LA-1 PM 20.6/21.9
Program Code: 20.XX.400.100
EA: 31500K, Project ID: 0715000162, PPNO 4885
January 2015

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

To

Request Programming for Capital Support

On Route SR-1

Between Herondo Street / Anita Street (PM 20.6)

And Artesia Boulevard (PM 21.9)

APPROVAL RECOMMENDED:

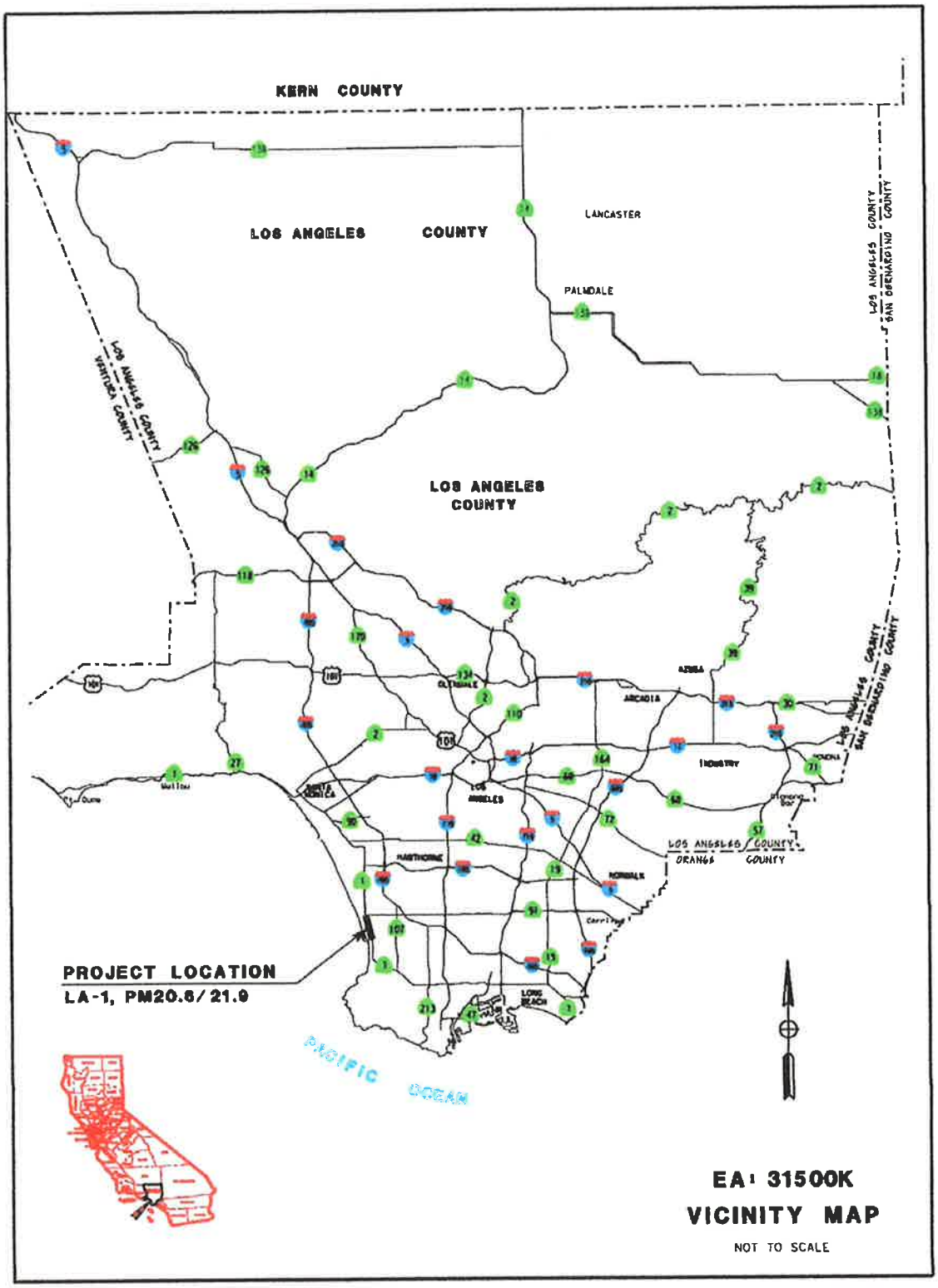
ZOE YUE, CALTRANS PROJECT MANAGER

APPROVED: 1/26/2015

FRANK BIGDELI P.E., PROJECT SPONSOR
DEPUTY PUBLIC WORKS DIRECTOR, CITY OF HERMOSA BEACH
Accepts Risks Identified in this PSR-PDS and Attached Risk Register

