05-SB-101-PM 45.5/46.3
20.10.201.010 (HB1)
Project ID No. 0500020029
06-235-0T630K
June 2011

PROJECT STUDY REPORT
To
Request for Programming in the 2012 SHOPP

On Route 101 in Santa Barbara County near Gaviota

From 0.7 mile north of Beckstead Overcrossing

To 0.9 mile south of Gaviota Tunnel

APPROVAL RECOMMENDED:

DEBRA LARSON, DISTRICT 5 SAFETY COORDINATOR

DAVID BEARD, PROJECT MANAGER

APPROVED:

RICHARD KRUMHOLZ, DISTRICT 5 DIRECTOR

8/9/2011
DATE

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DATE

05-SB-101-PM 45.5/46.3
20.10.201.010 (HB1)
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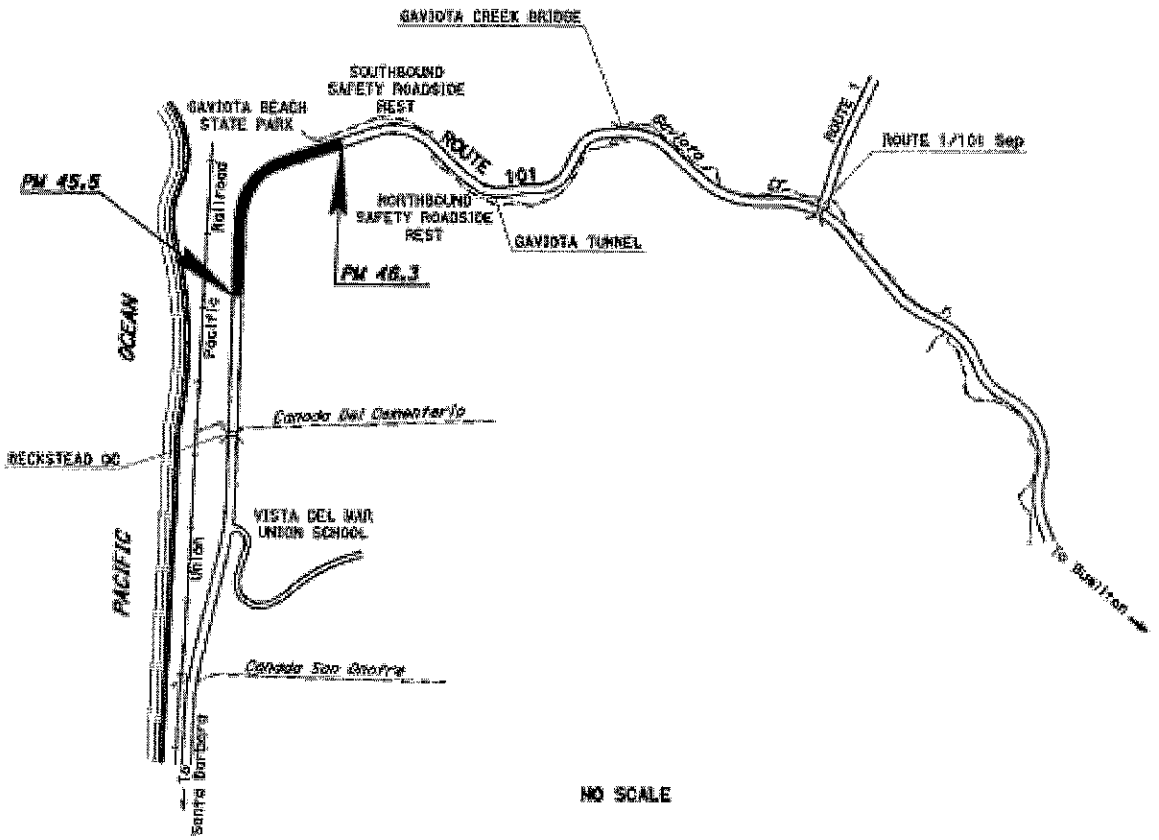
Vicinity Map



On Route 101 in Santa Barbara County near Gaviota

From 0.7 mile north of Beckstead Overcrossing

To 0.9 mile south of Gaviota Tunnel

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

6/8/2011

PAUL F. VALADAO, P.E. *DATE*

Table of Contents

1. INTRODUCTION

The proposed project is located on Route 101, from 0.7 mile north of Beckstead Overcrossing to 0.9 mile south of Gaviota Tunnel in Santa Barbara County near Gaviota. The project proposes to realign northbound Route 101 and replace the existing compound curve with a single radius curve. Additional right of way and utility relocation would be necessary to accommodate the realignment. The current capital construction cost estimate for this project is $4,979,097 (May 2011). Unescalated right of way costs for right of way acquisition and utility relocation is $482,169 (July 2010). See the Project Study Report Cost Estimate (Attachment C) for specific work items included in this project. This project is a candidate for the 2012 SHOPP in the 201.010 safety improvements program.

Project Limits	05-SB-101-PM 45.5/46.3
Number of Alternatives	3
Alternative Recommended for Programming:	Curve realignment to design speed of 65 MPH with excavated slope (Alt. 1)
Programmed or Proposed Capital Construction Costs	$4,979,097
Programmed or Proposal Capital Right of Way Costs	$482,169
Funding Source	201.010 (HB1)
Type of Facility (conventional, expressway, freeway):	Four Lane Expressway
Number of Structures:	None
Anticipated Environmental Determination/Document	Mitigated Negative Declaration (CEQA) Categorical Exclusion (NEPA)
Legal Description	Curve Realignment
Project Category	2A

2. BACKGROUND

Route 101 is a major north/south corridor within District 5, extending through Santa Barbara, San Luis Obispo, Monterey, and San Benito Counties. It primarily serves interregional traffic, much of it tourist and trucking, although commute traffic is predominant at specific locations within the district. A majority of the cities in Santa Barbara County are served by the corridor, which connects Los Angeles through Central Coast development areas to San Francisco.

Within the project limits, Route 101 is a four-lane expressway with a functional classification of rural principal arterial. This section of Route 101 was originally constructed in 1917 and last upgraded in 1952. The roadway cross section consists of 12 foot lanes, 8 foot outside shoulders, 10 foot to 15 foot northbound inside shoulder, 5 foot to 8 foot southbound inside shoulder, and a median width varying 22 feet to 50 feet that has concrete barrier (type 50) along its center. The Right of Way width varies 170 feet to 390 feet within the project limits. The

posted speed limit within the project's vicinity is 55 MPH. The terrain is mountainous, where grades vary 1% to 5.8%. The northbound horizontal alignment within the project limits consists of a compound curve with radii decreasing in the direction of travel from 1,800 feet to 1,149 feet. The southbound horizontal alignment also consists of a compound curve with radii increasing in the direction of travel from 1,195 feet to 1,800 feet. There is an at-grade intersection within the project area at the entrance to Gaviota State Park to the immediate north of the proposed curve correction. This section of Route 101 is bordered by California State Park land and is in a highly scenic area.

The District 5 Traffic Safety Department initiated this project and approval of the Project Initiation Form came in March 2010.

3. PURPOSE AND NEED STATEMENT

Need:

This segment of northbound Route 101 is experiencing a pattern of run-off-the-road collisions. Errant vehicles that travel beyond the limits of the traveled way may overcompensate by attempting to redirect the vehicle, also referred to as "overcorrecting". Several of the run-off-the-road collisions resulted in vehicles traveling off the road and colliding with the existing concrete median barrier. The actual collision rate at this location is over four times the statewide average for similar facilities.

Purpose:

The purpose of this project is to improve safety by reducing the potential for run-off-the-road collisions.

4. DEFICIENCIES

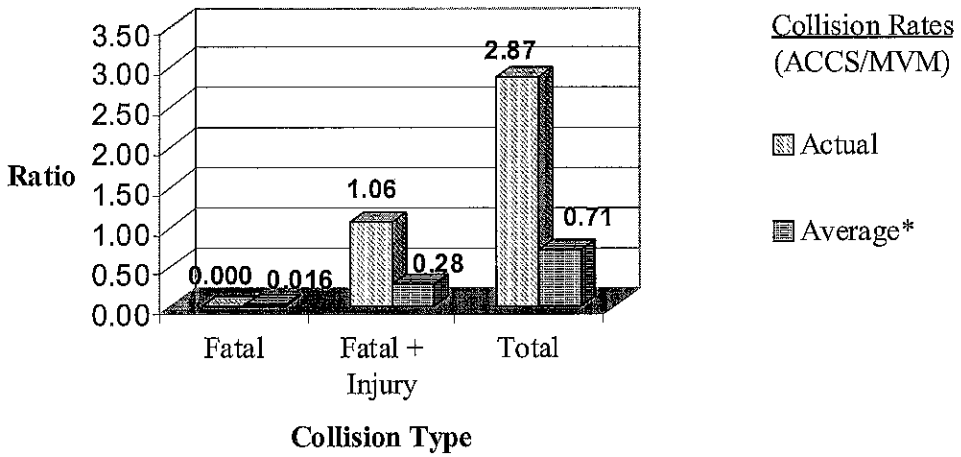
The Traffic Safety Department initiated this project in response to run-off-the-road collisions occurring on northbound Route 101 within the project limits, which includes an existing compound curve with two separate curve segments with radii decreasing from 1,800 feet to 1,149 feet in the direction of travel. The Caltrans Highway Design Manual (HDM), which contains the most recent State standards for highway design, notes that when drivers encounter a compound curve, they may have difficulty adjusting vehicular steering while negotiating the multiple curve radii. Traffic Collision Records indicate that collisions occurring within the project limits are primarily caused by traveling at excessive speeds.

During the three year period from August 1, 2005 to July 31, 2008, thirty-eight (38) collisions occurred within the project limits. None were fatal, fourteen (14) were injury collisions, and the remaining twenty-four (24) were "property damage only" collisions. The following depicts the collision data and rates within the project limits for said three year period (see Attachment E for the TASAS Table B Report).

COLLISION DATA
(08/01/2005 to 07/31/2008)

LOCATION	POST MILE	NUMBER OF COLLISIONS			ACCIDENT RATES	
		TOTAL	FATAL	INJURIES	ACTUAL TOTAL (ACCS/MVM)	AVERAGE* TOTAL (ACCS/MVM)
Route 101	45.5 to 46.3	38	0	14	2.87	0.71

COLLISION RATES



Note: Rates are collisions per million vehicle miles (MVM).
* Statewide average collision rate for similar facilities.

5. CORRIDOR AND SYSTEM COORDINATION

A. Route Designation Classification

Within the project limits, Route 101 is comprised of four lanes and classified as Expressway as part of the Freeway Expressway System (F&E). The 2001 Transportation Concept Report (TCR) for Route 101 in District 5 indicates that this area is functionally classified as Rural Principal Arterial. Although it is not officially designated as part of the Scenic Highway System, this portion of Route 101 is eligible for designation as a Scenic Highway.

B. Goods Movement

At the project location, Route 101 is designated as part of the: National Highway System (NHS), Surface Transportation Assistance Act (STAA), State Highway Extra Legal Load (SHELL), Interregional Road System (IRRS), National Truck Network (NTN), High Emphasis Route, and Focus Route. It is not part of the Strategic Highway Network (STRAHNET). Trucks make up approximately 13% of the traffic flow.

C. Design Designation

The Design Designation is a concise expression of the basic factors controlling the design of a given highway, as described in Topic 103 of the Highway Design Manual (HDM). The following is Design Designation for this project.

		Design Hourly Volume (DHV)				Average Daily Traffic (ADT)			
From	To	2008	2013	2023	2033	2008	2013	2023	2033
45.5	46.3	2,900	3,355	4,266	5,177	29,500	35,043	46,130	57,216

From	To	Split	Trucks in Peak Hour	Trucks in ADT	Traffic Index (10 Year)	Traffic Index (20 Year)	Design Speed (MPH)
45.5	46.3	60%	9.0%	13.0%	12	13	65

D. Planning Horizon

The 2001 Transportation Concept Report (TCR) indicates that the proposed concept for this area of Route 101 is a Level of Service (LOS) C and lists recommended actions for this area. Included but not limited to these recommended actions is accommodation for a future six-lane facility. However, the TCR does not limit any safety, protection, operational, or maintenance improvements. In summary, the proposed project would accommodate a future six-lane facility and be consistent with current System Planning documents.

6. ALTERNATIVES

A. Viable Alternative

Proposed Engineered Features

Alternatives considered for this project shared the characteristic to realign Route 101 and replace the existing compound curve. The viable alternative proposes to realign northbound Route 101 and replace the existing compound curve with a single 1,625 foot radius curve, which equates to a design speed of 65 MPH. The 1,625 foot curve radius would safely accommodate approaching northbound Route 101 traffic.

