05-SLO-101-PM R21.1
05-1G480 – 0515000038
20.xx.400.100 Local
May 2016

Project Study Report-Project Development Support (PSR-PDS)

To

Request Approval to Proceed to the Project Approval and Environmental Document Phase for a Locally Funded Project

On Route 101

At Avila Beach Drive Interchange

APPROVAL RECOMMENDED:

Wade Horton, *COUNTY OF SAN LUIS OBISPO*
Accepts Risks Identified in this PSR-PDS and Attached Risk Register

APPROVAL RECOMMENDED:

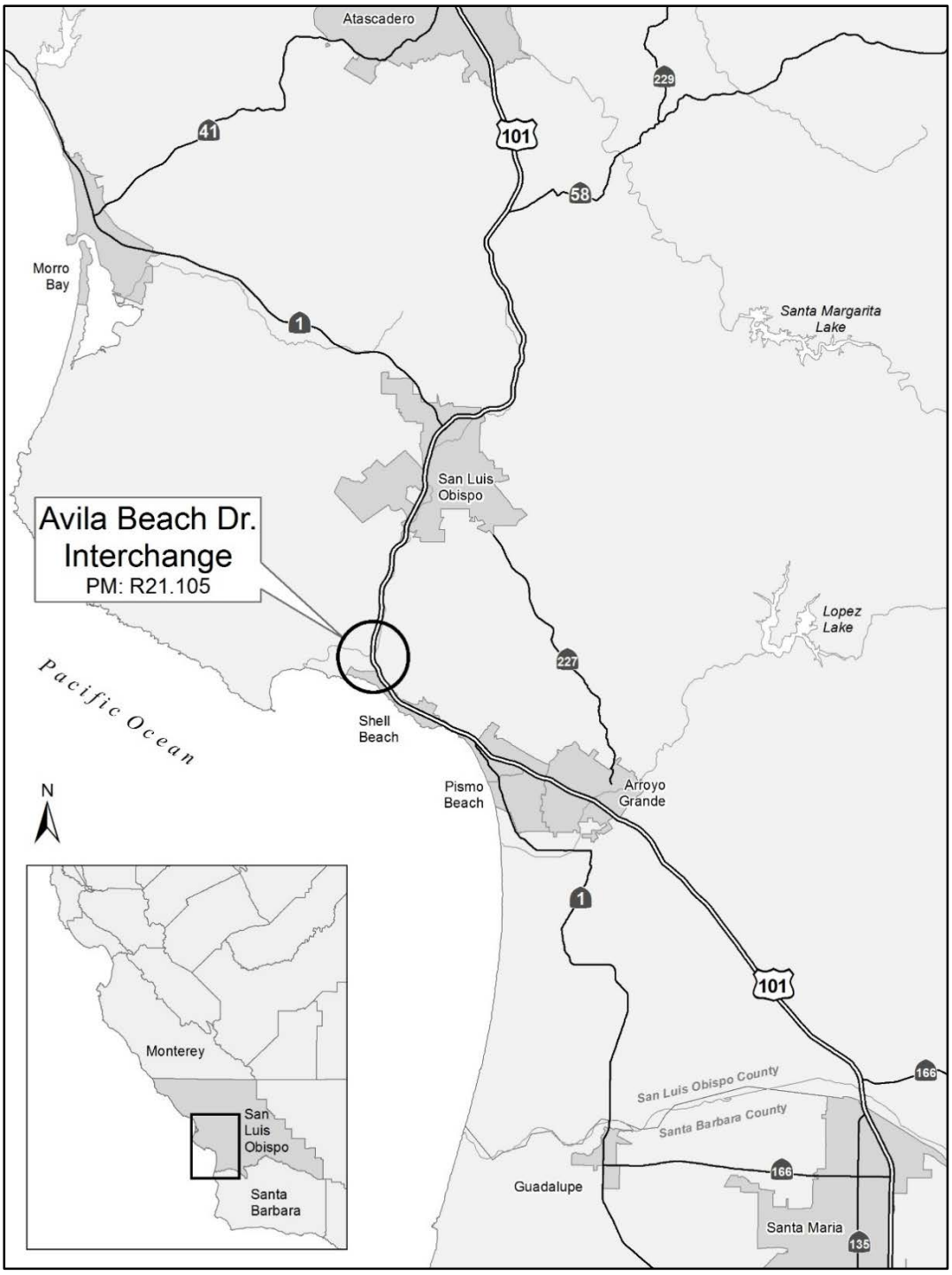
John Luchetta, *CALTRANS PROJECT MANAGER*

APPROVED:

Timothy M. Gubbins, *DISTRICT DIRECTOR*

5/9/2016
DATE

Vicinity Map



This project study report-project development support has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

CURTIS GUBLER, REGISTERED CIVIL ENGINEER *DATE* 5/03/2016

REGISTERED PROFESSIONAL ENGINEER
Curtis Gubler
No. C65304
Exp. 09/30/2017
CIVIL
STATE OF CALIFORNIA

Table of Contents

1. INTRODUCTION

The purpose of this Project Study Report-Project Development Support (PSR-PDS) is to request programming for capital support for the Project Approval and Environmental Document (PA&ED) component in order to begin the Project Approval and Environmental Document (PA&ED) phase.

The proposed alternatives include improving the northbound and southbound ramp intersections of the US 101/Avila Beach Drive interchange to address traffic operational deficiencies and improve multimodal access.

The US 101/Avila Beach Drive project is included in the San Luis Obispo Council of Governments (SLOCOG) *SLOCOG 2014 Regional Transportation Plan (RTP).* Local funds will be used during the PA&ED phase. Additional funding for final design, right-of-way, and construction costs will be proposed in future programming cycles.

All potential alternatives consider multimodal components and do not preclude future widening of US 101.

Project Limits	05-SLO-101-PM R21.1
Number of Alternatives	3
Current Capital Outlay Support Estimate for PA&ED	$950,000
Current Capital Outlay Construction Cost Range	$3.5 M to $8.5 M
Current Capital Outlay Right-of-Way Cost Range	$182,126
Funding Source	CMAQ / RSHA / Local
Type of Facility	At grade intersection of 4 lane freeway interchange.
Number of Structures	5 (retaining walls)
Anticipated Environmental Determination or Document	Mitigated Negative Declaration/ Categorical Exclusion
Legal Description	In San Luis Obispo County At Route 101 Intersections At Avila Beach Drive
Project Development Category	Category 3

The remaining capital outlay support, right-of-way, and construction components of the project are preliminary estimates and are not suitable for programming purposes. Either a project report or a supplemental project initiation document (PID) following the format of a project study report (PSR) will serve as the programming document for the remaining project components. A project report will serve as approval of the "selected" alternative.

Other approvals required:

- Coastal Development Permit
- 401c Water Quality Certification
- 404 Nationwide
- 1600 Streambed Alteration Agreement
- County of San Luis Obispo Encroachment Permit
- Mandatory & Advisory Design Exceptions

2. BACKGROUND

The County of San Luis Obispo has identified the US 101/Avila Beach Drive interchange southbound ramp intersection and Shell Beach Drive as a capital improvement project. They have proposed the evaluation of proper control for this intersection with strong consideration given to the construction of a roundabout. SLOCOG and the County are considering a future parking lot and Regional Transit Authority (RTA) bus stop at the southwest corner of Avila Beach Drive and Shell Beach Drive that could serve recreational and commuter purposes.

On May 21, 2012, the City of Pismo Beach held a community workshop, which identified a roundabout at this intersection as the desired alternative along with a city gateway enhancement.

In January 2015, SLOCOG, Caltrans and the County of San Luis Obispo initiated this PSR-PDS effort corresponding to the County's capital improvement project and the recommendations listed in SLOCOG's 2014 *US 101 Corridor Mobility Master Plan*. For Avila Beach Drive, the plan identified the simplification of the intersections of Avila Beach Drive, Shell Beach Road and US 101 southbound ramps, and better access to park and ride lots.

The US 101/Avila Beach Drive interchange northbound ramp intersection was included in order to analyze and address bicycle needs.

3. PURPOSE AND NEED

Purpose:
The purpose of the proposed project is to improve the operations and multimodal access of the US 101/Avila Beach Drive interchange northbound and southbound intersections.

Need:
The five-legged intersection of the southbound ramps, Avila Beach Drive and Shell Beach Road experiences operational issues during weekday p.m. peak travel times and the summer tourist seasons due to the intersection's geometry. The intersection is currently operating at Level of Service (LOS) "F" during p.m. peak periods. The three year collision rate is slightly below the statewide collision average; however,

the three year fatality and injury rate for the southbound off-ramp is above State average. The corner sight distance is limited for the left turn and through movements at the terminus of the southbound off-ramp.

Traffic patterns at the US 101 northbound off-ramp, Avila Beach Drive and Monte Road intersection are challenging, especially for bicyclists. Vehicles on the northbound off-ramp, which are not required to yield, approach the intersection at high speeds. The corner sight distance is limited for the minor movement turning left (the only movement possible) onto Monte Rd from eastbound Avila Beach Drive.

Vehicles exiting on the northbound off-ramp, which becomes westbound Avila Beach Drive, pass through the northbound intersection and onto the southbound intersection without the requirement to yield to the other, minor movements.

4. TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT

Currently, the Avila Beach southbound ramp intersection operates at LOS "F" (PM 21.280) and the 95 percent queue on the southbound off-ramp is estimated at 760 feet. The Caltrans Table B report for the US 101/ Avila Beach Drive ramp intersections from the last three years (05/01/2010 to 04/30/2013) shows that both the southbound ramp and the northbound ramp intersections are slightly below the statewide average. However, the three year fatality and injury rate for the southbound off-ramp is above State average.

The northbound ramp intersection is currently operating at LOS "A" in the a.m. and p.m. peak travel periods.

Based on the forecasted data from SLOCOG's 2014 *Corridor Mobility Master Plan* and count data performed April 28-30, 2015, it is recommended that an operational improvement be made to the US 101/Avila Beach Drive, Shell Beach Road and southbound ramp intersection. The northbound ramp intersection meets operational LOS.

The results of the Intersection Control Evaluation (ICE) for the proposed improvements to the southbound ramp node for year 2035 p.m. peak travel periods are as follows:

- All Way Stop Control would operate at LOS "E".
- Signal would operate at LOS "D".
- Single lane roundabout is anticipated to operate at LOS"C".

During the count periods, at the US 101 northbound ramp intersection, there were three bicycles turning from Monte Road to westbound Avila Beach Drive in the p.m. and one turning left from eastbound Avila Beach Drive onto Monte Road. At the US 101 southbound ramp intersection, there were three bikes turning left from Shell Beach Road. A bicyclist observed riding northbound on Shell Beach Road made an illegal movement by traveling eastbound along Avila Beach Drive on the westbound

shoulder against potential opposing traffic, and then made a left turn at the northbound intersection onto Monte Road.

In the a.m., there were four turning left from Shell Beach Road to westbound Avila Beach Drive and two turning right from eastbound Avila Beach Drive to Shell Beach Road.

This interchange provides a connectivity need for bicyclists and will require additional multimodal analysis during PA&ED.

5. DEFICIENCIES

Currently, the southbound ramp features a five-legged intersection with operational constraints during weekday p.m. peak travel times and summer tourist seasons affecting the level of service (LOS "F"). In addition, during peak periods, the intersection experiences increased congestion due to drivers on US 101 attempting to bypass mainline congestion by exiting the freeway to use local roads as an alternative throughway. The corner sight distance (CSD) at the terminus of the southbound off-ramp is limited for vehicles at the stop bar limit line that maneuver straight through the intersection onto southbound Shell Beach road, and for those that turn left onto eastbound Avila Beach Drive. The CSD for the drivers looking west at the eastbound traffic on Avila Beach Drive is limited due to the existing metal beam guardrail (MBGR) and a utility pole along the northwest corner of the southbound ramp intersection.

The northbound three-legged intersection is regulated by two-way stop control with the minor movements of Monte Rd and eastbound Avila Beach Drive having stop control. This allows the northbound off-ramp traffic to pass through at high rates of speed without yielding. While, the 2035 operational analysis anticipates the northbound ramp intersection to be LOS "A", the intersection has bicycling limitations that need to be addressed. Corner sight distance on eastbound Avila Beach Drive at Monte Road looking upstream on the northbound off-ramp is limited by the embankment fill. It is further limited by several signs and signposts.

The northbound off-ramp vehicles continue at a high rate of speed as they pass under US 101 adding to the operational difficulties of the southbound ramp intersection.

6. CORRIDOR AND SYSTEM COORDINATION

US 101 is a major north-south connector that provides a key connection between the Central Valley and the Central Coast for goods movement, commerce, commuters, tourism, recreation, and strategic military transport. The 2035 corridor concept for US 101 is a freeway with capacity of four to six lanes. Beyond 2035, the ultimate corridor concept for US 101 is a freeway with capacity up to six lanes.

