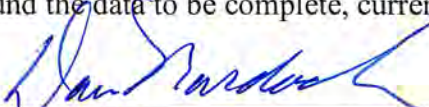


**Project Study Report
To
Request Conceptual Approval Of
A Project Funded by Others**

On Route US-101
At ± 0.2 miles West of Liberty Canyon Road


I have reviewed the right of way information contained in this report and the R/W Data Sheet attached hereto, and found the data to be complete, current and accurate:


Dan Murdoch, *ACTING DEPUTY DISTRICT DIRECTOR, RIGHT OF WAY* 5/1/15

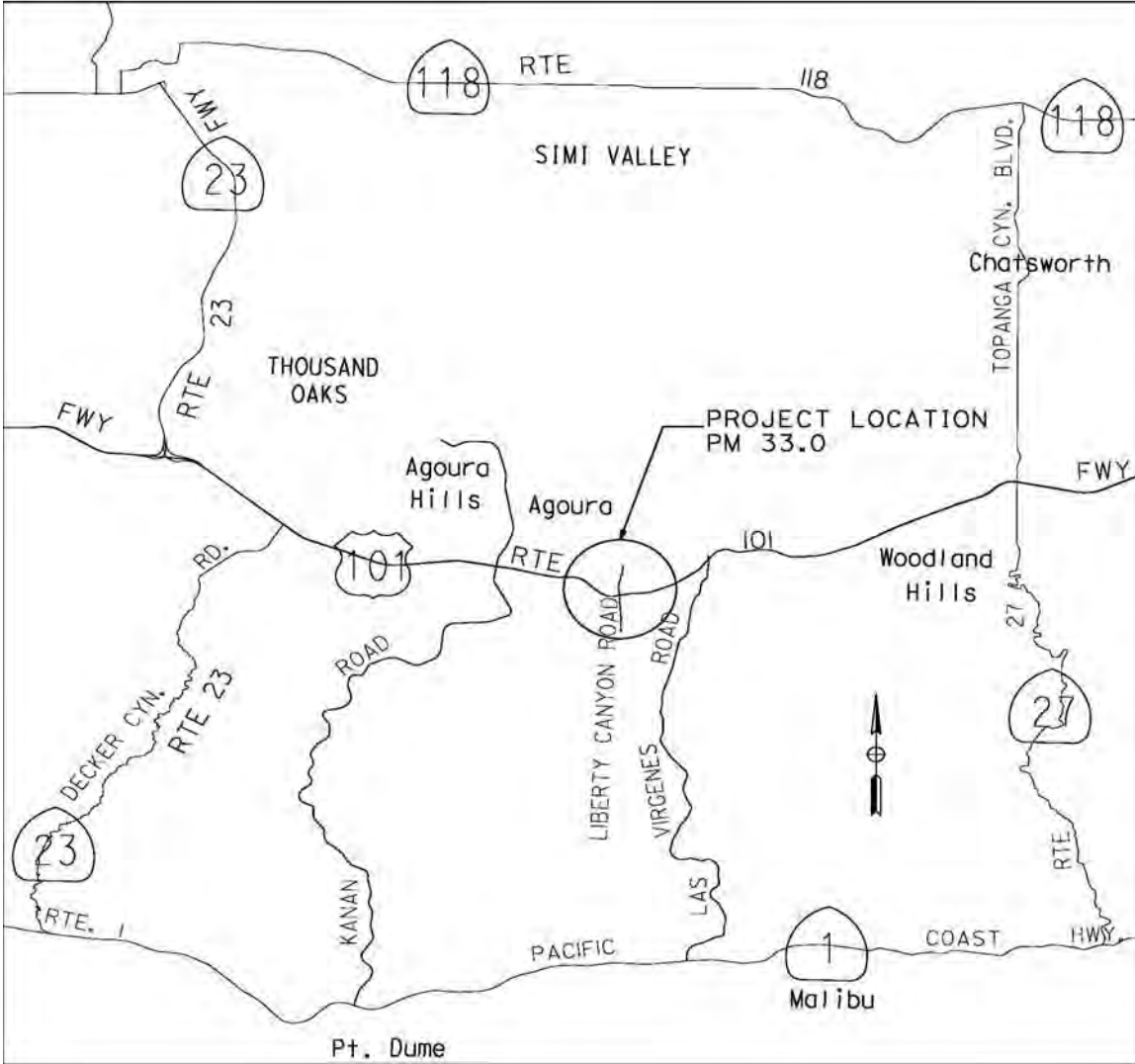
APPROVAL RECOMMENDED:


Reza Fateh, *PROJECT MANAGER*

APPROVED:


Carrie Bowen, *DISTRICT DIRECTOR* 5-1-15
DATE

Vicinity Map



On Route US-101

At ± 0.2 miles West of Liberty Canyon Road

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



REGISTERED CIVIL ENGINEER

4/28/15

DATE



Table of Contents

- 1. INTRODUCTION 1
- 2. BACKGROUND 2
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1. INTRODUCTION

Project Description:

This project proposes to construct a vegetated bridge across US-101 near Liberty Canyon Road in the City of Agoura Hills to function as a wildlife crossing. The project is sponsored by the Mountains Recreation and Conservation Authority (MRCA), which is a local partnership between the Santa Monica Mountains Conservancy, the Conejo Recreation and Park District, and the Rancho Simi Recreation and Park District. A cooperative agreement between MRCA and the California Department of Transportation (Caltrans) was executed on February 12, 2015. MRCA requested that Caltrans develop a Project Initiation Document (PID) for the project and agreed to fund the cost of the PID. MRCA and the Resource Conservation District of the Santa Monica Mountains (RCDSMM), project architect, provided the location and design elements of the bridge. Caltrans subsequently prepared this Project Study Report (PSR) to evaluate the cost and structural feasibility of the bridge and associated improvements.

One “no build” and one “build” alternative were evaluated and documented in this report. The “build” alternative, Alternative 2, proposes to build a 165-foot wide by 200-foot long bridge across US-101 west of Liberty Canyon Road. The bridge will be vegetated to provide a passage that resembles the natural habitat of wildlife. The slope between end of the bridge and Agoura Road south of the freeway will be built up to grade to allow the crossing to extend over Agoura Road before descending to join existing ground. A tunnel and associated retaining wall systems would be constructed along Agoura Road to keep the road operational and to accommodate the fill material needed to construct the wildlife crossing. The costs for the recommended alternative are summarized in the table below. An escalation rate of 3% per year is used to estimate the escalated cost. The capital funding source for the project is to be determined (TBD), as the project sponsor is actively seeking funding opportunities.

Project Limits	07-LA-101-PM 33.0	
Number of Alternatives	Two (2)	
Programmable Project Alternative	Alternative 2	
	Current Cost Estimate:	Escalated Cost Estimate:
Capital Outlay Support	\$10,152,500	\$10,152,500
Capital Outlay Construction	\$33,410,000	\$37,603,000
Capital Outlay Right-of-Way	\$6,140,000	\$9,085,000
Funding Source	TBD	
Funding Year	2017/2018	
Type of Facility	8 Lane Freeway	
Number of Structures	Two (2)	
Anticipated Environmental Determination or Document	Negative Declaration (ND)/ Finding of No Significant Impact	
Project Development Category	4	

2. BACKGROUND

US-101 is a freeway that runs mostly north-south in the State of California. It is also known as the Hollywood/Ventura Freeway and is a heavily travelled commuter route serving the Greater Los Angeles area and connecting Los Angeles and Ventura Counties. It also acts as the primary access route to and from downtown Los Angeles, various residential communities, and tourist destinations in Los Angeles, as well as the central California coast.

Within the project limits, US-101 is a 8-lane freeway that runs east-west through the City of Agoura Hills separating the Santa Monica Mountains (to the south) from the Simi Hills and Santa Susana Mountains (to the north). US-101 is a formidable and virtually impenetrable barrier for many wildlife species including mountain lions, bobcats, gray foxes, coyotes, and mule deer that inhabit and travel between these two mountain ranges. In particular, mammals with large home ranges such as mountain lions and bobcats need large connected habitats in order to hunt, breed, and thrive. The construction of US-101 divided this previously continuous habitat range into isolated habitat fragments and resulted in severely restricted movement between the two mountain ranges. For mountain lions in particular, the consequences of this restriction results in increased inbreeding and territorial fighting, and very low genetic diversity, within the Santa Monica Mountains.

The wildlife crossing is critical in the linkage between the Santa Monica Mountains and the Sierra Madre Range, which is one of the few coastal to inland connections remaining in Southern California. Both the South Coast Missing Linkages Project and the California Essential Habitat Connectivity Project identified the need to preserve and enhance this critical linkage in order to sustain ecological and evolutionary processes in California's South Coast Ecoregion. Additionally, the National Park Service has been collecting and publishing data on carnivore movement for over a decade, thereby validating the importance of a linkage for sustaining wildlife populations in the Santa Monica Mountains.

Analysis of genetics and tracking of ranges size conducted by the National Park Service has indicated that providing wildlife connectivity through intervening natural areas in the Simi Hills, Santa Susana Mountains, and ultimately to the larger ecosystem of the Sierra Madre Range is imperative for preserving a viable mountain lion population in the Santa Monica Mountains. The genetic diversity of mountain lions in the Santa Monica Mountains was determined to be lower than anywhere else in the state of California, or anywhere else throughout the species range in the Western United States. Moreover, connectivity is not just important for mountain lions, as National Park Service data has shown that bobcats and coyotes are also exhibiting significant genetic effects in the relatively short period since the freeway was built and research has shown that smaller species including lizards and birds are affected by the habitat fragmentation caused by roads and urban development. Without a safe and sustainable wildlife crossing, movement between these remaining areas of natural habitat is severely restricted and wildlife within the Santa Monica Mountains is essentially trapped.

The Liberty Canyon area was identified by scientists and experts working in the field of wildlife movement as the optimal location for a safe and sustainable wildlife crossing across US-101. Prime habitat has already been protected on both sides of the freeway at this

location that is contiguous with large swaths of protected habitat to the north and south of this connection. In addition, a tragic indicator that Liberty Canyon is the appropriate location for a wildlife crossing is the death of a male puma that was killed while attempting to migrate into the Santa Monica Mountains in October 2013.

3. PURPOSE AND NEED

Purpose:

The purpose of this project is to provide a safe and sustainable passage for wildlife across US-101 near Liberty Canyon Road in the City of Agoura Hills that reduces wildlife mortality and allows for the movement of animals and the exchange of genetic material.

Need:

The need for the proposed project is based on genetic and tracking data that shows US-101 is a barrier to wildlife that historically traveled between the Santa Monica Mountains and the Simi Hills, ultimately connecting the Santa Monica Mountains to the Sierra Madre mountain range north of Highway 126. In particular, large mammals such as mountain lions and bobcats need large connected habitats in order to hunt, breed, and thrive. US-101 divides this previously contiguous range into isolated habitat fragments; for mountain lions, this has resulted in inbreeding, territorial fighting, and a decrease in genetic diversity. Connectivity is critical for all kinds of wildlife, especially in an area such as Los Angeles with an extensive freeway system. The need will only increase as climate change effects species distribution.

4. DEFICIENCIES

Environmental impacts and mitigation measures were not considered nor required when US-101 and most of Southern California's freeways were built in the 1950s. As a result the construction of US-101 bisected the previously connected natural habitat ranges of many wildlife species. Presently, a safe and sustainable wildlife crossing across US-101 is not available. Without the addition of a wildlife crossing, the ecological and environmental impact on wildlife that resulted from the construction of US-101 will persist and the fate of many wildlife species within the Santa Monica Mountains will remain in jeopardy.

5. CORRIDOR AND SYSTEM COORDINATION

In District 7, US-101 extends 83.1 miles; 39.5 miles are in Los Angeles County and 43.6 miles are in Ventura County. US-101 is part of the Federal Aid Primary (FAP) system, which is a subset of the National Highway System (NHS). The project limits lie within the freeway segment from State Route 27 to the Los Angeles/Ventura County Line. This segment is classified as Rural Principal Arterial under FAP; and State Freeway under the State Highway System (SHS).

The latest Transportation Concept Report (TCR) for US-101 was completed in July 2013. The TCR identifies the existing and future route conditions as well as future needs for each route on the SHS. Currently, US-101 within the project limits has four mixed flow lanes (MFL) and an auxiliary lane in each direction. The existing Level of Service (LOS) for this segment of the freeway is F0. Due to financial, environmental, right of way, and other constraints, it is very difficult for Caltrans to continue to add more lanes to the highway systems. With these limitations, Caltrans District 7 has established LOS F0 as the minimum acceptable LOS on the freeway system. In accordance with the “CONCEPT – 2035 Facility” table in the TCR, eight (8) total MFLs (four [4] MFLs in each direction) are needed in the year of 2035 to maintain LOS of F0 within the project segment of the freeway. Thus, no widening of this segment of the freeway is planned at this time.

6. ALTERNATIVES

A. Viable Alternatives

The two viable alternatives for this project are Alternative 1: “No Build”; and Alternative 2: “Build”.

Alternative 1: “No Build”

This alternative does not satisfy the purpose and need for this project and will result in the continued restriction of wildlife movement into and out of the Santa Monica Mountains and threaten the long-term viability of wildlife species within it.

Alternative 2: “Build”

This alternative proposes to build a vegetated bridge across US-101 west of Liberty Canyon Road to provide a safe passage for wildlife to cross the freeway. The scope of work includes:

- Construct a two span 165-foot wide by 200-foot long bridge with columns on spread footings in the freeway median.
- Construct retaining walls at both the north and south end of the bridge.
- Construct soundwalls along the outer edges of the bridge to mitigate traffic noise and block light in order to make the crossing more conducive to wildlife crossing.
- Plant vegetation on the bridge to provide a passage that resembles the natural habitat for wildlife.
- Install irrigation and drainage system on the bridge.
- Fill and grade the slope and open area between the freeway and Agoura Road to provide a continuous grade thereby allowing the wildlife crossing to extend over Agoura Road before descending to join existing ground.
- Construct a tunnel and associated retaining wall systems along Agoura Road to keep the road operational and to support the fill materials required by the wildlife crossing.

The Structure Advance Planning Study (APS) for the proposed bridge, tunnel, and associated improvements are included in Attachment B.

This alternative can be constructed in two phases if funding is limited. The first phase would consist of the construction of the bridge over US-101. This would meet the immediate need to provide a wildlife crossing across the busy freeway. The capital and support cost for this phase is approximately \$30 million dollars.

The second phase would consist of the construction of the Agoura Road tunnel and grading of the open area between US-101 and Agoura Road to allow the wildlife crossing to extend over Agoura Road, which is currently a two-lane road that does not have high traffic volumes. If traffic volumes increase due to nearby residential and commercial development, Agoura Road would be widened per City of Agoura Hills's requirements and have higher traffic volumes that may result in undesirable conditions for wildlife seeking to cross Agoura Road. The second phase of the project would allow the wildlife crossing to extend over Agoura Road. The capital and support cost for this phase is approximately \$20 million dollars.

This is the recommended alternative for programming and it is recommended that the project proceed to the Project Approval/Environmental Document (PA/ED) phase. The implementation of the two phases of this alternative will be furthered studied in the PA/ED phase.

Design Exceptions

Based on the scope of work proposed by this project, on April 7, 2015, the HQ Design Reviewer concurred that the preparation of a Fact Sheet Exceptions to Mandatory Design Standards for the features described below would be deferred to the PA/ED Phase.

The identified nonstandard features proposed by this project are as follows:

1. Nonstandard Shoulder Width, SB Mainline Shoulder

The existing left shoulder width for SB US-101 within the project limits is 10 feet. The widths of the proposed bridge columns (5 feet 6 inches in diameter) and associated concrete barrier (Type 60F) will reduce the left shoulder width from 10 feet to 6 feet 6 inches, for a distance of 155 feet along the freeway centerline.

The standard for which this exception would be requested from is Index 302.1 of the Highway Design Manual (HDM) (last updated 9/22/14). Index 302.1 states, "**The shoulder widths given in Table 302.1 shall be the minimum continuous usable width of paved shoulder on highway.**" Table 302.1 calls for a left paved shoulder width of 10 feet for freeways with 6 or more lanes.

2. Nonstandard Shoulder Width, NB Mainline Shoulder

The existing left shoulder width for NB US-101 within the project limits is 10 feet. The widths of the proposed bridge columns (5 feet 6 inches in diameter) and associated concrete barrier (Type 60F) will reduce the left shoulder width from 10 feet to 6 feet 6 inches, for a distance of 155 feet along the freeway centerline.

The standard for which this exception would be requested from is Index 302.1 of the HDM (last updated 9/22/14). Index 302.1 states, “**The shoulder widths given in Table 302.1 shall be the minimum continuous usable width of paved shoulder on highway.**” Table 302.1 calls for a left paved shoulder width of 10 feet for freeways with 6 or more lanes.

3. Nonstandard Stopping Sight Distance on Horizontal Curve, SB Mainline

The bridge columns will be placed along the portion of the freeway with an 1800-foot radius horizontal curve along the centerline. The proposed columns and reduced shoulder width will result in a stopping sight distance of 427 feet for a design speed of 70 mph along the inside lane of SB mainline.

The standard for which this exception would be requested from is Index 201.1 of the HDM (last updated 9/22/14). Index 202.1 states, “**Table 202.1 shows the minimum standards for stopping sight distance related to design speed for motorists.**” Table 201.1 calls for stopping sight distance of 750 feet for a design speed of 70 mph.

4. Nonstandard Stopping Sight Distance on Horizontal Curve, NB Mainline

The proposed bridge abutment wall will be located at a distance of 12 feet from the edge of shoulder. The wall will obstruct the view of motorists travelling on the outside lane of NB mainline. The abutment wall and proposed shoulder width of 10 feet will result in a stopping sight distance of 635 feet for a design speed of 70 mph along the outside lane of NB mainline.

