------------|--|----------|
| <input checked="" type="checkbox"/> | a. Brochures and Mailers | \$20,000 |
| <input checked="" type="checkbox"/> | b. Press Release | |
| <input checked="" type="checkbox"/> | c. Paid Advertising | \$20,000 |
| <input type="checkbox"/> | d. Public Information Center/Kiosk | \$ |
| <input type="checkbox"/> | e. Public Meeting/Speakers Bureau | |
| <input type="checkbox"/> | f. Telephone Hotline | |
| <input checked="" type="checkbox"/> | g. Internet, E-mail | |
| <input checked="" type="checkbox"/> | h. Notification to impacted groups
(i.e. bicycle users, pedestrians with disabilities, others...) | |
| <input type="checkbox"/> | i. Others | \$ |

2) Traveler Information Strategies

- | | | |
|-------------------------------------|--|----------|
| <input type="checkbox"/> | a. Changeable Message Signs (Fixed) | \$ |
| <input checked="" type="checkbox"/> | b. Changeable Message Signs (Portable) | \$20,000 |
| <input checked="" type="checkbox"/> | c. Ground Mounted Signs | \$4,000 |
| <input type="checkbox"/> | d. Highway Advisory Radio | \$ |
| <input checked="" type="checkbox"/> | e. Caltrans Highway Information Network (CHIN) | |
| <input type="checkbox"/> | f. Detour maps (i.e. bicycle, vehicle, pedestrian...etc) | |
| <input type="checkbox"/> | g. Revised Transit Schedules/maps | |
| <input type="checkbox"/> | h. Bicycle community information | |
| <input type="checkbox"/> | i. Others | \$ |

3) Incident Management

- | | | |
|-------------------------------------|--|-----------|
| <input checked="" type="checkbox"/> | a. Construction Zone Enhanced Enforcement Program (COZEEP) (50x\$2000) | \$100,000 |
| <input type="checkbox"/> | b. Freeway Service Patrol | \$ |
| <input type="checkbox"/> | c. Traffic Management Team | |
| <input type="checkbox"/> | d. Helicopter Surveillance | \$ |
| <input type="checkbox"/> | e. Traffic Surveillance Stations
(Loop Detector and CCTV) | \$ |
| <input type="checkbox"/> | f. Others | \$ |

TMP Data Sheet (cont.)

4) Construction Strategies

<input checked="" type="checkbox"/>	a. Lane Closure Chart	
<input checked="" type="checkbox"/>	b. Reversible Lanes	
<input type="checkbox"/>	c. Total Facility Closure	
<input type="checkbox"/>	d. Contra Flow	
<input type="checkbox"/>	e. Truck Traffic Restrictions	\$
<input checked="" type="checkbox"/>	f. Reduced Speed Zone	\$20,000
<input type="checkbox"/>	g. Connector and Ramp Closures	
<input type="checkbox"/>	h. Incentive and Disincentive	\$
<input type="checkbox"/>	i. Moveable Barrier	\$
<input type="checkbox"/>		
<input type="checkbox"/>	k. Others _____	\$

5) Demand Management

<input type="checkbox"/>	a. HOV Lanes/Ramps (New or Convert)	\$
<input type="checkbox"/>	b. Park and Ride Lots	\$
<input type="checkbox"/>	c. Rideshare Incentives	\$
<input type="checkbox"/>	d. Variable Work Hours	
<input type="checkbox"/>	e. Telecommute	
<input type="checkbox"/>	f. Ramp Metering (Temporary Installation)	\$
<input type="checkbox"/>	g. Ramp Metering (Modify Existing)	\$
<input type="checkbox"/>	h. Others _____	\$

6) Alternate Route Strategies

<input type="checkbox"/>	a. Add Capacity to Freeway Connector	\$
<input type="checkbox"/>	b. Street Improvement (widening, traffic signal... etc)	\$
<input type="checkbox"/>	c. Traffic Control Officers	\$
<input type="checkbox"/>	d. Parking Restrictions	
<input type="checkbox"/>	e. Others _____	\$

7) Other Strategies

<input type="checkbox"/>	a. Application of New Technology	\$
<input type="checkbox"/>	e. Others _____	\$

TOTAL ESTIMATED COST OF TMP ELEMENTS = **\$184,000**

PREPARED BY Mahmoud Khodr DATE 12-10-2009
Jerry Morgan, (510)286-6350 DATE 12-10-2009

APPROVAL RECOMMENDED BY Steve Mislinski /
Lenka Pleskotova DATE 12-10-2009

Attachment L
Pavement Strategy
Checklist

PAVEMENT STRATEGY CHECKLIST (Rev. 9/24/09)

Date: February 18, 2010

Project description and project elements:

The proposed improvements at the intersection of State Route 12 (SR-12) and Church Road-Amerada Road includes the addition of right turn/ left turn lanes and acceleration/deceleration lanes along SR-12 in the east-west directions, the addition of left turn lane on Church Road approach and realignment of the intersection to eliminate the offset between Church Road and Amerada Road.

EA: 04-0G050K _

Project Manager: Steve Mislinski

Co/Rte: Sol/12

Office: Consultant for STA

Project Engineer: Keen Poong Initial KP

Program: 20.10.400.400

Design Senior: Ron Loutzenhiser Initial REL

PM Limits: 24.3/25.2

Materials Engineer (8th floor) : Ashok Das

Signature

Maintenance Engineering (6th flr): Ramses Sargiss

Signature

This project is at the following phase (please check one):

PID (PSSR, etc.) PR PS&E OTHER

Describe existing structural section (e.g., shoulder, traveled way). Show limits if different sections are within the project: **Unknown at this time. Existing structural section will be identified through boring during the next phase of the project.**

What pavement types/structural sections does Materials propose for each segment (shoulders and traveled way)?