The route is designated with the following functional classifications:

- Surface Transportation Assistance Act Route (National Truck Network)
- Interregional Road System
- National Highway System
- Freeway Expressway System
- Scenic Highway System eligibility
- Strategic Highway Corridor Network
- Federal Aid Primary Route
- Surface Transportation Assistance Act Route (National Truck Network)

The 2014 *US 101 Transportation Concept Report* (TCR) identifies strategic improvements to address congestion, which includes: operational, transit and bicycle projects, multiple carpool and rideshare options, park and ride lots, and access-management strategies. These options are consistent with the San Luis Obispo County Air Pollution Control District's 2001 *Clean Air Plan*, which strongly supports alternative transportation modes to reduce both the growth of vehicle trips and vehicle miles traveled. This project is compatible with the ultimate corridor concept outlined in the 2014 TCR.

The US 101/Avila Beach Drive interchange connects commuters to the Pacific Gas & Electric (PG&E) Diablo Canyon power plant and local workplaces, tourists to Avila Beach and nearby recreational outlets, and residents to their homes.

Currently, Avila Beach Drive and Shell Beach Road are existing Class II Bikeways and are part of the State-legislated Pacific Coast Bike Route (PCBR), which extends north and south from Oregon to the border of Mexico. The PCBR utilizes Ontario Road north of the project, and Shell Beach Road south of the project. Avila Beach Drive serves as the connection between Ontario Road and Shell Beach Road. This includes the intersection of Avila Beach Drive and Shell Beach Road, which also serves as the intersection with the southbound ramps of the US101/Avila Beach Drive interchange. This project is important since bicycling is prohibited along US 101 in the study area. As such, the intersection of Avila Beach Drive and Shell Beach Road is the only route for bicyclists between San Luis Obispo and the Shell Beach/north Pismo Beach area.

The northbound on-ramp is connected to the intersection of Avila Beach Drive and the northbound off-ramp via a short segment of Monte Road. Monte Road also serves bicyclists riding on the east side of US 101 to and from San Luis Obispo. This route is identified in the San Luis Obispo County Bike Map as a recreational route and will be an important connection once the Bob Jones Trail Class I bikeway is completed from San Luis Obispo to Avila Beach. The Bob Jones Trail alignment proposes to take an eastern alignment along US 101, then crossing US101 at San Luis Creek. During and immediately after heavy rains, the future Bob Jones Trail undercrossing may be unusable due to high water stage in San Luis Creek, making the Monte Road connection an alternate route for bicyclists.

SLOCOG and the County are considering a future parking lot and Regional Transit Authority (RTA) bus stop at the southwest corner of Avila Beach Drive and Shell Beach Drive that could serve recreational and commuter purposes. However, the RTA bus stop and parking lot are not part of this project.

The City of Pismo Beach has commenced a streetscape project on Shell Beach Road from Terrace Avenue to West Cliff Drive, which forms the northern boundary for Dinosaur Caves Park.

7. ALTERNATIVES

Alternative 1:
Alternative 1 proposes the inclusion of both the southbound (west) and northbound (east) roundabouts.

The west intersection proposes a five-legged roundabout, with high speed geometry for the eastbound Avila Beach Drive and southbound off-ramp approaches that would provide natural speed reduction. While design would be finalized in later phases, it is intended to include pedestrian facilities such as crosswalks, refuge areas in splitter islands, sidewalks, and Americans with Disabilities Act (ADA) accessible curb ramps. Several retaining walls are proposed, including one wall along the approach for the southbound on-ramp, and two smaller walls running under the US 101 bridge to provide ample room for sidewalks.

The east intersection proposes a three-legged roundabout, with high speed geometry to moderate the speed of vehicles approaching from the northbound off-ramp. Similar to the west roundabout, the east roundabout would also include pedestrian facilities such as crosswalks, refuge areas in splitter islands, sidewalks, and ADA accessible curb ramps. Two retaining walls are proposed. One wall would be located along the southeast section of the intersection to limit the impact of cutting into the existing bridge embankment. Another wall would be in the northeast section to limit the amount of embankment needed to catch to the deep drainage channel.

Roundabouts provide speed moderation and yield control to traffic entering the roundabout. This would allow the minor movements from Avila Beach Drive to have priority over the southbound off-ramp movements through the circulatory roadway. Furthermore, a roundabout at the northbound intersection may provide speed moderation for the northbound off-ramp prior to traversing under US 101 bridge, thereby moderating speeds at the southbound intersection as well, due to its close proximity.

Intersection improvements would be designed to minimize the effect it has on a future RTA bus stop and parking lot, which are not part of this project.

The preliminary design can be seen on the Layouts (Attachment B).

Alternative 2:
Alternative 2 would construct only the southbound (west) roundabout. Its features are nearly identical to the features of the west roundabout in Alternative 1. There is one noteworthy difference in the roundabout design. Without a roundabout at the east intersection, the westbound approach for the west roundabout would consider a high speed design to moderate the vehicles approaching from the northbound off-ramp.

The preliminary design can be seen on the Layouts (Attachment B).

Alternative 3:
Alternative 3 is the no-build alternative.

Alternatives Summary:
Operational improvements for the US 101/Avila Beach Drive southbound ramp intersection that were considered, but rejected, based upon findings of the ICE study include:

- All Way Stop Control (AWSC) of the ramp intersection with a LOS of "E" in the p.m. peak period
- Signalization of the ramp intersection with a LOS of "D" in the p.m. peak period

The structural section shown on the cross sections (Attachment B) show a 0.25 foot thick Rubberized Hot Mix Asphalt (RHMA) layer. This was also used to estimate pavement costs, and was chosen as a placeholder material until further structural section analysis can be performed. The use of RHMA or other suitable pavement would be further studied during PA&ED. In addition, the need for a Life-Cycle Cost Analysis (LCCA) would be determined at the beginning of, and if necessary completed during, the PA&ED phase.

The reconfiguration of the southbound ramps intersection (west) should alleviate the limited sight distance for the left turn and through movements at the terminus of the southbound off-ramp, in part due to the removal of the metal beam guardrail.

During PA&ED phase, the project should consider the potential benefits of removing a portion of the embankment slope next to the northbound off-ramp in such a way as to provide increased corner sight distance at the northbound off-ramp intersection with Monte Road and Avila Beach Drive. This may decrease or eliminate the issues bicyclists and other users perceive with this intersection.

Design Standards Risk Assessment:

Both alternatives are likely to have several nonstandard features. The potential nonstandard features and their probability ratings are identified in the table below.

Design Standards Risk Assessment				
Alternative	**HDM[1] Index**	**Type[2]**	**HDM Standard**	**Probability of Design Exception Approval[3]**
1,2	304.1(a)	A	Side Slopes 4:1 or Flatter	Med
2	504.3(5)	A	Single-Lane Ramp Length	Med
1,2	504.8	M	Ramp Terminal Access Rights	Med
2	405.1(2)	A	Corner Sight Distance	Low

1. Highway Design Manual
2. (M)andatory, (A)dvisory, (P)ermissive
3. None, Low, Medium, High

The probability rating for the identified design exception approvals were classified by the Project Development Coordinator and the delegated authority per instructions in the Project Development Procedures Manual (PDPM) Appendix S. The complex issues involved in considering design exceptions require more advanced engineering plans that would be analyzed in the subsequent phases of the project.

Transportation Management Plan:

The preliminary Transportation Management Plan (TMP) checklist (Attachment G) identifies strategies that should be included in the project. Major strategies are listed below:

- Public awareness campaign
- Ramp closure chart(s)
- Lane closure website
- Portable changeable message signs
- Bicycle and Pedestrian Accommodations
- No lane closures during special days (i.e. Lifecycle AIDS Ride, Amgen Tour of California)
- Contingency plan

8. RIGHT-OF-WAY

The only right-of-way needed is the transfer of a portion of Avila Beach Drive from the County of San Luis Obispo to the State of California. Additional encroachments from the County may be needed to facilitate construction of the west approach of the roundabout at the southbound (west) ramp intersection.

New or updated Freeway and Maintenance Agreements would be required during the Plans, Specification and Estimate (PS&E) phase.

Utilities:
Several utilities exist in the project limits, including AT&T telephone, cable and/or fiber optic lines, Southern California Edison (So Cal Gas) gas line, Phillips 66 8" oil line, and San Luis Obispo (SLO) County water line. Based upon preliminary information, as-builts and discussion with construction personnel for the truck climbing lane project, it was determined that the So Cal Gas line and the Phillips 66 oil line would not be impacted since they are below the existing structural section on Avila Beach Drive. However, a Phillips 66 valve may need to be adjusted to grade.

Other potential relocations or adjustments are:

- AT&T – relocate 125 feet of line through northeast retaining wall for the northbound ramp roundabout. Relocate vault and 25 feet of line at northwest corner of southbound roundabout.
- SLO County – Relocate 180 feet of pipe, vault and four valves along Shell Beach Drive. Relocate riser pipe west of Shell Beach Drive.

The need to relocate the identified utilities would be determined once verification maps show they are likely to be impacted. Currently, it is unknown whether the costs would be borne by the State or by the utility owners. For purposes of this PSR-PDS, it was estimated that virtually half of the relocation costs would be paid for by the State.

Railroad:
There are no railroads within the project limits.

9. STAKEHOLDER INVOLVEMENT

This project is sponsored by the County of San Luis Obispo, and was recommended in SLOCOG's 2014 *US 101 Corridor Mobility Master Plan*. This plan included extensive public involvement, including seven local workshops, 30 community presentations, two web-based interactive tools, numerous stakeholder meetings and several SLOCOG board presentations. The study team included representatives from SLOCOG, Caltrans, County of San Luis Obispo and the cities of San Luis Obispo, Arroyo Grande, Atascadero, Grover Beach, Paso Robles, Pismo Beach, Regional Transit Authority and the County Air Pollution Control District.

10. ENVIRONMENTAL DETERMINATION/DOCUMENT

Environmental Summary:
The anticipated environmental document for the proposed project is a Negative Declaration/Categorical Exclusion. This document level has been selected based on

the impacts to Cultural Resources, Biological Resources and Visual Impacts within the coastal zone which are anticipated to be mitigated below the threshold of significance as defined by CEQA. The California Department of Transportation (Caltrans) has delegated authority to the County to be the lead agency for the preparation of the CEQA (California Environmental Quality Act) environmental document. However, Caltrans will serve as the NEPA (National Environmental Policy Act) lead agency under its assumption of responsibility pursuant to 23 U.S. Code 327. The estimated time to obtain environmental approval is 24 months from the start of environmental studies. Assuming a start date of July, 2016, environmental studies would begin October 2016 after project preliminary maps and permits to enter are completed. Final environmental document would be anticipated by October 2018 It is anticipated multiple environmental studies and reports will be required for this project including (but not limited to): archaeology survey report, historic resource evaluation report, historic property survey report and natural environment study. It is currently estimated that Cultural Resources will be the critical path for the delivery of the environmental document. A 401,404, and 1600 permit will be required and will be issued by the Regional Water Quality Control Board, Army Corps of Engineers and California Department of Fish and Wildlife, respectively. A Coastal Development permit from San Luis Obispo County will also be required. Habitat restoration/preservation and construction monitoring is expected as a requirement of the project with an estimated cost of $311,200. To mitigate for visual impacts a preliminary cost of $200,000 will also be required.

Hazardous Waste:
While the Aerially Deposited Lead (ADL) level in the soil is unknown, the project estimate was calculated assuming that 20% of the excavation would have high enough concentrations of ADL, and would require special handling. It was also assumed that half of the ADL is Type Y and could be reused on the project, and that the other half is Type Z-2, which could not be reused, requiring it to be hauled off to the appropriate facility, at a significantly higher cost. Soil investigations would take place in the PA&ED phase. If the excavated soil is not hazardous, it can be used for embankment.

This project would have small quantities for the removal of striping, which includes edge of traveled way and lane lines. Removal would likely include yellow striping, but at this time it is unknown if the yellow striping would be classified as a hazardous waste. Further investigations would take place in the PA&ED phase.

Stormwater:
As this project proposes to add more than 1 ace of new and replaced impervious surfaces, post construction runoff control requirements as per the July 2013 Caltrans National Pollution Discharge Elimination System (NPDES) Permit (WQO 2012-0011 DWQ) are included in the scope of this project. Based on the alternative with the most impacts (Alternative 1), this project would be responsible for 1.5 acres of new impervious surfaces. The additional new impervious surfaces is less than 50% of the existing impervious surfaces, so this project's goal is to infiltrate or treat the water

quality volume (WQV) from 1.5 aces of paved highway surfaces. Design Pollution Prevention (DPP) Best Management Practices (BMPs) would be incorporated to infiltrate all or some of the required WQV. Per the Caltrans NPDES Permit the post construction runoff control requirement BMP priority would be to infiltrate the WQV. If the WQV cannot be infiltrated, that portion of the WQV than cannot be infiltrated must be treated via a flow through treatment BMP. If the WQV cannot be infiltrated and/or treated by a flow through Temporary BMPs (TBMP), an Alternative Compliance project must be initiated, somewhere in the watershed to infiltrate/treat the remainder of the WQV.