The standard for which this exception would be requested from is Index 201.1 of the HDM (last updated 9/22/14). Index 202.1 states, “**Table 202.1 shows the minimum standards for stopping sight distance related to design speed for motorists.**” Table 201.1 calls for stopping sight distance of 750 feet for a design speed of 70 mph.

Hazardous Waste

The Preliminary Hazardous Waste Assessment prepared for this project, finds that construction activities involving imported soil backfill will not have hazardous waste issues unless the existing freeway shoulder surfaces are disturbed before they are covered with imported fill material. If the exposed sites are disturbed, the exposed soils are likely to be lead-impacted and will require an Aerially Deposited Lead (ADL) site investigation. The elevation of groundwater in the project area needs to be determined if piles are proposed

for supporting the bridge. If groundwater elevation is below the endpoints of piles, the site should not have any issues; otherwise it will need to be screened for potential contaminants for disposal purpose.

Landscaping

The bridge across US-101 and fill area between the freeway and Agoura Road will be landscaped to provide a continuous passage that resembles a natural habitat for the wildlife. The landscape designs will be provided by MRCA in the next phase of the project.

Stormwater

The Los Angeles Regional Water Quality Control Board (LARWQCB) has jurisdiction over the project area. The total disturbed area (TDA) for the project is 4.44 acres.

A long-form Storm Water Data Report (SWDR) was prepared in accordance with the July 2010 Edition of Storm Water Quality Handbook-Project Planning Design Guide (PPDG) and approved on April 23, 2015. The SWDR Cover Sheet is presented in Attachment E.

Right of Way

The recommended alternative would require right of way from MRCA, City of Agoura Hills, and private property owners. The Right of Way Data Sheet is presented in Attachment F.

Utilities

Existing utilities along Agoura Road will be impacted by this alternative. Overhead utility lines and poles on both the north and south side of Agoura Road will need to be modified and/or relocated. Water lines along Vendell Place will need to be relocated. Sewer lines along Agoura Road will also need to be relocated if they are in conflict with the proposed retaining wall systems and associated footings. Drainage facilities impacted by construction of the project will be modified and/or relocated.

Railroad

Railroad impacts are not anticipated for this project since no rail systems exist within the project limits.

Other Agencies Involved

- The Los Angeles Regional Water Quality Control Board (LARWQCB) will oversee 401 Certification and the project's compliance with storm water regulations.
- The City of Agoura Hills will be involved for the improvements within their city limits, in the vicinity of Agoura Road.
- Army Corps of Engineers will be involved with the Section 404 Permit.
- California Department of Fish and Wildlife (CDFW) will be involved with the

Section 1602 Streambed Alteration Agreement.

B. Other Alternatives

Two other alternatives exist for this project, but were not fully developed as part of this report due to recommendations from the Project Delivery Team; they could be studied further in subsequent project phases. Both alternatives propose to construct a tunnel to go under US-101 to serve as a wildlife crossing. Neither tunnel would convey wildlife across Agoura Road to the south, as occurs with the full implementation of Alternative 2, since they would both open to the south between Agoura Road and US-101.

The first tunnel is a 13 feet wide by 13 feet high jacked box culvert located west of Liberty Canyon Road. The study was originally done by the Federal Highway Administration Central Federal Lands Highway Division (FHWA-CFLHD) in August 2010. The cost estimate for the tunnel was updated by FHWA in 2015 and is presented in Attachment I of this report. This alternative will not accommodate the same wide range of wildlife species as the bridge proposed by Alternative 2.

The second tunnel is a 32 feet wide by 15 feet high cast-in-place rectangular culvert located west of Liberty Canyon Road. This alternative may not be feasible due to constructability considerations and high traffic impacts. Specifically, such a large tunnel would require using the cut and cover technique, which would require closing US-101, one of the busiest freeway in the region. Overall, such a large tunnel would be more costly than the overpass portion of Alternative 2.

7. COMMUNITY INVOLVEMENT

This project is a result of collaborative effort between many government agencies and local communities. In addition to MRCA, RCDSMM, and Caltrans, National Wildlife Federation, National Park Service, City of Agoura Hills, City of Malibu, and local communities have contributed their support to the need of this project.

MRCA, RCDSMM, and Caltrans have been working with City of Agoura Hills on the design of the bridge and potential impact to the city road and related facilities.

There will be more public involvement when this project proceeds to the next phase, including general public and stakeholder meetings.

8. ENVIRONMENTAL DETERMINATION/DOCUMENT

The April 2015 Preliminary Environmental Analysis Report (PEAR) that was prepared for this project concludes that the project is expected to be classified as follows:

- California Environmental Quality Act (CEQA):

Initial Study with proposed Negative Declaration (ND).

- National Environmental Policy Act (NEPA):

Routine Environmental Assessment with proposed Finding of No Significant Impact (FONSI).

The PEAR is presented in Attachment D.

9. FUNDING/PROGRAMMING

It has been determined that this project may be eligible for federal-aid funding.

Capital Outlay Support and Project Estimates

Fund Source	Fiscal Year Estimate							
	Prior	2015/16	2016/17	2017/18	2018/19	2019/20	Future	Total
Component	In thousands of dollars (\$1,000)							
PA&ED Support		700.00	500.00					1200.00
PS&E Support			1169.35	2171.65				3341.00
Right-of-Way Support			300.00	300.00				600.00
Construction Support					1754.02	3006.90	250.58	5011.50
Right-of-Way			2140.00	4000.00				6140.00
Construction					20046.00	13364.00		33410.00
Total		700.00	4109.35	6471.65	21800.02	16370.90	250.58	49702.50

The support cost ratio is 25.67%.

10. SCHEDULE

Project Milestones		Scheduled Delivery Date (Month/Day/Year)
BEGIN ENVIRONMENTAL	M020	7/1/2015
NOTICE OF PREPARATION (NOP)	M030	7/30/2015
NOTICE OF INTENT (NOI)	M035	7/30/2015
CIRCULATE DPR & DED EXTERNALLY	M120	5/1/2016
PA/ED	M200	12/30/2016
DRAFT STRUCTURES PS&E	M378	9/30/2017
PROJECT PS&E	M380	3/30/2018
RIGHT OF WAY CERTIFICATION	M410	3/30/2018
READY TO LIST	M460	6/30/2018

Project Milestones		Scheduled Delivery Date (Month/Day/Year)
AWARD	M495	10/1/2018
APPROVE CONTRACT	M500	11/1/2018
CONTRACT ACCEPTANCE	M600	6/30/2020
END PROJECT	M800	12/30/2020

11. RISKS

Pursuant to District Directive 35 (DD-35), risk management activities were conducted. The resulting Risk Register is presented in Attachment H.

12. FHWA COORDINATION

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

13. PROJECT REVIEWS

Caltrans

Project Manager _____ Reza Fateh _____ Date April 14, 2015
 Structure Construction _____ Darwin Vargas _____ Date April 16, 2015
 Environmental Planning _____ Barbara Marquez _____ Date April 16, 2015
 Headquarter Design Review _____ Brian Frazer _____ Date April 16, 2015
 Design _____ Derek Higa _____ Date April 17, 2015
 Constructability Review _____ Quality Review Meeting _____ Date April 16, 2015

Project Sponsor

Santa Monica Mountain Conservancy _____ Paul Edelman _____ Date April 16, 2015

Project Architect

Resource Conservation District of Santa Monica Mountains
 _____ Clark Stevens _____ Date April 9, 2015

14. PROJECT PERSONNEL

Name	Title	Phone Number
Reza Fateh	Project Manager	213-897-8316
Marco Ruano	Chief, Office of Project and Special Studies (OPSS)	213-897-9863
Rafael Molina	Senior Transportation Engineer, OPSS	213-897-7945
Siew Mei Tan	Project Engineer, OPSS	213-897-5995
Barbara Marquez	Senior Environmental Planner	213-897-0791

15. ATTACHMENTS

- A. Project Location Map
- B. Structure Advance Planning Study (APS)
- C. Planning Cost Estimate
- D. Preliminary Environmental Analysis Report (PEAR)
- E. Storm Water Data Report (Cover Sheet)
- F. Right of Way Data Sheet
- G. Transportation Management Plan (TMP) Data Sheet
- H. Risk Register
- I. Jacked Box Culvert Estimate by FHWA-CFLHD


Project Location Map

Attachment – A

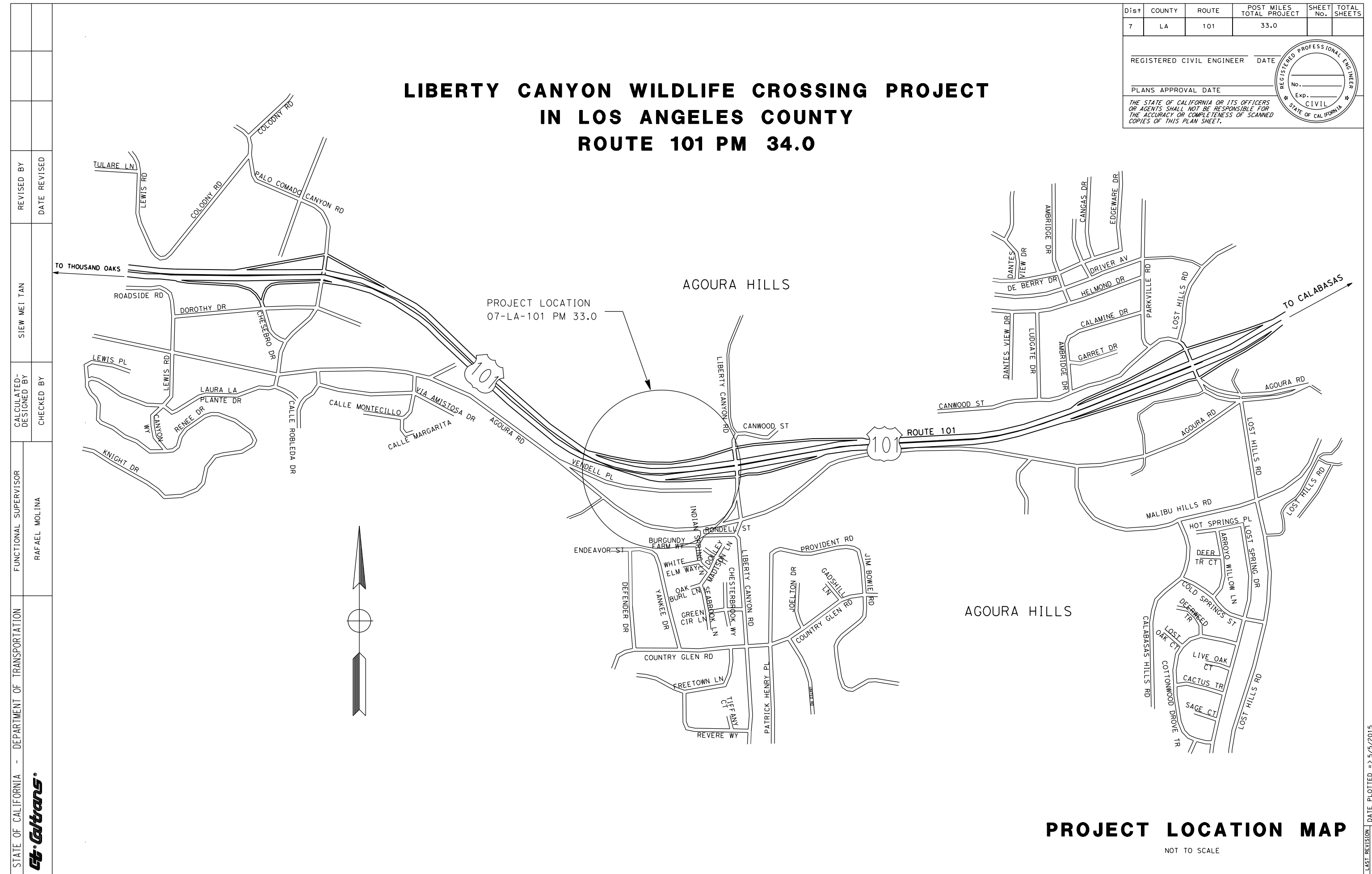
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	101	33.0		

REGISTERED CIVIL ENGINEER	DATE
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.



LIBERTY CANYON WILDLIFE CROSSING PROJECT IN LOS ANGELES COUNTY ROUTE 101 PM 34.0



PROJECT LOCATION MAP
NOT TO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
St. Caltrans
 FUNCTIONAL SUPERVISOR: RAFAEL MOLINA
 CHECKED BY: []
 CALCULATED-DESIGNED BY: []
 SIEW MEI TAN
 REVISED BY: [] DATE REVISED: []

LAST REVISION 00-00-00
 DATE PLOTTED => 5/5/2015
 TIME PLOTTED => 9:50:56 AM

Structure Advance Planning Study (APS)

Attachment – B

DIST	COUNTY	ROUTE	POST MILE
07	LA	101	34.3

NOTES:

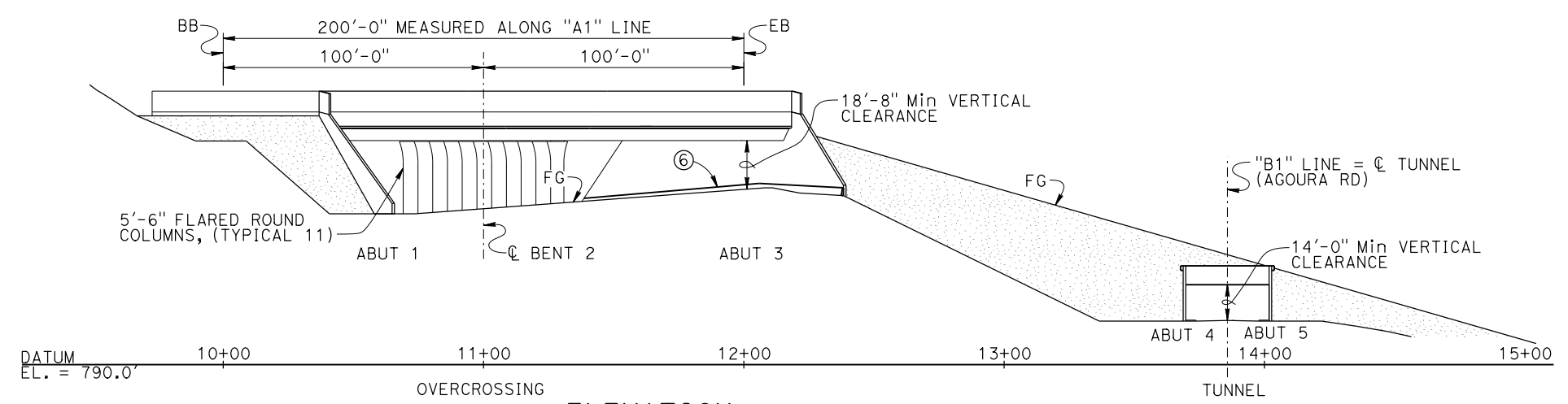
- ① Bridge deck Retaining Wall
- ② 8' High masonry Sound Wall
- ③ Continuous concrete Trench Drain
- ④ 80' Long Retaining/Wing Wall
- ⑤ 36' Long Retaining/Wing Wall
- ⑥ Concrete Barrier Type 60D

LEGEND:

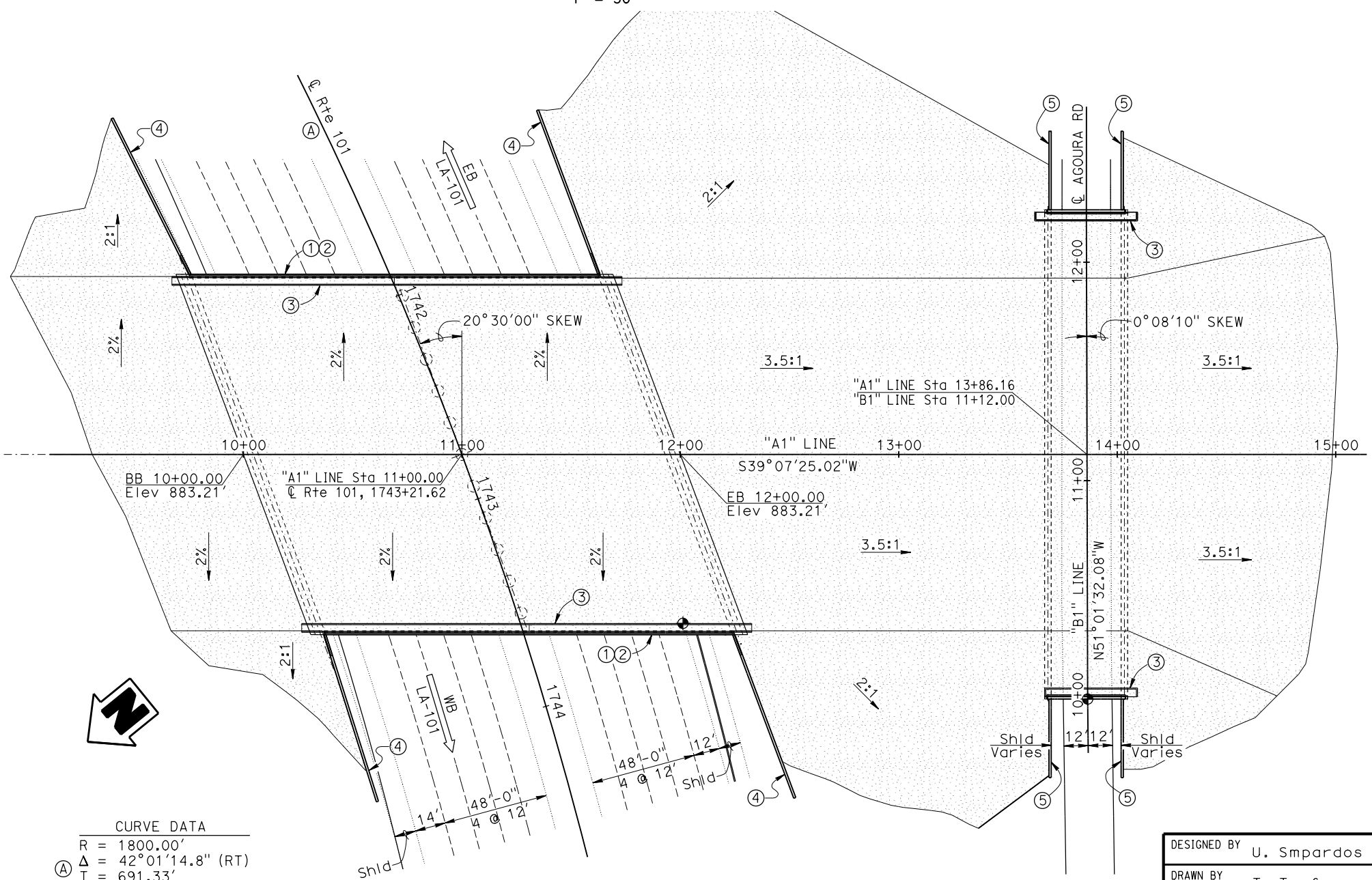
- ⊕ Indicates point of Minimum Vertical Clearance
- ▨ Indicates extent of imported dirt fill

ASSUMPTIONS:

- 1. Both structures were considered as bridges.
- 2. A 4'-0" soil surcharge is the only exterior load considered for the Rte 101 OC structure.
- 3. Traffic will pass through construction site; therefore, falsework openings are required. Based on information available at the time of this study, there is sufficient vertical clearance to provide a minimum of 15'-0" under falsework.
- 4. Temporary Railing to be placed by others.
- 5. Existing Utilities and signs in conflict to be removed or relocated by others.
- 6. Traffic Control and Staging to be handled by District (see "Road Plans").
- 7. Existing Rte 101 Alignment to remain unchanged.
- 8. Existing \bar{C} and Alignment of Agoura Road to remain unchanged.