A. 0.50' HMA (TYPE A) with 1.95' Class 2 AB on widened traveled way and shoulders

B. 0.17' cold plane and overlay 0.17' HMA (Type A) on existing pavement

C.

Pavement is involved in:

Entire project OR Part of the project

Assumptions (Is future widening in Regional Transportation Plan? Yes or no?): Please provide information for all of the following items that apply to this project.

	Yes	No	Question
1.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are you implementing an innovative strategy (e.g., cold foam Hot-Mix Asphalt (HMA)), pre-cast concrete pavement, continuously reinforced pavement, etc)? If so, which are you implementing and why? If not, why not? No critical soil situation has been identified at this time.
2.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Has Rapid Rehab strategy been considered (e.g., weekend closures and lane replacements)? Explain: The project doesn't need weekend closures. The existing pavement will be overlaid by staging work.
3.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are you using Rubberized Hot-Mix Asphalt (RHMA) in this project? If not, justify: Not consider at this stage. Will consider during PAED phase when existing pavement investigation has been conducted.
4.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Was Life Cycle Analysis performed? As noted in the PDT meeting dated September 08, 2009, a Pavement Life Cycle Cost Analysis will be completed during the PA/ED phase to reevaluate the pavement strategy.
5.	<input type="checkbox"/>	<input type="checkbox"/>	Does existing pavement have a settlement problem? Explain: Unknown at this time. Deflection testing may be proposed during the PA/ED Phase.
6.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	a) Is this project (or part of project) maintaining the grade profile? Yes. b) If not, explain how the profile change affects the pavement strategy choice (cut v. fill):
7.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Will there be a new barrier? No.
8.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is the proposed structural section on cut or fill or both? Provide limits of both, if applicable. Fill
9.	<input type="checkbox"/>	<input type="checkbox"/>	Are highly expansive basement soils present? Unknown at this time, but possible based on other projects in the vicinity.

	Yes	No	Question
10.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are as-builts (including structural section information regarding edge drains, under drains, lime treatment, permeable blanket, etc.) available? No.
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If no, did you check map files and online? No information has been found.
			If yes, existing structural section was based on (check one): <input type="checkbox"/> as-built <input type="checkbox"/> actual boring
11.	<input type="checkbox"/>	<input type="checkbox"/>	Do the project limits have problems with groundwater (e.g., high water table, flow requirements, etc.)? If yes, explain: Unknown at this time.
12.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Has the availability of pavement materials (i.e., long haul distances from plants) been considered? No.
			If yes, how does material availability affect pavement type selection?
13.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Will the existing pavement be rehabilitated?
	<input type="checkbox"/>	<input type="checkbox"/>	What are the age and condition of the existing adjacent lanes? Explain: The existing adjacent lanes are in poor condition with International Roughness Index(IRI) value > 170.
14.	<input type="checkbox"/>	<input type="checkbox"/>	What is the type of pavement/structural section (corridor pavement type/structural section continuity) on upstream/downstream roadway? Explain if several: Unknown.
15.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is TMP data (lane closure charts) available and was it considered?
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Will there be nighttime paving? If so, provide lane closure hours: _____.
16.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Was field Maintenance input considered?
17.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Were climate conditions (extreme temperature, rainfall, etc.) considered? If so, which ones do you anticipate affecting the pavement job?

	Yes	No	Question
18.			Which stage construction requirements (matching adjacent sections, temporary paving, etc.) were considered?
19.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is this a large-scale project? Explain all quantity take-off: The quantity take-off is based on calculated volume of proposed structure.
20.	<input type="checkbox"/>	<input type="checkbox"/>	Is there Open-Graded Hot-Mix Asphalt (OGHMA) on the existing pavement? Unknown at this time.
21.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Was environmental impact considered? Explain: No significant environmental impact has been found for the pavement design at this stage.
22.			What is the proposed pavement design life? 20 years.
23.			What is the final lane line configuration? 4-12ft lanes with 2-8ft shld
24.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are there vertical clearance issues? No. If yes, explain:
25.			What is the traffic index? 10 was used based on traffic study. The TI may be revised in the next project phase based on updated traffic data.
26.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are there existing retrofit edge drains? No.
27.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Will shoulders be used as detours? No.
28.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is there settlement at bridge approaches? Not applicable
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are bridge approach slabs being replaced? Does such replacement include shoulders? Not applicable.
			Consulted with structures maintenance representative on _____.
29.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is there a minimum standard (2% or 1.5%) cross-slope? Yes. If not standard, provide date of design exception approval: _____
30.			Provide the pavement condition report. Pavement Condition Report is attached.
31	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other factors? Explain: No geotechnical field investigation has been performed yet for this project.

Attachment M
Draft Cooperative
Agreement

COOPERATIVE AGREEMENT

This agreement, effective on _____, is between the State of California, acting through its Department of Transportation, referred to as CALTRANS, and:

Solano Transportation Authority, a political subdivision of the State of California, referred to as STA.

For the purpose of this agreement, the term PARTNERS collectively refers to CALTRANS and STA (all signatory parties to this agreement). The term PARTNER refers to any one of those signatory parties individually.

RECITALS

1. California Streets and Highways Code sections 114 and 130 authorize PARTNERS to enter into a cooperative agreement for performance of work within the State Highway System (SHS) right of way.
2. This agreement outlines the terms and conditions of cooperation between PARTNERS to complete PA&ED component of PROJECT for the realignment of the intersection of State Route 12 at Church Road/Amerada Road and new right/left turn lanes and acceleration/deceleration lanes along State Route 12.

For the purpose of this agreement, the realignment of the intersection of State Route 12 at Church Road/Amerada Road and new right/left turn lanes and acceleration/deceleration lanes along State Route 12 will be referred to as PROJECT. All responsibilities assigned in this agreement to complete PA&ED component of PROJECT will be referred to as OBLIGATIONS

3. There are no prior PROJECT-related cooperative agreements.
4. No PROJECT deliverables have been completed prior to this agreement.
5. The estimated date for OBLIGATION COMPLETION is December 31, 2015.
6. In this agreement capitalized words represent defined terms and acronyms. The Definitions section contains a complete definition for each capitalized term.
7. From this point forward, PARTNERS define in this agreement the terms and conditions under which they will accomplish OBLIGATIONS.