Soils within the project limits are United States Department of Agriculture (USDA) Hydrologic Soils Group (HSG) Type A, D, and some undefined soils. HSG Type A soils are suitable for the construction of infiltration design pollution prevention, DPP, type BMPs (infiltration strips/swales/trenches…), utilizing permanent erosion control with compost blanket incorporated into the soil to increase infiltration rates. Some areas, where concentrated flows are or can be directed, may be suitable for an underground infiltration vault or flow through TBMP. See the attached Storm Water Data Report (SWDR) for mapping showing potential infiltration DPP BMPS and/or TBMP locations. During PA&ED Geotechnical testing would be performed and post construction runoff controls would be determined. It is expected at this time that an Alternative Compliance project would not be required to meet the post construction runoff control requirements for this project.

As this project proposes to create more than 1 acre of disturbed soil, a Storm Water Pollution Prevention Program (SWPPP) and coverage under the Construction General Permit would be required. An initial project risk level assessment indicates this project is a risk level 2 under the Construction General Permit. During construction, effective combinations of temporary and permanent erosion and sediment controls would be used. Storm water management for the site would be coordinated through the contractor with Caltrans construction personnel to reduce or eliminate water quality impacts during construction.

Maintenance BMPs would be incorporated as needed. Maintenance BMPs associated with DPP infiltration and/or treatment BMPs may include maintenance vehicle pullouts, access gates and roads, and maintenance worker safety features. Types and locations would be determined at PA&ED/PS&E. All drain inlets within the project limits, where pedestrians have access to, would receive drain inlet markers.

11. FUNDING

This project is included in the San Luis Obispo Council of Government's (SLOCOG) Fiscal Year 2015/2016 Federal Statewide Transportation Improvement Program (FSTIP). PA&ED is being proposed for Local Funding from several sources including: Congestion Mitigation & Air Quality (CMAQ) Improvement Funds and the Regional State Highway Account (RSHA) administered through SLOCOG and; Local Road Impact Fees (LRIF) from San Luis Obispo County.

It has been determined that this project is eligible for Federal-aid funding.

Capital Outlay Project Estimate

	Range of Estimate		Local Funds	
	Construction	Right-of-Way	Construction	Right-of-Way
Alternative 1	$5.1 M - $8.5 M	$182,000	100%	100%
Alternative 2	$3.5 M – $5.9 M	$182,000	100%	100%

The level of detail available to develop these capital outlay project estimates is only accurate to within the above ranges and is useful for long-range planning purposes only. The ranges were determined by adding and subtracting 25% to each alternative's total project costs.

Capital Outlay Support Estimate

Capital outlay support estimate for PA&ED is $950,000 and would be funded with local sources as follows:

Congestion Mitigation & Air Quality (CMAQ) : $250,000
Regional State Highway Account : $300,000
Local Road Impact Fees : $400,000

Oversight work performed by Caltrans staff would not be reimbursed and is estimated to cost approximately $100,000.

12. SCHEDULE

Project Milestones		Scheduled Delivery Date (Month/Day/Year)
APPROVE PID	M010	April 2016
BEGIN ENVIRONMENTAL	M020	May 2016
CIRCULATE DED	M120	May 2018
PA & ED	M200	November 2018
R/W CERTIFICATION	M410	December 2021
READY TO LIST	M460	January 2023

The anticipated funding fiscal year for construction is 2022/23.

13. RISKS

Various risks affecting scope, schedule and cost have been identified.

There are several potential environmental risks that would affect the cost and schedule, including:

- Additional hours for biological assessment if listed species are found
- Avoidance of several permits if the wetland is avoided
- Archaeological deposits are identified that need mitigation

Additional alternatives may be developed during the PA&ED phase affecting the cost and schedule.

Additional utilities not currently identified may need to be relocated causing delays and possible cost increases. Also, utility relocation may take longer than expected, causing delays and possible cost increases.

Please see the risk register (Attachment K) for a full listing of risks, and the details of the identified risks, including a risk response plan for each.

14. FHWA COORDINATION

This project is considered to be an Assigned Project in accordance with the current Federal Highway Administration (FHWA) and Department of Transportation (Caltrans) Joint Stewardship and Oversight Agreement.

15. PROJECT REVIEWS

Field Review		Date 10/26/2015
Project Manager	Steve DiGrazia	Date 10/13/2015
Headquarters Project Delivery Coordinator	Paul Gennaro	Date 10/13/2015
District Safety Review		Date 10/07/2015
Constructability Review		Date 10/13/2015
Draft District Circulation Review		Date 10/05/2015
Transportation Planning		Date 04/13/2016

16. PROJECT PERSONNEL

Name	Title	Organization	Phone
Richard Murphy	Project Manager	SLOCOG	805-781-5754
Jeremy Ghent	Project Manager	County of San Luis Obispo	805-781-1406
John Luchetta	Project Manager	Caltrans	805-549-3175
Curtis Gubler	Project Engineer	Caltrans	805-549-3389
David Beard	Design Manager	Caltrans	805-549-3438
Michael Downs	Structures Liaison	Caltrans	916-227-9365
Claudia Espino	Planning Manager	Caltrans	805-549-3640
Cindy Utter	Regional Planner	Caltrans	805-549-3648
Mike Thomas	Environmental Generalist	Caltrans	805-549-3023

Name	Title	Organization	Phone
Matt Fowler	Environmental Manager	Caltrans	805-542-4603
Marshall Garcia	Right-of-Way Manager	Caltrans	805-549-3471
Pete Riegelhuth	Stormwater Specialist	Caltrans	805-549-3375
Samuel Toh	Traffic Engineer	Caltrans	805-542-4709
Jorge Aguilar	Project Manager	Wallace Group	805-544-4011
Ben Jensen	Project Engineer	Wallace Group	805-544-4011

17. ATTACHMENTS

A. Location Map (Title Sheet)
B. Typical Sections and Layouts
C. PSR-PDS Estimate
D. Risk Register
E. Preliminary Environmental Assessment Report
F. Right-of-Way Datasheet
G. Storm Water Data Report Cover Page
H. Transportation Management Plan
I. Distribution List

ATTACHMENT A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	101	R21.1		

INDEX OF PLANS

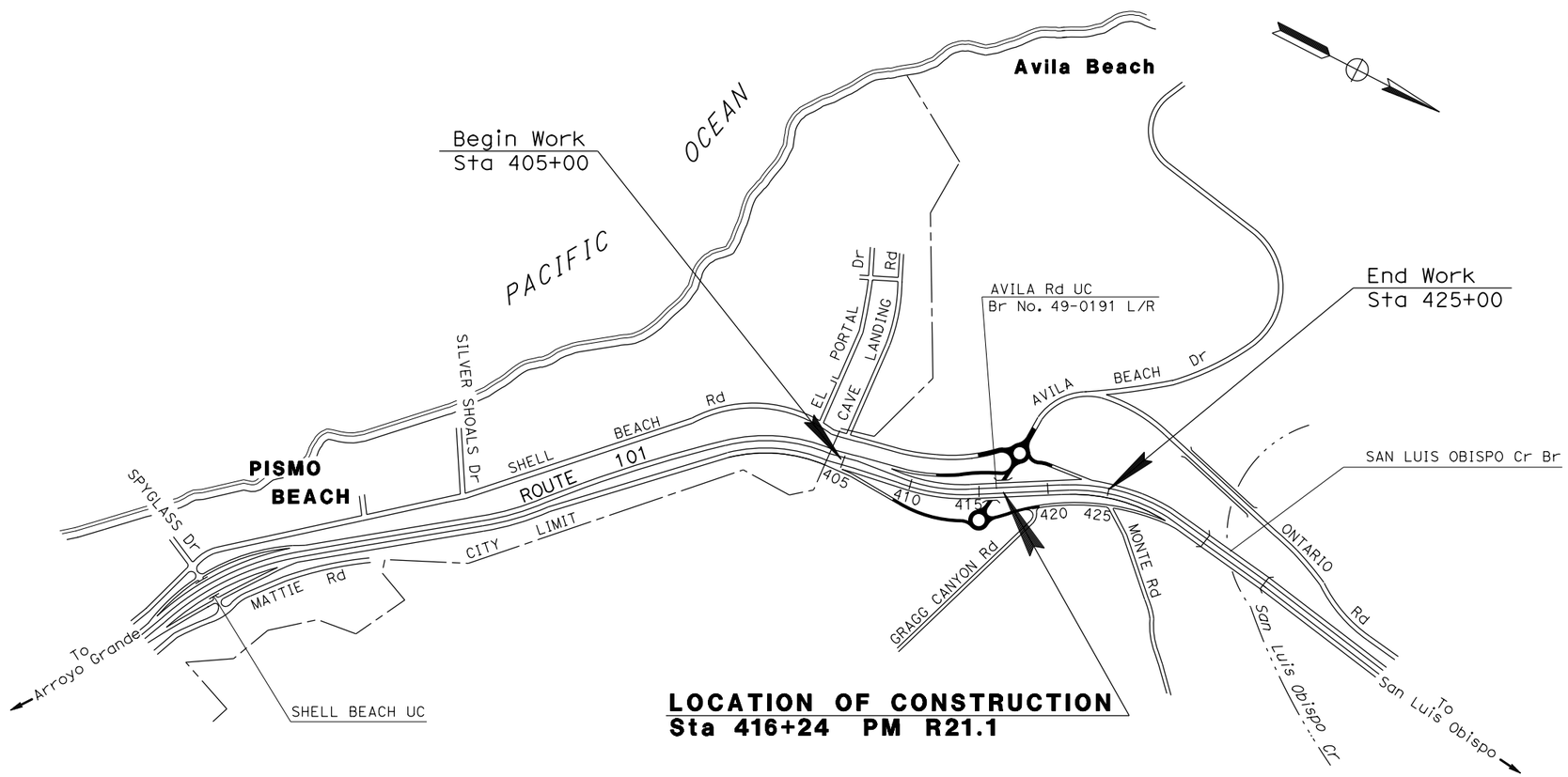
PRELIMINARY PLANS
Subject To Revision

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN SAN LUIS OBISPO COUNTY
AT ROUTE 101 INTERSECTIONS AT AVILA BEACH DRIVE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



LOCATION OF CONSTRUCTION
Sta 416+24 PM R21.1

NO SCALE

PROJECT MANAGER: JOHN LUCHETTA
DESIGN MANAGER: DAVID C. BEARD

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — No. ____ Exp. ____ 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 SCANNED COPIES OF THIS PLAN SHEET.

CONTRACT No.	05-1G4804
PROJECT ID	0515000038

LAST REVISION 02-29-16
DATE PLOTTED => 08-MAR-2016
TIME PLOTTED => 07:48

BORDER LAST REVISED 10/4/2013 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s113687 DGN FILE => 0515000038ab001.dgn | UNIT 1447 | PROJECT NUMBER & PHASE 05150000381

ATTACHMENT B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	101	R21.1		

REGISTERED CIVIL ENGINEER DATE

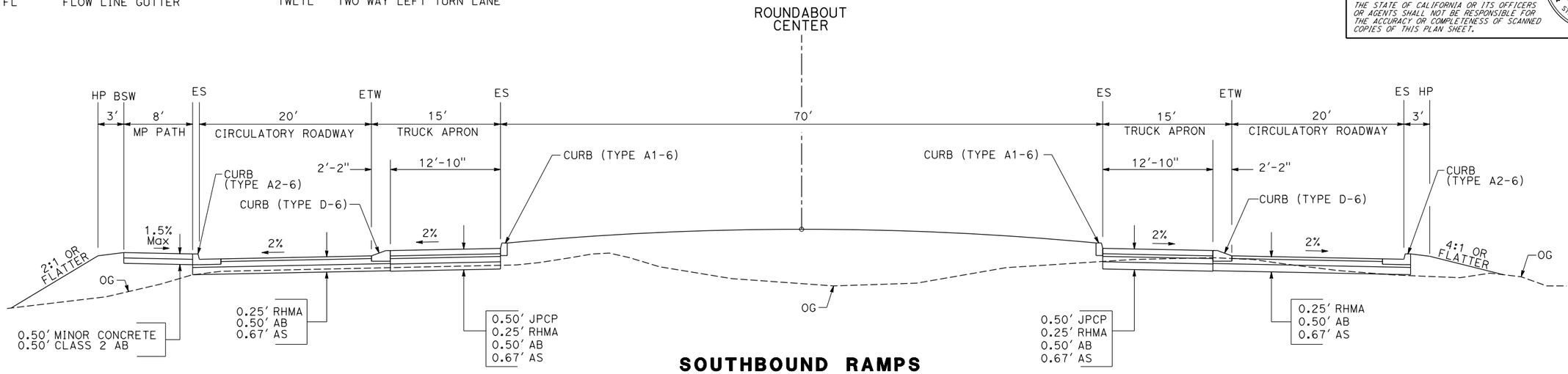
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