APPROVED: 1/26/15

for CARRIE BOWEN, DISTRICT DIRECTOR — DATE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VENTURA COUNTY
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SAN BERNARDINO COUNTY
LOS ANGELES COUNTY
PACIFIC OCEAN
LOS ANGELES COUNTY
ORANGE COUNTY
PROJECT LOCATION
LA-1, PM20.6/21.9
EA: 31500K
VICINITY MAP
NOT TO SCALE

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

JAMES VU

01/23/2015
DATE

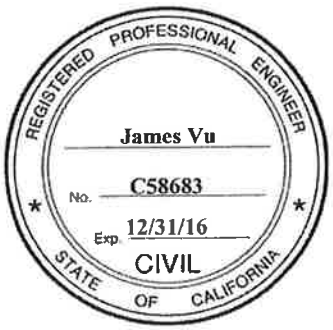


Table of Contents

1. INTRODUCTION

This project proposes to improve mobility and beautify the roadway at the following locations within the City of Hermosa Beach (City):

- On State Route 1 (SR-1), also known as Pacific Coast Highway (PCH), between Anita St./Herondo St. (PM 20.6) and Artesia Blvd./Gould Ave. (PM 21.9).
- On Aviation Blvd. between PCH and Prospect Ave.

Three build alternatives are proposed in this report. Alternative 2 proposes to improve pedestrian mobility and provide aesthetically pleasing roadway by reconstructing the sidewalks, undergrounding utilities, and constructing a landscaped median. Alternatives 3 and 4 propose to improve mobility and safety for all users including pedestrians, bicyclists, and transit users by implementing the concept of road diet and constructing roundabouts at some of the intersections.

Temporary Construction Easement (TCE) would be required for adjusting driveways for all three build alternatives. Right of way acquisition would be required for Alternatives 3 and 4 to construct roundabouts at PCH/Aviation Blvd., PCH/Pier Ave., PCH/Artesia Blvd., and Aviation Blvd./Prospect Ave.

Project Limits		07-LA-1 PM 20.6/21.9			
Number of Alternatives		4			
		Alternative 1 ($ Million)	Alternative 2 ($ Million)	Alternative 3 ($ Million)	Alternative 4 ($ Million)
Capital Outlay Support for PA&ED		0	2-3	2-3	2-3
Capital Outlay Construction Cost Range	State R/W	0	14-15	17-24	18-26
	City R/W	0	3-4	4-6	4-7
Capital Outlay Right-of-Way Cost Range (including utilities undergrounding)	State R/W	0	7-10 *	60-100 *	60-100 *
	City R/W	0	6-8 **	11-15 **	11-15 **
Funding Source		TBD			
Type of Facility		PCH: 6-lane Conventional Highway Aviation Blvd.: 4-lane Road			
Number of Structures		N/A			
Anticipated Environmental Determination or Document		EIR/EIS			
Project Development Category		Category 4A or 4B, depending on alternative selection in the next project phase.			

Utility undergrounding cost included: * $8.6 mil.; ** $6.5 mil.

2. BACKGROUND

SR-1 is a north-south state highway that traverses through Los Angeles and Ventura Counties Coastal region and is used for inter-regional, intra-regional, recreational and commuter travel through highly urbanized areas in Los Angeles County, and rural areas of Ventura County. It varies from one lane to four lanes in each direction. It serves many unincorporated areas, coastal cities and communities in Los Angeles and Ventura Counties by providing access to beaches, parks and other attractions along the route. The route runs beside the coastline or close to it and turns inland to avoid federally controlled or protected areas such as Vandenberg Air Force Base, Diablo Canyon Power Plant and Point Reyes National Seashore.