RESPONSIBILITIES

8. STA is SPONSOR for 100% of PROJECT.
9. CALTRANS will provide IQA for the portions of WORK within existing and proposed SHS right of way. CALTRANS retains the right to reject noncompliant WORK, protect public safety, preserve property rights, and ensure that all WORK is in the best interest of the SHS.
10. STA may provide IQA for the portions of WORK outside existing and proposed SHS right of way.
11. STA is the only FUNDING PARTNER for this agreement. STA's funding commitment is defined in the FUNDING SUMMARY.
12. CALTRANS is the CEQA lead agency for PROJECT.
13. CALTRANS is the NEPA lead agency for PROJECT.
14. STA is IMPLEMENTING AGENCY for PA&ED.

SCOPE

Scope: General

15. PARTNERS will perform all OBLIGATIONS in accordance with federal and California laws, regulations, and standards; FHWA STANDARDS; and CALTRANS STANDARDS.
16. IMPLEMENTING AGENCY for a PROJECT COMPONENT will provide a Quality Management Plan (QMP) for that component as part of the PROJECT MANAGEMENT PLAN.
17. Any PARTNER may, at its own expense, have representatives observe any OBLIGATIONS performed by another PARTNER. Observation does not constitute authority over those OBLIGATIONS.
18. Each PARTNER will ensure that all of its personnel participating in OBLIGATIONS are appropriately qualified, and if necessary licensed, to perform the tasks assigned to them.
19. PARTNERS will invite each other to participate in the selection and retention of any consultants who participate in OBLIGATIONS.
20. If WORK is done under contract (not completed by a PARTNER's own employees) and is governed by the California Labor Code's definition of a "public work" (section 1720(a)(a)), that PARTNER will conform to sections 1720 – 1815 of the California Labor

Code and all applicable regulations and coverage determinations issued by the Director of Industrial Relations.

21. IMPLEMENTING AGENCY for each PROJECT COMPONENT included in this agreement will be available to help resolve problems generated by that component for the entire duration of PROJECT.
22. CALTRANS will issue, upon proper application, at no cost, the encroachment permits required for WORK within SHS right of way.

Contractors and/or agents, and utility owners will not perform WORK without an encroachment permit issued in their name.

23. If any PARTNER discovers unanticipated cultural, archaeological, paleontological, or other protected resources during WORK, all WORK in that area will stop and that PARTNER will notify all PARTNERS within 24 hours of discovery. WORK may only resume after a qualified professional has evaluated the nature and significance of the discovery and a plan is approved for its removal or protection.
24. PARTNERS will hold all administrative draft and administrative final reports, studies, materials, and documentation relied upon, produced, created, or utilized for PROJECT in confidence to the extent permitted by law. Where applicable, the provisions of California Government Code section 6254.5(e) will govern the disclosure of such documents in the event that PARTNERS share said documents with each other

PARTNERS will not distribute, release, or share said documents with anyone other than employees, agents, and consultants who require access to complete PROJECT without the written consent of the partner authorized to release them, unless required or authorized to do so by law.

25. If any PARTNER receives a public records request, pertaining to OBLIGATIONS, that PARTNER will notify PARTNERS within five (5) working days of receipt and make PARTNERS aware of any disclosed public records. PARTNERS will consult with each other prior to the release of any public documents related to the PROJECT.
26. If HM-1 or HM-2 is found during a PROJECT COMPONENT, IMPLEMENTING AGENCY for that PROJECT COMPONENT will immediately notify PARTNERS.
27. CALTRANS, independent of PROJECT, is responsible for any HM-1 found within existing SHS right of way. CALTRANS will undertake HM-1 MANAGEMENT ACTIVITIES with minimum impact to PROJECT schedule.
28. If HM-1 is found within PROJECT limits and outside existing SHS right of way, responsibility for such HM-1 rests with the owner(s) of the parcel(s) on which the HM-1 is found. STA, in concert with the local agency having land use jurisdiction over the

parcel(s), will ensure that HM-1 management activities are undertaken with minimum impact to PROJECT schedule.

29. If HM-2 is found within PROJECT limits, the public agency responsible for the advertisement, award, and administration (AAA) of the PROJECT construction contract will be responsible for HM-2 MANAGEMENT ACTIVITIES.
30. CALTRANS' acquisition or acceptance of title to any property on which any HM-1 or HM-2 is found will proceed in accordance with CALTRANS' policy on such acquisition.
31. PARTNERS will comply with all of the commitments and conditions set forth in the environmental documentation, environmental permits, approvals, and applicable agreements as those commitments and conditions apply to each PARTNER's responsibilities in this agreement.
32. IMPLEMENTING AGENCY for each PROJECT COMPONENT will furnish PARTNERS with written monthly progress reports during the implementation of OBLIGATIONS in that component.
33. Upon OBLIGATION COMPLETION, ownership and title to all materials and equipment constructed or installed for the operations and/or maintenance of the SHS within SHS right of way as part of WORK become the property of CALTRANS.

CALTRANS will not accept ownership of title to any materials or equipment constructed or installed outside SHS right of way.
34. IMPLEMENTING AGENCY for a PROJECT COMPONENT will accept, reject, compromise, settle, or litigate claims of any non-agreement parties hired to do WORK in that component.
35. PARTNERS will confer on any claim that may affect OBLIGATIONS or PARTNERS' liability or responsibility under this agreement in order to retain resolution possibilities for potential future claims. No PARTNER will prejudice the rights of another PARTNER until after PARTNERS confer on claim.
36. PARTNERS will maintain, and will ensure that any party hired by PARTNERS to participate in OBLIGATIONS will maintain, a financial management system that conforms to Generally Accepted Accounting Principles (GAAP), and that can properly accumulate and segregate incurred PROJECT costs, and provide billing and payment support.
37. PARTNERS will comply with the appropriate federal cost principles and administrative requirements outlined in the Applicable Cost Principles and Administrative Requirements table below. These principals and requirements apply to all funding types included in this agreement.