The proposed alignment would require excavation of a new cut slope roughly parallel to the existing cut slope and recessed 75 feet to the northeast from the apex of the curve. The District Preliminary Geotechnical Design Report concluded that stable conditions persist under the existing cut slope based on favorable structural conditions of the rock and negligible degradation of the existing slope face. The proposed cut slope would reflect similar slope ratios to the existing cut slope, with slope ratios no steeper than 1.5:1 (Horizontal:Vertical) from stations 80+00 to 90+00 and no steeper than 0.5:1 from stations 90+00 to 95+50 (See Attachment B). Exclusion of benches and addition of a catchment area at the toe of the slope not less than 20 feet wide from the edge of traveled way (ETW) are proposed for the new slope design. Roadway excavation

constitutes the largest share of the viable alternative's cost estimate (See Attachment C). Existing northbound Route 101 alignment not used in the proposed design will be removed (structural section only) and graded to a slope appropriate for a rural expressway median. A new concrete median barrier (type 60S) will replace the existing concrete median barrier (type 50) to accommodate the proposed median width and grade.

Also included in this alternative is adjusting the concrete median barrier to the immediate north of the Gaviota State Park at-grade intersection. The purpose of this modification is to accommodate larger vehicle turning movements from Gaviota State Park to northbound Route 101. Drainage would be addressed by collecting the project's watershed onto roadside ditches, into drainage inlets and ultimately into existing and/or newly constructed culverts that outlet on the west side of Route 101. There are no nonstandard (Highway Design Manual) features proposed. The estimated cost for this alternative is $5,461,266 (See Attachment C). The scope and cost of the viable alternative produces a fundable Safety Index.

Right of Way and Utilities
The construction of the proposed realignment would require acquisition of Right of Way from a single parcel totaling 2.8 acres (APN 081-270-003) owned by California State Parks. This acquisition is necessary to accommodate the realignment and correlating excavated slope (See Attachment D).

There are several high risk utilities (overhead electric and underground gas and oil) within the project limits of which ownership includes Southern California Gas Company, Texaco, Shell Oil, Chevron, Exxon, Plains Pipeline, and Point Arguello Pipeline. There are also waterlines belonging to State Parks and Vista Del Mar Union School District, as well as overhead phone lines owned by Verizon. Exact impacts on underground facilities are not yet known since an engineering survey would not be performed until after this project is programmed (PSR approved). The engineering survey would determine the vertical profile of the proposed realignment and thus the anticipated excavated depths that could impact underground facilities. It is therefore assumed that said utilities would all be impacted by the project's design. No longitudinal utility encroachments are anticipated. Costs associated with anticipated utility impacts are indicated in the Right of Way Data Sheet (See Attachment D).

Stage Construction and Traffic Control
In order to construct the proposed realignment and allow for continuous flow of traffic, northbound Route 101 lanes would be shifted to the west and narrowed to 11 feet in order to construct the realignment to the east. Northbound Route 101 traffic and construction activity would be divided by Temporary Railing (Type K). Any necessary drainage work would be performed intermittently throughout all stages of construction. Southbound Route 101 traffic would be largely unaffected by stage construction activities. Traffic control during construction

would be handled by changeable message signs, construction area signs, and occasional lane closures during non-peak hour traffic.

Storm Water
With regard to the attached Storm Water Data Report (See Attachment G), this project is exempt from further consideration of treatment BMPs because it is not increasing the net new impervious area by one acre or more. In fact, this project's net new impervious area is 0.08 acres less than the existing impervious area. Storm water pollution would be prevented using slope/surface protection systems, preserving the largest practical vegetated surfaces, and other standard erosion control methods. A Storm Water Pollution Prevention Plan (SWPPP) would be required for this project.

Landscape Architecture
Since the project area is highly visible to the public and located in a sensitive location in the Coastal Zone, a Visual Impact Assessment would be prepared by District Landscape Architecture. The viable alternative's excavated slope would be more in keeping with the natural features and view shed of the project's vicinity. This will be performed by contour grading and landform grading. Preliminary Landscape Architecture costs associated with this design as well as visual aesthetic treatment and mitigation are included in the attached Project Study Report Cost Estimate (See Attachment C).

Hazardous Waste, Air Quality, Water Quality, Noise, and Paleontology
An Initial Site Assessment (ISA) and soil sampling would be required to rule out any hazardous waste impacts associated with this project. This project is not expected to appreciably change traffic volumes, air quality, water quality, or noise levels. Because of the location of the proposed excavation, there is potential of paleontology resources and further evaluations would be necessary.

SHOPP Performance Indicator
The SHOPP performance indicator for this project is 127 collisions reduced over the life of the project's improvement.

Permits
A Coastal Development Permit from the County of Santa Barbara would be required since the project limits are located within the coastal zone. Permits from the US Army Corps of Engineers (404), US Fish and Wildlife Service (Endangered Species Act Section 7), California Regional Water Quality Control Board (401), and California Department of Fish and Game (1600) may be required after further environmental review (See Attachment F).

Route Matters
The freeway agreement for the project's vicinity is not affected by the proposed design.

Rubberized Hot Mix Asphalt
Rubberized Hot Mix Asphalt was considered for this project but due to the small quantity required and mobilization costs for asphalt rubber production equipment, it was not considered economically feasible.

Risk Management
A Risk Management Plan (RMP) has been developed for the project (See Attachment H). Because the project is located in a sensitive coastal area and within a State Park, the RMP identifies several significant risks related to the Environmental, Right of Way, and Coastal Development Permit processes that are likely to add cost and delays to the project. Avoidance or Mitigation responses are identified to minimize most of these risks. However, as the RMP cannot identify all risks in advance of occurrence for a project, some risks are unknown.

B. Other Alternatives
Other alternatives considered were similar in scope to the aforementioned in replacing the existing northbound Route 101 compound curve, with the exception of differing radii in a single curve realignment. Alternatives with single curve realignment consisting of smaller radii than the proposed would have resulted in a design speed less than the 65 MPH designated for this project. After consulting Headquarters Design regarding the viability of resulting Design Exceptions, pursuing alternatives with geometric features that have a design speed less than the one designated for this project was not recommended because it would not meet the project's purpose and need.

Also, a higher design speed alignment was not chosen to avoid an excessive amount of earthwork. For instance, the approximate amount of roadway excavation to construct a 2,100 foot radius curve realignment, which equates to a design speed of 70 MPH, would result in 625,000 yd^3 and an estimated cost of $10,043,493. This compared to the viable alternative of a 1,625 foot radius curve realignment (65 MPH design speed) which results in approximately 186,000 yd^3 of roadway excavation and the aforementioned cost of $5,461,266. This would be a $4,582,227 increase with no appreciable benefit to the project's scope. Additionally, northbound Route 101 approach geometry consists of long tangent sections and large radii curves. The speed survey reading nearest the project limits indicates an 85^{th} percentile speed of 70.3 MPH located on northbound Route 101 at post mile 43.3. This project's existing curve is the first in a series of progressively smaller curves. The subsequent three curve radii that northbound Route 101 travelers promptly encounter range 1,200 feet to 1,000 feet. If a 2,100 foot radius curve realignment was chosen, the driver would be subjected to a sudden reduction in alignment geometry. According to HDM Topic 203.3 (Alignment Consistency), said variance in alignment geometry should be avoided. The use of the viable alternative's 1,625 foot curve radius resulting in a 65 MPH design speed follows the HDM's Alignment Consistency standards and is a logical design speed for the initial curve, in a progression of smaller curves.

Retaining walls could have been used in the 1,625 foot radius (65 MPH design speed) curve realignment alternative to reduce Right of Way acquisition, but the increased construction costs far exceeded the benefit of reduced amount of land acquisition. The types of walls that could have been used included gravity, semi-gravity, non-gravity-cantilever walls and soil reinforcement systems. The type of wall recommended in the District Preliminary Geotechnical Design Report, if used, would have been a soil-nail wall which was deemed the most cost effective stabilizing alternative. This wall type uses top-down construction methods, eliminating the need for a temporary excavation slope or shoring. The estimated cost for a 1,625 foot radius curve realignment alternative that includes a soil-nail wall is $9,461,482, or $4,000,216 more than the viable alternative (see subsection 6 a). Also, the soil-nail wall would have reduced the amount of land acquisition to 0.6 acre, or 2.2 acres less than the viable alternative.

The "No-Build" Alternative was rejected due to safety concerns and current collision data as well as not meeting the purpose and need.

7. COMMUNITY INVOLVEMENT

An informal meeting was held with State Parks and Caltrans Environmental Planning on December 6, 2010, where the project's preliminary design was introduced. State Parks, owner of the parcel requiring acquisition, identified the affected parcel as significant State-owned property. State Parks is interested in limiting the amount of acquisition as much as possible and drew attention to flooding issues near the entrance to Gaviota State Park located at the northwest end of the project limits.

The County of Santa Barbara would need to be consulted at an early stage since the project is within the coastal zone and thus a Coastal Development Permit would be necessary. The residents of the unincorporated town of Gaviota are imperative stakeholders who reside within close vicinity of the project. Public meeting(s) would be held to present the project's design to this vital community during the environmental (0) phase.

8. ENVIRONMENTAL DETERMINATION/DOCUMENT

An Initial Study with Mitigated Negative Declaration (California Environmental Quality Act, CEQA) and Categorical Exclusion (National Environmental Policy Act, NEPA) determinations are anticipated for this project. Caltrans would be the CEQA and NEPA lead agency. Due to concerns of potential impacts, the focus of the environmental review phase of the project would be on cultural and biological resources. Environmental studies would also include potential impacts to scenic and visual resources, California State Park property (Section 4(f) Evaluation), historic resources, paleontological resources, hazardous waste sites, noise, and air quality. A summary of the work that would be covered in the environmental phase may be found in the Preliminary Environmental Analysis Report (PEAR, See Attachment F).

9. FUNDING

The proposed project is a candidate for the 2012 SHOPP to be funded by the Safety Improvements Program (201.010) for delivery in the 2015/16 fiscal year. In accordance with Brent Felker's memorandum dated July 7, 2003 regarding all safety projects, a SHOPP amendment is to be prepared as soon as possible to program the project. Due to the extended delivery schedule, it cannot be amended into the current 2010 SHOPP, so it will be amended into the draft 2012 SHOPP for immediate programming of the PA&ED phase. The current estimated project cost is $5,461,266 (May 2011). See Attachment C for the Project Study Report Cost Estimate. The proposed estimated resources and funding schedule for this project are summarized in the following table.

Proposed Estimated Resources

Project Cost Component	Fiscal Years						Grand Total
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	
R/W Capital				**$586**			**$586**
Construction Capital						**$6,355**	**$6,355**
PA&ED Support		**$1,655**					**$1,655**
PS&E Support				**$1,374**			**$1,374**
R/W Support				**$94**			**$94**
Construction Support						**$1,246**	**$1,246**
Total Support		**$1,655**		**$1,468**		**$1,246**	**$4,369**
Total		**$1,655**		**$2,054**		**$7,601**	**$11,310**

Note: all costs x $1,000. Support Categories are the same as those identified by SB 45. Support Costs escalated at 3.10%. Construction Capital and Right of Way Capital escalated at 5%. Support Cost Ratio: 63%.

10. SCHEDULE

Project Milestones	Date
Begin Environmental	9/1/2011
Circulate DED	2/1/2013
PA & ED	8/1/2013
Regular Right of Way	9/15/2013
Project PS&E	6/1/2015
Right of Way Certification	9/15/2015
Ready to List	10/1/2015
Approve Contract	4/15/2016
Contract Acceptance	8/1/2017
End Project	8/1/2018

11. FHWA COORDINATION

No FHWA action is required for this project.