Within the project limits, SR-1 is designated as Pacific Coast Highway. In each direction, it generally consists of a 10 to 12 ft wide two-way left-turn lane, two 10 ft mixed-flow lanes, an 11 ft flexible lane (which is used for parking during non-peak hour), and sidewalks varying from 3 to 8 ft wide.

Within the project limits, Aviation Blvd. is a four-lane road with time limit parking spaces, and 8 ft wide sidewalks.

See Attachment A, Vicinity Map for project location.

3. PURPOSE AND NEED

Purpose:

The primary objectives of this project are to incorporate complete street features, improve pedestrian mobility and beautify the roadway, while enhancing traffic safety, and fulfilling American with Disabilities Act (ADA) requirements.

Need:

Within the project limits, the sidewalks are generally narrow and obstructed with utility features, which discourages pedestrian use and minimize accessibility. There are no bike lanes within the project limits, which results in bicyclists sharing the traveled lanes or the sidewalk. The traveled way has non-standard lane widths, and the intersection geometrics are inadequate for u-turn movement, which hinders the traffic flow.

4. TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT

An Intersection Control Evaluation screening meeting has been held, pursuant to Traffic Operations Policy Directive #13-02. It was agreed that the proposed roundabouts at PCH/Aviation Blvd., PCH/Pier Ave., PCH/Artesia Blvd., and Aviation Blvd./Prospect Ave. would provide substantial traffic flow benefits to the area.

Office of Traffic Engineering recommended that a detailed Traffic Impact Analysis be performed during Project Approval and Environmental Document (PA/ED) phase to accurately assess potential impacts of the PCH flexible lanes removal.

5. DEFICIENCIES

Following are identified transportation deficiencies:

- Lane width: The existing lane width is 10 ft. Alternatives 3 and 4 propose eliminating the two-way left-turn lane on PCH and providing standard 11 ft traveled lanes. This would improve traffic safety along this corridor.
- Bike lanes: Currently there is no bike lane within the project limits. Bicyclists have to share a lane with motorists. Alternative 3 proposes to add a bike lane where geometrically feasible. This is consistent with Caltrans' Complete Street policy and City of Hermosa Beach's improvement plan for Aviation Blvd.
- Transfer facilities: Existing bus stops are small and lack visibility. This project would construct standard bus-stop concrete pads and new bus canopies. This would improve connectivity to public transit for bicyclists and pedestrians, which in turn supports increased bicycling and walking.
- U-turn locations: Intersections within the project limits are generally inadequate for u-turn movements. Alternatives 3 and 4 propose adding roundabouts at PCH/Aviation Blvd., PCH/Pier Ave., PCH/Artesia Blvd., and Aviation Blvd./Prospect Ave. This would improve traffic safety and traffic flow in the area.
- Sidewalks: Within the project limits, sidewalks generally do not comply with the ADA standards. In some areas, the sidewalks are narrow and in poor condition. This project would relocate/remove protruding objects, and reconstruct the sidewalk to meet ADA requirements.

6. CORRIDOR AND SYSTEM COORDINATION

Following are the known recently completed/planned projects within the study limits:

- EA 1W140: Cold Plane, AC Overlay between Artesia Blvd. (PM 21.9) and Rosecrans Ave. (PM 23.9) in the City of Manhattan Beach. This project was completed in August 2014.

- EA 4T540: This project proposes to install left turn phasing and upgrade traffic signal system at the intersection of State Route 1, Pacific Coast Highway (PCH) and 2nd St. (PM 20.7). In Addition, it is proposed to modify an existing pedestrian crosswalk and install ADA curb ramps and In-Roadway Warning Lights (IRWL) at the intersection of PCH and 3rd St. This project is scheduled to be constructed in Spring 2016.

7. ALTERNATIVES

Four alternatives are presented in this report (See Attachment B).

7.1 Alternative #1 – No Build

The "No Build" Alternative will maintain the current configuration of the existing facility. It is presented as a basis of comparison with the other alternatives.

7.2 Alternative #2

Within State Right of Way

On PCH, this alternative would beautify the roadway and upgrade the existing sidewalks to the current ADA standards. Protruding obstacles that limit the clear width of the sidewalks would be removed. Exposed utility lines would be buried underground, and the existing two-way left-turn lane would be reconstructed to provide space for raised landscaped median. This alternative would maintain the existing nonstandard lane widths of 10 ft and the existing 0 ft shoulders.