Applicable Cost Principles and Administration Requirements		
The federal cost principles and administrative requirements associated with each organization type apply to that organization.		
Organization Type	Cost Principles	Administrative Requirements
Federal Governments	2 CFR Part 225	OMB A-102
State and Local Government	2 CFR, Part 225	49 CFR, Part 18
Educational Institutions	2 CFR, Part 220	2 CFR, Part 215
Non-Profit Organizations	2 CFR, Part 230	2 CFR, Part 215
For Profit Organizations	48 CFR, Chapter 1, Part 31	49 CFR, Part 18
CFR (Code of Federal Regulations)		
OMB (Office of Management and Budget)		
Related URLs:		
• Various OMB Circular:	http://www.whitehouse.gov/omb/grants_circulars	
• Code of Federal Regulations:	http://www.gpoaccess.gov/CFR	

38. PARTNERS will maintain and make available to each other all OBLIGATIONS-related documents, including financial data, during the term of this agreement.
39. PARTNERS will retain all OBLIGATIONS-related records for three (3) years after the federal final voucher.
40. PARTNERS have the right to audit each other in accordance with generally accepted governmental audit standards.

CALTRANS, the state auditor, FHWA, and STA will have access to all OBLIGATIONS-related records of each PARTNER, and any party hired by a PARTNER to participate in OBLIGATIONS, for audit, examination, excerpt, or transcription.

The examination of any records will take place in the offices and locations where said records are generated and/or stored and will be accomplished during reasonable hours of operation. The auditing PARTNER will be permitted to make copies of any OBLIGATIONS-related records needed for the audit.

The audited PARTNER will review the draft audit, findings, and recommendations, and provide written comments within 30 calendar days of receipt.

Upon completion of the final audit, PARTNERS have 30 days to refund or invoice as necessary in order to satisfy the obligation of the audit.

Any audit dispute not resolved by PARTNERS is subject to dispute resolution. Any costs arising out of the dispute resolution process will be paid within 30 calendar days of the final audit or dispute resolution findings.

- 41. Any PARTNER that hires another party to participate in OBLIGATIONS will conduct a pre-award audit of that party in accordance with the *Local Assistance Procedures Manual*.
- 42. PARTNERS consent to service of process by mailing copies by registered or certified mail, postage prepaid. Such service becomes effective 30 calendar days after mailing. However, nothing in this agreement affects PARTNERS' rights to serve process in any other manner permitted by law.
- 43. PARTNERS will not incur costs beyond the funding commitments in this agreement. If IMPLEMENTING AGENCY anticipates that funding for WORK will be insufficient to complete WORK, IMPLEMENTING AGENCY will promptly notify SPONSOR.

IMPLEMENTING AGENCY has no obligation to perform WORK if funds to perform WORK are unavailable.

- 44. If WORK stops for any reason, IMPLEMENTING AGENCY will place all facilities impacted by WORK in a safe and operable condition acceptable to CALTRANS.
- 45. If WORK stops for any reason, each PARTNER will continue to implement all of its applicable commitments and conditions included in the PROJECT environmental documentation, permits, agreements, or approvals that are in effect at the time that WORK stops, as they apply to each PARTNER's responsibilities in this agreement, in order to keep PROJECT in environmental compliance until WORK resumes.
- 46. Each PARTNER accepts responsibility to complete the activities that it selected on the SCOPE SUMMARY. Activities marked with "N/A" on the SCOPE SUMMARY are not included in the scope of this agreement.

Scope: Environmental Permits

- 47. Each PARTNER identified in the Environmental Permits table below accepts the responsibility to complete the assigned activities.

Environmental Permits						
Permit	Coordinate	Prepare	Obtain	Implement	Renew	Amend
404 USACOE	STA	STA	STA	STA	STA	STA
401 RWQCB	STA	STA	STA	STA	STA	STA
NPDES SWRCB	STA	STA	STA	STA	STA	STA

Scope: Project Approval and Environmental Document (PA&ED)

48. CALTRANS is the CEQA lead agency for PROJECT. CALTRANS will determine the type of environmental documentation required and will cause that documentation to be prepared.
49. Any PARTNER involved in the preparation of CEQA environmental documentation will follow the CALTRANS STANDARDS that apply to the CEQA process including, but not limited to, the guidance provided in the Standard Environmental Reference available at www.dot.ca.gov/ser.
50. Pursuant to SAFETEA-LU Section 6004 and/or 6005, CALTRANS is the NEPA lead agency for PROJECT. CALTRANS will assume responsibility for NEPA compliance and will prepare any needed NEPA environmental documentation or will cause that documentation to be prepared.
51. Any PARTNER involved in the preparation of NEPA environmental documentation will follow the SER and FHWA STANDARDS that apply to the NEPA process including, but not limited to, the guidance provided in the FHWA Environmental Guidebook available at www.fhwa.dot.gov/hep/index.htm.
52. STA will prepare the appropriate CEQA environmental documentation to meet CEQA requirements.
53. STA will prepare the appropriate NEPA environmental documentation to meet NEPA requirements.
54. Any PARTNER preparing any portion of the CEQA environmental documentation, including any studies and reports, will submit that portion of the documentation to the CEQA lead agency for review, comment, and approval at appropriate stages of development prior to public availability.
55. Any PARTNER preparing any portion of the NEPA environmental documentation (including, but not limited to, studies, reports, public notices, and public meeting materials, determinations, administrative drafts, and final environmental documents) will submit that portion of the documentation to CALTRANS for CALTRANS' review, comment, and approval prior to public availability.
56. STA will prepare, publicize, and circulate all CEQA-related public notices and will submit said notices to the CEQA lead agency for review, comment, and approval prior to publication and circulation.
57. STA will prepare, publicize, and circulate all NEPA-related public notices, except Federal Register notices. STA will submit all notices to CALTRANS for CALTRANS' review, comment, and approval prior to publication and circulation.