12. DISTRICT CONTACTS

1.	David Beard	Project Manager	(805) 549-3016
2.	Steve Wyatt	Design Manager	(805) 549-3079
3.	Paul Valadao	Project Engineer	(805) 549-3028
4.	Kelso Vidal	Environmental Planner	(805) 549-4671
5.	Debra Larson	Traffic Safety Program Mgr.	(805) 441-5875
6.	Robert Carr	Landscape Architect	(805) 549-3083
7.	John Magorian	Utilities	(805) 549-3002
8.	Alan Haag	Construction Senior	(805) 542-4680
9.	Glenn Johnson	Materials	(805) 549-3158
10.	Pete Riegelhuth	District Storm Water Coord.	(805) 549-3375

13. PROJECT REVIEWS

Field Review	Paul Valadao	Date	6/1/2010
District Maintenance	Lance Gorman	Date	6/20/2011
District Safety Review	Deb Larson	Date	TBD
Constructability Review	Alan Haag	Date	6/20/2011
HQ Design Coordinator	Mike Janzen	Date	6/20/2011
Project Manager District Safety Review	Deb Larson	Date	TBD
District SHOPP Program Advisor	Deb Larson	Date	TBD
HQ SHOPP Program Advisor	Christine Inouye	Date	TBD

14. ATTACHMENTS

A. Location Map
B. Typical Cross Section and Layout
C. Project Study Report Cost Estimate
D. Right of Way Data Sheet
E. TASAS Table B
F. Preliminary Environmental Analysis Report
G. Storm Water Data Report
H. Risk Management Plan
I. Transportation Management Plan Data Sheet / Checklist
J. Distribution List

ATTACHMENT A – Location Map

INDEX OF PLANS

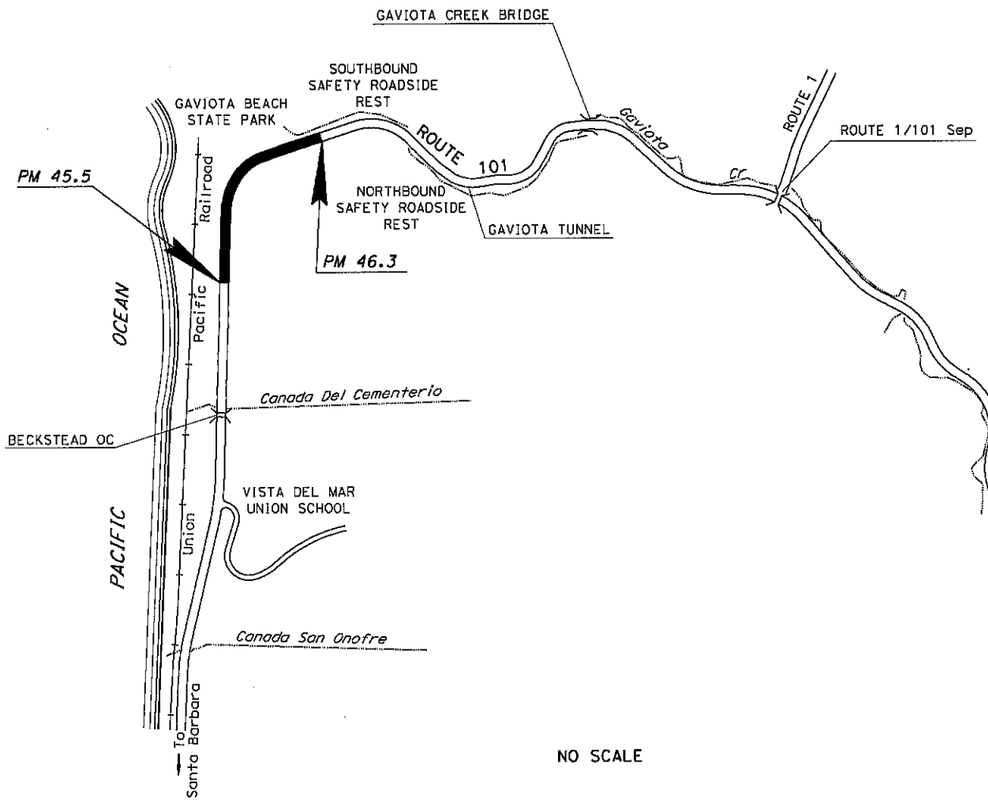
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	101	45.5/46.3		

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN SANTA BARBARA COUNTY
FROM 0.7 MILES NORTH OF BECKSTEAD OVERCROSSING
TO 0.9 MILES SOUTH OF THE GAVIOTA TUNNEL

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



NO SCALE

PROJECT MANAGER: David Beard
DESIGN ENGINEER: Paul Valadao

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 — P.F. Valadao — No. 63987 — Exp. 9-30-12 — 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.

ATTACHMENT A

CONTRACT No. **05-0T6304**

ATTACHMENT B – Typical Cross Section & Layout

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	101	45.5/46.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
P.F. Valadao
No. 63987
Exp. 9-30-12
CIVIL
STATE OF CALIFORNIA

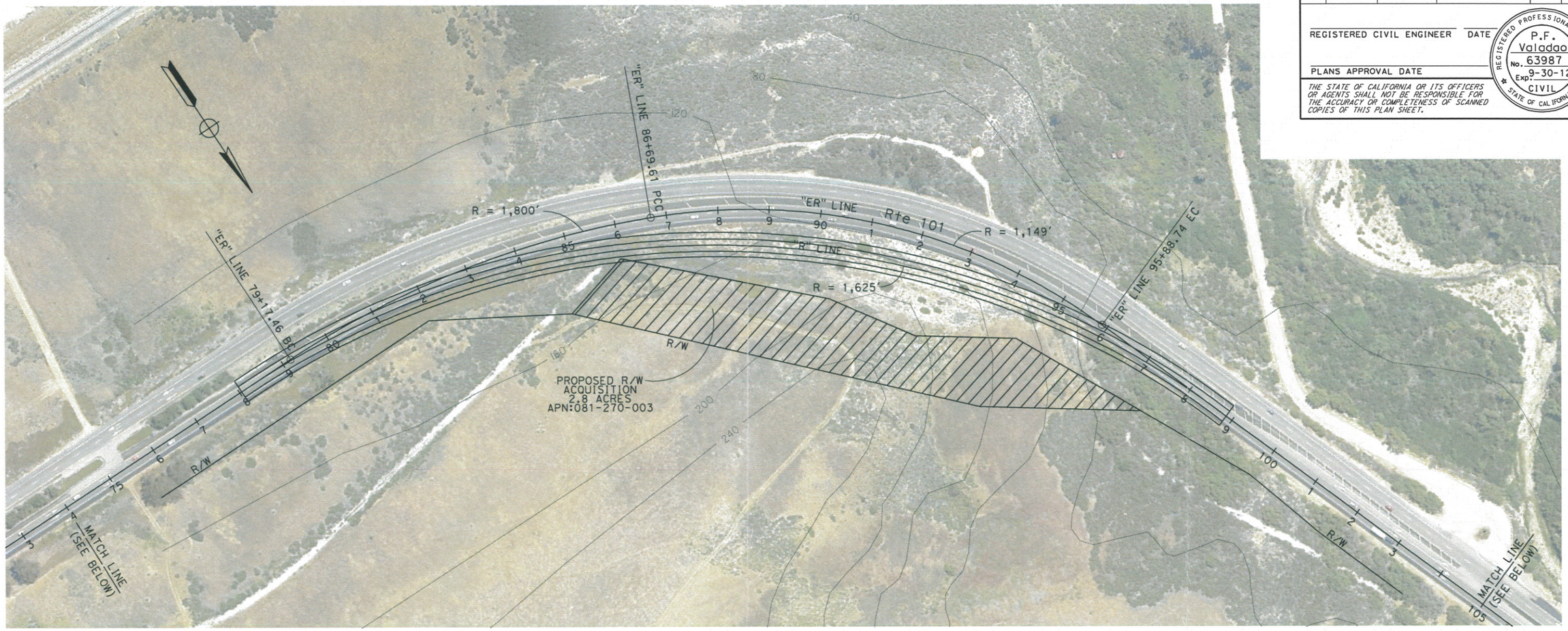
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

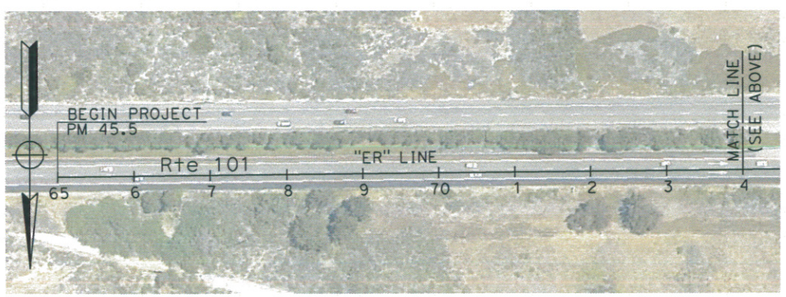
CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
P. VALADAO	M. O'NEAL		

FUNCTIONAL SUPERVISOR: S. WYATT

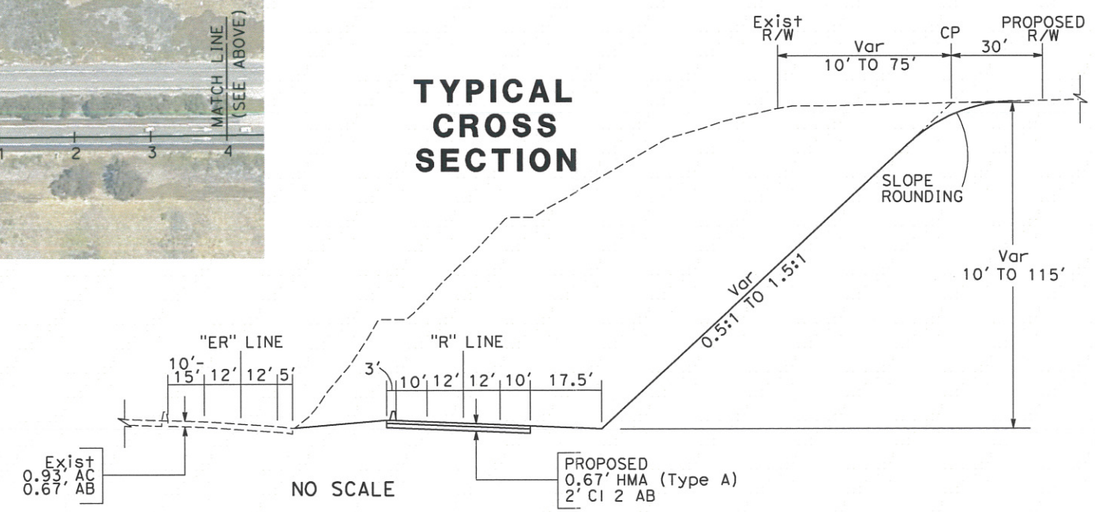
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

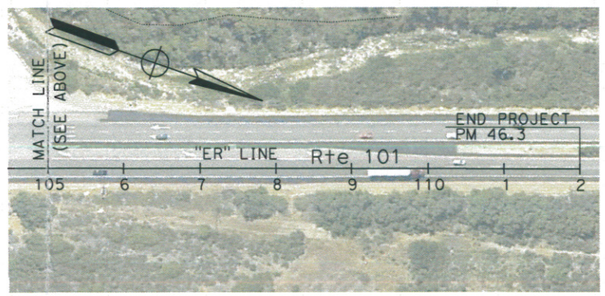
Caltrans® DESIGN





TYPICAL CROSS SECTION





ATTACHMENT B
TYPICAL CROSS SECTION AND LAYOUT

SCALE: 1" = 200'

ATTACHMENT C – Project Study Report Cost Estimate

PROJECT STUDY REPORT COST ESTIMATE

Dist-Co-Rte: 05-SB-101
PM: 45.5/46.3
EA: 05-0T630K
Program Code: 20.10.201.010

PROJECT DESCRIPTION:

Limits: In Santa Barbara County in Goleta, from 0.7 mile north of Beckstead Overcrossing to 0.9 mile south of Gaviota Tunnel.

Proposed Improvement: (Scope of Work) Curve Realignment (with Excavated Slope)

Alternative:

SUMMARY OF PROJECT COST ESTIMATE

I. **ROADWAY ITEMS**	Sections 1 - 5	$ 3,227,591
II. **ROADSIDE ITEMS**	Sections 6 - 7	$ 285,000
III. **ROADWAY ADDITIONS**	Sections 8 - 10	$ 1,466,507

TOTAL ROADWAY	Total of Sections 1 - 10 shown above	$ 4,979,097
TOTAL STRUCTURES		$ 0
SUBTOTAL CONSTRUCTION COSTS		$ 4,979,097
TOTAL RIGHT OF WAY ITEMS (Not Escalated)		$ 482,169
TOTAL PROJECT CAPITAL OUTLAY COSTS		$ 5,461,266

Reviewed by
District Program Manager: _____ (Signature) 6/10/2011 (Date)

Approved by Project Manager: David Beard (Signature) 6/9/11 (Date)

Phone Number: (805) 349-3016

ATTACHMENT C

PROJECT STUDY REPORT COST ESTIMATE

Dist-Co-Rte: 05-SB-101
PM: 45.5/46.3
EA: 05-0T630K
Program Code: 20.10.201.010

I. ROADWAY ITEMS

Section 1 - Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	185,437	CY	$10	$1,854,372	
Imported Borrow	0	CY	$0	$0	
Clearing & Grubbing	1	LS	$40,000	$40,000	
Develop Water Supply	0	LS	$0	$0	
Top Soil Reapplication				$0	
Stepped Slopes and Slope				$0	
Rounding (Contour Grading)	18,544	CY	$5	$92,719	
				Subtotal Earthwork:	$1,987,091
Section 2 - Pavement Structural Section*					
PCC Pvmt ____ **Depth**	0	CY	$0	$0	
PCC Pvmt ____ **Depth**	0	CY	$0	$0	
Hot Mix Asphalt (Ty A) (8")	4,500	Tons	$95	$427,500	
Lean Concrete Base	0	CY	$0	$0	
Cement-Treated Base	0	CY	$0	$0	
Aggregate Base (24")	6,700	CY	$40	$268,000	
Treated Permeable Base	0	CY	$0	$0	
Aggregate Subbase	0	CY	$0	$0	
Pavement Reinforcing Fabric	0	FT^2	$0	$0	
Edge Drains	0	FT	$0	$0	
				$0	
				$0	
				Subtotal Structural Section:	$695,500
Section 3 - Drainage					
Large Drainage Facilities	1	LS	$100,000	$100,000	
Storm Drains	1	LS	$50,000	$50,000	
Pumping Plants	0		$0	$0	
Project Drainage	0		$0	$0	
(X-Drains, overside, etc.)					
AC Dike	0	FT	$0	$0	
CMP	0	FT	$0	$0	
RCP	0	FT	$0	$0	
				Subtotal Drainage:	$150,000