Temporary Construction Easements would be required for adjusting driveways along the sidewalk to meet the ADA requirements.

Within City Right of Way

On Aviation Blvd., this alternative would remove protruding obstacles that limit the clear width of the sidewalks. Exposed utility lines would be buried underground, and the existing two-way left-turn lane would be reconstructed to provide as a raised landscaped median. One through-lane in the east bound direction would be eliminated, leaving only one through-lane in that direction. A 5 ft bike lane would be added in each direction. Parking would be provided in the east bound direction.

Temporary Construction Easements would be required for adjusting driveways along the sidewalk to meet the ADA requirements.

7.3 Alternative #3

Within State Right of Way

This alternative proposes to develop two distinct segments on PCH within the project limit. The first segment is between Aviation Blvd. and Artesia Blvd. and the second segment is between Aviation Blvd. and Anita St/Herondo St. The common design features between the two segments are: upgrading the sidewalks to meet the current ADA standards; eliminating the outside lane in each direction to provide space for two lanes with standard width of 11 ft; and providing permanent parking 9 ft wide in each direction. The first segment would have a 5 ft bike lane in each direction and roundabouts proposed at PCH/Aviation Blvd., PCH/Pier Ave., and PCH/Artesia Blvd. The second segment would have raised landscaped median and left-turn lanes at various intersections.

Temporary Construction Easements would be required for adjusting driveways along the sidewalk to meet the ADA requirements. Right of way acquisition would be required for construction of roundabouts.

Within City Right of Way

On Aviation Blvd. this alternative would remove protruding obstacles that limit the clear width of the sidewalks. Exposed utility lines would be buried underground. This alternative would add bike lanes on Aviation Blvd. within the project limits. It would eliminate one through-lane in the east bound direction. A roundabout would be added at the intersection of Aviation Blvd. and Prospect Ave.

Temporary Construction Easements would be required for adjusting driveways along the sidewalk to meet the ADA requirements. Right of way acquisition would be required for construction of roundabouts.

7.4 Alternative #4

Within State Right of Way

This alternative is similar to Alternative 3 on PCH, except that a landscaped median would be constructed instead of the bike lanes.

Within City Right of Way

This alternative is similar to Alternative 3 on Aviation Blvd, except that a landscaped median would be constructed instead of the bike lanes.

7.5 Other Alternatives Considered

Road Diet with Bike Lanes:
This alternative proposes a road diet with bike lanes without roundabouts on PCH. It is similar to segment 2 in Alternative 3 (See attachment C - Typical Cross Sections, Alternative 3 - from Herondo St. to Aviation Blvd.), except that bike lanes would be provided instead of parking. This alternative should be explored further in PA&ED phase. Traffic impacts due to the elimination of the flexible lanes need to be studied in details. Design exception for non-standard shoulders would be needed.

Minimum Standard Alternative:
This alternative proposes upgrading the segment on PCH to the current design standards. The existing right of way lines would be shifted by a total of 20 ft to the outside to provide space for standard lanes and shoulders. This alternative was discarded from further study due to its excessive cost for right of way acquisition.

7.6 Design Standards Risk Assessment

Alternative	Design Standard from Highway Design Manual Tables 82.1A & 82.1B	Probability of Design Exception Approval (None, Low, Medium, High,)	Justification for Probability Rating
2	Mandatory Lane Width (HDM Section 301.1)	Low	*(Existing/Proposed lane width on SR-1 is 10')* This section of Route 1 is Terminal Access (STAA). Further evaluation is needed.
2	Mandatory Shoulder Width, Right (HDM Section 302.1)	Low	*(Posted speed limit = 30mph Existing/Proposed right shoulder width on SR-1 is 0')* This section of Route 1 is a conventional multilane highway; not an access control highway.

8. RIGHT-OF-WAY

Conceptual right-of-way cost estimates for each build alternative have been prepared. (See Attachment E)

9. STAKEHOLDER INVOLVEMENT

Involved stakeholders in the development of the purpose and need of this project include Caltrans and the City of Hermosa Beach.