CALTRANS will work with the appropriate federal agency to publish notices in the Federal Register.

58. The CEQA lead agency will attend all CEQA-related public meetings.
59. STA will plan, schedule, prepare materials for, and host all CEQA-related public meetings and will submit all materials to the CEQA lead agency for review, comment, and approval at least 10 working days prior to the public meeting date.
60. The NEPA lead agency will attend all NEPA-related public meetings.
61. STA will plan, schedule, prepare materials for, and host all NEPA-related public meetings. STA will submit all materials to CALTRANS for CALTRANS' review, comment, and approval at least 10 working days prior to the public meeting date.
62. If a PARTNER who is not the CEQA or NEPA lead agency holds a public meeting about PROJECT, that PARTNER must clearly state its role in PROJECT and the identity of the CEQA and NEPA lead agencies on all meeting publications. All meeting publications must also inform the attendees that public comments collected at the meetings are not part of the CEQA or NEPA public review process.

That PARTNER will submit all meeting advertisements, agendas, exhibits, handouts, and materials to the appropriate lead agency for review, comment, and approval at least 10 working days prior to publication or use. If that PARTNER makes any changes to the materials, it will allow the appropriate lead agency to review, comment on, and approve those changes at least three (3) working days prior to the public meeting date.

The CEQA lead agency maintains final editorial control with respect to text or graphics that could lead to public confusion over CEQA-related roles and responsibilities. The NEPA lead agency has final approval authority with respect to text or graphics that could lead to public confusion over NEPA-related roles and responsibilities.

63. The PARTNER preparing the environmental documentation, including the studies and reports, will ensure that qualified personnel remain available to help resolve environmental issues and perform any necessary work to ensure that PROJECT remains in environmental compliance.

COST

Cost: General

64. The cost of any awards, judgments, or settlements generated by OBLIGATIONS is an OBLIGATIONS COST.
65. CALTRANS, independent of PROJECT, will pay all costs for HM MANAGEMENT ACTIVITIES related to HM-1 found within existing SHS right of way.

66. Independent of PROJECT, all costs for HM management activities related to HM-1 found within PROJECT limits and outside the existing SHS right of way will be the responsibility of the owner(s) of the parcel(s) where the HM-1 is located.
67. HM MANAGEMENT ACTIVITIES costs related to HM-2 are CONSTRUCTION SUPPORT and CONSTRUCTION CAPITAL cost.
68. The cost of coordinating, obtaining, complying with, implementing, and if necessary renewing and amending resource agency permits, agreements, and/or approvals is an OBLIGATIONS COST.
69. The cost to comply with and implement the commitments set forth in the environmental documentation is an OBLIGATIONS COST.
70. The cost to ensure that PROJECT remains in environmental compliance is an OBLIGATIONS COST.
71. The cost of any legal challenges to the CEQA or NEPA environmental process or documentation is an OBLIGATIONS COST.
72. Independent of OBLIGATIONS COST, CALTRANS will fund the cost of its own IQA for WORK done within existing or proposed future SHS right of way.
73. Independent of OBLIGATIONS COST, STA will fund the cost of its own IQA for WORK done outside existing or proposed future SHS right of way.
74. CALTRANS will provide encroachment permits to STA at no cost. CALTRANS will charge contractors, consultants, and agents the standard encroachment permit fees.
75. Fines, interest, or penalties levied against a PARTNER will be paid, independent of OBLIGATIONS COST, by the PARTNER whose actions or lack of action caused the levy. That PARTNER will indemnify and defend each other PARTNER.
76. Travel, per diem, and third-party contract reimbursements are an OBLIGATIONS COST only after those hired by PARTNERS to participate in OBLIGATIONS incur and pay those costs.

Payments for travel and per diem will not exceed the rates paid rank and file state employees under current California Department of Personnel Administration (DPA) rules current at the effective date of this agreement.

If STA invoices for rates in excess of DPA rates, STA will fund the cost difference and reimburse CALTRANS for any overpayment.
77. The cost of any engineering support performed by CALTRANS includes all direct and applicable indirect costs. CALTRANS calculates indirect costs based solely on the type of

funds used to pay support costs. State and federal funds are subject the Program Functional Rate. Local funds are subject to the Program Functional Rate and the Administration Rate.

78. If any PARTNER reimburses another PARTNER for any costs later determined to be unallowable, the PARTNER that received the reimbursement will reimburse those funds.
79. The cost to place PROJECT right of way in a safe and operable condition and meet all environmental commitments is an OBLIGATIONS COST.
80. Because IMPLEMENTING AGENCY is responsible for managing the scope, cost, and schedule of a project component, if there are insufficient funds available in this agreement to place the right of way in a safe and operable condition, the appropriate IMPLEMENTING AGENCY accepts responsibility to fund these activities until such time as PARTNERS amend this agreement.

That IMPLEMENTING AGENCY may request reimbursement for these costs during the amendment process.

81. If there are insufficient funds in this agreement to implement applicable commitments and conditions included in the PROJECT environmental documentation, permits, agreements, and/or approvals that are in effect at a time that WORK stops, each PARTNER implementing commitments or conditions accepts responsibility to fund these activities, as they apply to each PARTNER's responsibilities, until such time are PARTNERS amend this agreement.

Each PARTNER may request reimbursement for these costs during the amendment process.