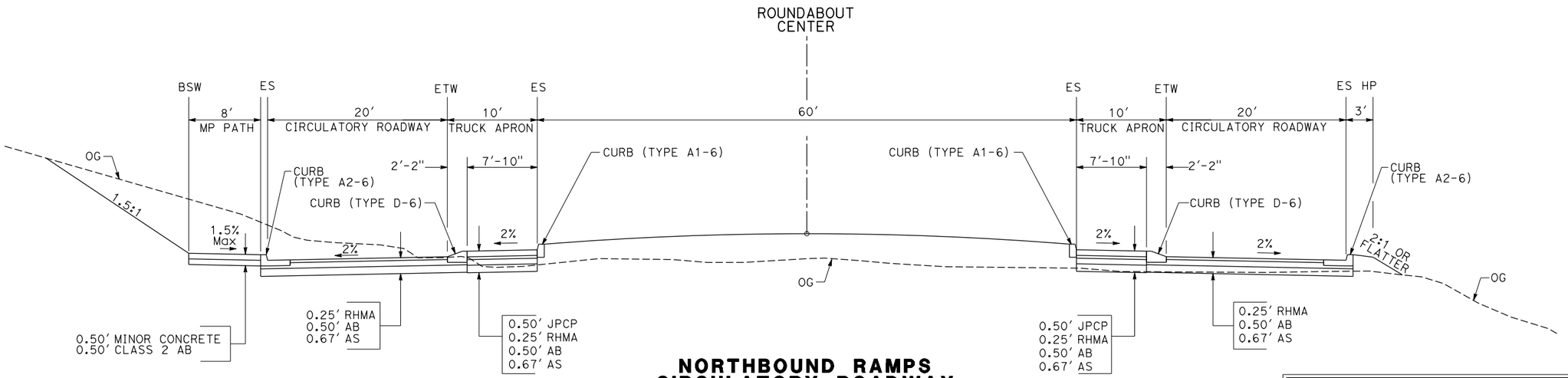
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

BSW	BACK OF SIDEWALK	FW	FACE OF WALL
EMS	EDGE OF MANAGED SHOULDER	LL	LANE LINE
ES	EDGE OF SHOULDER	MP	MULTI-PURPOSE
ETW	EDGE OF TRAVELED WAY	STRP	TRAFFIC STRIPE
FL	FLOW LINE GUTTER	TWLTL	TWO WAY LEFT TURN LANE



SOUTHBOUND RAMPS
CIRCULATORY ROADWAY
WEST ROUNDABOUT



NORTHBOUND RAMPS
CIRCULATORY ROADWAY
EAST ROUNDABOUT

PRELIMINARY PLANS
Subject To Revision

TYPICAL CROSS SECTIONS
ALTERNATIVE 1
NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN
FUNCTIONAL SUPERVISOR: DAVID C. BEARD
CALCULATED-DESIGNED BY: CURTIS GUBLER
CHECKED BY: T.B.D.
REVISED BY
DATE REVISED

LAST REVISION 02-29-16 | DATE PLOTTED => 01-MAR-2016 | TIME PLOTTED => 11:44

BORDER LAST REVISED 7/2/2010 | USERNAME => s118989 | DGN FILE => 0515000038ca001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1447 | PROJECT NUMBER & PHASE 0515000038K

ATTACHMENT B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	101	R21.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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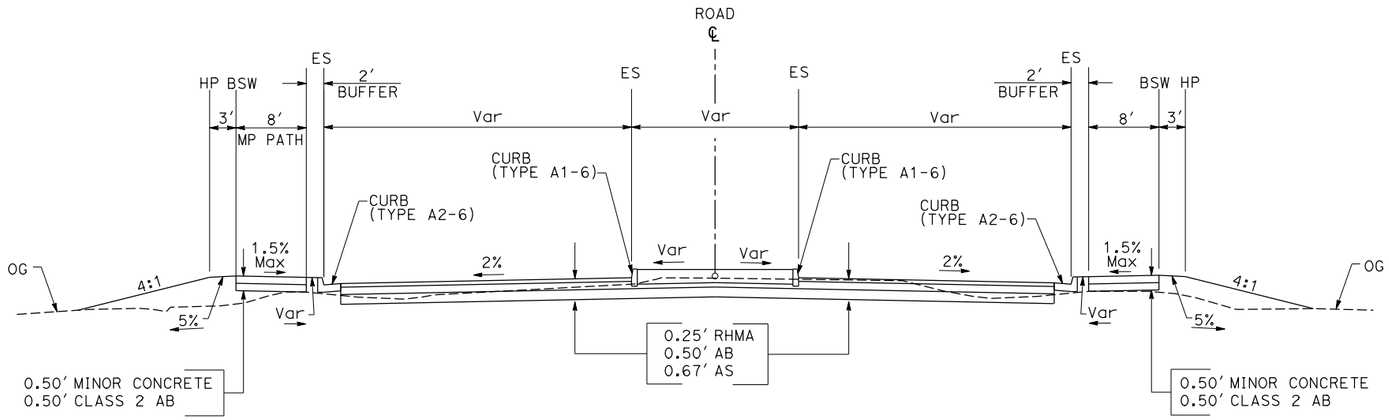
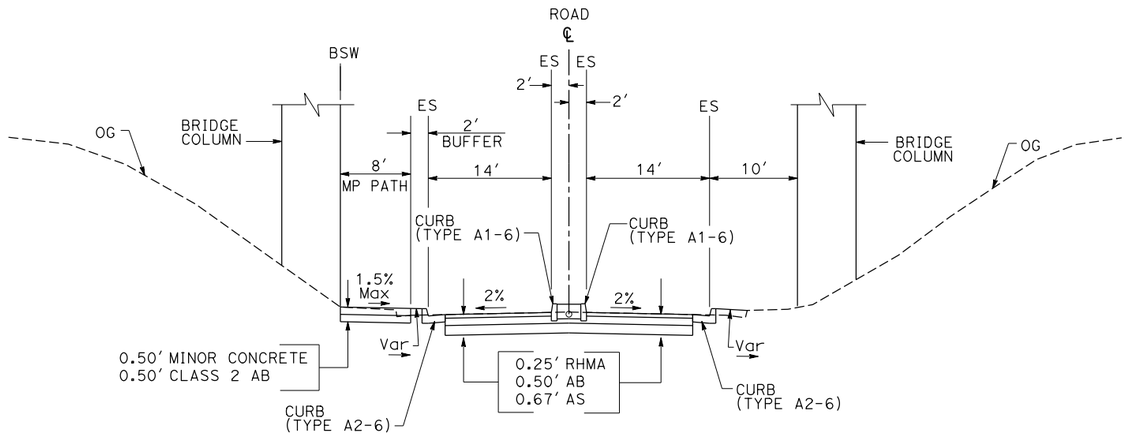
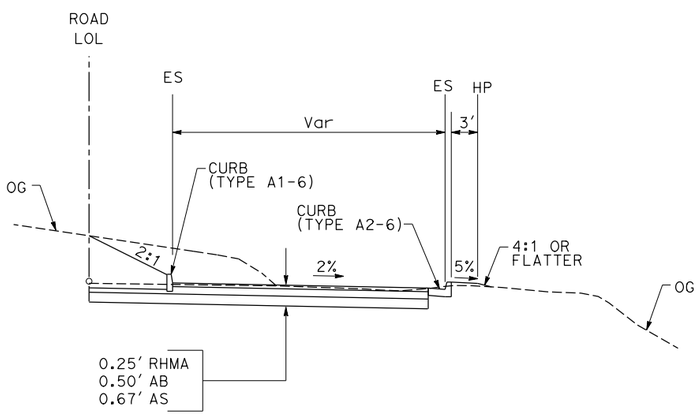


LOCAL ROAD APPROACH



AVILA BEACH DRIVE (UNDER US 101)



RAMP APPROACH

PRELIMINARY PLANS
Subject To Revision

TYPICAL CROSS SECTIONS
ALTERNATIVE 1
NO SCALE

X-2

REVISED BY	DATE REVISED

CURTIS GUBLER — T.B.D.

CALCULATED-DESIGNED BY — CHECKED BY

FUNCTIONAL SUPERVISOR: DAVID C. BEARD

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN

LAST REVISION 02-29-16 | DATE PLOTTED => 01-MAR-2016 | TIME PLOTTED => 11:44

ATTACHMENT B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	101	R21.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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LEGEND:

R/W LINE

FUTURE PARKING LOT & BUS STOP (NOT PART OF THIS PROJECT)

LAYOUT
ALTERNATIVE 1

SCALE: 1" = 200'
(PLOT SCALE: 11 x 17)

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	LAST REVISION DATE PLOTTED => 03-MAY-2016
Caltrans® DESIGN	DAVID C. BEARD	CHECKED BY: T.B.D.	DATE REVISED	05-03-16 TIME PLOTTED => 11:54

BORDER LAST REVISED 7/2/2010 | USERNAME => s113687 DGN FILE => Layout 1.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1447 | PROJECT NUMBER & PHASE 0515000038K

ATTACHMENT B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	101	R21.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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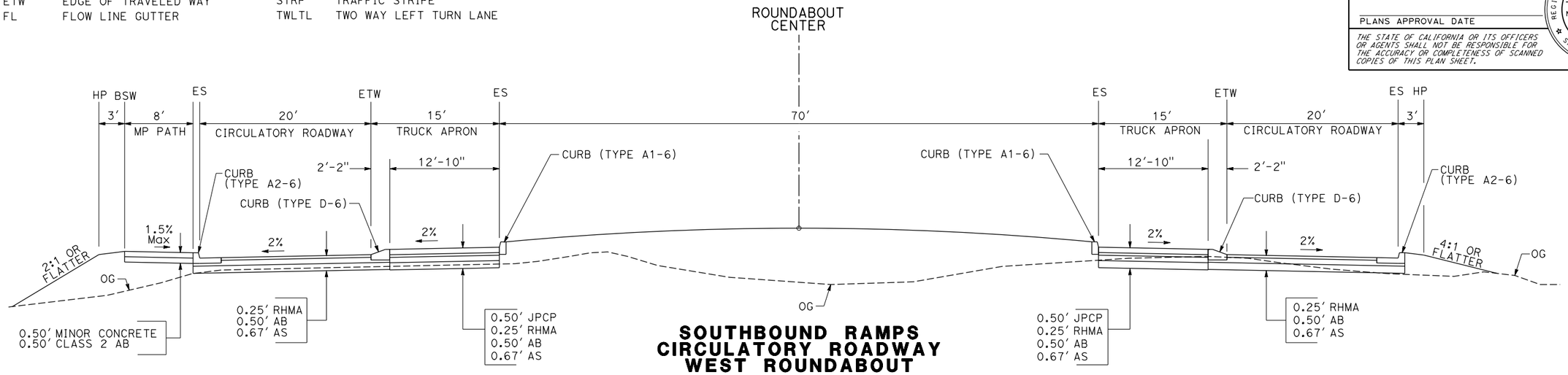
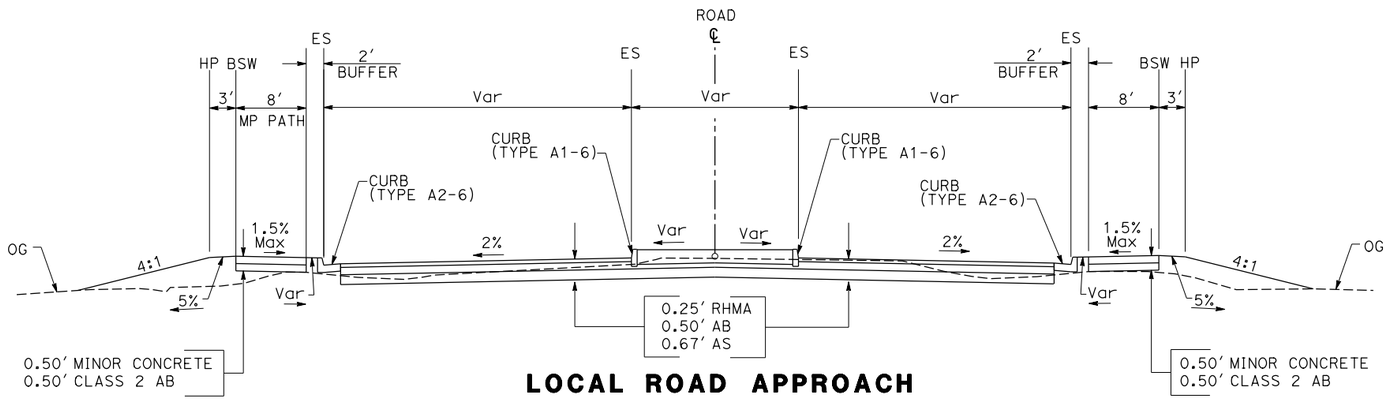
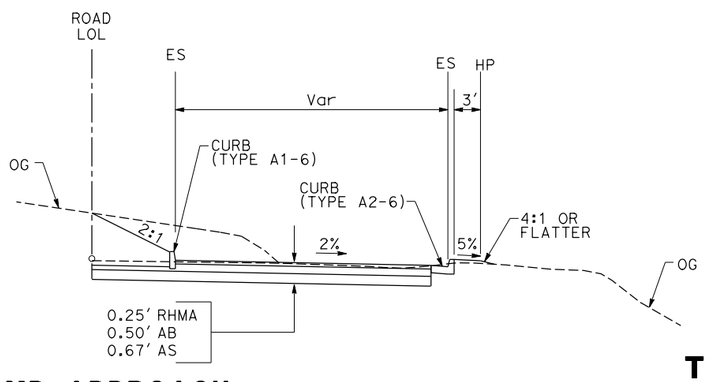
EMS	EDGE OF MANAGED SHOULDER	LL	LANE LINE
ES	EDGE OF SHOULDER	MP	MULTI-PURPOSE
ETW	EDGE OF TRAVELED WAY	STRP	TRAFFIC STRIPE
FL	FLOW LINE GUTTER	TWLTL	TWO WAY LEFT TURN LANE



SOUTHBOUND RAMPS CIRCULATORY ROADWAY WEST ROUNDABOUT



LOCAL ROAD APPROACH



RAMP APPROACH

PRELIMINARY PLANS
Subject To Revision

TYPICAL CROSS SECTIONS
ALTERNATIVE 2
NO SCALE

X-1

REVISED BY	DATE REVISED
CURTIS GUBLER	T.B.D.