A Cooperative Agreement between Caltrans and the City of Hermosa Beach will be executed prior to commencement of project approval and environmental document (PA&ED) work.

A Maintenance Agreement for the segment on PCH will be required.

10. ENVIRONMENTAL DETERMINATION/DOCUMENTATION

A Preliminary Environmental Analysis Report (PEAR) has been prepared to identify studies and capital outlay resources needed to complete the PA&ED phase. An Environmental Impact Report/Environmental Impact Statement (EIR/EIS) has been identified as the appropriate level environmental document for this project.

Alternatives 3 and 4 will require new right of way from private properties which may result in additional time needed to prepare the environmental document if there is project controversy regarding right of way. (See Attachment F)

11. FUNDING

Capital Outlay Project Estimate

Alternatives		Range of Estimate ($ Million)		STIP Funds		Other Funds	
		Construction	Right-of-Way	Construction	Right-of-Way	Construction	Right-of-Way
1	State R/W	0	0	N/A	N/A	N/A	N/A
	City R/W	0	0				
2	State R/W	14-15	7-10	N/A	N/A	N/A	N/A
	City R/W	3-4	6-8				
3	State R/W	17-24	60-100	N/A	N/A	N/A	N/A
	City R/W	4-6	11-15				
4	State R/W	18-26	60-100	N/A	N/A	N/A	N/A
	City R/W	4-7	11-15				

The level of detail available to develop these capital outlay project estimates is only accurate to within the above ranges and is useful for long-range planning purposes only. The capital outlay project estimates should not be used to program or commit State-programmed capital outlay funds.

Capital Outlay Support Estimate
Capital outlay support cost for programming PA&ED for this project is estimated to be from $2 million to $3 million.

12. SCHEDULE

Project Milestones		Scheduled Delivery Date (Month/Day/Year)
PROGRAM PROJECT	M015	02/02/2015
BEGIN ENVIRONMENTAL	M020	07/01/2015
CIRCULATE DPR & DED EXTERNALLY	M120	03/01/2017
PA&ED	M200	08/01/2017
PROJECT PS&E	M380	11/01/2019
RIGHT OF WAY CERTIFICATION	M410	01/01/2020
READY TO LIST	M460	06/01/2020
AWARD	M495	09/01/2020
APPROVE CONTRACT	M500	11/01/2020
CONTRACT ACCEPTANCE	M600	10/01/2021
END PROJECT	M800	12/01/2022

The anticipated funding fiscal year for construction is 2019/2020.

13. RISKS

Risks are identified at the PSR-PDS level in the Risk Register (See Attachment H).

14. FHWA COORDINATION

This project is determined to be a "Delegated/Assigned Project" and is administered per the Project Responsibilities List in the Joint Stewardship and Oversight Agreement 2007 (Amended September 2010).

15. CONSTRUCTION PHASING

It was suggested to divide the project into multiple construction phases. Phase I could include the improvements on Aviation Blvd. between PCH and Prospect Ave. Phase II, or additional phases, could include the improvements on PCH between Herondo St. and Artesia Blvd.

16. DISTRICT CONTACTS

Office of Project Management:	
Zoe Yue, Office Chief	Phone (213)453-7566
Office of Project and Special Studies	
James Vu, Project Engineer	Phone (213)897-0116
Amir Elsharief, Sr. Transportation Engineer	Phone (213)897-9565
Rafael Molina, Sr. Transportation Engineer	Phone (213)897-7945
Elaheh Yadegar, Office Chief	Phone (213)897-9635
Office of Right of Way Appraisals	
Dan Murdoch, Office Chief	Phone (213)897-1816

17. PROJECT REVIEWS

Caltrans

Office of Design 'A':
Richard Chiang, Acting Office Chief

Office of Environmental Planning:
Karl Price, Sr. Environmental Planner

Office of Traffic Engineering:
Yunus Ghausi, Sr. Transportation Engineer
Moe Bhuyian, Sr. Transportation Engineer