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

PROJECT STUDY REPORT COST ESTIMATE

Dist-Co-Rte: 05-SB-101
PM: 45.5/46.3
EA: 05-0T630K
Program Code: 20.10.201.010

Section 4 - Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	0		$0	$0	
Noise Barriers	0		$0	$0	
k-rail	3,500	LF	$20	$70,000	
Equipment/Animal Passes	0		$0	$0	
Water Pollution Control	1	LS	$90,000	$90,000	
Hazardous Waste Investigatio and/or Mitigation Work	0		$0	$0	
Environmental Compliance	1	LS	$25,000	$25,000	
Resident Engineer Office	1	LS	$40,000	$40,000	
	0		$0	$0	
	0	LS	$0	$0	
				$0	
			Subtotal Specialty Items:		$225,000

Section 5 - Traffic Items					
Lighting	0	LS	$0	$0	
Traffic Delineation	1	LS	$10,000	$10,000	
Traffic Signals	0	LS	$0	$0	
Overhead Sign Structures	0	LS	$0	$0	
Roadside Signs	1	LS	$15,000	$15,000	
Traffic Control Systems	0	LS	$0	$0	
Traffic Management Plan	1	LS	$20,000	$20,000	
Construction Area Signs	1	LS	$10,000	$10,000	
Traffic Handling (CMS)	1	LS	$15,000	$15,000	
Temporary Detection System	0	LS	$0	$0	
Maintain Traffic / Staging	1	LS	$100,000	$100,000	
	0	LS	$0	$0	
	0	LS	$0	$0	
			Subtotal Traffic Items:		$170,000

TOTAL ROADWAY ITEMS Sections 1 thru 5 $3,227,591

PROJECT STUDY REPORT COST ESTIMATE

Dist-Co-Rte: 05-SB-101
PM: 45.5/46.3
EA: 05-0T630K
Program Code: 20.10.201.010

II. ROADSIDE ITEMS

Section 6 Planting and Irrigatic	Quantity	Unit	Unit Price	Item Cost	Section Cost
Highway Planting	1	LS	$140,000	$140,000	
Replacement Planting	0		$0	$0	
Irrigation Modification	0		$0	$0	
Relocate Existing Irrigation	0		$0	$0	
Facilities	0		$0	$0	
Irrigation Corssovers	0		$0	$0	
	0		$0	$0	
	0	LS	$0	$0	
	0		$0	$0	
	0	LS	$0	$0	
				$0	
			Subtotal Planting and Irrigation Section:		$140,000

Section 7: Roadside Management and Safety Section					
Vegetation Control Treatments	0	LS	$0	$0	
Gore Area Pavement	0	LS	$0	$0	
Pavement beyond the gore are	0	LS	$0	$0	
Miscellaneous Paving	0	LS	$0	$0	
Erosion Control	1	LS	$105,000	$105,000	
Slope Protection	1	LS	$40,000	$40,000	
Side Slopes/Embankment Slo	0	LS	$0	$0	
Maintenance Vehicle Pullouts	0	LS	$0	$0	
Off-freeway Access (gates, stairways, etc.)	0	LS	$0	$0	
Roadside Facilities (Vista Points, Transit, Park & Ride)	0	LS	$0	$0	
Relocating roadside facilities/features	0	LS	$0	$0	
	0	LS	$0	$0	
	0	LS	$0	$0	
	0	LS	$0	$0	
			Subtotal Roadside Management and Safety Section:		$145,000

TOTAL ROADSIDE ITEMS Sections 6 thru 7 $285,000

PROJECT STUDY REPORT COST ESTIMATE

Dist-Co-Rte: 05-SB-101
PM: 45.5/46.3
EA: 05-0T630K
Program Code: 20.10.201.010

III. ROADWAY ADDITIONS

Section 8 - Minor Items

				Item Cost	Section Cost
$3,512,591 (Subtotal Sections 1 thru 7)	x	0.05 (5 to 10%)	=	$175,630	

Minor Items: $175,630

Section 9 - Roadway Mobilization

$3,688,220 (Subtotal Sections 1 thru 8)	x	0.05 (10%)	=	$184,411

Roadway Mobilization: $184,411

Section 10 - Supplemental Work & Contingencies

Supplemental Work

$3,688,220 (Subtotal Sections 1 thru 8)	x	0.05 (5 to 10%)	=	$184,411

Contingencies

$3,688,220 (Subtotal Sections 1 thru 8)	x	0.25 (**%)	=	$922,055

Supplemental Work & Contingencies: $1,106,466

TOTAL ROADWAY ADDITIONS Sections 8 thru 10: $1,466,507

TOTAL ROADWAY: $4,979,097
(Subtotal Sections 1 thru 10)

Estimate Prepared by: Paul Valadao (Print or Type Name) Phone: 805.549.3028 05/24/11 (Date)

Estimate Checked by: Steve Wyatt (Print or Type Name) Phone: 805.549.3079 05/24/11 (Date)

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

PROJECT STUDY REPORT COST ESTIMATE

Caltrans

Dist-Co-Rte: 05-SB-101
PM: 45.5/46.3
EA: 05-0T630K
Program Code: 20.10.201.010

II. STRUCTURE ITEMS

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

* Add additional structures as necessary

SUBTOTAL STRUCTURES ITEMS $0

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

TOTAL STRUCTURES ITEMS $0

COMMENTS:

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

(If appropriate, attach additional pages as backup)

PROJECT STUDY REPORT COST ESTIMATE

Dist-Co-Rte: 05-SB-101
PM: 45.5/46.3
EA: 05-0T630K
Program Code: 20.10.201.010

III. RIGHT OF WAY ITEMS

	Current Values	Escalation Rates		Escalated Values*
Acquisition, including excess lands and damages to remainder(s) and Goodwill	$70,000	121.6%	-	$85,085
Utility Relocation (State share)	$368,750	121.6%	-	$448,218
Mitigation	$41,000	121.6%	-	$49,836
RAP	$0	0.0%	-	$0
Title and Escrow Fees	$2,419	121.6%	-	$2,940
Construction Contract Work	$0	0.0%	-	$0
	$482,169			
TOTAL RIGHT OF WAY**				$586,079

Year to which Values are Escalated*: 2015

* Escalated to assumed year of advertising.
** Current total value for use on Sheet 1

Estimate Prepared by: Connie Shellooe (Print or Type Name) Phone: 805.549.3471 07/28/11 (Date)

ATTACHMENT D – Right of Way Data Sheet

State of California Business, Transportation and Housing Agency

Memorandum

To: DAVID BEARD

Attn PAUL VALADAO

STEVE WYATT

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

Date: 7/28/2011

File: CD 05 EA 0T630K Alt REV 1
Co SB RTE 101

DESCRIPTION:
THE PROJECT PROPOSES TO REALIGN THE EXISTING NORTHBOUND COMPOUND CURVE WITH A SINGLE RADIUS CURVE. ALSO PROPOSED IS THE WIDENING OF

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 5/5/2011

The following assumptions and limiting conditions were identified:

Appraisal

Utility
Route 101 is designated expressway within the project imits. Liability determination for some faciliteis would be pursuant to Master Contact. Encroachment permit search indicates the listed utility owners have facilities within the right of way in the project limits. Potential high risk facilities include So. CA Gas, Texaco, Shell Oil, Chevron/Point Arguello Pipeline, Plains Pipeline, and Exxon. Water lines belonging to Sae Paks nad Del Mar Schol are located in the median. Underground gas lines may occur as transverse crossings and as longitudinal encroachments in the vicinity of the project. No substantial change has occurred since original data sheet request of July 2010.

Right of Way Lead Time will require a minimum of 10 months after we receive Certified Appraisal Maps and/or Utility Conflict Plans, obtained necessary environmental clearance and applicable freeway agreements have been approved.

Connie Shellooe

for CONNIE SHELLOOE, Sr. Right of Way Agent
San Luis Obispo Field Office
(805) 549-3471

ATTACHMENT D

EA: 05-0T630K CO/RTE/PM-PM (Rte 1 and Rte 2) : SB/101/45.6-46.3 & //- Request Date: 5/5/2011
ALT: REV 1 Revised Date:

Right Of Way Cost Estimate

	Current Year 2011	Contingency Rate	Right of Way Escalation Rate	Escalated Year 2015
Acquisition:	$70,000	25%	5%	$85,085
Mitigation:	$41,000	25%	5%	$49,836
State Share of Utilities:	$368,750	25%	5%	$448,218
Expert Witness:	$0	25%	5%	$0
Relocation Assistance:	$0	25%	5%	$0
Demolition and Clearance:	$0	25%	5%	$0
Title and Escrow:	$2,419	25%	5%	$2,940
Ad Signs:	$0	25%	5%	$0
Total Current Value: If RW Cost Est fields are blank, Costs = $0	$482,169			$586,079

Estimated Construction Contract Work (CCW): 0 R/W LEAD TIME/Mo. 18

Cost Break Down

Pot Hole	15,000
Mitigation	
Land	0
Bank	0
Permit Fee	32,800

RR Involvement

Railroad Facilities or Right of Way Affected?	NO
Const/Maint Agreement:	NO
Service Contract:	NO
Right of Entry:	NO
Clauses:	YES
Estimated Lead-time	3 MON

Parcel Data

# of Parcel Type X:	0		
# of Parcel Type A: less than $10,000 non-complex	1		
# of Parcel Type B: more than $10,000 non-complex	0		
# of Parcel Type C: complex, special valuation	0		
# of Parcel Type D: most complex and time consuming	0	# of Duals Needed:	0
Totals:	1	Totals:	0

# of Excess Parcels: 0

Utilities

U4-1: Owner Expense	2
U4-2: State Expense, Conventional no Fed Aid	
U4-3: State Expense, Freeway no Fed Aid	2
U4-4: State Expense, both with Fed Aid	
U5-7: Utility verification, no relocation/potholing	10
U5-8: Utility verification, w/ some relocation/potholing	
U5-9: Utility verifications, relocation/potholing required	4

Misc R/W Work

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

EA: 05-0T630K ALT: REV 1

	Parcel Area
Total R/W Required:	2.8
Total Excess Area:	0

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

Very large parcel owned by State Parks. No improvements.

General Description of Utility Involvement:

From previous data sheet SCE & Verizon poles are in conflict witht eh project and will require relocation. There is an existing JUA between the State & SCE within the project limits. This estimate assumes that most underground utilities will be avoided or protected in place. Money is included for relocation of portions of gas line and water line which may be necessary at the conform points. Information in U4-1,2 and U5-7,9 and cost estimates have been brought forward from previous data sheet of 7/20/10.

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: 0 # of multi-family: 0 # of business/nonprofit: 0 # of farms: 0

Sufficient replacement housing will be available without last resort housing: N/A

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: Yes

Data for evaluation provided by:

Estimator:	Jim Gentry	6/15/2011
Railroad Liaison Agent:	SAH	6/10/2011
Utility Relocation Coordinator:	John T. Magorian	6/24/2011

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.

Connie Shellooe

Date

ENTERED PMCS 7/28/2011

BY: R. TABAREZ

CONNIE SHELLOOE
Sr. Right of Way Agent, Right of Way

ATTACHMENT E – TASAS Table B

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 2808426
Request Name: SB 101 Gaviota (3yr)
Ref Date: 08/19/2009

Request- & Line	L O C	D I R	L $ C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 2	H	N	I	05 SB 101 045.500 - 05 SB 101 046.300	01-AUG-05	31-JUL-08	N	L						N	N	N

Event Log:

Job Id is : 421159 Accidents Table B Request SB 101 Gaviota (3yr) Submitted by T5DSENOR
05 SB 101 45.5 - 05 SB 101 46.3 08/01/2005 TO 07/31/2008

OTM22130
08/19/2009
11:41 AM

California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID : 2808426

Location Description				Rate Group (RUS)	No. of Accidents / Significance Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Actual Fat	Actual F+I	Accident Rates Average Tot	Fat	F+I	Tot
05 SB 101 045.500 - 05 SB 101 046.299				.800 MI H 45	38	0	14	14	12	26	17	0	15.1	13.24	0.000	1.06	2.87	0.016	.28	.71
0001-0002	2005-08-01	2008-07-31	*36 mo.*	NORTH R	H99		H99	H99		H99	H99	16								

ATTACHMENT E

ATTACHMENT F – Preliminary Environmental Analysis Report

Preliminary Environmental Analysis Report

Project Information

District 05 County SB Route 101 Post Mile 45.5/46.3 EA 0T630 (0500020029)

Project Title: Gaviota Curve Realignment

Project Manager:	David Beard	Phone #:	(805) 549-3016
Design Manager:	Steve Wyatt	Phone #:	(805) 549-3079
Design Engineer:	Paul Valadao	Phone #:	(805) 549-3028
Environmental Manager:	Matt Fowler	Phone #:	(805) 549-4603
Environmental Planner:	Kelso Vidal	Phone #:	(805) 549-4671

PSR Summary Statement

An Initial Study with Mitigated Negative Declaration (CEQA) and a Categorical Exclusion (NEPA) are anticipated for this project. This environmental document level has been selected based upon potential impacts to cultural and biological resources scoped in the project vicinity. These potential environmental impacts 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 CEQA (California Environmental Quality Act) environmental document. Caltrans will serve as the NEPA (National Environmental Policy Act) lead agency under its assumption of responsibility pursuant to 23 U.S. Code 327. Environmental approval is estimated to take approximately 23 months.