82. PARTNERS will pay invoices within 30 calendar days of receipt of invoice.

Cost: Project Approval and Environmental Document (PA&ED)

83. The cost to prepare, publicize, and circulate all CEQA and NEPA-related public notices is an OBLIGATIONS COST.
84. The cost to plan, schedule, prepare, materials for, and host all CEQA and NEPA-related public hearings is an OBLIGATIONS COST.

SCHEDULE

85. PARTNERS will manage the schedule for OBLIGATIONS through the work plan included in the PROJECT MANAGEMENT PLAN.

GENERAL CONDITIONS

86. PARTNERS understand that this agreement is in accordance with and governed by the Constitution and laws of the State of California. This agreement will be enforceable in the State of California. Any PARTNER initiating legal action arising from this agreement will file and maintain that legal action in the Superior Court of the county in which the CALTRANS district office signatory to this agreement resides.
87. All OBLIGATIONS of CALTRANS under the terms of this agreement are subject to the appropriation of resources by the Legislature, the State Budget Act authority, and the allocation of funds by the California Transportation Commission.
88. Any PARTNER performing IQA does so for its own benefit. No one can assign liability to that PARTNER due to its IQA activities.
89. Neither STA nor any officer or employee thereof is responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by CALTRANS under or in connection with any work, authority, or jurisdiction conferred upon CALTRANS under this agreement.

It is understood and agreed that CALTRANS will fully defend, indemnify, and save harmless STA and all of its officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories or assertions of liability occurring by reason of anything done or omitted to be done by CALTRANS under this agreement.

90. Neither CALTRANS nor any officer or employee thereof is responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by STA under or in connection with any work, authority, or jurisdiction conferred upon STA under this agreement.

It is understood and agreed that STA will fully defend, indemnify, and save harmless CALTRANS and all of its officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories or assertions of liability occurring by reason of anything done or omitted to be done by STA under this agreement.

91. PARTNERS do not intend this agreement to create a third party beneficiary or define duties, obligations, or rights in parties not signatory to this agreement. PARTNERS do not intend this agreement to affect their legal liability by imposing any standard of care for fulfilling OBLIGATIONS different from the standards imposed by law.
92. PARTNERS will not assign or attempt to assign OBLIGATIONS to parties not signatory to this agreement.

93. PARTNERS will not interpret any ambiguity contained in this agreement against each other. PARTNERS waive the provisions of California Civil Code section 1654.
94. A waiver of a PARTNER's performance under this agreement will not constitute a continuous waiver of any other provision. An amendment made to any article or section of this agreement does not constitute an amendment to or negate all other articles or sections of this agreement.
95. A delay or omission to exercise a right or power due to a default does not negate the use of that right or power in the future when deemed necessary.
96. If any PARTNER defaults in its OBLIGATIONS, a non-defaulting PARTNER will request in writing that the default be remedied within 30 calendar days. If the defaulting PARTNER fails to do so, the non-defaulting PARTNER may initiate dispute resolution.
97. PARTNERS will first attempt to resolve agreement disputes at the PROJECT team level. If they cannot resolve the dispute themselves, the CALTRANS district director and the executive officer of STA will attempt to negotiate a resolution. If PARTNERS do not reach a resolution, PARTNERS' legal counsel will initiate mediation. PARTNERS agree to participate in mediation in good faith and will share equally in its costs.

Neither the dispute nor the mediation process relieves PARTNERS from full and timely performance of OBLIGATIONS in accordance with the terms of this agreement. However, if any PARTNER stops fulfilling OBLIGATIONS, any other PARTNER may seek equitable relief to ensure that OBLIGATIONS continue.

Except for equitable relief, no PARTNER may file a civil complaint until after mediation, or 45 calendar days after filing the written mediation request, whichever occurs first.

PARTNERS will file any civil complaints in the Superior Court of the county in which the CALTRANS district office signatory to this agreement resides. The prevailing PARTNER will be entitled to an award of all costs, fees, and expenses, including reasonable attorney fees as a result of litigating a dispute under this agreement or to enforce the provisions of this article including equitable relief.

98. PARTNERS maintain the ability to pursue alternative or additional dispute remedies if a previously selected remedy does not achieve resolution.
99. If any provisions in this agreement are deemed to be, or are in fact, illegal, inoperative, or unenforceable, those provisions do not render any or all other agreement provisions invalid, inoperative, or unenforceable, and PARTNERS will automatically sever those provisions from this agreement.
100. PARTNERS intend this agreement to be their final expression and supersede any oral understanding or writings pertaining to OBLIGATIONS.

101. If during performance of WORK additional activities or environmental documentation is necessary to keep PROJECT in environmental compliance, PARTNERS will amend this agreement to include completion of those additional tasks.
102. PARTNERS will execute a formal written amendment if there are any changes to OBLIGATIONS.
103. This agreement will terminate upon OBLIGATION COMPLETION or an amendment to terminate this agreement, whichever occurs first.

However, all indemnification, document retention, audit, claims, environmental commitment, legal challenge, and ownership articles will remain in effect until terminated or modified in writing by mutual agreement.

104. The following documents are attached to, and made an express part of this agreement: SCOPE SUMMARY, FUNDING SUMMARY.

DEFINITIONS

CALTRANS – The California Department of Transportation

CALTRANS STANDARDS – CALTRANS policies and procedures, including, but not limited to, the guidance provided in the *Guide to Capital Project Delivery Workplan Standards* (previously known as WBS Guide) available at <http://www.dot.ca.gov/hq/projmgmt/guidance.htm>.

CEQA (California Environmental Quality Act) – The act (California Public Resources Code, sections 21000 et seq.) that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those significant impacts, if feasible.

CFR (Code of Federal Regulations) – The general and permanent rules published in the Federal Register by the executive departments and agencies of the federal government

COOPERATIVE AGREEMENT CLOSURE STATEMENT – A document signed by PARTNERS that verifies the completion of all OBLIGATIONS included in this agreement and in all amendments to this agreement.