ELEVATION
1" = 30'



PLAN
1" = 30'

CURVE DATA

R	= 1800.00'
Δ	= 42°01'14.8" (RT)
T	= 691.33'
L	= 1320.12'

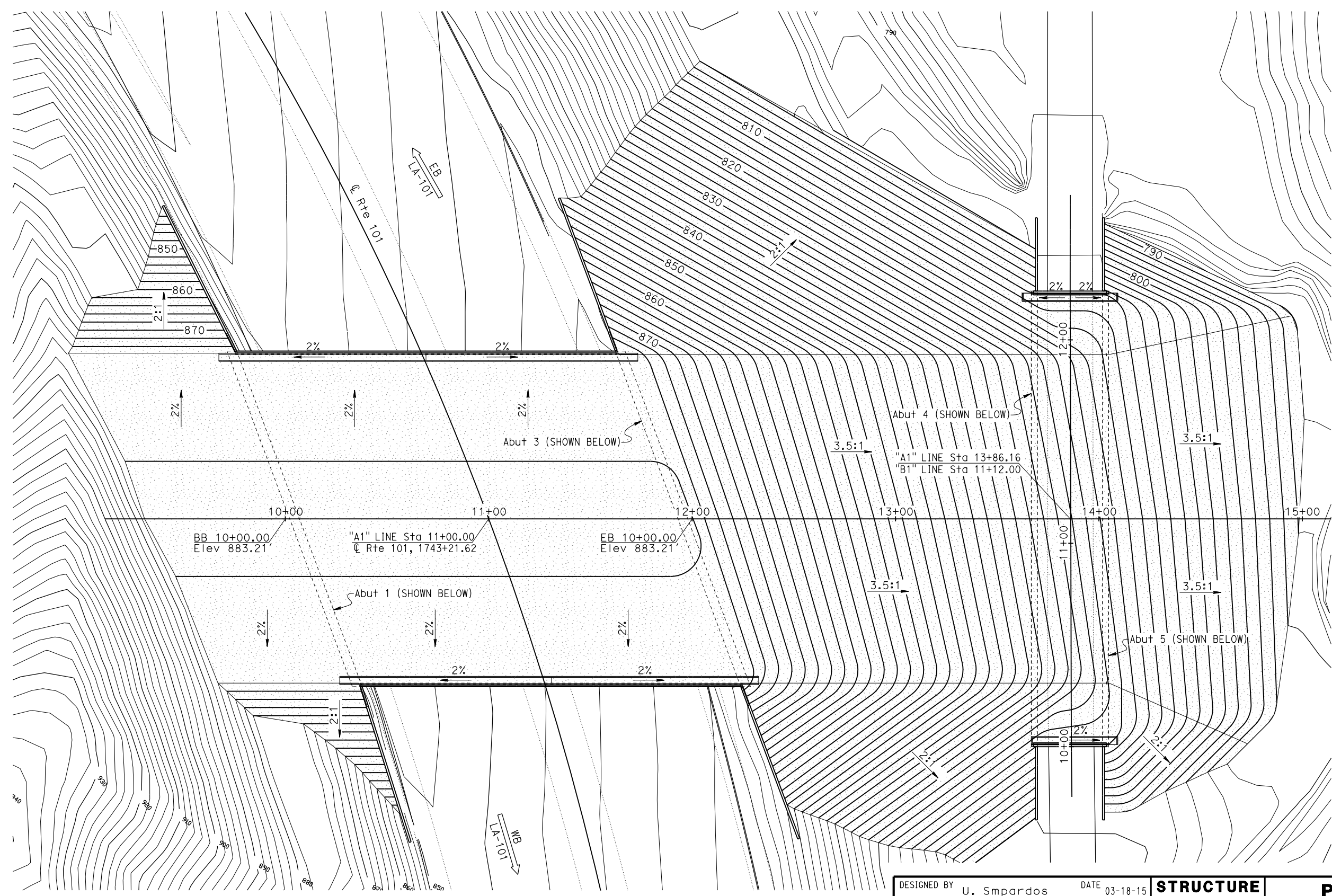
DESIGNED BY	U. Smpardos	DATE	03-18-15
DRAWN BY	T. Trefz	DATE	03-18-15
CHECKED BY	G. Galo	DATE	03-18-15
APPROVED	<i>José L. Nigareda</i>	DATE	03-18-15

STRUCTURE DESIGN BRANCH 15

PLANNING STUDY	
LIBERTY CANYON WILDLIFE CROSSING, 1 OF 4	
UNIT: 3604	BRIDGE No. 30710K
SCALE: AS NOTED	PROJECT No. & PHASE: 0714000213

DIST	COUNTY	ROUTE	POST MILE
07	LA	101	34.3

LEGEND:
 ——— Indicates existing grade contour
 ——— Indicates final grade contour
 [Hatched Area] Indicates extent of imported soil fill



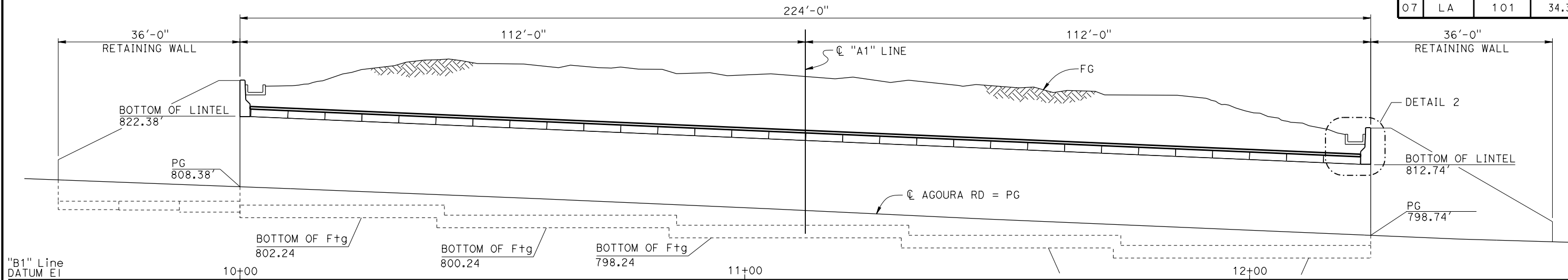
CONTOUR PLAN
 1" = 25'

DESIGNED BY	U. Smpardos	DATE	03-18-15
DRAWN BY	T. Trefz	DATE	03-18-15
CHECKED BY	G. Galo	DATE	03-18-15
APPROVED	<i>José L. Nigareda</i>	DATE	03-18-15

**STRUCTURE
 DESIGN
 BRANCH
 15**

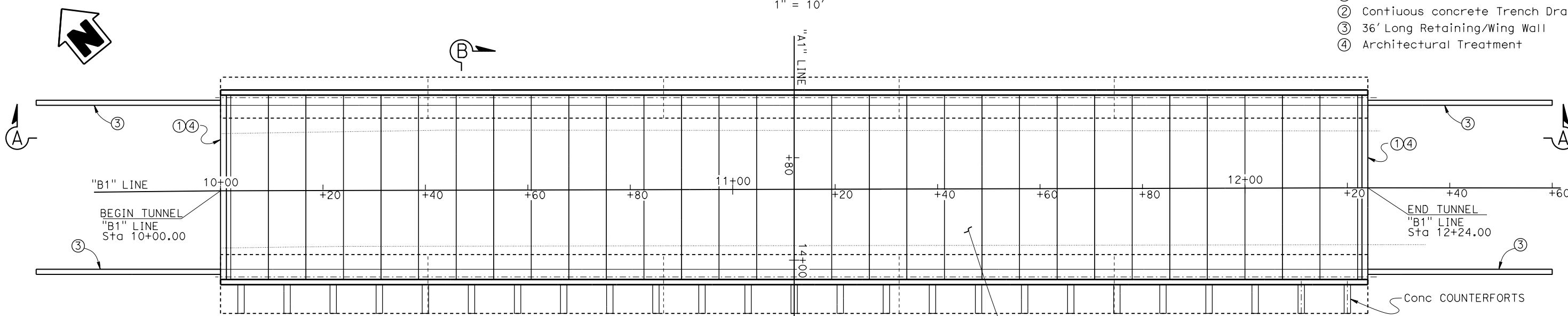
PLANNING STUDY	
LIBERTY CANYON WILDLIFE CROSSING, 2 OF 4	
UNIT: 3604	BRIDGE No. 30710K
SCALE: AS NOTED	PROJECT No. & PHASE: 0714000213

DIST	COUNTY	ROUTE	POST MILE
07	LA	101	34.3

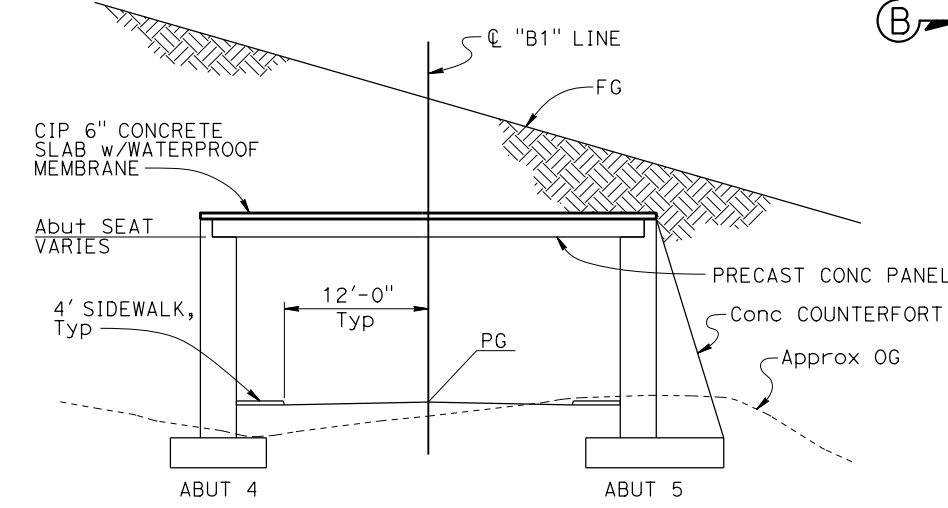


TUNNEL SECTION
1" = 10'

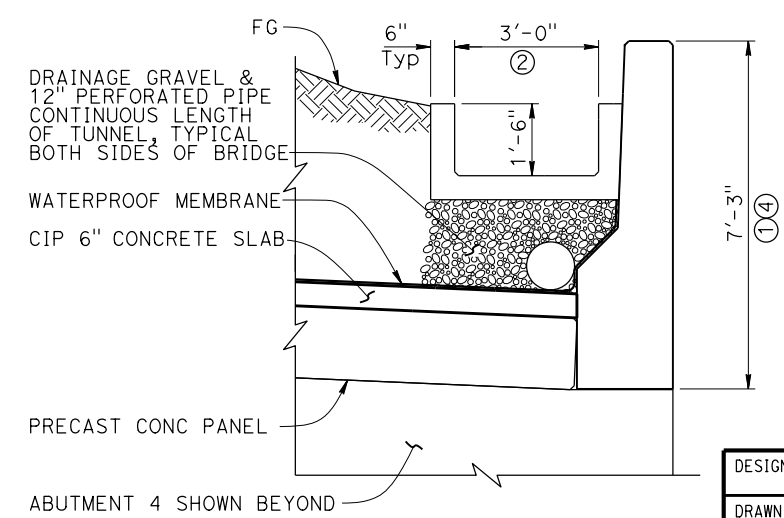
- NOTES:
- ① Precast concrete Lintel
 - ② Continuous concrete Trench Drain
 - ③ 36' Long Retaining/Wing Wall
 - ④ Architectural Treatment



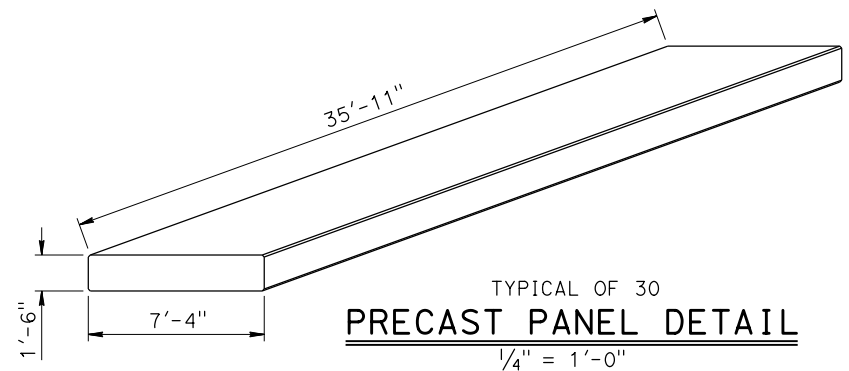
PLAN
1" = 10'



SECTION B-B
1/8" = 1'-0"



DETAIL 2
1/2" = 1'-0"



TYPICAL OF 30
PRECAST PANEL DETAIL
1/4" = 1'-0"

DESIGNED BY	U. Smpardos	DATE	03-18-15
DRAWN BY	T. Trefz	DATE	03-18-15
CHECKED BY	G. Galo	DATE	03-18-15
APPROVED	<i>José L. Nigareda</i>	DATE	03-18-15

STRUCTURE DESIGN BRANCH 15

TUNNEL	
PLANNING STUDY	
LIBERTY CANYON WILDLIFE CROSSING, 4 OF 4	
UNIT: 3604	BRIDGE No. 30710K
SCALE: AS NOTED	PROJECT No. & PHASE: 0714000213

Planning Cost Estimate

Attachment – C

Planning Cost Estimate

Project ID: 0714000213

Type of Estimate : PSR
Program Code : 4050.400.000
Project Limits : LA-101-PM 33.0
Description: Route 101 Liberty Canyon Wildlife Crossing
Scope : Construction of a bridge across US-101; a tunnel over Agoura Road; fill and grading in between US-101 and Agoura Road.
Alternative : 2

	Current Cost	Escalated Cost
ROADWAY ITEMS	\$ 12,174,500	\$ 13,702,507
STRUCTURE ITEMS	\$ 21,235,000	\$ 23,900,180
SUBTOTAL CONSTRUCTION COST	\$ 33,409,500	\$ 37,602,687
RIGHT OF WAY	\$ 6,139,848	\$ 9,084,821
TOTAL CAPITAL OUTLAY COST	\$ 39,550,000	\$ 46,688,000
PA/ED SUPPORT	\$ 1,200,000	\$ 1,200,000
PS&E SUPPORT	\$ 3,341,000	\$ 3,341,000
RIGHT OF WAY SUPPORT	\$ 600,000	\$ 600,000
CONSTRUCTION SUPPORT	\$ 5,011,500	\$ 5,011,500
TOTAL CAPITAL OUTLAY SUPPORT COST*	\$ 10,152,500	\$ 10,152,500
TOTAL PROJECT COST	\$ 49,702,500	\$ 56,900,000

If Project has been programmed enter Programmed Amount \$ -

Date of Estimate (Month/Year) Month / Year
April / 2015

Estimated Date of Construction Start (Month/Year) Nov / 2018

Number of Working Days 440 Working Days

Estimated Mid-Point of Construction (Month/Year) Month / Year
Sep 2019

Number of Plant Establishment Days Days

Estimated Project Schedule

PID Approval May-2015
PA/ED Approval Dec-2016
PS&E Mar-2018
RTL Jun-2018
Begin Construction Nov-2018