It is anticipated multiple environmental studies and reports will be required for this project including (but not limited to): a Natural Environment Study including a botanical survey, a Biological Assessment; a Scenic Resource Evaluation and Visual Impact Assessment; a Historic Property Survey Report, including an Archaeological Survey Report; a Paleontological Evaluation Report; an Initial Site Assessment and Preliminary Site Assessment for hazardous waste; a Noise Study Report; and an Air Quality Study would also be required. A Section 4(f) Evaluation will be required for impacts to California State Park property and potentially for Historic resources.

Cultural and Biological resources are potential concerns with this project. It is currently estimated that cultural studies will be the critical path for the delivery of the environmental document. An Extended Phase I/II study will be necessary to determine sites eligible for listing in the National Register of Historic Places. This study may take up to two years to complete and must be approved prior to circulation of the Draft Environmental Document. The Phase II findings may require further reports and consultation to be conducted. These extra reports must be completed prior to circulation of the Final Environmental Document. In addition, biological studies may potentially be problematic for the schedule because biological studies must be conducted for native flora, fauna, and special status species found in the region. Formal and informal consultation is likely to be required with NOAA Fisheries, USFWS and CDFG.

This project is located within the Coastal Zone. The project will require a Local Coastal Development Permit from the County of Santa Barbara. Visual and biological mitigation in the form of aesthetic treatments and planting augmentation is estimated at a cost of $80,000. Mitigation may be required for impacts to Section 4(f) resources. Paleontological monitoring during construction may be required.

Project Description

The California Department of Transportation (Caltrans) proposes a safety improvement project along State Route 101 between Post Mile 45.5 to 46.3 in Santa Barbara County, California. The project proposes to realign the existing northbound compound curve with a single radius curve. In addition, the project proposes to widen the existing shoulders along the 2 northbound lanes.

Purpose and Need

The purpose is to improve safety by reducing the potential for run-off-the-road collisions. The need for this project is to reduce the number of collisions occurring within the project limits. According to the Traffic Safety Department, the collision rate at this location is over four times the statewide average for facilities with similar characteristics. The data also suggests that collisions occurring within the project limits are primarily caused by excessive speeds while traversing through the compound curve (two successive curves with varying radii).

Description of Work

The California Department of Transportation (Caltrans) proposes to realign the existing northbound compound curve State Route 101 from 0.7 miles north of Beckstead Overcrossing to 0.9 miles south of Gaviota Tunnel in Santa Barbara County. The two successive curves with varying radii (compound curve) are unsafe for the traveling public. To correct the existing curve alignment, the project proposes to construct a single radius curve at this location. The proposed new alignment would require excavation of a new cut-slope. This new cut-slope will be set back 75-feet from its current location. Also, the project proposes to widen the existing northbound shoulders. The two northbound lanes will have 10 feet of paved shoulders on both sides of edge-of-travelway. The proposed project would include demolition of existing drainage systems, culvert replacement, and temporary traffic by-pass sections during construction.

Alternatives

There are two alternatives being considered for this project. Alternative 1 proposes to realign the curve by cutting the slope. Alternative 2 is the No-Build Alternative.

Funding

☒**State** ☒**Federal**

The Gaviota Curve Realignment project is anticipated to cost approximately $6,000,000. This project will be amended into the 2010 State Highway and Protection Program (SHOPP). These are funds from the State Highway Operation and Protection Program (SHOPP 201.010) designated for projects that address traffic safety, roadway rehabilitation, roadside rehabilitation, and operations related to the State Highway System.

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	23 months
Start Date	May 2010
Begin Environmental	September 2011
Draft Environmental Document	February 2013
Final Environmental Document	August 2013
PA&ED*	August 2013

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

Assumptions and Risks

Risks to the project have been defined in accordance with the Project Risk Management Handbook, May 2, 2007, Second Edition, Rev 0:

Assumptions:

- A Mitigated Negative Declaration & Categorical Exclusion is the appropriate level document.
- Santa Barbara County will be supportive of the safety project and issue a Local Coastal Development Permit.
- It is assumed that the project will only require a Section 4 (f) Evaluation for publicly owned parks. However, if the area is deemed historical or an archeological site is listed on or eligible for the National Register of Historic Places, then additional time would be required to address this 4(f) resource.
- Biological studies will occur within the appropriate blooming periods.
- No public controversy will arise. A public informational meeting will be offered in order to offset any potential for public controversy.
- It is assumed that the State's budget will be able to allocate funds to be available and ready to spend when needed during the project.
- All work will be conducted on the northbound side of highway 101.

Risks:

- Given the location of the project area, the probability of identifying a property eligible for the National Register of Historic Places or a property that constitutes a historic resource under California Environmental Quality Act (CEQA) is considered *very high* (Risk Ranking 5). If a Finding of Effect (FOE) document needs to be prepared, then impact to the project's Schedule is Very High (up to 18 months). A FOE must be completed prior to Final Environmental Document approval.

- The outcome of the FOE may require a Phase III data recover excavation. A Phase III excavation would impact the project's schedule and cost. Construction cannot begin until this mitigation is complete. The impact to the project's schedule would be considered *high*. The project's cost is anticipated to be *Moderate* (approximately $250,000 to $350,000).

- The project's Schedule, Cost and Scope will be impacted if it is determined that work will impact Gaviota Creek. If drainage work does potentially affect Gaviota Creek, then the probability that the project will affect the federally listed California red-legged frog (Rana aurora draytonii), Steelhead (Oncorhynchus mykiss) or its critical habitat is considered a Moderate Impact Rating (Risk Ranking 3). Impact to the schedule is anticipated to be *very high*. The effect on federally listed species would require consultation with NOAA Fisheries, and with California Department of Fish and Game (CDFG). Furthermore, permits would be required from the California Department of Fish and Game (1600), U.S. Army Corps of Engineers (404) and Regional Water Quality Control Board (401). The project's cost estimate is anticipated to be *highly* impacted if Gaviota Creek is affected. Additional mitigation measures, such as habitat restoration or replanting, would be required and increase cost.

- The likelihood for paleontological resources is *high* (Risk Ranking 4). A Paleontological Evaluation Report (PER) is required to determine the potential impacts to paleontological resources that may be present. If the PER concludes paleontological resources do exist and susceptible to impact, then a mitigation plan may be required. Mitigation measures may include a professional paleontologist monitor during time of construction. Project cost impact is considered *very low* ($12,000- $25,000).

- Given that the project is adjacent to Gaviota State Park property, it is highly likely that 4(f) resources will be impacted (Risk Ranking 5). A section 4(f) report is required to determine the potential impacts to publicly owned parks. Consultation with the official having jurisdiction over the 4(f) resource will be required. If California State Parks concludes the site is a significant 4(f) property, than Caltrans will have to analyze an additional avoidance alternative; one other than the no-build alternative. If there is no feasible and prudent alternative to avoid the use of 4(f) land, minimization and mitigation measures will be required. These measures are anticipated to moderately influence the project's Cost and Schedule

- If an additional alternative is presented that was not addressed as part of this PEAR, then there would be a corresponding impact to Schedule, Cost, and Scope. Probability of occurrence is a 3, but impacts to the project's Cost and Schedule are anticipated *very high*.

Risk Probability Ranking	
Ranking	Probability of Risk Event
5	60-99%
4	40-59%
3	20-39%
2	10-19%
1	1-9%

Evaluating Impact of a Threat on Project Objectives						
Impact		Very Low	Low	Moderate	High	Very High
Objectives	Time	Insignificant Schedule Slippage	Delivery Plan Milestone Delay within quarter	Delivery Plan milestone delay of one quarter	Delivery Plan milestone delay of more than 1 quarter	Delivery Plan milestone delay outside fiscal year
	Cost	Insignificant Cost Increase	<5% Cost Increase	5-10% Cost Increase	10-20% Cost Increase	>20% Cost Increase
	Scope	Scope decrease is barely noticeable	Changes in project limits or features with <5% Cost Increase	Changes in project limits or features with 5-10% Cost Increase	Sponsor does not agree that Scope meets the purpose and need	Scope does not meet purpose and need

Mitigation

Known mitigation costs, which were determined during the creation of this document, are listed in the respective categories below. Further studies may reveal the need for additional mitigation, which would be added to the cost of the project and included in an updated Mitigation Cost Compliance Estimate Form.

Right of Way Capital (050)

- California Department of Fish and Game CEQA document filing fee: $2,044.00 (2011 Dollars).
- US Fish and Wildlife Service Endangered Species Act Section 7 permit fee: $7,000 (2010 Dollars).
- Permits 1600, 404 and 401 if project construction does impact Gaviota Creek. Fees approximately $6,000.

- Property acquisition or transfer fees from State Parks.
- Santa Barbara County's Coastal Development Permit Fee: minimum $5,000.

Construction Capital (042)

The following Construction Capital mitigation that is currently known is in the following categories:

- Biological Monitoring for pre-construction surveys or on-site monitoring of construction activities. The costs will be determined after completion of the technical studies and level of survey work identified.
- There is potential for Native American monitoring during construction.
- There is potential for a professional paleontologist monitoring during construction.
- Visual aesthetic treatment and mitigation: approximately $80,000.
- There is potential for mitigation of 4(f) resources.

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: 07/25/11

Environmental Office Chief — Date: 7/26/11

Project Manager — Date: 7/27/11

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	☐		☒	☐
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

Air Quality Analysis

There will be no additional lanes added to State Route 101 in the project limits. Thus, there will be no long-term air quality emissions produced from the project.

Biology

The project may impact biological resources. A literature review was conducted with the California Natural Diversity Data base (CNDDB), CNDDB/ArcView, CERES wetland database, and USGS Quads. These resources and data suggest a potential for presence of special status species found in the region such as Steelhead, Steelhead Critical Habitat, California Red-legged frog, striped garter snake, western pond turtle, Gaviota tarplant, black figwort, Davidson's salt scale, tidewater goby and monarch butterfly. According to the California Natural Diversity Data base (CNDDB), there have been several sightings of these species within .01-2.0 miles of the project area.

The potential presence of these resources within and adjacent to the project site would necessitate the preparation of a Biological Assessment. Technical studies that would be necessary to support these documents include:

- Natural Environment Study that characterizes the habitats present and identifies the potential for special-status species to occur in these habitats, and the potential for the spread of invasive species.
- Focused botanical survey during the appropriate blooming period to determine the potential presence of special-status plant species.

Community Impact Assessment

The proposed project will not impact any housing, businesses, or low-income and/or minority populations.

Cultural Resources

The proposed project is likely to impact cultural resources. A record search utilizing the California Historical Resource Information System (CHRIS) and Caltrans' District 5 Archives revealed documented resources within one half-mile of the project. Within the project study area eleven sites have been identified, including one site that is potentially eligible for the National Register. Furthermore, it appears that archaeological site materials extend from that site into the area of direct impact for this project.

The potential presence of these resources within and adjacent to the project site would necessitate the preparation of a Historic Property Survey Report (HPSR) that includes a Phase I archaeological survey (ASR) and an Extended Phase I/II excavation and study. Depending on the findings and outcome of these studies, additional reports and consultation may be required. A Finding of Effect (FOE), a Memorandum of Agreement (MOA) and additional consultation with State Historic Preservation Office may occur. These reports may require additional mitigation measure such as Phase III data recovery excavation.

Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. The environmental document will discuss impacts

from the proposed project in relation to cumulative impacts in the area including the construction of transportation projects in the vicinity and the proposed Gaviota State Park Trail Project.

Farmland

The County of Santa Barbara's zoning map identifies the project area as recreation. The proposed project will not impact agriculture land.

Floodplain Evaluation

A floodplain evaluation will not be required since there are no floodplains in the project limits.

The environmental document for the project would further investigate the potential for hydrologic impacts to the area relating to project implementation. The environmental document will identify the impacts related to construction of the project components, and will recommend measure if required.

Greenhouse Emissions

There will be no additional lanes added to State Route 101 in the project limits. Thus, there no long-term Greenhouse emissions produced from the project are anticipated. The environmental document will have a discussion on Greenhouse gas emissions. Caltrans will implement standard provisions during construction to minimize any impact, but EPA has not yet provided direction on how to quantify Greenhouse gas emissions.

Hazardous Waste

The proposed project may contain minor amounts of hazardous waste within the project limits. An Initial Site Assessment and a Preliminary Site Assessment will be required to verify if excess soil will have to be disposed of as a hazardous waste. ADL testing will cost approximately $30,000.

Noise Study

There will be no additional lanes added to State Route 101 in the project limits. Thus, there will be no long-term noise produced from the project.

Paleontology

The project site and adjacent property to the east has been previously disturbed; however, according to the USGS Geologic Map of Santa Barbara Quadrangle, there appears to be a high probability of paleontological resources in the project area. Undescribed nonmarine sedimentary rock has been identified within the project limits. A Paleontological Evaluation Report is required to thoroughly evaluate the potential of encountering sensitive paleontological resources that may be present on the site. If resources are present, a paleontology mitigation plan will be required.