COST – The responsibility for cost responsibilities in this agreement can take one of three assignments:

- **OBLIGATIONS COST** – A cost associated with fulfilling OBLIGATIONS that will be funded as part of this agreement. The responsibility is defined by the funding commitments in this agreement.
- **PROJECT COST** – A cost associated with PROJECT that can be funded outside of OBLIGATIONS. A PROJECT COST may not necessarily be part of this agreement. This

responsibility is defined by the PARTNERS' funding commitments at the time the cost is incurred.

- **PARTNER cost** – A cost that is the responsibility of a specific PARTNER, independent of PROJECT.

FHWA – Federal Highway Administration

FHWA STANDARDS – FHWA regulations, policies and procedures, including, but not limited to, the guidance provided at www.fhwa.dot.gov/topics.htm.

FUNDING PARTNER – A PARTNER that commits a defined dollar amount to fulfill OBLIGATIONS. Each FUNDING PARTNER accepts responsibility to provide the funds identified on the FUNDING SUMMARY under its name.

FUNDING SUMMARY – The table that designates an agreement's funding sources, types of funds, and the PROJECT COMPONENT in which the funds are to be spent. Funds listed on the FUNDING SUMMARY are "not-to-exceed" amounts for each FUNDING PARTNER.

GAAP (Generally Accepted Accounting Principles) – Uniform minimum standards and guidelines for financial accounting and reporting issued by the Federal Accounting Standards Advisory Board that serve to achieve some level of standardization. See <http://www.fasab.gov/accepted.html>.

HM-1 – Hazardous material (including, but not limited to, hazardous waste) that may require removal and disposal pursuant to federal or state law whether it is disturbed by PROJECT or not.

HM-2 – Hazardous material (including, but not limited to, hazardous waste) that may require removal and disposal pursuant to federal or state law only if disturbed by PROJECT.

HM MANAGEMENT ACTIVITIES – Management activities related to either HM-1 or HM-2 including, without limitation, any necessary manifest requirements and disposal facility designations.

IMPLEMENTING AGENCY – The PARTNER responsible for managing the scope, cost, and schedule of a PROJECT COMPONENT to ensure the completion of that component.

IQA (Independent Quality Assurance) – Ensuring that IMPLEMENTING AGENCY's quality assurance activities result in WORK being developed in accordance with the applicable standards and within an established Quality Management Plan (QMP). IQA does not include any work necessary to actually develop or deliver WORK or any validation by verifying or rechecking work performed by another partner.

NEPA (National Environmental Policy Act of 1969) – The federal act that establishes a national policy for the environment and a process to disclose the adverse impacts of projects with a federal nexus.

OBLIGATION COMPLETION – PARTNERS have fulfilled all OBLIGATIONS included in this agreement, and all amendments to this agreement, and have signed a COOPERATIVE AGREEMENT CLOSURE STATEMENT.

OBLIGATIONS – All responsibilities included in this agreement.

OBLIGATIONS COST – See COST.

OMB (Office of Management and Budget) – The federal office that oversees preparation of the federal budget and supervises its administration in Executive Branch agencies.

PA&ED (Project Approval and Environmental Document) – See PROJECT COMPONENT.

PARTNER – Any individual signatory party to this agreement.

PARTNERS – The term that collectively references all of the signatory agencies to this agreement. This term only describes the relationship between these agencies to work together to achieve a mutually beneficial goal. It is not used in the traditional legal sense in which one PARTNER's individual actions legally bind the other partners.

PROJECT – The undertaking to the realignment of the intersection of State Route 12 at Church Road/Amerada Road and new right/left turn lanes and acceleration/deceleration lanes along State Route 12.

PROJECT COMPONENT – A distinct portion of the planning and project development process of a capital project as outlined in California Government Code, section 14529(b).

- **PID (Project Initiation Document)** – The activities required to deliver the project initiation document for PROJECT.
- **PA&ED (Project Approval and Environmental Document)** – The activities required to deliver the project approval and environmental documentation for PROJECT.
- **PS&E (Plans, Specifications, and Estimate)** – The activities required to deliver the plans, specifications, and estimate for PROJECT.
- **R/W (Right of Way) SUPPORT** – The activities required to appraise, acquire, manage, and dispose of real property.
- **R/W (Right of Way) CAPITAL** – The funds for acquisition of real property.
- **CONSTRUCTION SUPPORT** – The activities required for the administration, acceptance, and final documentation of the construction contract for PROJECT.
- **CONSTRUCTION CAPITAL** – The funds for the construction contract.

PROJECT COST – See COST.

PROJECT MANAGEMENT PLAN – A group of documents used to guide a project's execution and control throughout that project's lifecycle.

QMP (Quality Management Plan) – An integral part of the Project Management Plan that describes IMPLEMENTING AGENCY's quality policy and how it will be used.

SAFETEA-LU – Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

SCOPE SUMMARY – The attachment in which each PARTNER designates its commitment to specific scope activities within each PROJECT COMPONENT as outlined by the *Guide to Capital Project Delivery Workplan Standards* (previously known as WBS Guide) available at <http://www.dot.ca.gov/hq/projmgmt/guidance.htm>.

SHS (State Highway System) – All highways, right of way, and related facilities acquired, laid out, constructed, improved, or maintained as a state highway pursuant to constitutional or legislative authorization.

SPONSOR – Any PARTNER that accepts the responsibility to establish scope of PROJECT and the obligation to secure financial resources to fund PROJECT. SPONSOR is responsible for adjusting the PROJECT scope to match committed funds or securing additional funds to fully fund the PROJECT scope. If a PROJECT has more than one SPONSOR, funding adjustments will be made by percentage (as outlined in Responsibilities). Scope adjustments must be developed through the project development process and must be approved by CALTRANS as the owner/operator of the SHS.