CALCULATED-DESIGNED BY

CHECKED BY

FUNCTIONAL SUPERVISOR: DAVID C. BEARD

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN

LAST REVISION 02-29-16 | DATE PLOTTED => 02-MAR-2016 | TIME PLOTTED => 08:14

BORDER LAST REVISED 7/2/2010 | USERNAME => s118989 | DGN FILE => 0515000038ca001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1447 | PROJECT NUMBER & PHASE 0515000038K

ATTACHMENT B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	101	R21.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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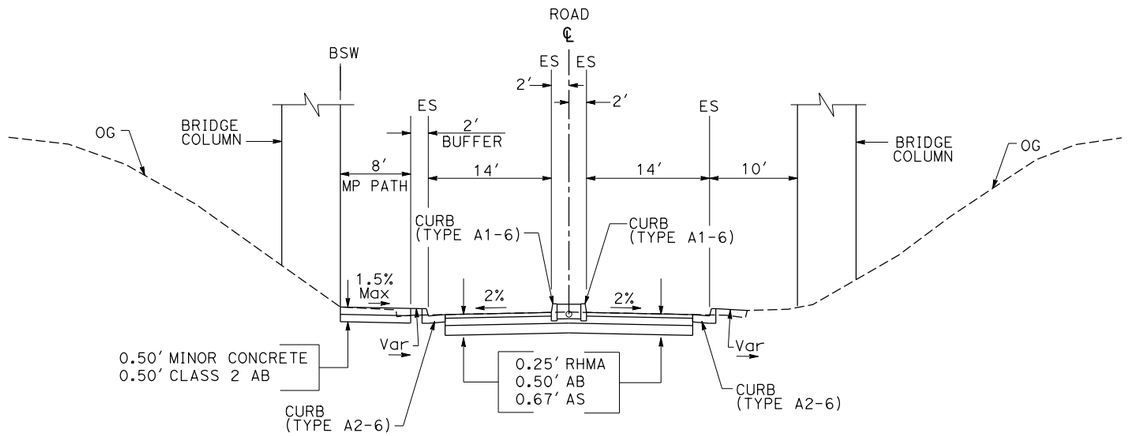


AVILA BEACH DRIVE
(UNDER US 101)

PRELIMINARY PLANS
Subject To Revision

TYPICAL CROSS SECTIONS

ALTERNATIVE 2

NO SCALE

X-2

CALCULATED-DESIGNED BY	REVISED BY
CHECKED BY	DATE REVISED
CURTIS GUBLER	
T.B.D.	

FUNCTIONAL SUPERVISOR: DAVID C. BEARD

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN

LAST REVISION 02-29-16 | DATE PLOTTED => 02-MAR-2016 | TIME PLOTTED => 08:14

BORDER LAST REVISED 7/2/2010 | USERNAME => s118989 | DGN FILE => 0515000038ca002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1447 | PROJECT NUMBER & PHASE 0515000038K

ATTACHMENT B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	101	R21.1		

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — No. ____ Exp. ____ CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

R/W LINE

FUTURE PARKING LOT & BUS STOP (NOT PART OF THIS PROJECT)

LAYOUT
ALTERNATIVE 2

SCALE: 1" = 200'
(PLOT SCALE: 11 x 17)

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	LAST REVISION DATE PLOTTED => 03-MAY-2016
Caltrans® DESIGN	DAVID C. BEARD	CHECKED BY T.B.D.	DATE REVISED	TIME PLOTTED => 11:55

BORDER LAST REVISED 7/2/2010	USERNAME => s113687 DGN FILE => Layout 1.dgn	RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3	UNIT 1447	PROJECT NUMBER & PHASE 0515000038K

Project Study Report – Project Development Support
Capital Outlay Project Estimate

Dist - Co – Rte: 05-SLO-101

PM: R21.1

Program Code: 400.100

Project Number: 0515000038

EA #: 05-1G480

Date: March 02, 2016

PROJECT DESCRIPTION:

Limits:

The project is in the County of San Luis Obispo at the Avila Beach Dr and Route 101 interchange.

Proposed Improvement (Scope):

Construct Two Roundabouts at the Avila Beach Dr. interchange with Route 101. The west roundabout would be at intersection of Avila Beach Dr. and the southbound Route 101 on- and off-ramps. The East roundabout would be at the intersection of Avila Beach Dr., the northbound Route 101 off-ramp, and Monte Rd.

Alternative 1

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$ 4,560,000
TOTAL STRUCTURE ITEMS	$ 1,890,000
TOTAL ENVIRONMENTAL MITIGATION ITEMS	$ 179,000
SUBTOTAL CONSTRUCTION COSTS	$ 6,629,000
TOTAL RIGHT-OF-WAY ITEMS	$ 221,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$ 6,850,000

I. ROADWAY ITEMS

	Average Cost per Lane Mile		Number of Lane Miles		Total Cost
Total Cost	$5,561,000	X	0.82	=	$4,560,000

Explanation:

The major roadway items in the estimate are earthwork, structural section, landscape costs including aesthetics for retaining walls and pedestrian facilities. Drainage was also included as a percentage of the major roadway costs. Other items included in the amount are a retaining wall designed in the district, storm water, and Transportation Management Plan strategies.

For more detailed information, please contact the Project Engineer.

TOTAL ROADWAY ITEMS $4,560,000

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)	Structure (4)
Bridge Name	Retaining Wall "N1"	Retaining Wall "S1"	Retaining Wall "E1"	Retaining Wall "W1"
Total Cost for Structure	$270,000	$270,000	$820,000	$530,000

Explanation:

The given structure costs are the highest of the cost range provided for each retaining wall location. Some assumptions that influence the structure costs are wall type, foundation conditions, aesthetic requirements, and staging and traffic control requirements.

Contact the Structures Liaison, Michael Downs for details on the retaining wall costs.

TOTAL STRUCTURE ITEMS $1,890,000

III. ENVIRONMENTAL MITIGATION

	Quantity	Unit		Unit Price		Item Cost
Archaeological Monitoring	1	LS	X	$50,000	=	$50,000
Biological Monitoring	1	LS	X	$7,200	=	$7,200
Oak Replanting	1	LS	X	$10,000	=	$10,000
Wetland Creation	1	LS	X	$11,467	=	$11,467
Visual Resources	1	LS	X	$100,000	=	$100,000

Explanation:

For more information on the above items, please contact the Environmental Generalist.

TOTAL ENVIRONMENTAL MITIGATION ITEMS $179,000

IV. RIGHT-OF-WAY ITEMS

	Escalated Value
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$ 13,980
B. Utility Relocation (State share)	$207,396

Anticipated Date of Right-of-Way Certification 7/2019
(Date to which values are escalated)

Explanation:

The acquisition costs are for environmental permits. Several utilities are assumed to need relocation or adjustment, and that the state would pay half of the relocation expenses. The utilities impacted include an AT&T telephone line and vault, and a Phillip 66 valve. Further, a San Luis Obispo County water line, several valves, a vault, and a riser will be relocated. This estimate assumes that virtually half of the relocation costs would be paid for by the state.

For more information contact the Project Engineer.

TOTAL RIGHT-OF-WAY ITEMS $221,376

Project Study Report – Project Development Support
Capital Outlay Project Estimate

Dist - Co – Rte: 05-SLO-101

PM: R21.1

Program Code: 400.100

Project Number: 0515000038

EA #: 05-1G480

Date: March 02, 2016

PROJECT DESCRIPTION:

Limits:

The project is in the County of San Luis Obispo at the Avila Beach Dr and Route 101 interchange.

Proposed Improvement (Scope):

Construct Roundabout at the Avila Beach Dr. interchange with Route 101. The roundabout will be constructed at the intersection of Avila Beach Dr. and the southbound Route 101 on- and off-ramps.

Alternative 2

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$ 3,234,000
TOTAL STRUCTURE ITEMS	$ 1,070,000
TOTAL ENVIRONMENTAL MITIGATION ITEMS	$ 179,000
SUBTOTAL CONSTRUCTION COSTS	$ 4,483,000
TOTAL RIGHT-OF-WAY ITEMS	$ 221,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$ 4,704,000

I. ROADWAY ITEMS

	Average Cost per Lane Mile		Number of Lane Miles		Total Cost
Total Cost	$5,989,000	X	0.54	=	$ 3,234,000

Explanation:

The major roadway items in the estimate are earthwork, structural section, landscape costs including aesthetics for retaining walls and pedestrian facilities. Drainage was also included as a percentage of the major roadway costs. Other items included in the amount are retaining walls, storm water, and Transportation Management Plan strategies.

For more detailed information, please contact the Project Engineer.

TOTAL ROADWAY ITEMS $ 3,234,000

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)	Structure (4)
Bridge Name	Retaining Wall "N1"	Retaining Wall "S1"	Retaining Wall "W1"	
Total Cost for Structure	$270,000	$270,000	$530,000	

Explanation:

The given structure costs are the highest of the cost range provided for each retaining wall location. Some assumptions that influence the structure costs are wall type, foundation conditions, aesthetic requirements, and staging and traffic control requirements.

Contact the Structures Liaison, Michael Downs for details on the retaining wall costs.

TOTAL STRUCTURE ITEMS $1,070,000

III. ENVIRONMENTAL MITIGATION

	Quantity	Unit		Unit Price		Item Cost
Archaeological Monitoring	1	LS	X	$50,000	=	$50,000
Biological Monitoring	1	LS	X	$7,200	=	$7,200
Oak Replanting	1	LS	X	$10,000	=	$10,000
Wetland Creation	1	LS	X	$11,467	=	$11,467
Visual Resources	1	LS	X	$100,000	=	$100,000

Explanation:

For more information on the above items, please contact the Environmental Generalist.

TOTAL ENVIRONMENTAL MITIGATION ITEMS $179,000

IV. RIGHT-OF-WAY ITEMS

	Escalated Value
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$ 13,980
B. Utility Relocation (State share)	$207,396

Anticipated Date of Right-of-Way Certification 7/2019
(Date to which values are escalated)

Explanation:

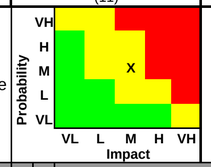
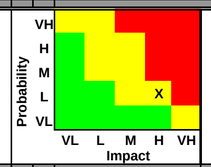
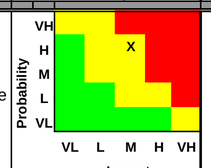
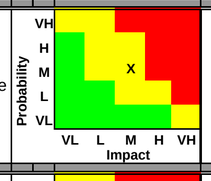
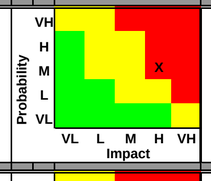
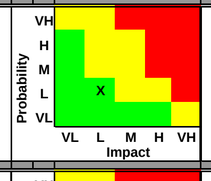
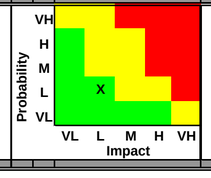
The acquisition costs are for environmental permits. Several utilities are assumed to need relocation or adjustment, and that the state would pay half of the relocation expenses. The utilities impacted include an AT&T telephone line and vault, and a Phillip 66 valve. Further, a San Luis Obispo County water line, several valves, a vault, and a riser will be relocated. This estimate assumes that virtually half of the relocation costs would be paid for by the state.

For more information contact the Project Engineer.