Section 4(f) Evaluation

The project will require right-of-way from California State Park property. A Section 4(f) Evaluation report will be required for impacts to publicly-owned park resources. If an avoidance alternative is not feasible or prudent, minimization and mitigation measure will be required. In addition, if Cultural Resources find the project area to be eligible for the National Register, the 4(f) Evaluation will be revised to address historical sites.

Visual Resources

A Visual Impact Assessment is required for the project area is highly visible to the public and located in a sensitive location in the Coastal Zone.

Water Quality

No long term impacts on water quality are anticipated with the project. However, a Water Quality Assessment will be required to determine the feasibility of incorporating permanent treatment or structural BMPs into the project.

Wild and Scenic River Consistency

There are no wild and Scenic Rivers in the project vicinity.

Permits

- Permits to Enter State Park property to conduct research and surveys.
- 1600 Permit potentially required because of proposed drainage work that may impact Gaviota Creek.
- 401 Permit potentially required because of proposed drainage work that may impact Gaviota Creek.
- 404 Permit potentially required because of proposed drainage work that may impact Gaviota Creek.
- State Lands Commission Right-of-way permit (requires jurisdiction confirmation)
- California RWQCB National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit, including the preparation of a storm water pollution prevention plan.
- Local Coastal Development Permit required because the project lies within the Coastal Zone.

List of Preparers

Air Quality by Karl Mikel	September 2010
Biology by Lisa Schicker	September 2010
Cultural Resources by Tom Wheeler	September 2010
Farmland screening by Kelso Vidal	September 2010
Geotechnical by Michael Jurasius	September 2010
Greenhouse Gas Emissions by standard procedure	September 2010
Hazardous Waste by Jim Tkach	September 2010
Noise by Karl Mikel	September 2010
Paleontology by Isaac Leyva	October 2010
Section 4(f) Evaluation by Kelso Vidal and Tom Wheeler	September 2010
Visual Resources by Bob Carr	September 2010
Water Quality by Isaac Leyva	October 2010
Preliminary Environmental Analysis Report by Kelso Vidal	November 2010

Central Region Environmental Division Project Schedule

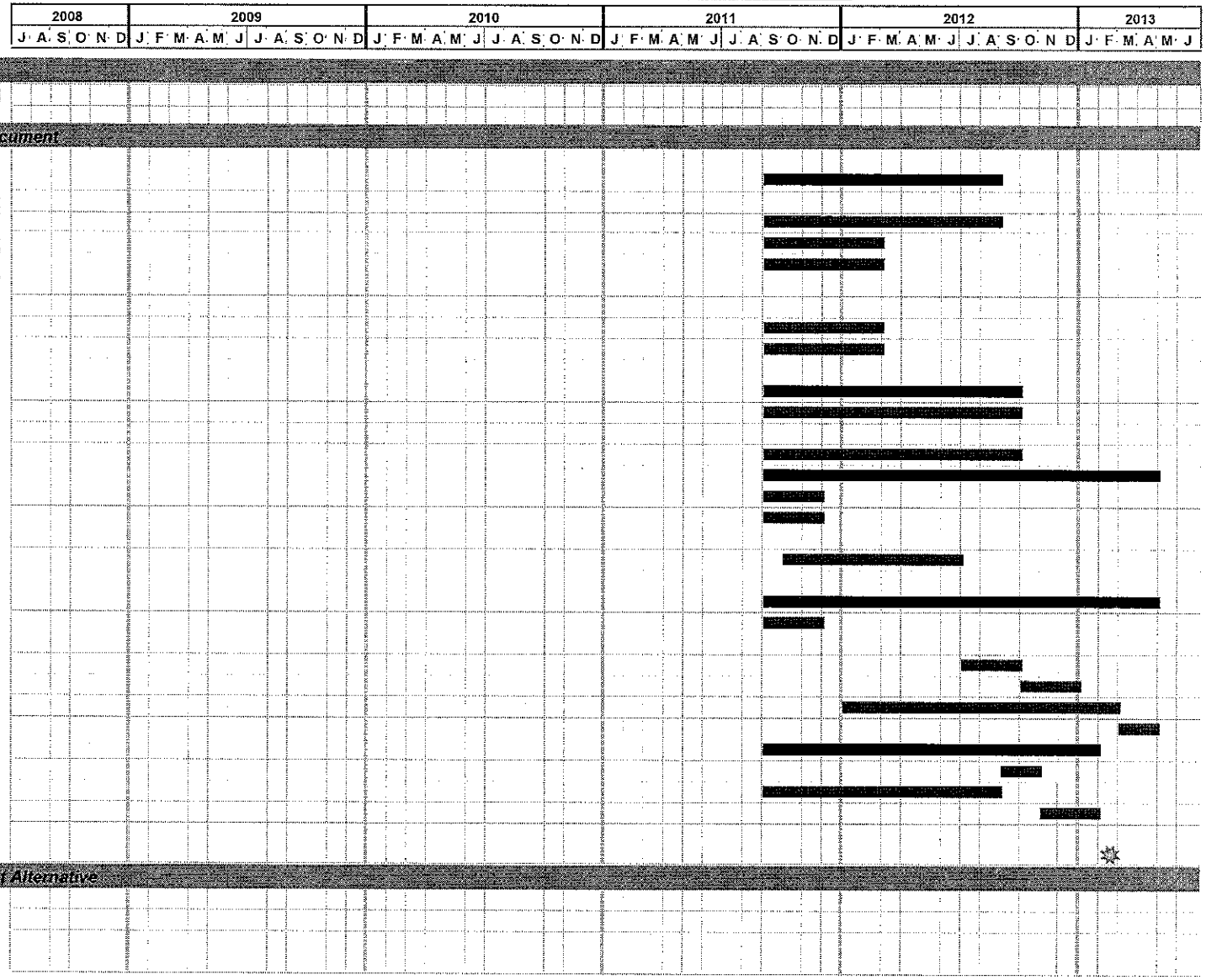
EA: 05-0T630 Co-Rt-PM: SB-101-45.5 / 46.3 Project Manager: David Beard

Proj. ID: 05-0002-0029 Project Name: Gaviota Curve Realignment Env Manager: Matt Fowler

LEGEND
- Umbrella Tasks
- Caltrans Tasks
- Other AgencyTasks
- Milestone

Last Modified: 7/20/2011 10:13:59

	Begin Date	End Date
160 – Prelim. Eng Studies and Draft PR		
160.30.05 – Maps for Env Evaluation		
160.30.15 – Obtain Rights of Entry for Env.		
165 Perform Env Studies and Prepare Draft Environmental Document		
165.05 – Env Scoping of Alt's Identified for Study in		
165.10 – Perform General Env Studies	9/1/11	9/1/12
165.10.15 – CIA, Land Use & Growth		
165.10.20 – Visual Impact Assess	9/1/11	9/1/12
165.10.25 – Noise Study	9/1/11	3/1/12
165.10.30 – Air Quality Study	9/1/11	3/1/12
165.10.35 – Water Quality Studies	9/1/11	
165.10.55 – Draft ROW Relocation Impact Doc		
165.10.65 – Paleontology Study	9/1/11	3/1/12
165.10.80 – Haz. Waste Initial Site Assessment	9/1/11	3/1/12
165.10.85 – Haz. Waste Prelim Site Investigation		
165.15 – Biological Studies	9/1/11	10/1/12
165.15.05 – Biological Assessment	9/1/11	10/1/12
165.15.10 – Wetlands Study		
165.15.20 – NES Report	9/1/11	10/1/12
165.20 – Cultural Resource Studies	9/1/11	5/1/13
165.20.05 – Archaeological Survey	9/1/11	12/1/11
165.20.05.05 – APE/Study Area Maps	9/1/11	12/1/11
165.20.10 – Ext. Phase I Arch Studies		
165.20.15 – Phase II Arch Studies	10/1/11	7/15/12
165.20.20 – Hist & Architect Studies		
165.20.25 – Cul Res Compliance Consult Docs	9/1/11	5/1/13
165.20.25.05 – Final APE/Study Area Maps	9/1/11	12/1/11
165.20.25.10 – PRC 5024.5 Consult		
165.20.25.15 – HPSR/Det Elig/HRCR	7/1/12	10/1/12
165.20.25.20 – Finding of Effect	10/1/12	1/1/13
165.20.25.25 – Arch Data Recovery Plan/Treatment Plan	1/1/12	3/1/13
165.20.25.30 – Memorandum of Agreement (MOA)	3/1/13	5/1/13
165.25 – Prepare and Approve DED	9/1/11	2/15/13
165.25.05 – Prepare DED	9/1/12	11/1/12
165.25.10 – Section 4(f) Evaluation	9/1/11	9/1/12
165.25.20 – Quality Control & Other Reviews	11/1/12	2/1/13
165.25.25 – Obtain Approval to Circulate	2/1/13	2/15/13
MILESTONE 120 – Circulate DED	2/15/13	
175 Circulate Draft Env Document and Select Preferred Project Alternative		
175.05 – DED Circulation	2/15/13	3/15/13
175.10 – Public Hearing	2/15/13	3/1/13
175.15 – Public Comment Responses and Correspc	2/15/13	3/15/13
175.20 – Select Preferred Alternative		



Central Region Environmental Division Project Schedule

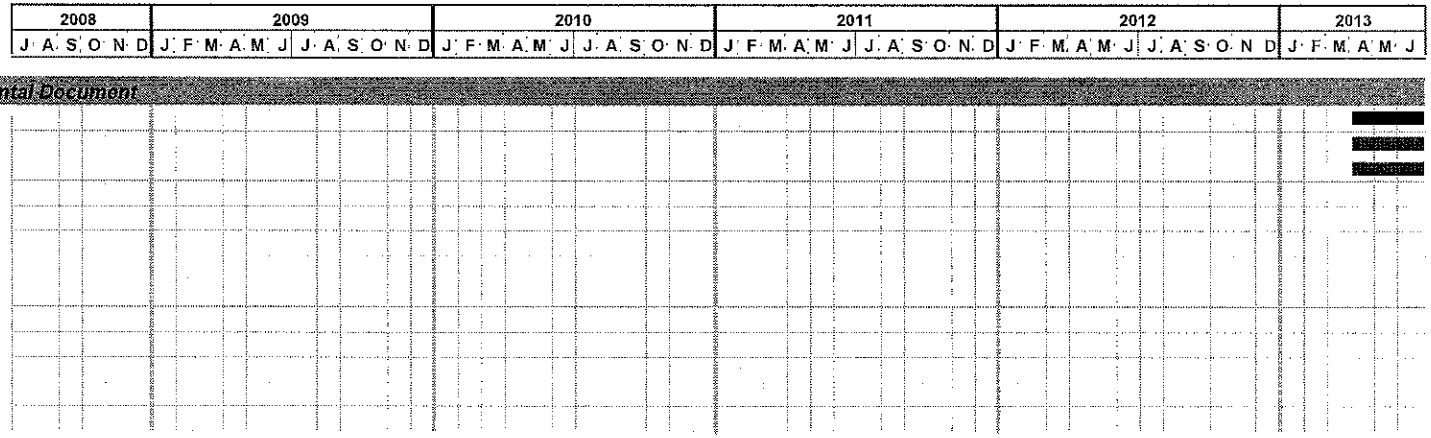
EA: 05-0T630 Co-Rt-PM: SB-101-45.5 / 46.3 Project Manager: David Beard

Proj. ID: 05-0002-0029 Project Name: Gaviota Curve Realignment Env Manager: Matt Fowler

LEGEND
- Umbrella Tasks
- Caltrans Tasks
- Other AgencyTasks
- Milestone

Last Modified: 7/20/2011 10:13:59

	Begin Date	End Date
180 Prepare and Approve Project Report and Final Environmental Document		
180.10 – Final Environmental Document	4/1/13	7/15/13
180.10.05.05 – Draft FED Review	4/1/13	7/1/13
180.10.05.10 – Revise Draft FED	4/1/13	7/15/13
180.10.05.15 – Section 4(f) Evaluation		
180.10.05.40 – Sec 106 Consult & MOA		
180.10.05.45 – Section 7 Consultation		
180.10.05.65 – Section 404 Compliance		
180.10.05.70 – Finalize Mitigation Measures		
180.10.15 – Final ROW Relocation Impact Document		
180.15 – Completed Environmental Document	7/22/13	7/27/13
180.15.10 – Notice of Determination (CEQA)	7/22/13	7/27/13
MILESTONE 160 – Final Environmental Doc.	7/15/13	
MILESTONE 200 – Project Approval & Env Doc	7/22/13	



ATTACHMENT G – Storm Water Data Report

APPENDIX E

Long Form - Storm Water Data Report

Dist-County-Route: 05-SB-101
Post Mile Limits: 45.5/46.3
Project Type: Curve Correction/Realignment
Project ID (EA): 05-0002-0029 (0t630K)
Program Identification: 20.10.201.010 (HB1)
Phase: ☒ PID ☐ PA/ED ☐ PS&E

Regional Water Quality Control Board(s): Central Coast Regional Water Quality Control Board