Approved by Project
Manager

Reza Fateh

(213) 897-8316

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

Section		Cost
1	Earthwork	\$ 1,693,500
2	Pavement Structural Section	\$ 161,900
3	Drainage	\$ 735,000
4	Specialty Items	\$ 224,400
5	Environmental	\$ 2,797,000
6	Traffic Items	\$ 185,000
7	Detours	\$ -
8	Minor Items	\$ -
9	Roadway Mobilization	\$ 579,700
10	Supplemental Work	\$ 359,900
11	State Furnished	\$ 300,000
12	Contingencies	\$ 2,434,900
13	Overhead	\$ 2,703,200
TOTAL ROADWAY ITEMS		\$ 12,174,500

Estimate Prepared By Siew Mei Tan, PE 4/24/2015 (213) 897-5995
Name and Title Date Phone

Estimate Reviewed By Reza Fateh, PM 4/24/2015 (213) 897-8316
Name and Title Date Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

PRELIMINARY
PROJECT COST ESTIMATE

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
160101	Clearing & Grubbing	LS	1	x	50,000.00	= \$	50,000
170101	Develop Water Supply	LS		x		= \$	-
190101	Roadway Excavation	CY	235	x	100.00	= \$	23,500
190103	Roadway Excavation (Type Y) ADL	CY		x		= \$	-
190105	Roadway Excavation (Type Z-2) ADL	CY		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x		= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x		= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
198001	Imported Borrow	CY	216,000	x	7.50	= \$	1,620,000
198007	Imported Material (Shoulder Backing)	TON		x		= \$	-
XXXXXX	Some Item			x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$ 1,693,500
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
150771	Remove Asphalt Concrete Dike	LF	200	x	15.00	= \$	3,000
150860	Remove Base and Surfacing	CY		x		= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		= \$	-
1532XX	Remove Concrete (type)	CY		x		= \$	-
250401	Aggregate Subbase	CY	115	x	150.00	= \$	17,250
260203	Class 2 Aggregate Base	CY	125	x	100.00	= \$	12,500
280000	Lean Concrete Base	CY	145	x	250.00	= \$	36,250
365001	Sand Cover	TON		x		= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		= \$	-
3750XX	Screenings (Type XX)	TON		x		= \$	-
377501	Slurry Seal	TON		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		= \$	-
390132	Hot Mix Asphalt (Type A)	TON	120	x	180.00	= \$	21,600
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x		= \$	-
393003	Geosynthetic Pavement Interlayer	SQYD		x		= \$	-
39405X	Shoulder Rumber Strip (HMA, Type XX Inden	STA		x		= \$	-
394071	Place Hot Mix Asphalt Dike	LF		x		= \$	-
394090	Place Hot Mix Asphalt (Misc. Area)	SQYD		x		= \$	-
397005	Tack Coat	TON		x		= \$	-
401050	Jointed Plane Concrete Pavement	CY	175	x	300.00	= \$	52,500
401108	Replace Concrete Pavement (Rapid Strength	CY		x		= \$	-
404092	Seal Pavement Joint	LF		x		= \$	-
404094	Seal Longitudinal Isolation Joint	LF		x		= \$	-
413112A	Repair Spalled Joints (Polyester Grout)	SQYD		x		= \$	-
413115	Seal Existing Concrete Pavement Joint	LF		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
731521	Minor Concrete (Sidewalk)	CY	25	x	750.00	= \$	18,750
731530	Minor Concrete (Textured Paving)	SQFT		x		= \$	-
XXXXXX	Some Item			x		= \$	-

TOTAL STRUCTURAL SECTION ITEMS	\$ 161,900
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)		Cost
150206	Abandon Culvert	LF	x	= \$		-
150805	Remove Culvert	LF	x	= \$		-
150820	Modify Inlet	EA	x	= \$		-
152430	Adjust Inlet	LF	x	= \$		-
155003	Cap Inlet	EA	x	= \$		-
193114	Sand Backfill	CY	x	= \$		-
510502	Minor Concrete (Minor Structure)	CY	x	= \$		-
510512	Minor Concrete (Box Culvert)	CY	x	= \$		-
62XXXX	XXX" APC Pipe	LF	x	= \$		-
64XXXX	XXX" Plastic Pipe	LF	x	= \$		-
65XXXX	XXX" RCP Pipe	LF	x	= \$		-
66XXXX	XXX" CSP Pipe	LF	x	= \$		-
68XXXX	Edge Drain	LF	x	= \$		-
69XXXX	XXX" Pipe Downdrain	LF	x	= \$		-
70XXXX	XXX" Pipe Inlet	LF	x	= \$		-
70XXXX	XXX" Pipe Riser	LF	x	= \$		-
70XXXX	XXX" Flared End Section	EA	x	= \$		-
703233	Grated Line Drain	LF	x	= \$		-
72XXXX	Rock Slope Protection (Type and Method)	CY	x	= \$		-
721420	Concrete (Ditch Lining)	CY	x	= \$		-
721430	Concrete (Channel Lining)	CY	x	= \$		-
729010	Rock Slope Protection Fabric	SQYD	x	= \$		-
750001	Miscellaneous Iron and Steel	LB	x	= \$		-
XXXXXX	Drainage	LS	1	x 735,000.00	= \$	735,000
XXXXXX	Some Item		x	= \$		-

TOTAL DRAINAGE ITEMS	\$	735,000
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)		Cost
070012	Progress Schedule (Critical Path Method)	LS	1	x 5,000.00	= \$	5,000
150662	Remove Metal Beam Guard Railing	LF	200	x 20.00	= \$	4,000
150668	Remove Terminal Systems	EA	x	= \$		-
153221	Remove Concrete Barrier	LF	195	x 50.00	= \$	9,750
153250	Remove Sound Wall	SQFT	x	= \$		-
190110	Lead Compliance Plan	LS	x	= \$		-
49XXXX	CIDH Concrete Piling (<i>Insert Diameter</i>)	LF	x	= \$		-
510060	Structural Concrete (Retaining Wall)	CY	x	= \$		-
510133	Class 2 Concrete (Retaining Wall)	CY	x	= \$		-
510524	Minor Concrete (Sound Wall)	CY	x	= \$		-
5110XX	Architectural Treatment (<i>Insert Type</i>)	SQFT	x	= \$		-
511048	Apply Anti-Graffiti Coating	SQFT	x	= \$		-
5136XX	Reinforced Concrete Crib Wall (<i>Insert Type</i>)	SQFT	x	= \$		-
518002	Sound Wall (Masonry Block)	SQFT	x	= \$		-
520103	Bar Reinf. Steel (Retaining Wall)	LB	x	= \$		-
800360	Chain Link Fence	LF	3,000	x 65.00	= \$	195,000
832001	Metal Beam Guard Railing	LF	x	= \$		-
839310	Double Thrie Beam Barrier	LF	x	= \$		-
839521	Cable Railing	LF	x	= \$		-
839541	Transition Railing (<i>Type WB</i>)	EA	2	x 4,500.00	= \$	9,000
8395XX	Terminal System (<i>Type CAT</i>)	EA	x	= \$		-
8395XX	Alternative Flared Terminal System	EA	x	= \$		-
8395XX	End Anchor Assembly (<i>Insert Type</i>)	EA	x	= \$		-
839561	Rail Tensioning Assembly	EA	x	= \$		-
839XXX	Crash Cushion (<i>Insert Type</i>)	EA	x	= \$		-
83XXXX	Concrete Barrier (<i>Insert Type</i>)	LF	x	= \$		-
839576	End CAP (<i>Type A</i>)	LF	2	x 350.00	= \$	700
839578	End CAP (<i>Type TC</i>)	EA	2	x 450.00	= \$	900

TOTAL SPECIALTY ITEMS	\$	224,400
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SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code	Unit	Quantity		Unit Price (\$)		Cost
XXXXXX Biological Mitigation	LS	1	x	250,000.00	= \$	250,000
071325 TEMPORARY REINFORCED SILT FENCE	LF		x		= \$	-
071325 Temporary Fence (Type ESA)	LF		x		= \$	-
XXXXXX Long Term Biological Monitoring	LS	1	x	1,050,000.00	= \$	1,050,000
XXXXXX Permits and Agreements	LS	1	x	6,912.00	= \$	6,912
XXXXXX Wildlife Fencing, Ramps	EA	6	x	5,000.00	= \$	30,000
<i>Subtotal Environmental</i>						\$ 1,336,912

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity		Unit Price (\$)		Cost
200001 Highway Planting	LS	1	x	270,000.00	= \$	270,000
20XXXX XXX" (Insert Type) Conduit (Use for	LF		x		= \$	-
20XXXX Extend XXX" (Insert Type) Conduit	LF		x		= \$	-
201700 Imported Topsoil	CY		x		= \$	-
2030XX Erosion Control (Type ___)	SQYD		x		= \$	-
203021 Fiber Rolls	LF		x		= \$	-
203026 Move In/ Move Out (Erosion Control)	EA		x		= \$	-
204099 Plant Establishment Work	LS	1	x	305,000.00	= \$	305,000
204101 Extend Plant Establishment (X Years)	LS		x		= \$	-
208000 Irrigation System	LS	1	x	385,000.00	= \$	385,000
208304 Water Meter	EA		x		= \$	-
209801 Maintenance Vehicle Pullout	EA		x		= \$	-
XXXXXX Landscape	LS		x		= \$	-
<i>Subtotal Landscape and Irrigation</i>						\$ 960,000

5C - NPDES

Item code	Unit	Quantity		Unit Price (\$)		Cost
074016 Construction Site Management	LS	1	x	5,000.00	= \$	5,000
074017 Prepare WPCP	LS		x		= \$	-
074019 Prepare SWPPP	LS	1	x	5,000.00	= \$	5,000
074023 Temporary Erosion Control	SQYD		x		= \$	-
074027 Temporary Erosion Control Blanket	SQYD		x		= \$	-
074028 Temporary Fiber Roll	LF		x		= \$	-
074032 Temporary Concrete Washout Facility	EA	1	x		= \$	-
074033 Temporary Construction Entrance	EA	1	x		= \$	-
074035 Temporary Check Dam	LF		x		= \$	-
074037 Move In/ Move Out (Temporary Erosion Cont)	EA		x		= \$	-
074038 Temp. Drainage Inlet Protection	EA		x		= \$	-
074041 Street Sweeping	LS		x		= \$	-
074042 Temporary Concrete Washout (Portable)	LS		x		= \$	-
XXXXXX Construction Site BMPs	LS	1	x	490,000.00	= \$	490,000

Supplemental Work for NPDES

(These costs are not accounted in total here but under Supplemental Work on sheet 7 of 11).

066595 Water Pollution Control Maintenance Sharing*	LS	1	x	5,000.00	= \$	5,000
066596 Additional Water Pollution Control**	LS	1	x		= \$	-
066597 Storm Water Sampling and Analysis***	LS	1	x		= \$	-

Subtotal NPDES (Without Supplemental Work) **\$ 500,000**

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL	\$ 2,797,000
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SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code	Unit	Quantity	Unit Price (\$)	Cost
150760 Remove Sign Structure	EA	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
5602XX Furnish Sign Structure	LB	x	= \$	-
5602XX Install Sign Structure	LB	x	= \$	-
56XXXX XXX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
860090 Maintain Existing Traffic Management	LS	x	= \$	-
860810 Inductive Loop Detectors	EA	x	= \$	-
86055X Lighting & Sign Illumination	LS	x	= \$	-
8607XX Interconnection Facilities	LS	x	= \$	-
8609XX Traffic Monitoring Stations	LS	x	= \$	-
860XXX Signals & Lighting	LS	x	= \$	-
8611XX Ramp Metering System (Location X)	LS	x	= \$	-
8611XX Ramp Metering System (Location X)	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item				
<i>Subtotal Traffic Electrical</i>				<u>\$ -</u>

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
120090 Construction Area Signs	LS	1	x 5,000.00 = \$	5,000
150701 Remove Yellow Painted Traffic Stripe	LF	x	= \$	-
150710 Remove Traffic Stripe	LF	x	= \$	-
150713 Remove Pavement Marking	SQFT	x	= \$	-
150742 Remove Roadside Sign	EA	x	= \$	-
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
566011 Roadside Sign (One Post)	EA	x	= \$	-
566012 Roadside Sign (Two Post)	EA	x	= \$	-
560XXX Furnish Sign Panels	SQFT	x	= \$	-
560XXX Install Sign Panels	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
<i>Subtotal Traffic Signing and Striping</i>				<u>\$ 5,000</u>

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120100 Traffic Control System	LS	1	x 125,000.00 = \$	125,000
120120 Type III Barricade	EA	x	= \$	-
120143 Temporary Pavement Delineation	LF	x	= \$	-
12016X Channelizer	EA	x	= \$	-
128650 Portable Changeable Message Signs	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	2,200	x 25.00 = \$	55,000
129100 Temp. Crash Cushion Module	EA	x	= \$	-
129099A Traffic Plastic Drum	EA	x	= \$	-
839603A Temporary Crash Cushion (ADIEM)	EA	x	= \$	-
XXXXXX Some Item				
<i>Subtotal Stage Construction and Traffic Handling</i>				<u>\$ 180,000</u>

TOTAL TRAFFIC ITEMS	\$ 185,000
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SECTION 7: DETOURS

Include constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
0713XX Temporary Fence (Type X)	LF	x	= \$	-
07XXXX Temporary Drainage	LS	x	= \$	-
120143 Temporary Pavement Delineation	LF	x	= \$	-
1286XX Temporary Signals	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
190101 Roadway Excavation	CY	x	= \$	-
198001 Imported Borrow	CY	x	= \$	-
198050 Embankment	CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
260201 Class 2 Aggregate Base	CY	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-
TOTAL DETOURS				\$ -

SUBTOTAL SECTIONS 1-7 \$ 5,796,800

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items

ADA Items 0.0% \$ -

8B - Bike Path Items

Bike Path Items 0.0% \$ -

8C - Other Minor Items

Other Minor Items 0.0% \$ -

Total of Section 1-7 \$ 5,796,800 x 0.0% = \$ -

TOTAL MINOR ITEMS \$ -

SECTIONS 9: MOBILIZATION

Item	Quantity	Unit Price (\$)	Cost
999990 Total Section 1-8	\$ 5,796,800 x 10%	= \$	579,680
TOTAL MOBILIZATION			\$ 579,700

SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066015 Federal Trainee Program	LS	x	= \$	-
066063 Traffic Management Plan - Public Informati	LS	x	= \$	-
066090 Maintain Traffic	LS	x	= \$	-
066094 Value Analysis	LS	x	= \$	-
066204 Remove Rock & Debris	LS	x	= \$	-
066222 Locate Existing Cross-Over	LS	x	= \$	-
066670 Payment Adjustments For Price Index Fluct	LS	x	= \$	-
066700 Partnering	LS	1	50,000.00 = \$	50,000
066866 Operation of Existing Traffic Management S	LS	x	= \$	-
066920 Dispute Review Board	LS	1	15,000.00 = \$	15,000
XXXXXX Some Item	LS	x	= \$	-
<i>Cost of NPDES Supplemental Work specified in Section 5C</i>				= \$ 5,000
Total Section 1-8		\$ 5,796,800	5%	= \$ 289,840
TOTAL SUPPLEMENTAL WORK			\$ 359,900	

II. STRUCTURE ITEMS

	<u>Bridge 1</u>	<u>Bridge 2</u>	
DATE OF ESTIMATE	03/27/15	03/27/15	00/00/00
Bridge Name	Liberty Canyon Wildlife Crossing	Agoura Road Tunnel	XXXXXXXXXXXXXXXXXXXX
Bridge Number	TBD	TBD	57-XXX
Structure Type	CIP/PS Box Girder	PC PS Panel w/ CIP Slab Lintel	XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	165.00 LF	224.00 LF	0.00 LF
Total Bridge Length (Feet)	200.00 LF	0.00 LF	0.00 LF
Total Area (Square Feet)	33000 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	5.50 LF	2.00 LF	0.00 LF
Footing Type (pile or spread)	Spread	N/A	XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$460.82	\$0.00	\$0.00

COST OF EACH STRUCTURE	\$15,207,000.00	\$6,028,000.00	\$0.00
-------------------------------	------------------------	-----------------------	---------------

DATE OF ESTIMATE	00/00/00	00/00/00	00/00/00
Name	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0.00 LF	0.00 LF	0.00 LF
Total Length (Feet)	0.00 LF	0.00 LF	0.00 LF
Total Area (Square Feet)	0 SQFT	0.00 SQFT	0.0 SQFT
Structure Depth (Feet)	0.00 LF	0.00 LF	0.00 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$0.00	\$0.00	\$0.00

COST OF EACH STRUCTURE	\$0.00	\$0.00	\$0.00
-------------------------------	---------------	---------------	---------------

TOTAL COST OF BRIDGES	\$21,235,000.00
------------------------------	------------------------

TOTAL COST OF BUILDINGS	\$0.00
--------------------------------	---------------

TOTAL COST OF STRUCTURES¹	\$21,235,000.00
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Estimate Prepared By: Ulysses Smpardos

April 22, 2015
Date

Structure Design, Division of Engineering Services

¹Structure's Estimate includes Overhead and Mobilization.
Add more sheets if needed. Call them 9a, 9b, 9c, ..., etc

Preliminary Environmental Analysis Report (PEAR)

Attachment – D



PRELIMINARY ENVIRONMENTAL ANALYSIS REPORT

1. Project Information

District 07	County LA	Route 101	PM 33.0	EA 30710K
Project Title: Liberty Canyon Wildlife Crossing Project				
Project Manager Reza Fateh			Phone # 213-897-8316	
Project Engineer Siew Mei Tan			Phone # 213-897-5995	
Environmental Office Chief/Manager Garrett Damrath			Phone # 213-897-9016	
PEAR Preparer Fiona Nagle			Phone # 213-897-2956	

2. Project Description

Purpose and Need

The purpose of the project is to provide a safe and sustainable passage for wildlife across US-101 near Liberty Canyon Road in the City of Agoura Hills that reduces wildlife mortality and allows for the exchange of genetic material. The need for the proposed project is based on genetic and tracking data that show US-101 is a barrier to wildlife that historically traveled between the Santa Monica Mountains and the Sierra Madre mountain range in this area. In particular, large mammals such as mountain lions and bobcats need large connected habitats in order to hunt, breed, and thrive. US-101 divides this previously contiguous range into isolated habitat fragments, resulting in inbreeding, territorial fighting, and a decrease in genetic diversity.