TOTAL RIGHT-OF-WAY ITEMS $221,376

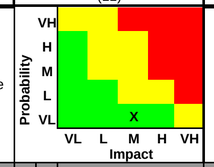
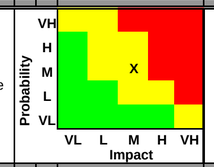
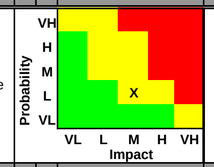
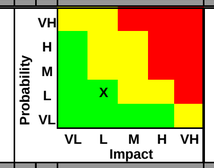
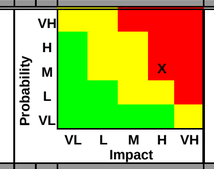
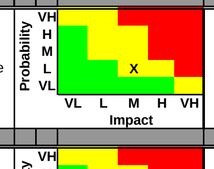
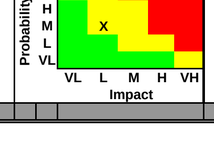
Dist. - E.A	Co-Rte.-PM	Project Name	Project Manager	Telephone Number	Date	Version/Draft
05-1G480	SLO-Route-101-PM 21.147	Avila Beach Dr. Ramp Intersection Improvements	John Luchetta	(805) 549-3175	4/14/2016	Version 1/Draft 3

PROJECT RISK MANAGEMENT PLAN

	Identification						Qualitative Analysis				OPTIONAL Quantitative Analysis				Risk Response Plan		Monitoring and Control	
Priority	Status	ID #	Date Identified Project Phase	Functional Assignment	Risk (Threat/Opportunity)		Type	Probability	Impact	Risk Matrix	Probability (%)	Impact (%)	Impact ($ or days)	Effect ($ or days)	Strategy	Response Actions including advantages and disadvantages	Responsibility (Risk Manager)	Last date changes made to risk and Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(13A)	) =(12)x(13)x(1	(15)	(16)	(17)	(18)
	Active	1	9/4/2015 PID	Environmental	If the project scope changes requiring additional site reviews, additional hours may be required negatively affecting the project scope (hours).		**Scope** **Schedule**	Moderate	Moderate						Acceptance	Include all alternatives with ample APEs at the start of Env studies. Monitor and Control for scope changes.	PM,DM,EM	
	Active	2	9/4/2015 PID	Environmental	If listed plant and animal species are found within the BSA and the project cannot be designed to avoid impacts, then additional hours will be required to prepare a Biological Assessment for Section 7 consultation with USFWS during the 0 phase, negatively impacting the schedule and scope (hours) for the project.		**Cost** **Schedule**	Low	High						Acceptance	Start studies as early as possible in the Env phase.	DM,EM	
	Active	3	9/4/2015 PID	Environmental	If impacts within the project area can avoid the wetland area, then the: 404 Nationwide Permit Coordination, 401 Permit Coordination, and the 1602 Permit Coordination may be able to be avoided, resulting in a savings to the project in cost (mitigation), scope (hours), and schedule (time to complete tasks). This is an Opportunity.		**Scope** **Schedule**	High	Moderate						Avoidance	Identify impacts as early as possible and work to modify the design if possible to avoid impacts.	DM,EM	
	Active	4	9/4/2015 PID	Environmental	If impacts within the project area can avoid or reduce the impact to oaks, then the cost (oak replanting) may be able to be avoided or reduced. This is an Opportunity.		**Cost**	Moderate	Moderate						Avoidance	The team will strive to avoid oak impacts as much as possible starting with early identification of possible impacts.	DM,EM	
	Active	5	9/4/2015 PID	Environmental Archaeological	The project will identify archaeological deposits in the project APE that are eligible to the NRHP and a FOE/MOA and mitigation will be required.		**Schedule** **Cost**	Moderate	High						Acceptance	Begin cultural studies as early in the Env studies phase as possible.	EM	
	Active	6	9/4/2015 PID	Traffic	Multiple office engineer reviews		**Schedule**	Low	Low						Mitigation	Careful attention to the schedule from early in the project development phase will help to mitigate this risk.	DM	
	Active	7	9/4/2015 PID	Traffic	Preparing CCO's during construction.		**Cost**	Low	Low						Mitigation	Careful attention to the construction phase budget prior to award will help to mitigate this risk.	DM, CM	

Dist. - E.A	Co-Rte.-PM	Project Name	Project Manager	Telephone Number	Date	Version/Draft
05-1G480	SLO-Route-101-PM 21.147	Avila Beach Dr. Ramp Intersection Improvements	John Luchetta	(805) 549-3175	4/14/2016	Version 1/Draft 3

PROJECT RISK MANAGEMENT PLAN

	Identification					Qualitative Analysis				OPTIONAL Quantitative Analysis				Risk Response Plan		Monitoring and Control	
Priority	Status	ID #	Date Identified Project Phase	Functional Assignment	Risk (Threat/Opportunity)	Type	Probability	Impact	Risk Matrix	Probability (%)	Impact (%)	Impact ($ or days)	Effect ($ or days)	Strategy	Response Actions including advantages and disadvantages	Responsibility (Risk Manager)	Last date changes made to risk and Comments
(1)	(2)	(3)	(4)	(5)	(6) (7)	(8)	(9)	(10)	(11)	(12)	(13)	(13A)	) =(12)x(13)x(1	(15)	(16)	(17)	(18)
	Active	8	9/4/2015 PID	Environmental	Studies may identify built environment resources in the project APE that are eligible for the NRHP and a FOE/MOA and mitigation will be required.	**Schedule** **Cost**	Very Low	Moderate						Acceptance		EM	
	Active	9	9/4/2015 PID	Surveys	Any change in the scope of work may result in additional design surveys, additional Right of Way Engineering or additional construction staking.	**Scope** **Schedule**	Moderate	Moderate						Mitigation	this risk can be mitigated by careful monitoring of the work plan as the project progresses. The PM can assess the impact and adjust per CT change management policies.	PM, DM	
	Active	10	9/4/2015 PID	Surveys	Possible delay in completing design survey if survey crews are busy doing construction staking work.	**Schedule**	Low	Moderate						Mitigation	This risk can be mitigated by careful monitoring of surveys planned work as the project progresses. The PM can assess upcoming work and coordinate with the Field Surveys department.	PM	
	Active	11	9/4/2015 PID	Surveys	Surveys receiving a late or incomplete Survey File from Design may cause a delay in preparing a construction staking notes package for a survey crew, which could delay a contractor's work schedule.	**Schedule**	Low	Low						Mitigation	This risk can be mitigated by careful monitoring of submittal quality.	DM	
	Active	12	11/10/2015 PID	ROW	Relocation of utility facilities (especially underground) takes longer than provided lead time.	**Scope** **Schedule**	Moderate	High						Acceptance	During the PA&ED phase, the PDT should strive to find ways to avoid or mitigate this risk.	DM, RM	
	Active	13	4/12/2016 PID	ROW	Possibility that not all utilities have been identified	**Cost**	Low	Moderate						Acceptance	R/W and Design will closely coordinate to assure any project changes are correctly shown on mapping.	R/W Utilities	
	Active	14	4/12/2016 PID	ROW	Utility relocation liability will not be fully known until after programming	**Cost**	Moderate	Low						Acceptance	R/W to work with utility companies and keep PM apprised of any potential cost increases.	R/W Utilities	

Preliminary Environmental Analysis Report

Project Information

District	05	County	SLO	Route	101	Post Mile	R21.1	EA	05-0G480

Project ID#:	0515000038		
Project Title:	Avila Beach Drive Operational Improvements		
Project Manager:	John Luchetta	Phone #:	805-549-3437
Design Manager:	Ron Kramer	Phone #:	805-549-3175
Design Engineer:	Curtis Gubler	Phone #:	805-549-3389
Environmental Manager:	Matt Fowler	Phone #:	805-542-4603
Environmental Planner:	Michael H. Thomas	Phone #:	805-549-3023

PSR Summary Statement

The anticipated environmental document for the proposed project is a Negative Declaration/Categorical Exclusion. This document level has been selected based on the impacts to Cultural Resources, Biological Resources and Visual Impacts within the coastal zone which are anticipated to be mitigated below the threshold of significance as defined by CEQA. The California Department of Transportation would act as the lead agency in the preparation of a joint NEPA/CEQA (National Environmental Policy Act/California Environmental Quality Act) environmental document. Caltrans will serve as the NEPA lead agency under its assumption of responsibility pursuant to 23 U.S. Code 327. The estimated time to obtain environmental approval is 28 months from the start of environmental studies. Assuming a start date of July, 2016, environmental studies would begin October 2016 after project preliminary maps and permits to enter are completed. Final environmental document would be anticipated by October 2018

It is anticipated multiple environmental studies and reports will be required for this project including (but not limited to): archaeology survey report, historic resource evaluation report, historic property survey report and natural environment study. It is currently estimated that Cultural Resources will be the critical path for the delivery of the environmental document. A 401,404, and 1600 permit will be required and will be issued by the Regional Water Quality Control Board, Army Corps of Engineers and California Department of Fish and Wildlife, respectively. A Coastal Development permit from San Luis Obispo County will also be required. Habitat restoration/preservation and construction monitoring is expected as a requirement of the project with an estimated cost of $311,200. To mitigate for visual impacts a preliminary cost of $200,000 will also be required."

Project Description

The California Department of Transportation (Caltrans), proposes to improve the US 101/Avila Beach Drive interchange northbound and southbound ramp intersections to address traffic operational deficiencies and improve multimodal access.

Purpose and Need

Purpose

The purpose of the proposed project is to improve the operations and multimodal access of the US 101/Avila Beach Drive interchange northbound and southbound intersections.

Need

The five-legged intersection of the southbound ramps, Avila Beach Drive and Shell Beach Road experiences operational and safety issues during weekday p.m. peak travel times and the summer tourist seasons due to the intersection's geometry. The intersection is currently operating at Level of Service (LOS) "F" during p.m. peak periods. The three year collision rate is slightly below the statewide collision average; however, the three year fatality and injury rate for the southbound off-ramp is above state average.

Traffic patterns at the US 101 northbound off-ramp, Avila Beach Drive and Monte Road intersection are challenging, especially for bicyclists. Vehicles on the northbound off-ramp, which are not required to yield, approach the intersection at high speeds. The corner sight distance is limited for the minor movement turning left (the only movement possible) onto Monte Rd form eastbound Avila Beach Drive.

Vehicles exiting on the northbound off-ramp, which becomes westbound Avila Beach Drive, pass through the northbound intersection and onto the southbound intersection without the requirement to yield to the other, minor movements. . The corner sight distance is limited for the minor movement turning left (the only movement possible) onto Monte Rd form eastbound Avila Beach Drive.

Description of Work

The proposed project include improving the US 101/Avila Beach Drive interchange northbound and southbound ramp intersections to address traffic operational deficiencies and improve multimodal access

Alternatives

Alternative 1

Alternative 1 is the inclusion of both the southbound (west) and northbound (east) roundabouts.

The west intersection is a five-legged roundabout, with high speed geometry for the eastbound Avila Beach Drive and southbound off-ramp approaches that will provide natural speed reduction. While design will be finalized in later phases, it is intended to include pedestrian facilities such as crosswalks, refuge areas in splitter islands, sidewalks, and Americans with Disabilities Act (ADA) accessible curb ramps. It is expected that there will be several retaining

walls, including one wall along the approach for the southbound on-ramp, and two smaller walls running under the US 101 bridge to provide ample room for sidewalks.

The east intersection is a three-legged roundabout, with high speed geometry to moderate the speed of vehicles approaching from the northbound off-ramp. Similar to the west roundabout, the east roundabout will also include pedestrian facilities such as crosswalks, refuge areas in splitter islands, sidewalks, and ADA accessible curb ramps. It is expected that there will be two retaining walls. One wall will be located along the southeast section of the intersection to limit the impact of cutting into the existing bridge embankment. Another wall will be in the northeast section to limit the amount of embankment needed to catch to the deep drainage channel.

Roundabouts provide speed moderation and yield control to traffic entering the roundabout. This would allow the minor movements from Avila Beach Drive to have priority over the southbound off-ramp movements through the circulatory roadway. Furthermore, a roundabout at the northbound intersection may provide speed moderation for the northbound off-ramp prior to traversing under US 101 bridge, thereby moderating speeds at the southbound intersection as well, due to its close proximity.

Intersection improvements will be designed to minimize the effect it has on a future park and ride lot and RTA bus stop(s), which are not part of this project

Alternative 2

Alternative 2 will construct only the southbound (west) roundabout. Its features are nearly identical to the features of the west roundabout in Alternative 1. There is one noteworthy difference. Without a roundabout at the east intersection, the westbound approach for the west roundabout would consider a high speed design to moderate the vehicles approaching from the northbound off-ramp.

Alternative 3

Alternative 3 is the no-build alternative.

Funding

☒**State** ☒**Federal**

This project is included in the Fiscal Year 2015/2016 Federal Statewide Transportation Improvement Program (FSTIP) and PA&ED is proposed for Local Funding from several sources including: Congestion Management & Air Quality (CMAQ) Improvement Funds and the Regional State Highway Account (RSHA) administered through San Luis Obispo Council Of Governments (SLOCOG) and; Local Road Improvement Funds (LRIF) from San Luis Obispo County. It is also included in SLOCOG's 2014 Regional Transportation Plan.