Office of Maintenance Engineering
Hamid Saadatnejadi, Office Chief

HQ Design
Brian Frazer, Design Reviewer
Peter Vacura, Design Coordinator

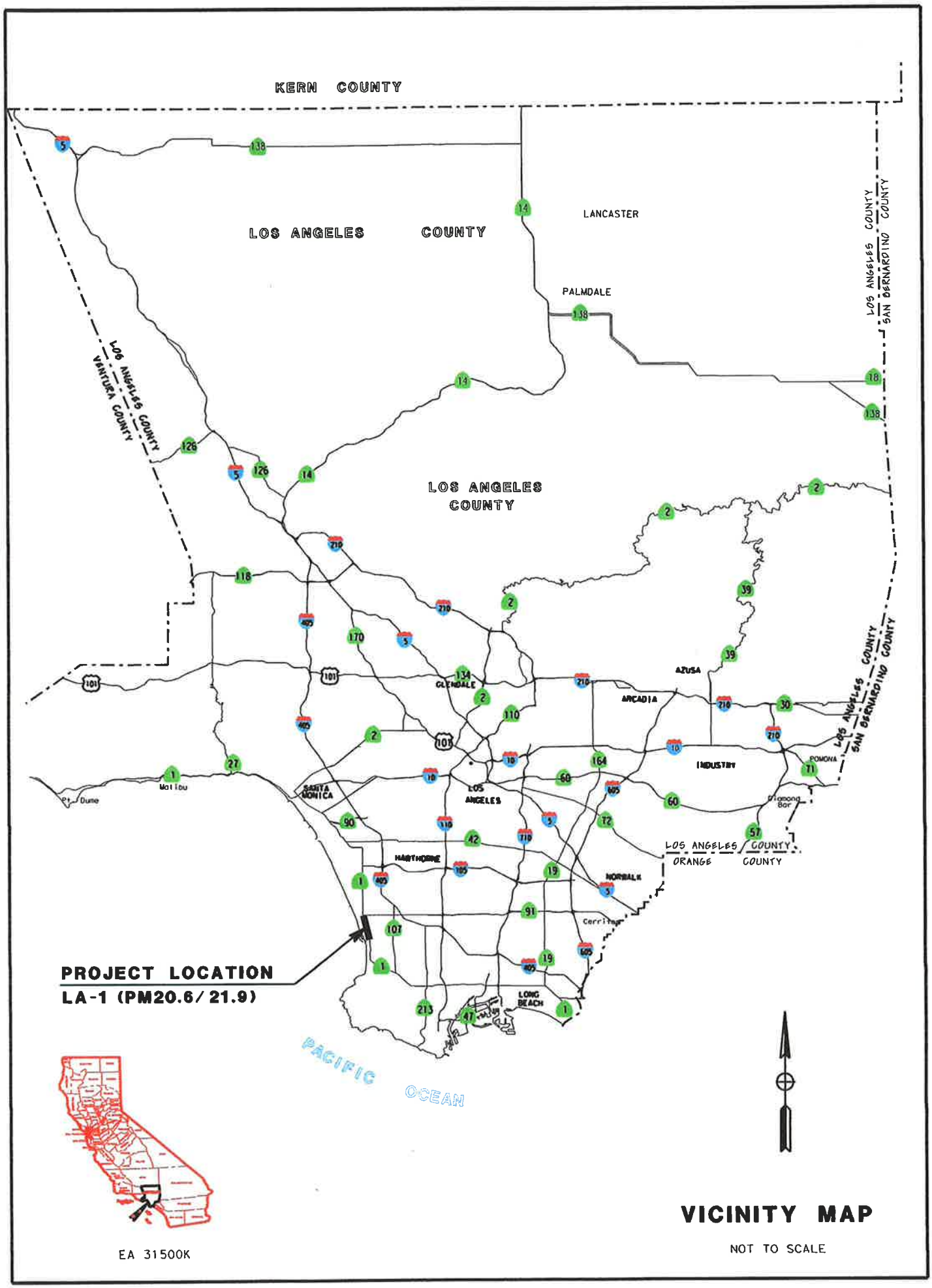
City of Hermosa Beach

Frank Bigdeli, Deputy Public Works Director

18. ATTACHMENTS

A. Vicinity Map
B. Schematic Maps
   1. Alternative 1: No Build/Existing
   2. Alternative 2
   3. Alternative 3
   4. Alternative 4
C. Typical Cross Sections
D. Capital Outlay Project Estimate
E. Right-of-Way Conceptual Cost Estimate Component
F. Preliminary Environmental Assessment Report
G. Storm Water Data Report
H. Risk Register