Description of work

This project proposes to construct a vegetated bridge across US-101 near Liberty Canyon Road in the City of Agoura Hills for the purpose of a wildlife crossing. The project is sponsored by Mountains Recreation and Conservation Authority (MRCA). A cooperative agreement between MRCA and California Transportation Department (Caltrans) was executed on February 12, 2015. MRCA requested Caltrans to develop a Project Initiation Document (PID) for the project and agreed to fund the cost of the PID. MRCA provided Caltrans the location and design elements of the overcrossing. Caltrans prepared a Project Study Report (PSR) to evaluate the cost and structural feasibility of the bridge and associated improvements.

The bridge will be approximately 165 feet wide and 200 feet long. It will be vegetated to provide a passage that resembles the natural habitat of wildlife. The slope between the end of the bridge and Agoura Road south of the freeway will be filled up to grade to allow the crossing to extend over Agoura Road before descending to join existing ground. A culvert and associated

retaining wall systems will be constructed along Agoura Road to keep it operational and to accommodate the fill materials.

Alternatives

Two alternatives are being considered for the project:

Alternative 1: “No Build”

This alternative will result in continued deterioration of wildlife habitats in the area and continued isolation of native animal species.

Alternative 2: “Build”

This alternative proposes to build a bridge across US-101 west of Liberty Canyon Road to provide a safe passage for wildlife to cross the freeway. The scope of work includes:

- Construct a 165-foot wide and 210-foot long bridge with two spans and columns on spread footings in the freeway median.
- Construct retaining walls at both the north and south end of the bridge.
- Construct soundwalls along the outer edges of the bridge to prevent traffic noise and light from disturbing the animals.
- Plant vegetation on the bridge to provide a passage that resembles the natural habitat for wildlife.
- Install irrigation and drainage systems on the bridge.
- Fill and grade the slope and open area between the freeway and Agoura Road to allow the wildlife crossing to go over Agoura Road before descending to join existing ground.
- Construct culvert and associated retaining wall systems along Agoura Road to keep it operational and to support the fill materials.

Alternative 2 is the preferred alternative and it is recommended that the project proceed to the Project Approval/Environmental Document (PA/ED) phase.

3. Anticipated Environmental Approval

Check the anticipated environmental determination or document for the proposed project in the table below.

CEQA		NEPA	
Environmental Determination			
Statutory Exemption	<input type="checkbox"/>		
Categorical Exemption	<input type="checkbox"/>	Categorical Exclusion	<input type="checkbox"/>
Environmental Document			
Initial Study or Focused Initial Study with proposed Negative Declaration (ND) or Mitigated ND	<input checked="" type="checkbox"/>	Routine Environmental Assessment with proposed Finding of No Significant Impact	<input checked="" type="checkbox"/>
		Complex Environmental Assessment with proposed Finding of No Significant Impact	<input type="checkbox"/>
Environmental Impact Report	<input type="checkbox"/>	Environmental Impact Statement	<input type="checkbox"/>
CEQA Lead Agency (if determined):		CA Dept of Transportation District 7	
Estimated length of time (months) to obtain environmental approval:		18 months	
Estimated person hours to complete identified tasks:		9423	

4. Special Environmental Considerations

A number of additional studies are needed for this project. These include:

- Archaeological Survey Report
- Community Impact Assessment Report
- Geotechnical Design Report
- Location Hydraulic Study for impacts on a local stream
- Natural Environmental Study Report with special attention on endangered species (Biology)
- Storm Water Data Report
- Visual Impact Assessment Report
- Wildlife Corridor Assessment

This project will require extensive wildlife monitoring before, during, and after construction. This will be done in coordination with the National Park Service. Pre-construction monitoring will last approximately two years and post-construction approximately five years. During construction, a full-time monitor will be needed for any work near the valley oaks and streambed for approximately 12-16 months.

The visual quality of the project requires special attention in order to blend with the existing topography and natural landscape. In particular, detailed analysis is needed of structure color and

materials as they relate to the project's natural environment, and the use of native vegetation and removal of non-native plants in the project area are recommended. These studies will require significant lead time because of the complexities involved, and so should be done as early as possible.

5. Anticipated Environmental Commitments

- Re-vegetate any temporarily impacted areas and plant native vegetation on the structure. Any impacts to native vegetation including valley oaks will be mitigated through the planting and restoration occurring on site.
- Restoration of approximately 1.5 acres of riparian habitat as part of landscaping.
- Wildlife fencing improvements for an estimated 3,000 feet: 8 feet tall with an additional 2 feet buried below grade.
- Jump ramps within the fencing to provide escapes for any wildlife that are trapped between the fencing and the freeway.
- Pre-construction and post-construction monitoring of the wildlife crossing's effectiveness will be performed in coordination with NPS. Monitoring will be done 2 years prior to construction and 5 years after construction.
- A full-time biological monitor present during construction to monitor any work near the valley oaks and streambed for approximately 12 to 16 months.

6. Permits and Approvals

- Army Corps of Engineers Section 404 permit: 6-12 months, \$0
- California Department of Fish and Wildlife (CDFW) Section 1602 Streambed Alteration Agreement: 6-12 months, \$4912
- Regional Water Quality Control Board (RWQCB) Section 401 Water Quality Certification: 6-12 months, \$1000-2000

7. Level of Effort: Risks and Assumptions

There are three areas that contain levels of uncertainty at the time of this PEAR. Further studies and/or mitigations may be required:

1) Technical issues

- The final hazardous waste assessment is pending the geotechnical investigation. This information will indicate whether the existing slope shoulders of the project area will be disturbed. If they are, then the exposed soils are likely to be lead impacted and will require an ADL site investigation. If an ADL site investigation becomes necessary, the results can be available during the design phase before the PS&E. The

assessment will also provide the depth of the groundwater to help determine length of the piles.

- Further hydraulics studies may be needed in the following two conditions: a) grading alters existing topography to where local patterns of erosion and storm water drainage are changed; b) the streambed is altered or water is diverted.
- If this project disturbs greater than 1 acre during construction, then the following Storm Water compliance measures must apply:
 - NPDES Construction General Permit No. CAS000002
 - NPDES - Caltrans Statewide Permit No. CAS000003In addition, all nine Caltrans approved treatment BMPs considered IF *net new impervious* area is greater than 1 acre.
- If a paleontological consultation is performed with the Los Angeles County of Natural History Museum, and paleontological resources are identified, then a Paleontological Evaluation Report (PER) will be needed during PA/ED. This consultation is recommended if possible, takes 1-4 weeks, and has an associated cost.

2) Biological issues

- There may be endangered or threatened species in the project area. The potential also exists for temporary impacts to extend into the adjacent riparian vegetation, including the drip line of the valley oaks (*Quercus lobata*) that are located within the project limits. Coordination with U.S. Fish and Wildlife Service (USFWS) and CDFW will be needed during the life of the project to avoid or minimize impacts.
- If any clearing and grubbing is to be performed during the bird nesting season (February 15 to September 1), a district biologist will need to perform necessary surveys to minimize the risk of violating the Migratory Bird Treaty Act.
- A bioacoustic study on noise levels appropriate for wildlife may be performed during PA/ED. This may affect soundwalls and other noise barriers.

3) Community issues

- The adjacent open space and recreational hiking trails may qualify as Section 4(f) properties. If project construction requires use of these lands, they may qualify for 4(f) exemption under CFR §774.13 (g) "Exception regarding transportation enhancement projects". However, during the PA/ED Phase, more detailed documentation about whether the above exception applies will be needed, and written agreement/concurrence from the officials with jurisdiction over the conservation and recreation properties will need to be obtained.
- Adjacent subdivisions and commercial properties to the east and west of the project will require further investigation to determine possible impacts on land use. In particular, the project intersects Agoura Road and Vendell Place. Agoura Road is the primary emergency access route for some of the subdivisions, and Vendell Place may be coming under ownership of a commercial developer for the purpose of constructing two new office buildings (APB Properties LLC).
- A preliminary list of stakeholders and community groups is being compiled, but full knowledge of affected parties is not yet known. A more comprehensive assessment will be needed to ensure the project meets Caltrans' standards for context sensitive solutions.

8. PEAR Technical Summaries

8.1 Land Use:

The area surrounding the proposed project consists primarily of residential subdivisions to the east and west and open space to the north and south. The subdivisions are single family homes and condominiums that fall under the purview of Rondell Condo Owners Association and others. There may also be one or two commercial properties currently adjacent to the project footprint, and two office buildings (9600 sq ft and 20,000 sq ft respectively) are planned for east of the site at the northwest corner of Liberty Canyon Road and Agoura Road. South of the freeway, the project intersects Agoura Road – a frontage road and primary access for some of the subdivisions – and Vendell Place, a small unimproved public road currently owned by the City of Agoura Hills but which is under review for vacation in favor of APB Properties LLC for the two planned office buildings. It is anticipated that Vendell Place may be affected by construction of the wildlife crossing. All these properties will require further investigation to determine possible impacts from the proposed overpass.

The open space properties north and south of the project are owned by the Santa Monica Mountains Conservancy and possibly other public agencies. A recreational hiking trail lies immediately south of Agoura Road and within the project area. The open space and hiking trail may qualify as Section 4(f) properties. The construction of the project would likely involve a use of land from these properties. However, the use, if required, is anticipated to fall under CFR §774.13 (g) "Exception regarding transportation enhancement projects, where:

- The use of the Section 4(f) property is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection; and
- The official(s) with jurisdiction over the Section 4(f) resource agrees in writing to paragraph (g)(1) of this section."

It is anticipated that the requirement for Section 4(f) approval would not apply.

The City of Agoura Hills' General Plan 2035 states that protection and enhancement of open space resources, other natural areas, and significant wildlife and vegetation in the City is an integral component of a sustainable environment. Policy NR-4.12 states "Protect and maintain wildlife corridors, particularly the Liberty Canyon wildlife corridor, to help the continued survival of wildlife." The City also supports a comprehensive trail and pathway system that makes pedestrian and equestrian travel healthy, feasible, safe, and enjoyable. Policy CS-5.1 states "Link the local trail and pathway system to existing and proposed regional trails." The proposed project is consistent with these policies and the General Plan because it provides a wildlife corridor at Liberty Canyon and connects two hiking trail systems north and south of the US-101.

8.2 Growth:

The proposed project is an environmental enhancement that does not involve new road construction or motoring facilities. Growth impacts are not anticipated.

8.3 Farmlands/Timberlands:

There are no agricultural or timber lands in the area. No impacts are anticipated.

8.4 Community Impacts:

This project is anticipated to add to or have little negative impact on the local community because it is an environmental enhancement rather than a growth-inducing construction. Connection of the hiking trail south and north of the freeway will likely have a positive impact on the community. However, several utilities and emergency services will be affected during construction, and there may be other negative impacts to be determined. Therefore, a Community Impact Assessment will need to be undertaken during PA/ED.

8.5 Visual/Aesthetics:

Review of the project site and proposed project overpass profile indicates that the project would not result in substantial adverse impacts to the visual environment. Rather, visual resources viewed by motorists would benefit from improved integration of the proposed overcrossing with the natural environment. For example, the color and materials of the structure and the use of native vegetation will enable this structure to blend with existing topography. Additionally, while re-grading the cut slopes may not be practical to restore a more natural appearance, the use of native plants can screen some of the hard lines of the cut slopes.

A comprehensive Visual Impact Assessment of the overcrossing should be done at the environmental document phase. This analysis should include: the general shape of the structure and retaining walls; the use of color, materials, and other design site features as they relate to the project's natural environment; the removal of non-native plant species where encountered; the planting of abundant native plants around disturbed areas to make the project consistent with the indigenous aesthetic; and the use of native vegetation on the structure itself. The design of this type of special structure requires significant lead time because of the complexities involved, and so should be done as early as possible.

8.6 Cultural Resources:

Aboriginally, the overall area was abundant in natural resources such as oak trees, large and small mammals, birds, and water. Chiefly due to these factors, the valley and surrounding mountains were intensely utilized by Native American people. Today, the

subject property lies in a partially urbanized area. This evaluation is based on a records search conducted at the South Central Coastal Information Center and from the files housed at District 7.

Since the project possesses moderate to high archaeological sensitivity, mitigation of affected resources may involve project redesign and/or archaeological data recovery. The uninvestigated areas within the Area of Potential Effects (APE) should be surveyed by a qualified archaeologist prior to project approval. Once surveyed, results should be documented in an Archaeological Survey Report (ASR). If sites are found, further investigation and/or mitigation may be necessary. However, because the APE has been previously disturbed by highway construction, overall effects may be negligible (i.e. many sites may have been previously damaged and/or destroyed).

8.7 Hydrology and Floodplain:

Local, state and federal water resources and floodplain management agencies must be consulted if a proposed action encroaches on a 100-year base floodplain. Coordination also may occur in order to obtain current information on development and proposed actions in the affected watersheds. Caltrans is responsible for initiating early coordination meetings to discuss potential floodplain encroachments.

It is anticipated that the project will not present any drainage impacts on the floodplain. However, there is a riparian zone/stream adjacent to the project that will need further assessment to determine impacts of the overpass.

8.8 Water Quality and Storm Water Runoff:

The disturbed soil area is 4.4 acres. Storm Water compliance requires that, for any project disturbing greater than 1 acre, the following must apply:

- NPDES Construction General Permit No. CAS000002
- NPDES - Caltrans Statewide Permit No. CAS000003
- All nine Caltrans approved treatment BMPs considered IF net new impervious area is greater than 1 acre.

Storm water quality must be considered during project planning (specifically the Project Study Report [PSR], Project Report [PR], Project Scope Summary Report [PSSR], and other scoping documents) in order to:

- Identify potential storm water quality requirements and pollutants of concern for specific water bodies;
- Ensure that the programmed project includes sufficient right-of-way and budget for required storm water controls;
- Identify project-specific permanent and temporary BMPs that may be required to mitigate impacts. Be advised that permanent BMPs (Design Pollution Prevention BMPs and Treatment BMPs) are to be implemented at the project site to the maximum extent practicable and to the extent that implementation is consistent with existing Caltrans policies. In practice, this means maximizing the use of vegetation in

the right-of-way.

In addition, these items need to be addressed in the PA/ED phase:

- Refer to Appendix C (Selection of Construction Site BMPs) and Appendix F (Cost Estimate of the Construction Site BMPs) of the PPDG (See Storm Water Unit website); Obtain concurrence from Jimmy Chan, Acting District 7 Construction Storm Water Coordinator.
- Contact TMDL Unit, Maria Agustin, for latest TMDL development and requirements in the project area.
- Continue to comply with the District 7 Directive Nos. DD31, DD81, DD32, DD91, DD92 and DD95 in the project. See Storm Water Unit website for more information.
- The PE must prepare and furnish the Storm Water Data Report document for each phase for review by the Storm Water Unit. This can be found on Storm Water unit website.
- Provide a cost estimate for the Storm Water consideration on Construction Site BMP, Design Pollution Prevention BMPs and Treatment BMPs if applicable.

The Storm Water unit website is found at <http://110.56.12.51/stormwater/DocLink.asp>.

8.9 Geology, Soils, Seismic and Topography:

There are no geological or geotechnical conditions that would preclude the development of this site as a wildlife crossing. Specifically:

- The site of the proposed wildlife crossing does not fall within an Earthquake Fault Zone map as established by the California Geological Survey (CGS).
- The potential for liquefaction is considered low for the proposed wildlife crossing site.
- There are no mapped landslides in the boundaries of the proposed wildlife crossing and the slope at this site is considered grossly stable.

However, please note the following two conditions to be considered during and post construction:

- Some surficial instabilities along hill slopes may exist within 500 feet to 1000 feet to the site.
- The proposed project requires significant grading to alter the existing topography which may change patterns of erosion and storm water drainage in the area.

SITE GEOLOGY

The proposed location of the wildlife crossing is located in the Transverse Ranges geomorphic province of California. A north-south convergent movement between the Pacific tectonic plate and the North American tectonic plate result in an almost east-west trend of mountain ranges, valleys, and tectonic structural features such as folds and faults (Harden, 1998). The Transverse Ranges geomorphic province includes several mountain ranges such as the Santa Monica Mountains, the Santa Ynez Mountains, the San Gabriel Mountains, and the San Bernardino Mountains (Harden, 1998).

According to the Geologic Map of the Calabasas Quadrangle, Los Angeles and Ventura Counties, California, by Thomas W. Dibblee, Jr, (Dibblee 1992), Liberty Canyon and the surrounding area are underlain by several Miocene age sedimentary formations.

The surficial deposits found along the canyon floor are Quaternary alluvium (Qa) which are composed of gravel, sand and clay in depositional environments, characterized as valley areas, stream channels, alluvial fans, and slope wash.

The Dibblee map represents the area of the proposed wildlife crossing as being underlain by bedded, gray claystone of the Upper Topanga formation (Ttuc). Ttuc forms the hill slopes of the east side of Liberty canyon. Along the west side of Liberty canyon, where the wildlife crossing is proposed, Ttuc is shown at the base of the slopes and overlain by Qa. Ttuc is described by Dibblee as crumbly with ellipsoidal fracture.