Anticipated Environmental Approval

CEQA	NEPA
☐ **Categorical Exemption/Statutory Exemption**	☒ **Categorical Exclusion (☒6004/☐6005)**
☒ **Negative Declaration/Mitigated ND(☐Appendix G)**	☐ **Finding of No Significant Impact**
☐ **Environmental Impact Report**	☐ **Environmental Impact Statement**

Anticipated Environmental Schedule

Total Time for Environmental Approval	28 months
Start Date	July 2016
Begin Environmental	October 2016
Draft Environmental Document	March 2018
Final Environmental Document	October 2018
PA&ED*	November 2018

**PA&ED is generally 1 month following the FED date*

Assumptions and Risks

Assumptions:

Cultural Resources

- This project will require additional right-of-way. Assume additional archaeological sites may be discovered outside of the right-of-way and require evaluation
- Assume that consultation with the State Historic Preservation Officer (SHPO) concerning the resolution of a Finding of Adverse Effect through the preparation of a Memorandum of Agreement (MOA) will proceed without unexpected delays.
- Approved and Adequate Mapping is submitted by October 2016

Visual Resources

- Retaining the scenic features of the project site

Biological Resources

- Will require 404 Nationwide Permit Coordination, 401 Permit Coordination, and 1602 Permit coordination,
- Will avoid impacts to listed plant and animal species and no Section 7 consultation will be required,
- Will require Biological mitigation for oaks and wetlands

Risks:

General

- Project scope expands and new studies need to be done impacting schedule by 6-12 months
- Environmental does not receive approved and adequate mapping by October 2016 resulting in the schedule being pushed out by up to 6 months

Cultural

- Unexpected delays in receiving MOA from SHPO delaying schedule by 6 months
- The impacts to the project site cannot be reduced to a level of NEPA insignificance resulting in the environmental document being elevated from an CE to EA delaying schedule by 6-12 months
- Studies may identify built environment resources in the project APE that are eligible to the NRHP and a FOE/MOA and mitigation will be required. Likewise, studies may identify archaeological deposits in the project APE that are eligible to the NRHP and a FOE/MOA and mitigation will be required

Biology

- If the project scope changes requiring additional site reviews, additional hours may be required negatively affecting the project cost
- If listed plant and animal species are found within the BSA and the project cannot be designed to avoid impacts, then additional hours will be required to prepare a Biological Assessment for Section 7 consultation with the USFWS during the 0 phase, negatively impacting the schedule and cost (hours) for the project

- If impacts within the project area can avoid the wetland area, then the: 404 Nationwide Permit Coordination, 401 Permit Coordination, and the 1602 Permit Coordination may be able to be avoided, resulting in a savings to the project in cost (mitigation), scope (hours), and schedule (time to complete tasks).

- If impacts within the project area can avoid or reduce the impact to oaks, then the cost (oak replanting) may be able to be avoided or reduced.

Mitigation

Right of Way Capital (050)

- California Department of Fish and Wildlife Document 1602 permit-$4,912
- Regional Water Quality Control Board 401 Permit-$2,079
- California Department of Fish and Wildlife Document Review Fee-$2,210

Construction Capital (042)

- Re-vegetation and Oak Replanting $103,000
- Coastal Wetlands and other waters of the U.S. for permanent impacts $151,000
- Visual Impact Mitigation $200,000
- Archaeological Monitoring $50,000
- Biological Monitoring $7,200

Disclaimer

This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and conclusions provided are approximate and are based on cursory analysis of probable effects. This report is to provide a preliminary level of environmental analysis to supplement the Project Initiation Document. Changes in project scope, alternatives, or environmental laws will require a reevaluation of this report.

Review and Approval

I confirm that environmental cost, scope, and schedule have been satisfactorily completed and that the PEAR meets all Caltrans requirements. Also, if the project is scoped as a routine EA, complex EA, or EIS, I verify that the HQ DEA Coordinator has concurred in the Class of Action.

Approved by:

Environmental Manager / Date: 3/29/16

Environmental Office Chief Date: 3-30-16

Project Manager

Date: 3-30-16

Environmental Technical Reports or Studies Required

Required–requires analysis including field surveys, database searches, report, or memo to file and brief explanation in the environmental document.
Not Required–Issue is not applicable to the proposed project.
Possible Critical Path–Major issue that has the potential to drive the schedule and determine the length of time to reach PA&ED (can be more than one major issue).

	Required	Clearance Memo Received	Not Required	Possible Critical Path
Biology		☐		☐
Endangered Species (Federal)	☒		☐	
Endangered Species (State)	☒		☐	
Species of Concern (CNPS, USFS, BLM, S, F)	☒		☐	
Wetland Delineation	☒		☐	
Natural Environment Study	☒		☐	
Biological Assessment (USFWS, NMFS, State)	☐		☒	
Cultural Resources				☐
ASR	☒		☐	
HRER	☒		☐	
HPSR/HRCR	☒		☐	
Screening Memo	☐	☐	☒	
SHPO Concurrence	☒		☐	
Native American Coordination	☒		☐	
Finding of Effect Document	☒		☐	
Treatment Plan & MOA	☒		☐	
Hazardous Waste		☐		☐
ISA	☒		☐	
PSI	☒		☐	
ADL	☒		☐	
Air Quality Analysis		☒		☐
Hot Spot Analysis	☐		☒	
MSAT	☐		☒	
Noise Study	☐	☐	☒	☐
Water Quality	☐	☐	☒	☐
Community Impact Assessment				☐
Environmental Justice	☐		☒	
Growth Related Impacts	☒		☐	
Cumulative Impacts	☒		☐	☐
Farmland	☐		☒	☐
Visual Resources		☐		☐
Scenic Resource Evaluation	☒		☐	
Visual Impact Assessment	☒		☐	
Floodplain Evaluation	☒		☐	☐
Paleontology	☒		☐	☐
Section 4(f) Evaluation	☐		☒	☐
Wild and Scenic River Consistency	☐		☒	☐
Geology	☒		☐	☐
Topology	☒		☐	☐
Soils	☒		☐	☐
Greenhouse Emissions	☒		☐	☐

Permits Anticipated for Construction

	Required	Not Required
401 Permit Coordination (discharge into navigable waters)	☒	☐
404 Permit Coordination (discharge into waters of the US including wetlands)	☒	☐
☒ - Nationwide		
☐ - Individual		
1600 Permit (Streambed Alteration)	☒	☐
City/County Coastal Permit Coordination	☒	☐
State Coastal Permit Coordination	☐	☒
NPDES Coordination	☐	☒
US Coast Guard (Section 10)	☐	☒
State 2081 Permit (State only incidental take of threatened or endangered species)	☐	☒

Discussion of Technical Review

Biology

General plant and animal surveys will be required. General Plant surveys will require three (3) - four (4) visits during the blooming season (February-October). One (1) to two (2) initial site visits will be required to survey for animals in the spring. Additional surveys may be required to determine presence or absence of special status species. In all between four (4) and six (6) site visits between February and October would be required.

Total duration to complete required studies and produce the Biological Reports required for the 0 phase is 12 months.

Coordination with: USACE for the 404 Nationwide Permit, RWQCB for the 401 Permit, and CDFW for the 1602 Permit are anticipated with the current scope of the project.

Surveys will occur for coastal wetlands and environmentally sensitive habitat areas (ESHA's). A coastal development permit will be needed

Oak replanting may occur if removal is necessary for the project. Replacement could occur on-site or at a nearby location, if feasible. The current scope of the project does not pose any threats to wildlife connectivity in the area

If disposal, staging, or borrow sites are needed for the project then they will need to be cleared by a Caltrans Biologist prior to the start of construction

Biological SSPs 14-6.02 Species Protection and 14-1.02 Environmentally Sensitive Area (ESA) may be required. Biological monitoring during construction may be needed. These will be addressed and revised during the 0 phase when survey's and habitat assessments are conducted

Cultural Resources

One bridge within the project limits (Avila Road UC, Bridge Number 49-0191) has been previously evaluated as a Category 5 bridge (not eligible for listing in the National Register of Historic Places). Previous studies did not identify any built resources eligible for listing in the National Register. One additional property located within the project area (Avila Hot Springs resort) has not been previously studied and will require evaluation for eligibility.

Although no recorded archaeological resources have been recorded within the project Area of Potential Effects (APE), CA-SLO-801, a large prehistoric archaeological resource, is known to have existed adjacent to the project area. CA-SLO-801 is a large prehistoric habitation site characterized by dense midden soils, a diverse artifact assemblage, and human remains. Though heavily disturbed by the construction of Highway 101 and surrounding residential development, intact portions of the site are known to exist in the area, particularly south of the APE along ocean terraces

Bridge Number 49-0191 is located within the project area and has been previously determined as Category 5 (not eligible for listing in the National Register of Historic Places) on the Caltrans Historic Highway Bridge Inventory. Similarly, the bridge does not meet the criteria for listing in the California Register of Historical Resources and is not historical resources for the purposes of the California Environmental Quality Act

Area remains highly sensitive to Northern Chumash Groups and Individuals. Consultation required under AB 52

A field survey (Phase 1) of the entire APE will be conducted in-house prior to the Draft Environmental Document. Based on field inventories and additional archival research, an Archaeological Survey Report (ASR) will be prepared. Modifications in project plans would result in additional studies.

If intensive archaeological surveys identify materials associated with CA-SLO-801 in the project area, Extended Phase 1/Phase II Testing is required. Areas known to be sensitive for archaeological resources extend from western most margins of the southbound onramp and along Shell Beach Road. The testing will identify first if there are archaeological materials within the APE, and secondly, the relationship of the deposit to the APE. If intact materials are identified and cannot be avoided by Environmentally Sensitive Area (ESA) fencing, the testing will transition into a Phase II investigation which will determine if the site is eligible to the NRHP One property located within the project area has not been previously studied and will require evaluation for eligibility. Evaluation will be conducted in-house

Preparation of a FOE and MOE is required if there are any effects to eligible archaeological and architectural resources, and if new eligible properties are identified over the course of the project studies. If sites eligible for the National Register are identified in the APE a Finding of Effects (FOE document and a Memorandum of Agreement (MOA) and data recovery plan will be prepared. The FOE must be reviewed and approved by the FWHA, SHPO, and the Native American Community prior to the approval of the Final Environmental Document. An additional 12 to 18 months may be necessary for the circulation of the FOE/MOA

If the FOE Cultural Resource Mitigation Plan requires a Phase III data recovery excavation, this excavation must be conducted prior to construction. Results of this study will be documented in the data recovery report, and if necessary would cost between $250,000 and $350,000. Additionally, all recovered cultural material will be curated at an appropriate curation facility.

Historic Property Survey Report (HPSR) is a required document that summarizes the technical documents and cultural study efforts, regardless of outcome.

Hazardous Waste

Aerially Deposited Lead may be an issue since soil may be excavated and placed elsewhere in the project limits and/or disposed of outside of the highway right of way. A task order will need

to be written to have soil sampling performed to evaluate onsite or offsite reuse and/or disposal of ADL soil The Task Order may cost $35000.00.

If yellow stripe or thermoplastic is going to be removed it will need to be managed differently depending on its age and the way it will be removed. Some of the yellow traffic stripe in this segment of highway 101 may be newer yellow stripe that does not contain lead, and some may have hazardous lead. Hazardous traffic stripe will need to be handled and disposed as a hazardous waste according to regulations and specifications.

TWW includes posts for metal beam guard railing, thrie beam barrier, piles, or roadside signs. This project will likely require TWW to be removed and disposed of in accordance with regulations and specifications.

Asbestos containing materials (ACM), lead containing paint (LCP) – ACM and LCP may be an issue for this project. If structures or local facilities are impacted they will have to be inspected for asbestos containing material (ACM) and lead containing paint (LCP). A task order will need to be written to have these inspections performed to evaluate handling and disposal.

Air Quality Analysis

The project is located in the South Central Coast Air Basin in San Luis Obispo County which is in attainment and /or unclassified for all Federal Standards. According to 40CFR Section93.127 Table 3, this project is considered as an Intersection channelization and it is exempted from the regional emission analysis requirements. Project level emission analysis is not required because San Luis Obispo County is in attainment for carbon monoxide, PM10 and PM2.5. No further investigation concerning air quality is needed.

Noise Study

The proposed project is not considered as a Type I or Type II project, as it will not construct a highway on a new location, significantly change the alignment of the existing highway or involve construction of noise abatement on an existing highway with no changes to the highway capacity or alignment, it is not subject to Caltrans Traffic Noise Analysis Protocol.

Water Quality

A Water Quality Assessment has determined that no water quality impacts are anticipated for the above-mentioned project. This project is adjacent to a realigned engineered unnamed tributary to San Luis Obispo (SLO) creek. SLO creek travels 2.5 miles before discharging into Port San Luis. Standard construction practices such as linear barriers and other best Management practices (BMP's) should be incorporated into the plans to minimize potential risk of runoff from construction activities. By incorporating proper and accepted engineering controls and Best Management Practices, the proposed project should not result in significant impacts to water quality.

Community Impact Assessment

A Community Impact Assessment will be required for this project

Cumulative Impacts

A Cumulative Impacts analysis will be required for this project

Farmland

The project will not be acquiring any farmland or be impacting any farmland

Visual Resources

The project may affect mature trees in the Coastal Zone which may be considered a CEQA Scenic Resource. The project may affect views of the Pacific Ocean which is considered a CEQA Scenic Resource. Because of the projects location in the Coastal Zone, combined with the potential to alter community visual character and scenic vistas, a Visual Impact Assessment will be required.