Attachment A



EA 31500K

VICINITY MAP

NOT TO SCALE

Attachment B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	20.6/21.9		

REGISTERED CIVIL ENGINEER DATE

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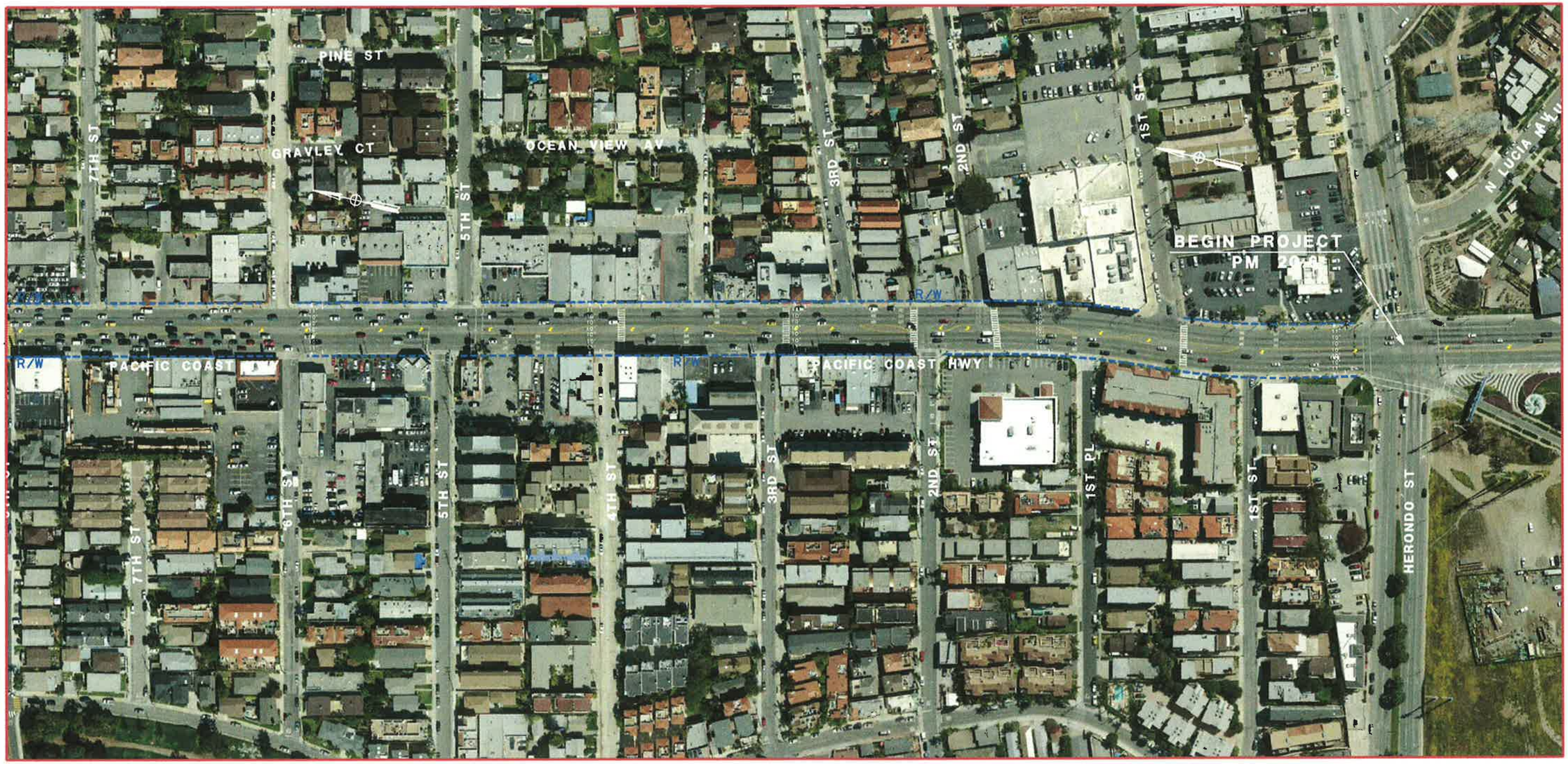