North and south of SR-101, the Ttuc is overlain by the Monterey formation, which is described by Dibblee as a gray-brown, white weathering siliceous shale that is thinly bedded and moderately hard with platy fracture. The Monterey formation includes soft, fissile, diatomaceous shale, hard, brittle cherty shale, and layers of hard, yellow-weathering calcareous concretions or lenses. The Monterey formation also includes a light gray to light brown, semi-friable bedded sandstone and a gray coble conglomerate of mostly granitic detritus in sandstone matrix.

Dibblee presents Conejo Volcanics in contact with the Monterey formation west of Liberty canyon and south of SR-101. Conejo Volcanics consist of dark gray to dark brown, crudely bedded to massive, andesitic to basaltic volcanic rock types. The Conejo Volcanics in this area present a variety of depositional environments including: flows, flow-breccia, reworked breccia, autoclastic flow breccia, and mud-flow (laharic) breccia.

SEISMICITY

The proposed wildlife crossing is located in southern California which is a seismically active zone. The geologic processes, which have caused earthquakes in the past, can be expected to continue. Seismic events, which are likely to produce the greatest bedrock accelerations, could be a moderate event on the Malibu Coast fault (approximately 6 miles south of the site), the Santa Monica fault (approximately 8 miles south of the site), and the Anacapa-Dume fault (approximately 10 miles south of the site).

An earthquake fault is considered by the State of California to be active if geologic evidence indicates that movement on the fault has occurred in the last 11,000 years, and potentially active if movement is demonstrated to have occurred in the last 2 million years.

Ground Shaking

Ground shaking is the primary cause of structural damage during an earthquake; the magnitude, duration and vibration frequency characteristics will vary greatly, depending upon the particular causative fault and its distance from the project.

Seismic design parameters can be obtained from Caltrans' ARS Online Tool. We reviewed available SPT data from the As-Built LOTB of Liberty Canyon Road Undercrossing (Bridge 53-1731), dated July 27, 1964. SPT blow counts greater than 40 are represented in shale and sandstone. Based on this information, the peak ground acceleration for deterministic and probabilistic range from 1.0g to 1.4g, with a Vs30 of 400 m/s.

Ground Rupture

An analysis of fault rupture hazard for a particular fault requires that the fault be located exactly, and its potential for rupture to be known, if only approximately.

The site of the proposed wildlife crossing does not fall within an Earthquake Fault Zone map as established by the California Geological Survey (CGS).

Liquefaction

Liquefaction exists when fine silts and sands are located below the water table. The water can also be perched ground water. Liquefaction has been documented to affect soils to 50 feet depth, during prolonged periods of ground shaking.

The Seismic Hazard Report for the Calabasas Quadrangle does not present a liquefaction zone or a location of historical liquefaction. Based on this information the potential for liquefaction is considered low for the proposed wildlife crossing site.

SLOPE STABILITY (LANDSLIDES)

The potential for land-sliding will depend on the degree (inclination) of the slope, strength of the rock/soil and the intensity of ground shaking. According to Plate 2.1 (Landslide Inventory, Shear Test Sample Locations, and Areas of Significant Grading, Calabasas Quadrangle) in the Seismic Hazard Zone Report for the Calabasas 7.5-minute Quadrangle, Los Angeles and Ventura Counties, California (CGS 1997), there are no mapped landslides in the boundaries of the proposed wildlife crossing. A significant component of slope stability in sedimentary rock is based on bedding orientation. Based on Dibblee, the slope at this site is characterized by bedding that is dipping northeastward, into the slope, with a strike approximately northwest-southeast (perpendicular to the slope gradient). Considering the general orientation of bedding as represented by Dibblee, the slope at this site is considered grossly stable.

According to the Map Showing Landslides of the Central and Western Santa Monica Mountains, Los Angeles and Ventura Counties, California, by Weber and Wills (1983) some surficial instabilities along hill slopes may exist within 500 feet to 1000 feet to the site.

GROUNDWATER

Data from the State Water Resources Control Board's Geotracker website were reviewed to obtain the most recent and nearest groundwater information. A well called P11 related to the Calabasas Landfill is located in Liberty canyon north of SR-101, 0.45 miles north-east of the proposed wildlife crossing. The groundwater in P11 was measured at a depth

of 33.59 feet below ground surface on August 13, 2014. The groundwater level at the time of measurement was 836.10 feet amsl. The well is located in a narrow valley and groundwater in that location is likely to vary due to seasonal rain events.

EROSION

The proposed project requires significant grading to alter the existing topography which may change patterns of erosion and storm water drainage in the area.

8.10 Paleontology:

The Area of Potential Effect (APE) has been previously disturbed by highway construction and adjacent residential land uses. Therefore, paleontology may not be of concern. However, if possible, consultation with the Los Angeles County of Natural History Museum (LACNHM) to verify whether paleontological resources would be of concern in this area is recommended. If the potential for such resources exists within the APE, then appropriate technical studies would need to be prepared by a qualified Paleontologist. Consultation with LACNHM could take 1-4 weeks and has an associated cost which is unknown at the time of this review.

8.11 Hazardous Waste/Materials:

The two sides of the freeway will need to be elevated to the height of the planned overpass with clean imported soil backfill. This part of the construction activity will not have hazardous waste issues unless the existing exposed shoulder surfaces are disturbed before they are covered by imported soil. If the exposed sides are disturbed, the exposed soils are likely to be lead impacted and will require an ADL site investigation.

The elevation of the groundwater in the project area needs to be known for the installation of the piles that may be required to support the overpass. If the groundwater elevation is below the endpoint of the piles, the site will not have any issues; otherwise, it will need to be screened for potential contaminants for disposal purpose.

The final hazardous waste assessment is pending the geotechnical investigation. This information will provide the depth of the groundwater (crudely estimated at 2-29 feet below ground level), help determine length of the piles, and whether the shoulders of the project area will be disturbed. If a hazardous waste investigation becomes necessary, the results can be available during the design phase before the PS&E.

8.12 Air Quality:

Per 40 CFR 93.126 published in the Federal Register (volume 69, page 40004) on July 1, 2004, Table 2 allows certain projects to be exempt from all emissions analyses. Based on the above- described scope of work provided in the March 2, 2015 memo request, proposed project is deemed listed in Table 2 under the subtitle "Other" and classifications "Plantings, landscaping, etc." Therefore, pursuant to 40 CFR 93.126, this project is deemed classified and is exempt from

the requirement to determine conformity.

However, please note that the proposed project is located in Los Angeles County and is within the boundary of the South Coast Air Quality Management District (SCAQMD); therefore, this project must comply with the SCAQMD Fugitive Dust Implementation Rule 403 to minimize temporary emissions during construction of the project as applicable and appropriate.

8.13 Noise and Vibration:

The overpass structure will be vegetated and have sound abatement measures to provide a passage that resembles the natural habitat of wildlife. Based on the scope of this project, this is not a Type I project as defined in the 2011 Traffic Noise Analysis Protocol. Hence, a detailed noise study is not required for this project.

If needed, a bioacoustic study can be performed during PA/ED if established noise guidelines/policies on wildlife from operation and construction noise are provided.

8.14 Energy and Climate Change:

This project is not expected to require an EIR or EIS; therefore, an energy technical report is not required.

The project is also not expected to have any negative effects on greenhouse gas emissions. Rather, it adds native, healthy vegetative cover to the landscape where before there was only concrete and airspace over the freeway. This additional vegetation means that greenhouse gasses will likely be reduced and thus have a positive effect on climate change.

8.15 Biological Environment:

The proposed project has the potential to impact biological resources including native vegetation, waters of the U.S. and/or State, threatened and endangered species, and wildlife conductivity. All of these resources will need to be further evaluated and coordination with the respective Resource Agencies may be necessary.

It is anticipated that the proposed project may require a U.S. Army Corps (USACE) Section 404 Permit, Regional Water Quality Control (RWQCB) Board 401 Certification, and a CA Department of Fish and Wildlife (CDFW) 1602 Streambed Alteration Agreement. During a field visit conducted on March 13, 2015, the project architect explained that the proposed limits of fill do not extend into the adjacent streambed. The design aims to avoid impacts, but it is uncertain at this time whether any permanent or temporary impacts will result from construction of the proposed project. There is the potential for temporary impacts to extend into the adjacent riparian vegetation, including the drip line of the valley oaks (*Quercus lobata*) that are located within the project limits.

There is also potential for endangered or threatened species. It is anticipated that impacts

to listed species can be avoided or minimized but further evaluation of the habitat present and coordination with U.S. Fish and Wildlife Service (USFWS) and CDFW is needed.

In order to construct the proposed project, native vegetation removal may be necessary. This vegetation includes riparian habitat and several large valley oaks (approximately six). In addition, if any clearing and grubbing is to be performed during the bird nesting season (February 15 to September 1), a district biologist will need to perform necessary surveys to minimize the risk of violating the Migratory Bird Treaty Act.

The proposed project is anticipated to have a positive impact on wildlife connectivity across U.S. 101. During the development of the Natural Environmental Study (NES), a Wildlife Corridor Assessment (WCA) will be prepared using baseline data gathered by the National Parks Service (NPS). This assessment will evaluate the anticipated increase in wildlife conductivity and outline a plan for monitoring the effectiveness of the crossing.

8.16 Cumulative Impacts:

Because this project does not add substantial construction or growth-inducing facilities to the area, a Cumulative Impact Analysis is not required.

8.17 Context Sensitive Solutions:

Caltrans uses Context Sensitive Solutions (CSS) as its approach to plan, design, construct, maintain, and operate its transportation system. CSS uses innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals and is reached through a collaborative, interdisciplinary approach involving all stakeholders. In order to ensure that CSS is fully integrated into the project development process, careful, imaginative, and early planning is required along with continuous community involvement. Early agency coordination for each resource area as well as early outreach to the community will help to ensure a successful CSS outcome. CSS is an integral component of the PID stage and is coordinated by the PDT.

The proposed project offers a unique opportunity to simultaneously undertake highway planning and land use planning. As part of the project development, Caltrans has been actively partnering with various agencies and nonprofit stakeholder groups to acquire funding and other resources to support this project. These include:

Federal Highway Administration
City of Agoura Hills
Counties of Los Angeles and Ventura
National Park Service
Santa Monica Mountains Conservancy
Mountains Recreation and Conservation Authority
US Fish and Wildlife Service
California Department of Fish and Wildlife

California State Parks
Resource Conservation District of the Santa Monica Mountains

This project has been garnering certain amount of media attention and a public rally has been held. Although it appears that public support is positive, there are several residential subdivisions and hiking trails in the area. Therefore, it will be important to assess during PA/ED whether the interests of any additional user or stakeholder groups, other than the partners listed above, need to be heard or represented as the project moves forward.

9. Summary Statement for PSR or PSR-PDS

Alternative 1: No Build

This alternative would require the least permits and studies, as no construction would occur. The existing conditions would remain as-is.

Alternative 2: Build

This alternative would require several technical studies and permits. One overpass would be constructed and designed to mimic a natural habitat in order to encourage wildlife usage. This would require possibly 3 permits plus coordination and partnership with multiple agencies and government jurisdictions.

10. Disclaimer

This Preliminary Environmental Analysis Report (PEAR) provides information to support programming of the proposed project. It is not an environmental determination or document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in the Project Study Report (PSR). The estimates and conclusions in the PEAR are approximate and are based on cursory analyses of probable effects. A reevaluation of the PEAR will be needed for changes in project scope or alternatives, or in environmental laws, regulations, or guidelines.

11. List of Preparers

Cultural Resources specialist Alex Kirkish, PhD	Date: 3/9/15
Biologist Erika Reppun	Date: 4/1/15
Community Impacts specialist Fiona Nagle (Thoa Le, 4(f) permits)	Date: 3/26/15
Noise and Vibration specialist Jin S Lee	Date: 3/12/15
Air Quality specialist Andrew Yoon	Date: 3/23/15

Geology specialist Michael Salisbury	Date: 3/11/15
Paleontology Specialist Dawn Kukla	Date: 4/3/15
Water Quality specialist Jay Arceo	Date: 3/16/15
Hydrology and Floodplain specialist Ara Jitechian	Date: 3/13/15
Hazardous Waste/Materials specialist Ali Nili	Date: 3/16/15
Visual/Aesthetics specialist George Olguin	Date: 3/19/15
Energy and Climate Change specialist Fiona Nagle	Date: 3/26/15
PEAR Preparer (Name and Title) Fiona Nagle, PhD, Associate Environmental Planner	Date: 4/3/15

12. 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.



 Barbara Marquez, Environmental Branch Chief

Date: 4/3/15



 Reza Fateh, Project Manager

Date: 4/3/15

REQUIRED ATTACHMENTS:

Attachment A: PEAR Environmental Studies Checklist

Attachment B: Estimated Resources by WBS Code

Attachment C: PEAR Environmental Commitments Cost Estimate (Standard PSR)

Attachment A: PEAR Environmental Studies Checklist

Rev. 11/08

Environmental Studies for PA&ED Checklist					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Land Use	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	Part of CIA
Growth	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	Part of CIA
Farmlands/Timberlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Community Impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	CIA
Community Character and Cohesion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Relocations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Environmental Justice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Utilities/Emergency Services	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	Part of CIA
Visual/Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	VIA
Cultural Resources:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
Archaeological Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	ASR
Historic Resources Evaluation Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Historic Property Survey Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Historic Resource Compliance Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Section 106 / PRC 5024 & 5024.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Native American Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Finding of Effect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Data Recovery Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Memorandum of Agreement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Hydrology and Floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	LHS
Water Quality and Stormwater Runoff	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	SWDRs
Geology, Soils, Seismic and Topography	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	GDR
Paleontology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
PER	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	Pending a recommended consultation with the Los Angeles County of Natural History Museum
PMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Hazardous Waste/Materials:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	Pending GSR
ISA (Additional)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
PSI	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Air Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Noise and Vibration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	Bioacoustics study pending bio studies
Energy and Climate Change	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Biological Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
Natural Environment Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	
Section 7:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Formal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Informal	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	

Environmental Studies for PA&ED Checklist

	Not anticipated	Memo to file	Report required	Risk*			Comments
				L	M	H	
No effect	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			unknown
Section 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
USFWS Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>			
NMFS Consultation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Species of Concern (CNPS, USFS, BLM, S, F)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>			unknown
Wetlands & Other Waters/Delineation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
404(b)(1) Alternatives Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Invasive Species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Wild & Scenic River Consistency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Coastal Management Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
HMMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
DFG Consistency Determination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
2081	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Cumulative Impacts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Context Sensitive Solutions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>			Part of CIA
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>			
Permits:							
401 Certification Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>			
404 Permit Coordination, IP, NWP, or LOP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>			
1602 Agreement Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>			
Local Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
State Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
NPDES Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
US Coast Guard (Section 10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
TRPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
BCDC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			

ATTACHMENT B - Resources by WBS Code

Project ID:
EA: 30710K
Description: Liberty Canyon Wildlife Corridor

WBS Task Activity Code	Division Chief	Office Chief	Senior	Generalist	Biology	Cultural	Haz Waste	Socio-Economic	Storm Water	ECL	Paleo	Noise/Air	Geotech	Design	Hydraulics	Landscape	Planning	Right of Way	Surveys	Total	
Assigned Unit																					
Project Management																					
100.10 – Project Management - PA&ED																					-
100.15 – Project Management - PS&E																					-
100.20 – Project Management - Construction																					-
100.25 – Project Management - Right of Way																					-
Total Project Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perform Preliminary Engineering Studies and Draft Project Report																					
160.05 – Updated Project Information																					-
160.10 – Engineering Studies																120					120
160.15 – Draft Project Report																					-
160.30 – Environmental Study Request																					-
160.40 – NEPA Assignment																					-
Total Perform Prelim Eng Studies & Draft PR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	-	-	-	-	120
Perform Environmental Studies and Prepare Draft Environmental Document - Task Management Activities																					
165.05 – Env Scoping of Alternatives			40	100	50																190
165.10 – General Env Studies			125	500	50		175	100			140	150	100			300					1,640
165.15 – Biological Studies			125		800																925
165.20 – Cultural Resource Studies						300		20													320
165.25 – Draft Env Document		40	150	400	50				100												740
165.30 – NEPA Assignment																					-
Total Perform Env Studies & Prepare DED	-	40	440	1,000	950	300	175	120	100	-	140	150	100	-	-	300	-	-	-	-	3,815
Obtain Permits, Licenses, Agreements and Certifications (PLACs) and Route Adoptions during PA&ED Component - Task Management Activities																					
170.05 – Required PLACs																					-
170.10 – PLACs																					-
170.15 – Railroad Agreements																					-
170.20 – Freeway Agreements																					-
170.25 – Agreement for Material Sites																					-
170.30 – Executed Maintenance Agreements																					-
170.40 – Route Adoptions																					-
170.45 – MOU from TERO																					-
170.55 – NEPA Assignment																					-
Obtain PLACS & Rte Adoptions during PA&ED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Circulate Draft Environmental Document and Select Preferred Project Alternative - Task Management Activities																					
175.05 – DED Circulation			25	100																	125
175.10 – Public Hearing		8	8	48	40	20	20		20			20	20			20					224
175.15 – Public Comment Responses & Corr			10	100	100	40	40		40			40	40			40					450
175.20 – Project Preferred Alternative			8	40	40																88
175.25 – NEPA Assignment																					-
Total Circ DED & Select Preferred Proj Alt	-	8	51	288	180	60	60	-	60	-	-	60	60	-	-	60	-	-	-	-	887
Prepare and Approve Project Report and Final Environmental Document																					
180.05 – Final Project Report			8	75																	83
180.10 – Final Env Document		8	10	100	100	20			20		20										278
180.15 – Completed Env Document			8	75						40											123
180.20 – NEPA Assignment																					-
Total Prep and Approve PR & FED	-	8	26	250	100	20	-	-	20	40	20	-	-	-	-	-	-	-	-	-	484
Prepare Base Maps and Plan Sheets for PS&E Development																					
185.05 – Updated Project Information																					-
185.15 – Preliminary Design																					-