Is the Project required to consider Treatment BMPs? Yes ☐ No ☒
If yes, can Treatment BMPs be incorporated into the project? Yes ☐ No ☐
If No, a Technical Data Report must be submitted to the RWQCB at least 30 days prior to the projects RTL date. List RTL Date:

Total Disturbed Soil Area: 9.7 acres Risk Level: 2
Estimated: Construction Start Date: April 2013 Construction Completion Date: August 2014
Notification of Construction (NOC) Date to be submitted: March 2013

Erosivity Waiver Yes ☐ Date: No ☐
Notification of ADL reuse (if Yes, provide date) Yes ☐ Date: No ☐
Separate Dewatering Permit (if yes, permit number) Yes ☐ Permit # No ☐

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

Austin Buist, Registered Project Engineer — 2/16/11 Date

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

David Beard — 2/22/11
David Beard, Project Manager — *Date*

Jon Wood — 3-1-11
Jon Wood, Designated Maintenance Representative — *Date*

Dennis J. Reeves — 2/22/11
Dennis Reeves, Designated Landscape Architect Representative — *Date*

[Stamp Required for PS&E only) FOR — 3/2/2011
Marissa Nishikawa, Regional Design SW Coordinator or Designee — *Date*

STORM WATER DATA INFORMATION

1. Project Description

- This project is intended to realign the compound curve that is located at the mentioned post miles in the Gaviota pass. The new curve will have a larger radius and increased design speed to minimize potential safety hazards that have been identified in this area. In the process, there will be a large new cut slope to the east of the freeway in very rocky material, and minimal land (2.8 acres) will be taken for right of way from State Parks.
- The total disturbed soil area was calculated with Microstation using the area tool between the conform lines on each end of the project. The width of the DSA was taken from the east edge of pavement on southbound 101 to the right of way boundary east of northbound 101. The total DSA was calculated to be 9.7 acres.
- The impervious area of the existing roadway is about 99,028 ft^2. The proposed new impervious area of the project is about 95,461 ft^2. Therefore, the net decrease of impervious surface area of the completed project is 3,567 ft^2 (0.08 ac).
- There are no urban MS4 areas within the project limits.

2. Site Data and Storm Water Quality Design Issues (refer to Checklists SW-1, SW-2, and SW-3)

- The receiving water bodies for this project are the Gaviota Creek and the Pacific Ocean at Gaviota Beach. The Gaviota Creek is approximately ¼ mile from the project. The project is located in the South Coast Arguello Hydrologic Area, #315.10.
- The Gaviota Creek is 303(d) listed for boron and the Pacific Ocean at Gaviota Beach is 303(d) listed for total coliforms. Runoff from this project may drain indirectly into Gaviota Creek.
- A 401 certification is most likely going to be required.
- There are no Drinking Water Reservoirs or Recharge Facilities within the project limits.
- There are no RWQCB or local agency special requirements/concerns involving the project.
- This project is on the central coast with South Coast climate. It involves slope stability issues including excavating a 0.5: to 1.5:1 slope into hard soil and rocky material. It will also include a right-of-way acquisition of approximately 2.8 acres from another state agency (State Parks).
- The Risk Level for this project is a Level 2 with High Sediment Risk and a Low Receiving Water Body Risk. The risk was determined using the Risk Determination Worksheet obtained from Appendix 1 of CGP.
- At this time the project will not involve the reuse of soil containing Aerially Deposited Lead (ADL).
- The right-of-way cost for acquiring the necessary 2.8 acres from State Parks is estimated to be $113,419.
- There are no existing Treatment BMPs within the project limits.

3. Regional Water Quality Control Board Agreements

- There are currently no agreements with the RWQCB concerning this project.

4. Proposed Design Pollution Prevention BMPs to be used on the Project.

Downstream Effects Related to Potentially Increased Flow, Checklist DPP-1, Parts 1 and 2

- Because the amount of new impervious surface is being reduced within the project, there will be no increase of velocity or volume to the Gaviota Creek from the indirect discharge.
- With the addition of a new northbound roadway, there will be new drainage systems installed to handle the area. These new systems, however, will not change the quantity of runoff from the project.
- The project drains indirectly into Gaviota Creek, which is unlined, and then shortly to the Pacific Ocean.
- There is a very low potential for an increase in sediment loading.
- Since the volume and velocity of runoff are not expected to change, there will be no hydraulic changes that affect downstream channel stability.

Slope/Surface Protection Systems, Checklist DPP-1, Parts 1 and 3

- The project is designed for 185,437 cubic yards of roadway excavation. The majority of this cut will be hauled off site at the contractor's discretion, according to the requirements of the standard specifications and contract plans. The amount of fill will be negligible.
- Currently to the east of northbound 101 there is a varying slope that is well steeper than 1:1 in many locations, along with horizontal tiered steps. The roadway cross slopes are vary from 1.5% to 9%. The proposed finished slope on the cut to the west of northbound 101 varies from 0.5:1 to 1.5:1, and the new roadway cross slopes vary from 2% to 7%.
- All DSA will be treated with erosion control determined by District Landscape Architecture during PS&E.
- There will be areas of new hard surfaces for this project. One includes the new northbound 101 roadway, which is going to be two lanes and shoulders for about 2100 ft. (from about station 78+00 to 99+00). The other hard surface is going to be the new face of part of the slope to the east of NB 101. It is estimated that the steeper part of the slope from about station 90+00 to 95+00 will be mainly hard rock material.

Concentrated Flow Conveyance Systems, Checklist DPP-1, Parts 1 and 4

- There will be no new culvert or downdrain systems in the construction of this project. The drainage systems will continue to use the existing culvert facilities. The Concentrated Conveyance Systems will send the water north until it eventually makes its way into Gaviota Creek, and then west to the Pacific Ocean.

Preservation of Existing Vegetation, Checklist DPP-1, Parts 1 and 5

- At this stage, clearing and grubbing will take place wherever necessary. This includes areas of roadway excavation.
- The areas west of southbound 101 outside shoulder are considered biologically sensitive, and therefore, will be deemed off-limits to the contractor.

5. Proposed Permanent Treatment BMPs to be used on the Project

- Permanent Treatment BMPs are not needed for this project because at the completion of the project there will be less impervious surface area than there was at the beginning of the project.

6. Proposed Temporary Construction Site BMPs to be used on Project

- The following may be incorporated as separate bid items for this project:

Temporary Fiber Rolls	Temporary Construction Site Entrance
Street Sweeping	Temporary Concrete Washout (Portable)
Temporary Large Sediment Barrier	Temporary Fence (Type ESA)
Construction Site Management	Prepare SWPPP
Prepare Rain Event Action Plan	Prepare Stormwater Annual Report
Temporary Drainage Inlet Protection	
Stormwater Sampling and Analysis Day	

- The following are the Temporary Construction Site BMP supplemental items:

  Water Pollution Control Maintenance Sharing
  Additional Water Pollution Control
  Storm Water Sampling and Analysis

- This project is at Risk Level 2.
- Document the coordination effort to get concurrence with Construction regarding the Construction Site BMP strategy and associated quantities (provide names of staff and date of meeting(s)). Attach a copy of the Construction Site BMP Consideration Form to the SWDR at PS&E.
- Approximately 1.5% of the total project cost is being estimated for the Temporary Construction Site BMPs and the items associated with the Sampling and Analysis to be performed.

7. Maintenance BMPs (Drain Inlet Stenciling)

- Drain inlet stenciling not required for this project because there is no pedestrian access and the project is not located in an MS4.

Required Attachments

- Vicinity Map
- Risk Determination
- R-Factor, Erosivity Index
- K Factor
- Evaluation Documentation Form (EDF)

Supplemental Attachments

- Checklist SW-1, Site Data Sources
- Checklist SW-2, Storm Water Quality Issues Summary
- Checklist SW-3, Measures for Avoiding or Reducing Potential Storm Water BMPs
- Checklists DPP-1, Parts 1–5 (Design Pollution Prevention BMPs) [only those parts that are applicable]

APPENDIX E

Evaluation Documentation Form

DATE: 12/09/10

Project ID (or EA): EA 0t630K

NO.	CRITERIA	YES ✓	NO ✓	SUPPLEMENTAL INFORMATION FOR EVALUATION
1.	Begin Project Evaluation regarding requirement for consideration of Treatment BMPs	✓		See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs. Go to 2
2.	Is this an emergency project?		✓	If **Yes**, go to 10. If **No**, continue to 3.
3.	Have TMDLs or other Pollution Control Requirements been established for surface waters within the project limits? Information provided in the water quality assessment or equivalent document. Gaviota **Creek is 303(d) for boron. Go to question 4.**	✓		If **Yes**, contact the District/Regional NPDES Coordinator to discuss the Department's obligations under the TMDL (if Applicable) or Pollution Control Requirements, go to 9 or 4. PSR *(Dist./Reg. SW Coordinator Initials)* If **No**, continue to 4.
4.	Is the project located within an area of a local MS4 Permittee?		✓	If **Yes**. *(write the MS4 Area here)*, go to 5. If **No**, document in SWDR go to 5.
5.	Is the project directly or indirectly discharging to surface waters?	✓		If **Yes**, continue to 6. If **No**, go to 10.
6.	Is it a new facility or major reconstruction?	✓		If **Yes**, continue to 8. If **No**, go to 7.
7.	Will there be a change in line/grade or hydraulic capacity?	✓		If **Yes**, continue to 8. If **No**, go to 10.
8.	Does the project result in a net increase of one acre or more of new impervious surface?		✓	If **Yes**, continue to 9. If **No**, go to 10. *0.08 (Net Decrease New Impervious Surface)*
9.	Project is required to consider approved Treatment BMPs.		See Sections 2.4 and either Section 5.5or 6.5 for BMP Evaluation and Selection Process. Complete Checklist T-1 in this Appendix E.	
10.	Project is not required to consider Treatment BMPs. DSM *(Dist./Reg. Design SW Coord. Initials)* *(Project Engineer Initials)* 3/2/2011 *(Date)*	✓	Document for Project Files by completing this form, and attaching it to the SWDR.	

See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs

ATTACHMENT H – Risk Management Plan

Project Risk Management Plan

District: 05 EA: 0T630_

County: Santa Barbara Route: 101 PM: 45.5/46.3

Purpose

This document describes how Risk Management will be structured and performed on this project. The risk management plan includes methodology, roles and responsibilities, budgeting, timing, risk categories, definitions of risk probability and impact, probability and impact matrix, reporting formats, and tracking. The Caltrans Project Risk Management Handbook will be utilized as primary reference and guideline.

APPROVED BY:

David C. Beard 3/21/11

Project Manager Date

Roles and Responsibilities

Project Manager responsibilities include:

- Incorporate the resources and time required to execute the Risk Management Plan in the project budget and schedule
- Develop, distribute and implement this Risk Management Plan
- Develop and update the Risk Register with the support of the Project Team and incorporate it into the workplan
- Coordinate with the risk owners to monitor risks and implement risk response strategies

Project Manager Support or Risk Officer responsibilities include:

- Support the Project Manager in developing and updating the Risk Management Plan and the Risk Register
- Maintain updates to the Risk Management Plan and the Risk Register
- Maintain a list of risk and response strategies of all the projects in the district
- Update the Sample Risk List and the lessons learned database (http://pd.dot.ca.gov/pm/PMPI/LessonsLearned/index.asp).

Project Team responsibilities include:

- Identify the risk and describe it
- Assess the probability that a risk will occur and specify the criteria used to assess the probability
- Assess the impact of risks on project cost, time, scope, and quality objectives, and specify the criteria used to assess the impact
- Help identify the risk owners and assist in developing the risk response strategies (Project Team members may be assigned as "Risk Owner")
- Perform the risk response steps assigned
- Assist the PM in activities associated with Risk Monitoring and Control

Risk Owner responsibilities include:

- Develop and/or update the assigned risk response strategy
- Monitor the risk assigned and inform PM of any threats or opportunities to the project. This includes monitoring the risk trigger and informing the PM, if the risk becomes a real event.

Risk Register

The attached Risk Register documents the identified risks, the assessment of their root causes, areas of the project affected (WBS elements), the analysis of their likelihood of occurring and impact if they occur and the criteria used to make those assessments and the overall risk rating of each identified risk by objective (e.g. cost, time, scope and quality). (Appendix D, Project Risk Management Handbook). Importantly, it includes the risk triggers, response strategies for high priority risks, and the assigned risk owner who will monitor the risk.

Risk Identification Methods Used

The risk breakdown structure (Appendix B, Project Risk Management Handbook) and Sample Risk List (Appendix C, Project Risk Management Handbook) will be used as reference tools to help the PDT identify and categorize risks.

Risk Analysis Methods Used

Qualitative Risk Analysis attempts to rank the risks into high, medium and low risk categories based on their probability of occurring and impact on an objective. (The objective with the most impact, at a minimum).

This project will	X	will not		use qualitative risk analysis
This project will		will not	X	use District RM Web tool

Quantitative Risk Analysis attempts to estimate the risk that the project and its phases will finish within objectives taking into account all identified and quantified risks, estimates the contingency needed for cost and schedule and identifies the best decisions using decision tree analysis. (See *Project Risk Management Handbook* for additional information and when to use Quantitative Risk Analysis).