Floodplain Evaluation

The project is not located in a 100 year floodplain.

Paleontology

A Paleontology Study will be required, the project site is shown as having High to No potential for encountering sensitive paleontological resources and the probability of encountering sensitive fossil remains is unknown based on the nature of the work. Additional information is need about the project site geology and details of excavation/drilling to be precise about anticipating impacts to the resource

Section 4(f) Evaluation

There are no Section 4(f) resources within the project limits.

Wild and Scenic River Consistency

There are no Wild and Scenic Rivers within the project limits

Geology

A geotechnical investigation will be required at the site to determine engineering properties of local soil and rock, including depth of soil profile, hydraulic conductivity, and relative density

Topology

A geotechnical investigation will be required at the site to determine engineering properties of local soil and rock, including depth of soil profile, hydraulic conductivity, and relative density

Soils

A geotechnical investigation will be required at the site to determine engineering properties of local soil and rock, including depth of soil profile, hydraulic conductivity, and relative density

Greenhouse Emissions

Greenhouse Emissions will be assessed in the environmental document

Permits.

- 1600 Streambed Alteration Agreement from the California Department of Fish and Wildlife for proposed work in Waters of the US.
- 404 Nationwide from the Army Corp of Engineers for proposed work in Waters of the US
- 401 Water Quality Certification from the Regional Water Quality Control Board for proposed work in Waters of the US
- Coastal Development Permit from County of San Luis Obispo

List of Preparers

Cultural by Damon Haydu	June 2015
Biology by Andrew Dominigos	June 2015
Air & Noise by Abdul Chafi	July 2015
Paleontology & Water Quality by Isaac Leyva	June 2015
Visual by Bob Carr	June 2015
Hazardous Waste by Joel Kloth	October 2015
Preliminary Environmental Analysis Report by Michael Thomas	October 2015

State of California Transportation Agency

Memorandum

To: Steve DiGrazia
PM-SLO

Attn Curtis Gubler
PE-SLO
James Perano
DM-SLO

From: **Department of Transportation**
Division of Right of Way Central Region

Date: 11/12/2015

File: **CD** 05 **EA** 1G4801 **Alt** 1 REV 1
Co SLO **RTE** 101

DESCRIPTION:
Operational Improvements

Subject: RIGHT OF WAY DATA SHEET

We have completed an estimate of the right of way costs for the above-referenced project based on the Right of Way Data Sheet Request Form dated 10/20/2015

The following assumptions and limiting conditions were identified:

Appraisal

Utility
The PE indicates on the Right of Way Data Sheet Request Form, item# 5: Utility permit search completed NO (X), Utility involvement and/or relocation REQUIRED (X), Potholing required YES (X). 10 potholes have been requested. A review of the permit database shows six utilities are located within the project limits, including: 8" oil line at PM 17.8 to 25.9, gas line at PM 17.3 to 25.5, 6" water crossing at PM 21.4, and a water main at PM 13.2. The PE states in the datasheet the following utilities may need to be relocated: ATT cable/fiber, Phillips 66 pipeline, So. Cal Gas pipeline, and SLO County water pipeline. An ATT vault and SLO County water vault will also need relocation. In subsequent communication with the PE, the gas line will not be impacted and will not require relocation. As the Design Branch develops plans and utility verifications are completed, there may be a need to amend data reflecting utility involvement and relocations. The state cost estimates presented here are based on occupancy rights information the Rght of Way Branch has to date. Cost estimates may change as occupancy information is updated. Any adjustment of facilities constitutes involvement and a R/W utility process and timeline would be necessary before the project could be certified.

Right of Way Lead Time will require a minimum of 24 months after we receive Certified Appraisal Maps and/or Utility Conflict Plans, obtained necessary environmental clearance and applicable freeway agreements have been approved.

Marshall Garcia, Sr. Right of Way Agent
San Luis Obispo Field Office
(805)549-3471

EA: 05-1G4801 CO/RTE/PM-PM (Rte 1 and Rte 2) : SLO/101/21.1- & //- Request Date: 10/20/2015
ALT: 1 REV 1 Revised Date:

Right Of Way Cost Estimate	Current Year 2015	Contingency Rate	Right of Way Escalation Rate	Escalated Year 2019
Acquisition:	$0	25%	5%	**$0**
Mitigation:	$11,501	25%	5%	**$13,980**
State Share of Utilities:	$170,625	25%	5%	**$207,396**
Expert Witness:	$0	25%	5%	**$0**
Relocation Assistance:	$0	25%	5%	**$0**
Demolition and Clearance:	$0	25%	5%	**$0**
Title and Escrow:	$0	25%	5%	**$0**
Ad Signs:	$0	25%	5%	**$0**
Total Current Value: If RW Cost Est fields are blank, Costs = $0	$182,126			

NOTE: above estimate includes railroad engineering in the amount of:

Estimated Construction Contract Work (CCW): R/W LEAD TIME/Mo. 24

Cost Break Down

Pot Hole	5,000
Mitigation	
Land	
Bank	
Permit Fees	9,201

Parcel Data

# of Parcel Type X:			
# of Parcel Type A: less than $10,000 non-complex			
# of Parcel Type B: more than $10,000 non-complex			
# of Parcel Type C: complex, special valuation			
# of Parcel Type D: most complex and time consuming		# of Duals Needed:	
Totals:	0	**Totals:**	0

# of Excess Parcels:

Misc R/W Work

# of RAP Displacements:	0
# of Clearance/Demos:	
# of Const Permits:	
# of Condemnations:	

RR Involvement

Railroad Facilities or Right of Way Affected?	N
Const/Maint Agreement:	N
Service Contract Count:	
Right of Entry:	N
Clauses:	N
Estimated Lead-time:	0 Mos.

Utilities

U4-1: Owner Expense	2
U4-2: State Expense, Conventional no Fed Aid	0
U4-3: State Expense, Freeway no Fed Aid	2
U4-4: State Expense, both with Fed Aid	0
U5-7: Utility verification, no relocation/potholing	3
U5-8: Utility verification, w/ some relocation/potholing	0
U5-9: Utility verifications, relocation/potholing required	3

EA: 05-1G4801 ALT: 1 REV 1

Parcel Area

Total R/W Required:
Total Excess Area:

General Description of R/W and Excess Lands Required (zoning, use, major improvements, critical or sensitive parcels, etc.):

General Description of Utility Involvement:

Route 101 is designated Freeway throughout the project limits. This project is a reconfiguration of the Avila Beach Dr. intersection with the northbound and southbound on and off ramps. The southbound ramps intersection includes work on Shell Beach Rd and the northbound ramps intersection includes work on Monte Rd. The Datasheet requests ten potholes be performed. The Data Sheet request form states the following utilities may need to be relocated: ATT, Phillips 66, So. Cal Gas, and SLO County water pipeline. The long lead time indicated on the Datasheet is due to the potential for oil and/or gas pipeline relocation and the timeframes for securing plans and utility agreements for such relocations.

Is there a significant effect on assessed valuation:	No
Were any previously unidentified sites with hazardous waste or material found:	No
Are RAP displacements required:	No
# of single family:	
# of muliti-family:	
# of business/nonprofit:	
# of farms:	
Sufficient replacement housing will be available without last resort housing:	
Are material borrow or disposal sites required:	No
Are there potential relinquishments or abandonments:	No
Are there any existing or potential airspace sites:	No
Are environmental mitigation parcels required:	No

Data for evaluation provided by:

Estimator:	Liz Valadez	11/4/2015
Railroad Liaison Agent:	SWB	10/22/2015
Utiltiy Relocation Coordinator:	Martin Miller	11/10/2015

I have personally reviewed this Right of Way Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.

Marshall Garcia
Sr. Right of Way Agent, Right of Way

Date
ENTERED PMCS 11/12/2015
BY: Danny Millsap

APPENDIX E

Long Form - Storm Water Data Report

Dist-County-Route: 05-SLO-101
Post Mile Limits: R21.1
Type of Work: Roundabout- Safety Improvements
Project ID (EA): 05-1500-0038-K (05-1G480K)
Program Identification: ~~075.600~~ 400.100
Phase: ☒ PID ☐ PA/ED ☐ PS&E

Regional Water Quality Control Board(s): Central Coast, Region 3

Total Disturbed Soil Area: 2.5 acres Post Construction Treatment Area: NIS=1.5 ac

Alternative Compliance (acres) N/A

Estimated Const. Start Date: 5/1/2023 Estimated Const. Completion Date: 11/1/2023

Is the Project covered under the Construction General Permit? Yes ☒ No ☐

Risk Level: RL 1 ☐ RL 2 ☒ RL 3 ☐ WPCP ☐ NA ☐

Does Project require a Rapid Stability Assessment? Yes ☐ No ☒

Is the Project within a TMDL area where Caltrans is a named stakeholder? Yes ☐ No ☒

TMDL Compliance Units (acres) N/A

Notification of ADL reuse (if yes, provide date): Yes ☐ Date:_____ 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 date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Curtis Gubler, Registered Project Engineer — 3/14/2016 Date

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

John Luchetta, Project Manager — for JL — 3/15/16 Date

Chris Chalk, Designated Maintenance Representative — 3/21/16 Date

Dennis Reeves, Designated Landscape Architect Representative — 3/15/16 Date

(Stamp Required for PS&E only)

James Espinosa, Regional SW Coordinator or Designee — FOR — 3/22/2016 Date

DISTRICT 5
TRANSPORTATION MANAGEMENT PLAN DATA SHEET/CHECKLIST

District / EA / EFIS: 05-1G4800
Project Engineer: Curtis Gubler
Date Prepared: 9/9/2015

Co.-Rte-PM: SLO-101-R21.1
Description: Avila Roundabout
Working Days: 135 days

Check each box and reference your attachments to the item(s) number(s) shown on the list.

	Required	Recommended	Not required	COMMENTS
1.0 Public Information				
1.1 Public Awareness Campaign	x			Estimate $9000
1.2 Other Strategies				
2.0 Motorist Information Strategies				
2.1 Changeable Message Signs - Portable	x			Estimate $50,000 ($200/day per unit*)
2.2 Construction Area Signs	x			
2.3 Highway Advisory Radio (fixed and mobile)			x	
2.4 Planned Lane Closure Web Site	x			Construction to provide information to TMC
2.5 Caltrans Highway Information Network (CHIN)			x	Construction to provide information to TMC
3.0 Incident Management				
3.1 COZEEP (during k-rail moving & work in live traffic)			x	$12,000 - For K-rail placement/mainline closures
3.2 Freeway Service Patrol			x	
4.0 Traffic Management Strategies				
4.1 Lane/Ramp Closures Charts	x			To be provided during PS&E
4.2 Total Facility Closure/ Number of days?			x	
4.3 Coordination with adjacent construction		x		
4.4 Contingency Plan	x			Standard SSP
4.4.1 Material/Equipment Standby				Contruction/Contractor to provide
4.4.2 Emergency Detour Plan				Contruction/Contractor to provide
4.4.3 Emergency Notification Plan				Contruction/Contractor to provide
4.5 Speed Limit Reduction Request				
4.6 Special Days:	x			Lifecycle AIDS Ride, Amgen Tour of CA
4.7 Other items:				
4.8 Bicycle and Pedestrian Accommodations*	x			

**Planning for all road users must be included in this process. Bicyclists and Pedestrians shall not be led into direct conflicts with mainline traffic, work site vehicles, or equipment moving through or around the TTC zone. Contact Dario Senor w/ questions.*

5.0 Anticipated Delays				
5.1 Lane Closure Review Committee (for anticipated delays over 30 minutes)			x	
5.2 Planned freeway closures			x	

5.3 Minimal delay anticipated - no further action required

[x] yes [ ] no If no, explain additional measures on attached sheet.

6.0 Placement of CMS*				
CMS estimate depends on the number of closures and detours. Plan for 2 per day for the whole job now and revise later.	x			Per RE

Shayne Sandeman
District 5 TMP Coordinator

Document Distribution List

ATTACHMENT I

	Contact	Division / Program / Office	Copies
1	Design Report Routing	HQ Division of Design	1
2	Division of Engineering Services	HQ Division of Engineering Services	5
3	Kurt Scherzinger	HQ Transportation Programming	1
4	Bob Pavlik	HQ Environmental	1
5	John Luchetta	Project Manager	1
6	David Beard	Design Manager	2
7	Mike Lew	Resident Engineer	1
8	Lance Gorman	District Maintenance	1
9	Jacques Van Zeventer	District Traffic Management	1
10	Steve Talbert	District Traffic Safety	1
11	Mohammed Qatami	Region Traffic Design	1
12	Paul McClintic	District Traffic Operations	1
13	Doug Lambert	Region Materials	1
14	Susan Schilder	Region Environmental	1
15	Dennis Reeves	Region Landscape	1
16	Marshall Garcia	Region Right of Way	1
17	Garin Schneider	Distict Planning	1
18	Linda Araujo	PPM	1
19	Jeremy Villegas	Surveys	1
20	Nick Tatarian	Surveys	1
21	Pat Duty	District Records	1*

* Electronic copy only