Project ID:
 EA: 30710K
 Description: Liberty Canyon Wildlife Corridor

WBS Task Activity Code	Division Chief	Office Chief	Senior	Generalist	Biology	Cultural	Haz Waste	Socio-Economic	Storm Water	ECL	Paleo	Noise/Air	Geotech	Design	Hydraulics	Landscape	Planning	Right of Way	Surveys	Total
Assigned Unit																				
Total Prep Base Maps & Plan Sheets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Right of Way Property Management and Excess Land																				
195.40 – Property Management																				
195.45 – Excess Land																				
Total RW Property Mgmt and Excess Land	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Utility Relocation																				
200.15 – Approved Utility Relocation Plan																				
200.20 – Utility Relocation Package																				
Total Utility Coordination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Obtain Permits, Licenses, Agreements, and Certifications (PLACs) during PS&E Component - Task Management Activities																				
205.05 – PLACs Determination																				
205.10 – PLACs			25		226															251
205.15 – Railroad Agreements																				
205.25 – Agreement for Material Sites																				
205.30 – Executed Maintenance Agreements																				
205.45 – MOU from TERO																				
205.55 – NEPA Delegation																				
Total Permits & Agreements during PS&E	-	-	25	-	226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	251
Obtain Right of Way Interests for Project Right of Way Certification																				
225.75 – Right of Way Clearance																				
Total Obtain RW Interests for Proj RW Cert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prepare Draft PS&E																				
230.05 – Draft Roadway Plans																				
230.10 – Draft Highway Planting Plans																				
230.30 – Draft Drainage Plans																				
230.35 – Draft Specifications																				
230.60 – Updated Project Info for PS&E Pkg																				
230.90 – NEPA Assignment																				
230.99 – Other Draft PS&E Products																				
Total Prepare Draft PS&E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mitigate Environmental Impacts and Clean-up Hazardous Waste - Task Management Activities																				
235.05 – Environmental Mitigation			40		420															460
235.10 – Detailed Site Investigation for HW							430													430
235.15 – HW Management Plan																				
235.20 – HW PS&E																				
235.25 – HW Clean-up																				
235.30 – Haz Substances Disclosure Doc																				
235.35 – Long Term Mitigation Monitoring																				
235.40 – Updated Env Commitments Record			4	40						240										284
235.45 – NEPA Assignment																				
Total Mit Env Impacts & Clean-up HW	-	-	44	40	420	-	430	-	-	240	-	-	-	-	-	-	-	-	-	1,174
Post Right of Way Certification Work																				
245.75 – Right of Way Clearance																				
Total Post RW Clearance Work	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Circulate, Review and Prepare Final District PS&E Package																				
255.05 – Circ. & Rev. Draft Dist PS&E Package			8		80															88
255.10 – Updated PS&E Package																				
255.15 – Environmental Reevaluation			10	80	16															106
255.20 – Final District PS&E Package																				

Project ID:
 EA: 30710K
 Description: Liberty Canyon Wildlife Corridor

WBS Task Activity Code	Division Chief	Office Chief	Senior	Generalist	Biology	Cultural	Haz Waste	Socio-Economic	Storm Water	ECL	Paleo	Noise/Air	Geotech	Design	Hydraulics	Landscape	Planning	Right of Way	Surveys	Total	
Assigned Unit																					
255.40 – Resident Engineer's Pending File																					-
255.45 – NEPA Assignment																					-
Total Circ, Rev and Prepare Final Dist PS&E Pkg	-	-	18	80	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	194
Contract Bid Documents "Ready to List"																					
260.75 - Env Cert at RTL																					-
Total Contract Bid Documents "RTL"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction Engineering and General Contract Administration																					
270.15 – Construction Stakes																					-
270.33 – Construction Inspection																					-
270.66 – Technical Support																					-
Total Const Engineering & Gen Contract Admin.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Administration of Permits, Licenses, Agreements and Certifications (PLACs) and Environmental Stewardship																					
280.10 – PLAC Compliance					8					420											428
280.40 – PLAC Violations																					-
280.50 – Other Environmental Compliance			40		508				100												648
280.60 – Other Environmental Violations																					-
280.70 – Updated ECR										80											80
280.75 – Environmental Reevaluation			8	80																	88
280.80 – Updated PLACs																					-
Total Admin of PLACs and Env Stewardship	-	-	48	80	516	-	-	-	100	500	-	-	-	-	-	-	-	-	-	-	1,244
Change Order Administration																					
285.05 – Change Order Process																					-
285.10 – Functional Support																					-
Total Change Order Administration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disputes and Claims																					
290.40 – Potential Claim Record																					-
Total Disputes and Claims	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accept Contract/Prepare Final Construction Estimate and Final Report																					
295.35 – Certificate of Environmental Compliance			4		40					40											84
295.40 – Long Term Env Mit/Mont after CCA			100		1,070																1,170
Total Accept Contract	-	-	104	-	1,110	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	1,254
Total Project Hours	-	56	756	1,738	3,598	380	665	120	280	820	160	210	160	-	-	480	-	-	-	-	9,423

Attachment C: PEAR Environmental Commitments Cost Estimate

Standard PSR Only

(Prepare a separate form for each viable alternative described in the Project Study Report)

PART 1 PROJECT INFORMATION

rev. 11/08

District-County-Route-Post Mile 07 – LA – 101 – 33.0	EA: 30710K
Project Description: Liberty Canyon Wildlife Crossing Project	
Form completed by (Name/District Office): Fiona Nagle, D07 Environmental Planning	
Project Manager: Reza Fateh	Phone Number: 213-897-8316
Date: 4/3/15	

PART 2 PERMITS AND AGREEMENTS

	Permits and Agreements (\$\$)
<input type="checkbox"/> Fish and Game 1602 Agreement	4,912
<input type="checkbox"/> Coastal Development Permit	
<input type="checkbox"/> State Lands Agreement	
<input type="checkbox"/> Section 401 Water Quality Certification	1,000 - 2,000
<input type="checkbox"/> Section 404 Permit – Nationwide (U.S. Army Corps)	0
<input type="checkbox"/> Section 404 Permit – Individual (U.S. Army Corps)	
<input type="checkbox"/> Section 10 Navigable Waters Permit (U.S. Army Corps)	
<input type="checkbox"/> Section 9 Permit (U.S. Coast Guard)	
<input type="checkbox"/> Other:	
Total (enter zeros if no cost)	6,912

PART 3. ENVIRONMENTAL COMMITMENTS FOR PERMANENT IMPACTS

To complete the following information:

- Report costs in \$1,000s.
- Include all costs to complete the commitment:
 - O.K. to break down by phase: Design, ROW, Construction, and/or provide Sub-Total.
 - Capital outlay and staff support. Refer to Estimated Resources by WBS Code. For example, if you estimated 80 hours for biological monitoring (WBS 235.35 Long Term Mitigation Monitoring), convert those hours to a dollar amount for this entry. For current conversion rates from PY to dollars, see the Project Manager.
 - Cost of right of way or easements.
 - If compensatory mitigation is anticipated (for wetlands, for example), insert a range for purchasing credits in a mitigation bank.
 - Long-term monitoring and reporting
 - Any follow-up maintenance
 - Use current costs; the Project Manager will add an appropriate escalation factor.
 - This is an estimating tool, so a range is not only acceptable, but advisable.

Environmental Commitments Build Alternative					
	Estimated Cost in \$1,000's				Notes
	<u>Phases</u>				
	<u>Design</u>	<u>ROW</u>	<u>Construction</u>	<u>Sub-Total</u>	
Long-term Biological monitoring				1,050	2 yrs pre-construction + 5 yrs post-construction
Wildlife fencing and jump ramps				225	3000 ft fence @ \$65/ft + 6 ramps @ \$5k/ramp
Biological monitoring during construction			\$200-300	\$200-300	full-time monitor for any work near the valley oaks/streambed
WBS 160 (120 hrs total)					
WBS 165 (3815 hrs tot)					
WBS 175 (887 hrs total)					
WBS 180 (484 hrs total)					
WBS 205 (251 hrs total)					
WBS 235 (1174 hrs tot)					
WBS 255 (194 hrs total)					
WBS 280 (1244 hrs tot)					
WBS 295 (1254 hrs tot)					
Total (enter zeros if no cost)					

**Storm Water Data Report
(Cover Sheet)**

Attachment – E



Dist-County-Route: 07-LA-101
 Post Mile Limits: 33.0
 Project Type: Wildlife Crossing
 Project ID (or EA): 0714000213 (EA 30710K)
 Program Identification: 4050.400.000
 Phase: PID
 PA/ED
 PS&E

Regional Water Quality Control Board(s): Los Angeles Region 4

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: 4.44 Acres Risk Level: 2
 Estimated: Construction Start Date: Nov 2018 Construction Completion Date: June 2020
 Notification of Construction (NOC) Date to be submitted: Oct 2018

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.

Siew Mei Tan 4/23/15
 Siew Mei Tan, Registered Project Engineer/Landscape Architect Date

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

Reza Fateh 4/23/15
 Reza Fateh, Project Manager Date

David Lawrence for Roger Castillo 04/23/15
 Roger Castillo, Designated Maintenance Representative Date

Ron Russak 04-24-15
 Ron Russak, Designated Landscape Architect Representative Date

Shirley Pak 4/24/2015
 Shirley Pak, District/Regional Design SW Coordinator or Designee Date

[Stamp Required for PS&E only]

Right of Way Data Sheet

Attachment – F

Memorandum

*Serious Drought!
Help Save Water!*

To: Rafael Molina , Design Manager
Office of Design
District 7, Los Angeles Office

Date: 4/24/2015
EA: 30710K
Data Sheet ID NO: ds1230
Project ID # 0714000213

From: Dan Murdoch, Office Chief
Right of Way Appraisals, and Planning & Management
District 7, Los Angeles Office

Subject: Current Estimated Right of Way Costs for **Project Report**

We have completed an estimate of the Right of Way costs for the above referenced project based on information received from Siew Mei Tan PE and the following assumptions and limiting conditions apply:

- The mapping did not provide sufficient detail to determine the limits of the right of way required.
- The transportation facilities have not been sufficiently designed so our estimator could determine the damages to any of the remainder parcels affected by the project.
- Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the estimate.
- We have determined there are no right of way functional involvement's in the proposed project at this time
- Milestone dates per PMs Report.
Data Sheet revised on 4-24-15 to reflect correct 33 post mile (pm.)

Right of Way Certificate (RWC) lead time will require a minimum of 24 months after maps to appraisal (MA). Completed Appraisal maps include HMDD, COS, HW Memo, and RE-49. An executed copy of the new freeway agreement is required for the project. When utility relocation is warranted, utility conflict maps will be required. Additionally a minimum of 18 months will be required after receiving the last revision to the appraisal map. Shorter lead times will require either more right of way resources or an increased number of condemnation suits to be file and present a risk to the RWC project delivery milestone. Due to the passage of Map 21 and the Buy America provision, the Right of Way Certification process will be longer, if Utility Relocation is necessary.

Current Schedule: PRSM Milestone dates per PMs Report.

PAED (M 200)	MA (M 224)	RWC (M 410)	RTL (M 460)	CCA (M 600)
12/30/2016	5/1/2017	3/30/2018	6/30/2018	6/30/2020

TO Rafael Molina
 ATTN Siew Mei Tan

R/W DATA SHEET

ID NO ds1230

SENIOR R/W P&M Reza Fateh

Date of Data Sheet 4/24/2015

ROUTE 101

Project Description Route 101 Liberty Canyon Road Wildlife Crossing Project in City of Agoura Hills.

PM_KM 33.0

EA 30710K

Project ID # 0714000213

ALT

This cost estimate is valid for the above scoping report only. This is an estimate only and not an appraisal. It may be based on worse case scenarios.

The estimate is subject to change and revision.

The mapping did not provide sufficient nor adequate detail to determine the limits of the Right of Way required and effects on the improvements.

The transportation facilities have not been sufficiently designed for our estimator to determine the damages to any of the remainder parcels affected by

This cost estimate is pursuant to the following responses supplied by Rafael Molina to the Data Sheet Request Form.

	YES	NO	Not known at this time
Utilities are depicted on plans		X	
Railroads are depicted on plans		X	
There are Material and/or Disposal Sites Required			X
Caltrans will do the Right of Way work	X		
There will be a Cooperative Agreement	X		
This is a reimbursable project	X		
There is Hazardous Waste potential		X	

RW COST ESTIMATE

	CURRENT VALUE	ESCALATED VALUE
R/w acq.(incl.contingency G.w-condem.-adm.s'tl.)Permits	\$268,240	\$329,948
Clearance		
RAP (cont rate.)		
Escrow costs (cont rate.)	\$5,608	\$6,898
Utility relocation costs	\$5,860,000	\$8,741,975
Estimate of Reimbursed Appraisal Fee	\$6,000	\$6,000
Total estimated cost	\$6,139,848	\$9,084,821

Escalation Rate Rw .07
 Escalation Rate Utilities .08
 Cert.date 3/30/18

Comment

Milestone dates per PMs Report.
Data Sheet revised on 4-24-15 to reflect correct 33 post mile (pm.)

ROUTE 101
 PM_KM 33.0
 EA 30710K
 ALT

Parcel Count and Py Info

PARCEL TYPES	DUAL APPR.
A	
B	3
C	1
D	
F	

RIGHTS NEEDED	Count
FEE	3
EASE	
TCE	1

TAKES	Count
FULL	2
PART	2
TOTAL	4

DISPLACEMENT OF UNITS	Count
SFR	
BUS	
MULTI	

PARCELS WITH RAP	Count

POTENTIAL CLEARANCE PARCELS	Count

POTENTIAL CONDEMNATION PARCELS	Count
	1.2

POTENTIAL EXCESS PARCELS	Count

UTILITY IMPACTS	Count
u4-1	
u4-2	
u4-3	
u4-4	6
u5-7	
u5-8	
u5-9	6

Estimate Of Right Of Way Support Hours

Activity Codes	Function	Hours
225 & 245	Appraisals	675
225 & 245	Acquisitions	735
200	Utilities	1,908
185.20.40	Utility Potholing	
205	Railroads	
225 & 245	Condemnation	348
225 & 245	Clearance	
225 & 245	Relocation	
220 & 300	RW Engineering	1,200
	Total	4,866

UTILITY INFORMATION

Please See the Utility Conflict Addendum for Complete Utility Information

Are utility easements required? No

Are Utility agreements required? Yes

Utility types , Facilities & Agreements Description:

Total Current Cost \$5,860,000

Const. Completion Date 6/30/2020

Utility Escalation Rate 8%

Total Escalated Cost \$8,741,975

ROUTE 101
PM_KM 33.0
EA 30710K
ALT

RR INFORMATION

Are RR affected NA
Describe affected RR NA

When Branch Lines Or Spurs Are Affected ,would Acquisition And Or Payment Of Damages To Businesses And Or Industries Served By The Railroad Facility Be More Cost Effective Than Service Contracts ,or Grade Separations Requiring Construction And Maintenance Agreements Involved?

0

Explain Branch lines NA

Discuss Types Of Agreements And Rights Required From The Railroads, Are Grade Xing Requiring Service Contracts ,or Grade Separations Requiring Construction And Maintenance Agreements Involved.

NA

RAILROAD COST PERTAINING TO CONSTRUCTION ACTIVITY _____

The cost of flagging related to project construction activity is a Phase 4 cost (construction contract cost). Though noted on the RW data sheet, the estimated flagging cost is not a RW cost, and is not a part of RW Capital.. The estimate is provided so it can be added to the engineer's estimate for construction -- the RR flagging estimate is based on days needed for construction activity.

		<u>DATE</u>
Right of Way Estimate prepared by	<u>Roy Gallegos</u>	<u>3/26/15</u>
Railroad Estimate prepared by	<u>Steve Johnson</u>	<u>4/9/15</u>
Utilities Estimate prepared by	<u>Cesar Aguilar</u>	<u>4/21/15</u>

I have personally reviewed this R/W Data Sheet and all supporting information I certify that the probable highest and best use estimated values and assumptions are reasonable and proper subject to the limiting conditions set forth and I find this Data Sheet complete and current.

This Data Sheet is not to be signed by Chief unless accompanied by final scoping report(PR,PSR,PSSR) for review and/or signature.