WORK – All scope activities included in this agreement.

CONTACT INFORMATION

The information provided below indicates the primary contact data for each PARTNER to this agreement. PARTNERS will notify each other in writing of any personnel or location changes. Contact information changes do not require an amendment to this agreement.

The primary agreement contact person for CALTRANS is:

Jason Mac, Project Manager
111 Grand Avenue
Oakland, California 94612
Office Phone: (510) 622-8891
Mobile Phone: (510) 290-0476
Fax Number: (510) 622-0192
Email: jason_mac@dot.ca.gov

The primary agreement contact person for STA is:

Janet Adams, Director of Projects
One Harbour Center, Suite 130
Suisun City, California 94585
Office Phone: (707) 424-6010
Email: jadams@STA-SNCI.com

SIGNATURES

PARTNERS declare that:

1. Each PARTNER is an authorized legal entity under California state law.
2. Each PARTNER has the authority to enter into this agreement.
3. The people signing this agreement have the authority to do so on behalf of their public agencies.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

SOLANO TRANSPORTATION AUTHORITY

By: _____
Helena (Lenka) Culik-Caro
Deputy District Director - Design

By: _____
Daryl Halls
Executive Director

CERTIFIED AS TO FUNDS:

Attest: _____
Johanna Masielat
Clerk of the Board

By: _____
Maureen Rehs
District Budget Manager

APPROVED AS TO FORM AND PROCEDURE

By: _____
Charles Lamoree
STA Legal Counsel

SCOPE SUMMARY

4	5	6	7	8	Description	CALTRANS	STA	N/A
2	160				Perform Preliminary Engineering Studies and Draft Project Report	X	X	
		05			Updated Project information		X	
		10			Engineering Studies		X	
		15			Draft Project Report		X	
		20			Engineering and Land Net Surveys		X	
		30			Environmental Study Request (ESR)		X	
		40			NEPA Delegation	X		
		45			Base Maps and Plan Sheets for Project Report and Environmental Studies		X	
2	165				Perform Environmental Studies and Prepare Draft Environmental Document	X	X	
		05			Environmental Scoping of Alternatives Identified for Studies in Project Initiation Document		X	
		10			General Environmental Studies		X	
		15			Biological Studies		X	
		20			Cultural Resource Studies		X	
			05		Archaeological Survey		X	
			10		Extended Phase I Archaeological Studies		X	
			15		Phase II Archaeological Studies		X	
			20		Historical and Architectural Resource Studies		X	
			25		Cultural Resource Compliance Consultation Documents		X	
		25			Draft Environmental Document or Categorical Exemption/Exclusion	X	X	
			10		Section 4(F) Evaluation	X	X	
			20		Environmental Quality Control and Other Reviews	X		
			25		Approval to Circulate Resolution	X		
			30		Environmental Coordination		X	
			99		Other Draft Environmental Document Products		X	
		30			NEPA Delegation	X		
2	170				Permits, Agreements, and Route Adoptions during PA&ED component	X	X	
		05			Required permits		X	
		10			Permits		X	
			05		U.S. Army Corps of Engineers Permit (404)		X	
			10		U.S. Forest Service Permit(s)			X
			15		U.S. Coast Guard Permit			x
			20		Department of Fish and Game 1600 Agreement(s)			X

		25		Coastal Zone Development Permit			X
		30		Local Agency Concurrence/Permit			X
		35		Waste Discharge (NPDES) Permit		X	
		40		U.S. Fish and Wildlife Service Approval			X
		45		Regional Water Quality Control Board 401 Permit		X	
		50		Updated Environmental Commitments Record		X	
		95		Other Permits			X
		15		Railroad Agreements		X	
		20		Freeway Agreements		X	
		25		Agreement for Material Sites		X	
		30		Executed Maintenance Agreement		X	
		40		Route Adoptions		X	
		45		MOU From Tribal Employment Rights Office (TERO)		X	
		55		NEPA Delegation	X		
2	175			Circulate Draft Environmental Document and Select Preferred Project Alternative Identification	X	X	
		05		DED Circulation		X	
		10		Public Hearing	X	X	
		15		Public Comment Responses and Correspondence		X	
		20		Project Preferred Alternative	X		
		25		NEPA Delegation	X		
2	180			Prepare and Approve Project Report and Final Environmental Document	X	X	
		05		Final Project Report	X	X	
		10		Final Environmental Document	X	X	
		05		Approved Final Environmental Document	X	X	
			05	Draft Final Environmental Document Review	X		
			10	Revised Draft Final Environmental Document	X		
			15	Section 4(F) Evaluation	X		
			20	Findings	X		
			25	Statement of Overriding Considerations	X		
			30	CEQA Certification	X		
			40	Section 106 Consultation and MOA	X		
			45	Section 7 Consultation	X		
			50	Final Section 4(F) Statement	X		
			55	Floodplain Only Practicable Alternative Finding	X		
			60	Wetlands Only Practicable Alternative Finding	X		
			65	Section 404 Compliance		X	
			70	Mitigation Measures		X	
		10		Public Distribution of Final Environmental Document and Respond To Comments		X	
		15		Final Right of Way Relocation Impact Document		X	
		99		Other Final Environmental Document Products		X	
		15		Completed Environmental Document	X	X	
		05		Record of Decision (NEPA)	X		
		10		Notice of Determination (CEQA)	X		
		20		Environmental Commitments Record		X	

			99		Other Completed Environmental Document Products		X	
		20			NEPA Delegation	X		

FUNDING SUMMARY

Funding Source	Funding Partner	Fund Type	PA&ED	Subtotal Support	Subtotal Capital	Subtotal Funds Type
LOCAL	STA	Local	\$425,000	\$425,000	\$0	\$425,000
		Subtotals by Component	\$425,000	\$425,000	\$0	\$425,000