This project will	X	will not		use quantitative cost risk analysis
This project will	X	will not		use quantitative schedule risk analysis
This project will		will not	X	use decision tree analysis
This project will		will not	X	use other quantitative methods

Period of Risk Management Meetings and Full Review of Project Risk

Meetings for the purpose of discussing and making decisions on Project risk will be held:

Weekly _____ Bi-Weekly _____ Monthly _____ Other **PDT Meetings**

The risk management identification, analysis and response planning process shall occur during project initiation document (PID). A full review and update of risk register will occur at the beginning of each subsequent phase of the project.

Budget Allocated for Risk Management

Staff allocated and assigned for risk management activities include:

PMSU Chief	@		Hrs
Risk Officer	@		Hrs
PM	@	40	Hrs
Environmental	@	2	Hrs
Design	@	2	Hrs
R/W	@	2	Hrs
DES/Structure	@		Hrs
Const.	@	2	Hrs
Traffic Operations	@		Hrs
Maintenance	@	2	Hrs
	@		Hrs
Total:		50	Hrs

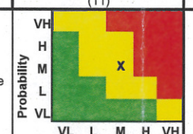
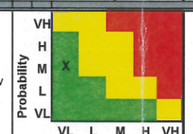
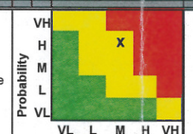
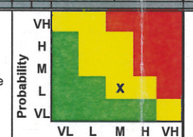
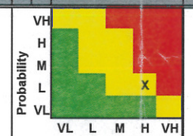
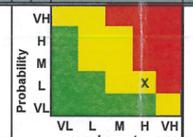
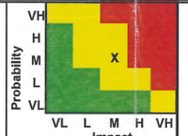
---

50 Hrs. × $ 105 /Hr =

A total of $5,250 is allocated for Risk Management on this project.

Dist - E.A	Co-Rte-PM	Project Name	Project Manager	Telephone Number	Date	Version/Draft
05-0T630	SB-101-45.5/46.3	Gaviota Curve Realignment	David Beard	805-543-3016	3/17/2011	PID

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	Threat/Opportunity Event	Risk Trigger	Type	Probability	Impact	Risk Matrix	Probability (%)	Impact ($ or days)	Effect ($ or days)	Strategy	Response Actions including advantages and disadvantages	Responsibility (Risk Manager)	Last date changes made to risk and Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14) =(12)x(13)	(15)	(16)	(17)	(18)
	Active	1	3/1/2011 PS&E	Design	Unidentified Materials/ Geotechnical/ Foundation issues	Identified by Geotech	Schedule Cost	Moderate	Moderate		50%		6 months	Mitigation	Request Geotech information as early as possible.	Steve Wyatt	
	Active	2	3/1/2011 PID	Design	Design exceptions required for one or more alternatives	Identified by Design	Schedule	Moderate	Very Low		50%		3 months	Mitigation	Review geometric features as needed.	Steve Wyatt	
	Active	3	3/1/2011 PS&E	Design	Context sensitive solutions	Identified during Env. Doc or permits	Schedule Cost	High	Moderate		75%		$200 K	Acceptance	Include in project budget.	Steve Wyatt	
	Active	4	3/1/2011 PS&E	Design	Utility info late or discovery of additional utilities	Utility information received late	Schedule	Low	Moderate		25%		3 Months	Mitigation	Begin utility coordination as early as possible.	Steve Wyatt	
	Active	5	3/1/2011 PA&ED	Project Management	Delay in PA&ED phase impacts ability to meet programmed delivery year.	Informed by Environmental or Design	Schedule	Low	High		25%		6 months	Mitigation	Establish and monitor a detailed schedule.	David Beard	
	Active	6	3/1/2011 PA&ED	Environmental	Difficulty with public acceptance of the project.	Negative comments to Environmental Document of Permits	Schedule	Low	High		25%		12 months	Mitigation	Respond carefully to comments	Matt Fowler	
	Active	7	3/1/2011 PA&ED	Environmental	Archaeological site excavations need to be included in the schedule development	Discovered during environmental studies	Schedule Cost	Moderate	Moderate		50%		$300 K 6 months	Mitigation	Evaluate site as early as possible. Avoid archaeological site if possible.	Matt Fowler	

Dist - E.A	Co-Rte-PM	Project Name	Project Manager	Telephone Number	Date	Version/Draft
05-0T630	SB-101-45.5/46.3	Gaviota Curve Realignment	David Beard	805-543-3016	3/17/2011	PID

PROJECT RISK MANAGEMENT PLAN

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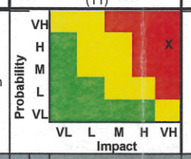
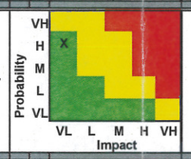
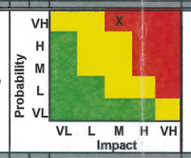
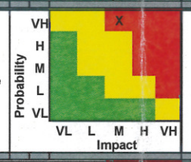
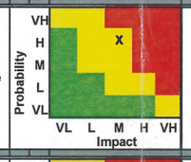
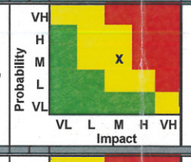
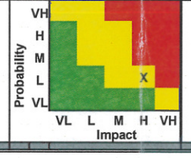
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14) =(12)x(13)	(15)	(16)	(17)	(18)
	Active	8	3/1/2011 PA&ED	Environmental	Property eligible as a Historic Resource and may require data recovery	Discovered during environmental studies	Schedule Cost	High	Very High		75%		$300 K 18 months	Mitigation	Evaluate property as early as possible. Complete Finding of Effect as quickly as possible.	Matt Fowler	
	Active	9	3/1/2011 PA&ED	Environmental	Project is in an area of high sensitivity for paleontology	Discovered during environmental studies	Cost	High	Very Low		75%		$25K	Acceptance	Incorporate mitigation (paleontologist monitor) if required.	Matt Fowler	
	Active	10	3/1/2011 PA&ED	Environmental	Section 4(f) resources at Gaviota State Park will be used by this project. Development of avoidance or minimization alternatives will likely be required for 4(f).	Discovered during environmental studies	Cost Scope Schedule	Very High	Moderate		90%		$100 K 12 months	Mitigation	Prepare to add an avoidance alternative or mitigation.	Matt Fowler	
	Active	11	3/1/2011 PA&ED	Environmental	The project is in the Coastal Zone	Triggered	Cost Scope Schedule	Very High	Moderate		100%		$100 K 12 months	Acceptance	Identify coastal resources and stakeholders early.	Matt Fowler	
	Active	12	3/1/2011 PA&ED	Environmental	Aesthetic treatment or design may be an issue for the Coastal Permit	Discovered during permit application process	Cost	High	Moderate		75%		$200 K	Acceptance	Incorporate Context Sensitive Solutions/ Aesthetic Treatment.	Matt Fowler	
	Active	13	3/1/2011 PA&ED	Environmental	Protocol surveys are likely to be involved for plant or animal species.	Discovered during environmental studies	Schedule	Moderate	Moderate		50%		12 months	Mitigation	Conduct surveys as early as possible and plan for the correct time of the year.	Matt Fowler	
	Active	14	3/1/2011 PA&ED	Environmental	Work in or near Gaviota Creek affects endangered species	Informed by Design	Schedule Cost	Low	High		25%		$500 K 6 months	Avoidance	Develop scope that avoids Gaviota Creek.	Matt Fowler	

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05-0T630	SB-101-45.5/46.3	Gaviota Curve Realignment	David Beard	805-543-3016	3/17/2011	PID

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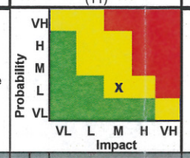
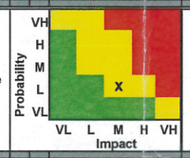
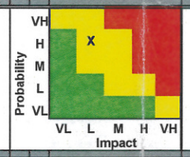
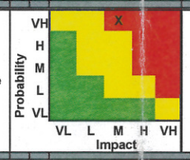
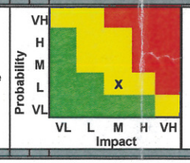
	Active	15	3/1/2011 PID	Environmental	There is environmental work that will be contracted out, or other special expertise not readily available to the District that may be required.	Identified during scoping	Cost	Low	Moderate		25%		$200 K	Acceptance	Incorporate into workplan.	Matt Fowler	
	Active	16	3/1/2011 PA&ED	Environmental	Additional alternatives for study are likely to be requested by resource agencies, elected officials or the public after scoping has been completed.	Informed by stakeholders	Schedule	Low	Moderate		25%		12 months	Mitigation	Prepare to add an additional alternative.	Matt Fowler	
	Active	17	3/1/2011 PA&ED	Environmental	The project does require disposal, staging or borrow sites.	Informed by Design	Schedule	High	Low		75%		3 months	Mitigation	Identify and study sites early.	Matt Fowler	
	Active	18	3/1/2011 PA&ED	Environmental	The project involves property controlled by State Parks	Triggered	Schedule	Very High	Moderate		100%		3 months	Mitigation	Involve State Parks early.	Matt Fowler	
	Active	19	3/1/2011 PS&E	Right of Way	Utility issues	Discovered during utility process	Cost Schedule	Low	Moderate		25%		3 months	Mitigation	Begin utility coordination as early as possible.	John Magorian	

ATTACHMENT I – Transportation Management Plan Data Sheet / Checklist

DISTRICT 5
TRANSPORTATION MANAGEMENT PLAN DATA SHEET/CHECKLIST

District / EA: 05/0T630K
Project Engineer: Paul Valadao
Date Prepared: 5/25/2010

Co.-Rte-PM: SB-101 45.5/46.3
Description: Gaviota Realignment
Working Days: 200 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			Include $12,500
1.2 Other Strategies	x			
2.0 Motorist Information Strategies				
2.1 Changeable Message Signs - Portable	x			Estimate $200/day, one per direction
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			Estimate $100/hour days; $200/hour nights
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			x	
4.3 Coordination with adjacent construction			x	
4.4 Contingency Plan	x			Standard SSP
4.4.1 Material/Equipment Standby			x	Contruction/Contractor to provide
4.4.2 Emergency Detour Plan			x	Contruction/Contractor to provide
4.4.3 Emergency Notification Plan			x	Contruction/Contractor to provide
4.5 SSP 12-220 and Others	x			
4.6 Other Strategies:				
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			
x			Per RE

Shayne Sandeman
District 5 TMP Coordinator

ATTACHMENT I

ATTACHMENT J – Distribution List

CENTRAL REGION PID DISTRIBUTION LIST

Division / Program / Office	Project Type	D5	
FHWA	Designated high profile projects only. Refer to Stewardship Agreement	Dominic Hoang	1
HQ Division of Design	All Projects	Design Report Routing	1
HQ Program Advisor	SHOPP	HQ Program Advisor gets one copy but do not duplicate other Advisors listed below. For Program Advisors not listed, refer to http://sv06web/pjd/home/docs/SHOPP_Program_Advisors.xls	1
HQ Division of Engineering Serv	All Projects	Division of Engineering Services	5
HQ Transportation Programming	STIP	Kurt Scherzinger	1
	SHOPP	Rick Guevel	
HQ Environmental	All Projects	Bob Pavlik	1
HQ Maintenance	HA22	Rob Marsh	
	HA21	Roger Hunter	
	HA42, HA23	Gerald Kracher	
	STIP	Patti-jo Dickinson	
HQ Traffic Operations	HB4N, HB4C	Nagi Pagadala	
HQ Traffic Ops/Traffic Safety Pgm	HB1	Shaila Chowdhury	1
HQ Traffic Ops/Traffic Safety Pgm	HB711	Richard Haggstrom	
Project Manager	All Projects	Project Manager	1
Design Manager	All Projects	Design Manager	2
Resident Engineer	All Projects	Resident Engineer	1
District Maintenance	All Projects	Lance Gorman	1
	D6 Eastern Kern		0
	SHOPP	Kelly Mcclain	1
District Traffic Management	All Projects		0
District Traffic Safety	All Projects		0
District Traffic Safety	Mon/SCr	Tamara Babcock	
District Traffic Safety	SLO	Steve Talbert	
District Traffic Safety	SB/SBt	David Chesebro	1
Region Traffic Design	All Projects	Mohammed Qatami	1
District Traffic Operations	All Projects	Paul McClintic	1
Region Materials	All Projects	Doug Lambert	1
Region Environmental	All Projects	David Hyatt	1
Region Landscape	All Projects	Dennis Reeves	1
Region Right of Way	All Projects	Connie Shellooe	1
District Planning	All Projects	Claudia Espino	1
PPM	All Projects	Linda Araujo	1
District Single Focal Point	All Projects	No Copy	0
Surveys	All Projects	Hanna Kassis (electronic copy only)	0
	All Projects	Jeremy Villegas	1
	Mon/SC/SBt	Bob Fredricks	
	SB/SLO	Nick Tatarian	1
HQ DES/OPPM	Proj w/Structures	Andrew T S Tan	1
District Records	All Projects	Gail Hayes / Kristina Jaime	1
	TOTAL COPIES		District 5 = 30
PJD Technical Support			Last Rev. May 12,2011

ATTACHMENT J