CHIEF



4/30/15

**Utility Conflicts
Id- ds1230
EA- 30710K**

	Description	Quantity	\$/Unit	Total Cost
1	30" Water (Las Virgenes Municipal Water) MWD, Vendell PL; (1500	1500	1500	2250000
2	6" M gas (Southern California Gas Co.) Agoura Road; (300 Ft)	300	1200	360000
3	Manholes Sewer (Las Virgenes Municipal Water)	2	25000	50000
4	18" VCP Sewer (Las Virgenes Municipal Water); (300 Ft)	300	1350	405000
5	Transmission Wooden Pole # 4193951E, Power, Edison, Agoura Rd	1	200000	200000
6	Transmission Wooden Pole # 4401099E, Edison, Vendell PL	1	200000	200000
7	Guy Pole Wooden #4401100E, Agoura Rd for Trans. Pole#4401099E	1	30000	30000
8	Transmission Steel Pole # 44734957E, Edison, Vendell PL (\$450K))	1	400000	400000
9	Guy Steel Pole # 4734958E, Vendell For Trans. Pole 44734957	1	150000	150000
10	Transmission Wooden Pole # 2279160E, Edison, Vendell PL	1	200000	200000
11	Guy Wooden Pole # 1611805E, Vendell PL for Trans. Pole#	1	30000	30000
12	Transmission Wooden Pole # 4403511E, Edison, Vendell PL	1	200000	200000
13	Guy Wooden Pole #1611803E, Vendell PL for Trans. Pole#4403511E	1	30000	30000
14	Transmission Wooden Pole # 4403476E, Edison, Vendell PL	1	200000	200000
15	Guy Wooden Pole # PTC00045, Vendell PL	1	30000	30000
16	Transmission Wooden Pole # 4193952EE, Edison, Vendell PL	1	30000	30000
17	Telephone Wooden Pole #593858H, Vendell PL	1	30000	30000
18	Telephone Wooden Pole #PTc00043, Vendell PL	1	30000	30000
19	Telephone Wooden Pole #1017611H, Agoura Rd	1	30000	30000
20	Telephone Wooden Pole #1030562H, Agoura Rd	1	30000	30000
21	4-Fiber Optic Overhead Lines, Vendell PL,	1500	200	300000
22	4-Fiber Optic Overhead Lines, Agoura Rd	1500	200	300000
23	8" Steel Water (Las Virgenes Municipal Water), (600 Ft)	600	600	360000
24	Fire Hydrant (Las Virgenes Municipal Water)	1	15000	15000

Transportation Management Plan (TMP) Data Sheet

Attachment – G

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

(Preliminary TMP Elements and Costs)

Co/Rte/PM LA-101, PM 33.00 EA 30710K / 0714000213 Alternative No. _____

Project Limit In Los Angeles County in the City of Agoura Hills on Route 101 at Liberty Canyon Rd.

Project Description Constructing a vegetated overpass across Route 101 to provide wildlife crossing just west of Liberty Canyon Road.

1) Public Information

- | | | |
|-------------------------------------|------------------------------------|-------------|
| <input type="checkbox"/> | a. Brochures and Mailers | \$ |
| <input checked="" type="checkbox"/> | b. Press Release | |
| <input checked="" type="checkbox"/> | c. Paid Advertising | \$50,000.00 |
| <input type="checkbox"/> | d. Public Information Center/Kiosk | \$ |
| <input type="checkbox"/> | e. Public Meeting/Speakers Bureau | |
| <input type="checkbox"/> | f. Telephone Hotline | |
| <input checked="" type="checkbox"/> | g. Internet | |
| <input type="checkbox"/> | h. Others _____ | \$ |

2) Motorists Information Strategies

- | | | |
|-------------------------------------|--|---------|
| <input checked="" type="checkbox"/> | a. Changeable Message Signs (Fixed) | \$00.00 |
| <input type="checkbox"/> | b. Changeable Message Signs (Portable) | \$ |
| <input type="checkbox"/> | c. Ground Mounted Signs | \$ |
| <input type="checkbox"/> | d. Highway Advisory Radio | \$ |
| <input type="checkbox"/> | e. Caltrans Highway Information Network (CHIN) | |
| <input type="checkbox"/> | f. Others _____ | \$ |

3) Incident Management

- | | | |
|-------------------------------------|--|-------------|
| <input checked="" type="checkbox"/> | a. Construction Zone Enhanced Enforcement Program (COZEEP) | \$90,000.00 |
| <input type="checkbox"/> | b. Freeway Service Patrol | \$ |
| <input checked="" type="checkbox"/> | c. Traffic Management Team | |
| <input type="checkbox"/> | d. Helicopter Surveillance | \$ |
| <input type="checkbox"/> | e. Traffic Surveillance Stations (Loop Detector and CCTV) | \$ |
| <input type="checkbox"/> | f. Others _____ | \$ |

4) Construction Strategies

- a. Lane Closure Chart
- b. Reversible Lanes
- c. Total Freeway Mainline Closure
- d. Extended Weekend Closure
- e. Contra Flow
- f. Truck Traffic Restrictions \$ _____
- g. Reduced Speed Zone \$ _____
- h. Connector and Ramp Closures
- i. Incentive and Disincentive \$ _____
- j. Moveable Barrier \$ _____
- k. Others _____ \$ _____

5) Demand Management

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

6) Alternative Route Strategies

- a. Add Capacity to Freeway Connector/Ramps \$ _____
- b. Street Improvement (widening, traffic signal... etc) \$ _____
- c. Traffic Control Officers \$ _____
- d. Parking Restrictions
- e. Others _____ \$ _____

7) Other Strategies


- a. Application of New Technology \$ _____
- e. Others _____ \$ _____

TOTAL ESTIMATED COST OF TMP ELEMENTS = \$140,000.00

Project Notes:

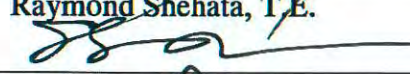
1. The scope of work involves constructing a vegetated overpass across Route 101 at Liberty Canyon Road.
2. Public Affairs Campaign cost estimate of \$50,000.00 was provided by Judy Gish, Public Information Officer, Caltrans Office of Public Affairs and Media Relations, on 3/12/2015.
3. In the instruction to the RE File, inform RE to notify Public Affairs prior to construction to ensure that a PIO is assigned for the project.
4. COZEEP cost estimate of \$90,000.00 was provided by Amjad Obeid, Construction Traffic Advisor-South, on 3/16/2015.
5. Existing Fixed Changeable Message Signs may be used to manage traffic as needed during construction as follows:
 - A. CMS # 108 (NB Rte 101 at De Soto Ave).
 - B. CMS # 98 (SB Rte 101 at Ventu Park Rd).
6. Traffic Management Team is required during full freeway closure for falsework erection and removal.
7. It is anticipated work will be performed in accordance with the Lane Requirements Charts provided in the Maintaining Traffic Specifications.
8. Any changes in construction strategy that would result in a different type of closures other than indicated here shall require a revision for the TMP Data Sheet.

PREPARED BY


Raymond Shehata, T.E.

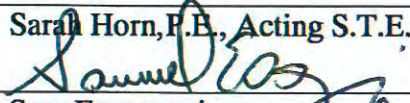
DATE 3/17/15

APPROVAL RECOMMENDED BY


Sarah Horn, P.E., Acting S.T.E.

DATE 3/17/15

APPROVED BY


Sam Esquenazi
District Traffic Manager

DATE 3/19/15

Risk Register

RISK REGISTER CERTIFICATION (ACCOUNTABILITY CHECKPOINTS)

Form PM-0001 (Rev. 4/2013)

The risk register is to approved and signed-off by the deputies* listed below for all scalability levels. By signing this form, you are certifying that you have reviewed the risks documented in the register and agree that they have been managed to the extent possible by the PDT.

Project Information

Capital Project Major Maintenance Project (Check One)

Project ID/District-EA

EFIS ID:0714000213/EA:07-30710

Project Description

LA-101-32.8/33.8-IN LA, WILDLIFE CROSSING @ LIBERTY CANYON AT OR IN THE VICINITY OF LIBERTY - WILDLIFE HABITAT CONNECTIVITY

Project Manager (PM)

FATEH, REZA

Project Risk Manager (for Risk Level 3 Projects)

No Risk Register Certification Required -- Check Box if project is less than \$1 million in total cost and risk register not prepared. Sign below and submit this form with PID, PA&ED, PS&E submittal, and RE Handoff File (as applicable).

Project Manager Signature

Date:

PID (Recommended for Capital Projects Only excluding Minor Projects)

Project Manager

Date:

Deputy District Director, Planning

Date:

Deputy District Director*, Design**

Date:

Deputy District Director, Project Management

Date:

PA&ED (Required for Capital Projects Only)

Project Manager

Date:

Deputy District Director*, Environmental

Date:

Deputy District Director*, Design**

Date:

Deputy District Director, Project Management

Date:

Prior to PS&E (Required for Capital Projects and Maintenance Projects)

Project Manager

Date:

Deputy District Director*, Design**

Date:

Deputy District Director*, Construction

Date:

Deputy District Director*, Right of Way

Date:

Deputy District Director*, Environmental _____ Date: _____
Deputy District Director, Project Management** _____ Date: _____

RE File Hand-Off (Recommended for Capital Projects and Major Maintenance Projects)

Project Manager _____ Date: _____
Deputy District Director*, Design** _____ Date: _____
Deputy District Director*, Construction _____ Date: _____
Deputy District Director, Project Management** _____ Date: _____

*or the respective Project Delivery Division Chief signatures in the North Region or Central Region
**or Deputy District Director, Maintenance signature for HM Projects designed by the District Maintenance Division

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

Project Risk Register for 30710 as of 04/29/15



No.	Status*	ID	Risk Type	RBS Category	WBS Impacted	Critical Path Impacted?	Title	Risk Statement	Impact Description	Linear/Non-Linear	Risk Probability	Risk Impact	Impact Consequence Cost/Time	Cost/Time Score	Cost \$K (Low)	Cost \$K (Most Likely)	Cost \$K (High)	Probable Cost Impact (\$K)	Time in Mos (Low)	Time in Mos (Most Likely)	Time in Mos (High)	Probable Time Impact (Mos.)	Rationale (for Rating) *	Response Strategy	Response Action	Mitigation Option (Minimize Prob or Impact)	Risk Triggers	Residual Risks	Secondary Risks	Risk Interaction	Risk Owner	Comments	Last Updated	
1	Active	24144		PM	0.100		Funding Uncertainties	Funding- No funding source has been identified for the PS&E phase nor for construction of the project.	If funding is not secured for the project, it will not get built.	Linear	40-59%	High	Cost	16 (HIGH)	32500	37000	42000	18397.50						Avoid	Several environmental and conservation organizations as well as local politicians have shown keen interest in the project and we are hopeful that they will collectively be able to fund it.	Probability	A signed PSR is the trigger to begin the efforts to secure funds for the project as the document will lay out what is needed to build the project.	none	none	none	Reza Fateh		04/20/2015 09:43:00	
2	Active	24151		CON	5.270.20		Cost	Cost of the project may be increased largely due to environmental mitigation requirements, utility relocations, design changes and right of way acquisitions.	The construction of the tunnel over the Agoura Road as well as relocating high voltage overhead power lines will add substantial costs to the project.	Linear	40-59%	High	Cost	16 (HIGH)	3000	5000	8000	2640.00						Mitigate	All utilities need to be identified early on during the PS&E phase and efforts to relocate them should begin quickly to minimize their impacts on the schedule. The cost of the relocations will be minimized if it done in a manner that would minimize or eliminate any construction delays.	Impact	As soon as the project footprint is finalized utility research needs to begin and the necessary relocation work identified and coordinated with utility companies.	delays in construction	none	none	Celina Aviles	Celina needs to keep an eye on the project and begin her utility engineering work to help minimize the impacts as discussed above.	04/17/2015 11:26:00	
3	Active	24146		Gen	0.100		Maintenance Agreement and Cost of Maintaining the Structure	The maintenance cost and responsibilities of the bridge, Agoura Hill culvert and associated structures need to be clearly defined and agreed upon by involving parties.	This is a relatively major structure that is being built within the State ROW which will require substantial Maintenance throughout its service life. The cost of that maintenance is of concern to the State and the keeping the bridge in good repair is also a concern as it can have safety implication for the travelling public.	Linear	60-99%	Moderate	Cost	15 (HIGH)	1000	10000	25000	9540.00							Avoid	To mitigate this risk a maintenance agreement needs to be negotiated with the project sponsor (MRCA) to fully address this aspect of the project.	Probability, Impact	Prior to issuing the encroachment permit the maintenance agreement needs to be fully executed.	none	none	none	Reza Fateh	PM to make sure negotiations on the Maintenance agreement begin in a timely manner so that it can be fully executed before the encroachment permit is issued.	04/20/2015 10:12:00
4	Active	24162		DGN			Design Exceptions	the bridge is located at a horizontal curve and the row of bents in the median as well as the abutment wall on the north side create non-standard sight distance and shoulder widths within the project limits. A mandatory design exception fact sheet will be required prior to finalizing the scope of work. This is being deferred to the PA/ED phase.	Proposed non-standard features will have to be approved prior to finalizing scope of work.	Linear	40-59%	Moderate	Cost	12 (MEDIUM)	1000	1500	2000	742.50							Accept	The proposed non-standard features will be mitigated by moving the abutment wall to the extent feasible.	Impact	Start of PAED phase	none	none	none	Orlane Lee		04/29/2015 07:45:00
5	Active	24145		ENV	0.100.10		Environmental Permits	The existence of a live stream within the project limits may require extensive and lengthy permitting process from various environmental agencies.	Delivery of milestone PAED might be delayed.	Linear	20-39%	Moderate	Time	9 (MEDIUM)						0	2	8	00.98		Mitigate	The PD team will begin working with the agencies early on to help maximize the use of the available time so that all questions and concerns of the resource agencies can be addressed in a timely manner and	Probability	Completion of draft plans that fully describe the project footprint.	none	none	none	Barbara Marquez		04/17/2015 10:54:00

**Jacked Box Culvert Estimate
by FHWA-CFLHD**

Attachment – I

CA PRA SAMO 99(1)
 Santa Monica Mountains Recreation Area/ Caltrans -Wildlife Tunnel Study

PROJECT FEASIBILITY COST ESTIMATE - April 2015 Update

13' X 13' JACKED BOX CULVERT

Completed by: FHWA-CFLHD

4/17/15 9:25 AM

Item Description	Quantity	Unit	Unit Price	Item Cost	Section Cost
I. ROADWAY ITEMS					
Section 1 Earthwork					
Roadway Excavation	10,000	CUYD	\$15.00	\$150,000.00	
Clearing & Grubbing	6	ACRE	\$3,000.00	\$20,000.00	
Top Soil Reapplication	4,300	CUYD	\$20.00	\$90,000.00	
Subtotal Earthwork					\$260,000.00
Section 2 Pavement Structural Section					
Asphalt Concrete	1,000	TON	\$125.00	\$125,000.00	
Aggregate Base	1,600	CUYD	\$65.00	\$105,000.00	
Subtotal Pavement Structural Section					\$230,000.00
Section 3 Drainage					
Large Drainage Facilities (13 ft x 13 ft RCB, jacked)	305	LNFT	\$10,000.00	\$3,050,000.00	
Storm Drains	1	LPSM	\$60,000.00	\$60,000.00	
Headwalls/Wingwalls	1	LPSM	\$75,000.00	\$75,000.00	
Subtotal Drainage					\$3,185,000.00
Section 4 Specialty Items					
Barriers and Guardrails	700	LNFT	\$45.00	\$35,000.00	
Utility Coordination/Potholing	1	LPSM	\$100,000.00	\$100,000.00	
Hazardous Waste Investigation and/or Mitigation Work	1	LPSM	\$100,000.00	\$100,000.00	
Removal of Structure (Building)	1	LPSM	\$50,000.00	\$50,000.00	
Environmental Compliance (NPS Monitoring)	1	LPSM	\$100,000.00	\$100,000.00	
Subtotal Specialty Items					\$385,000.00
Section 5 Traffic Items					
Transportation Management Plan (Roadway Emergency Monitoring/Plan)	1	LPSM	\$150,000.00	\$150,000.00	
Subtotal Traffic Items					\$150,000.00
Section 6 Planting and Irrigation					
Highway Planting	1	LPSM	\$150,000.00	\$150,000.00	
Irrigation Modification (Plant Irrigation System)	1	LPSM	\$50,000.00	\$50,000.00	
Subtotal Planting and Irrigation Section					\$200,000.00
Section 7 Roadside Management and Safety Section					
Erosion Control Slope Protection	1	LPSM	\$30,000.00	\$30,000.00	
Maintenance Vehicle Pull outs	1	LPSM	\$50,000.00	\$50,000.00	
Roadside Facilities (Gates, Pedestrian Crossings, Trails, etc.)	1	LPSM	\$75,000.00	\$75,000.00	
Wildlife Fencing	4,000	LNFT	\$10.00	\$40,000.00	
Subtotal Roadside Management and Safety Section					\$195,000.00
TOTAL SECTIONS: 1 thru 7:					\$4,605,000.00
Section 8 Minor Items					
	10%		\$470,000.00	\$470,000.00	
TOTAL MINOR ITEMS:					\$470,000.00
Section 9 Roadway Mobilization					
	10%		\$510,000.00	\$510,000.00	
TOTAL ROADWAY MOBILIZATION:					\$510,000.00

CA PRA SAMO 99(1)
 Santa Monica Mountains Recreation Area/ Caltrans -Wildlife Tunnel Study

PROJECT FEASIBILITY COST ESTIMATE - April 2015 Update

13' X 13' JACKED BOX CULVERT

Completed by: FHWA-CFLHD

4/17/15 9:25 AM

Item Description	Quantity	Unit	Unit Price	Item Cost	Section Cost
I. ROADWAY ITEMS					
Section 10 Roadway Additions					
Supplemental Work	10%		\$510,000.00	\$510,000.00	
Contingencies	25%		\$1,270,000.00	\$1,270,000.00	
TOTAL ROADWAY ADDITIONS:					\$1,780,000.00
TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 10):					\$7,365,000.00

2011 Estimate Summary

PSR Preparation		\$65,000.00
PA/ED		\$350,000.00
Geotech Investigation & Draft Report		\$250,000.00
PS&E (8%)		\$590,000.00
Construction Administration (12%)		\$890,000.00
Project Total (2011)		\$9,510,000.00
SAY		\$9,600,000.00
Range	Low	\$8,700,000.00
	High	\$10,600,000.00

Construction Cost Escalation (2011 to 2015)

2012	2.2%	\$220,000.00
2013	0.6%	\$60,000.00
2014	1.3%	\$130,000.00
2015	0.0%	\$0.00
Total Escalation		\$410,000.00
Project Total (2015)		\$10,010,000.00
SAY		\$10,100,000.00
Range	Low	\$9,100,000.00
	High	\$11,200,000.00