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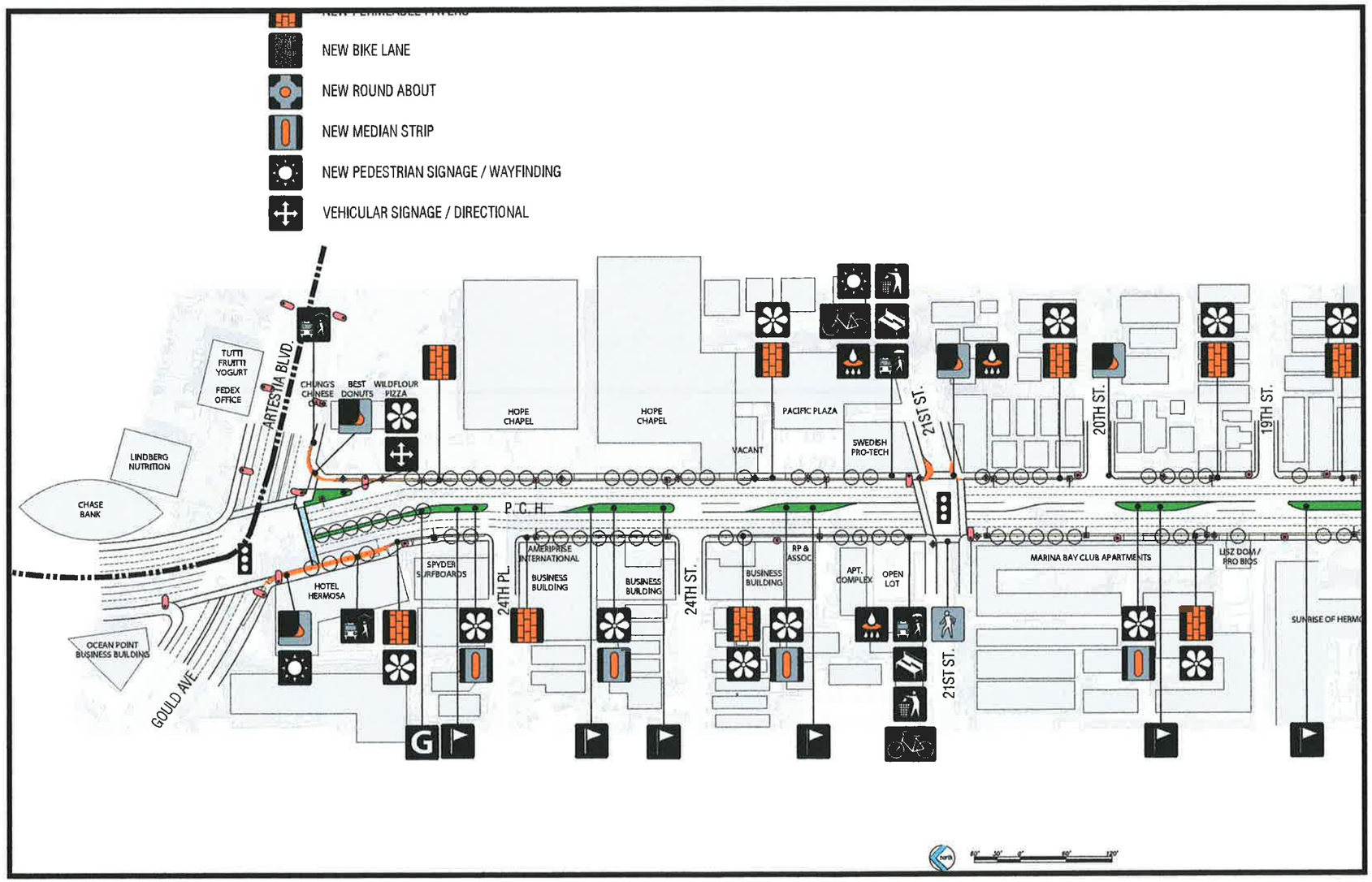

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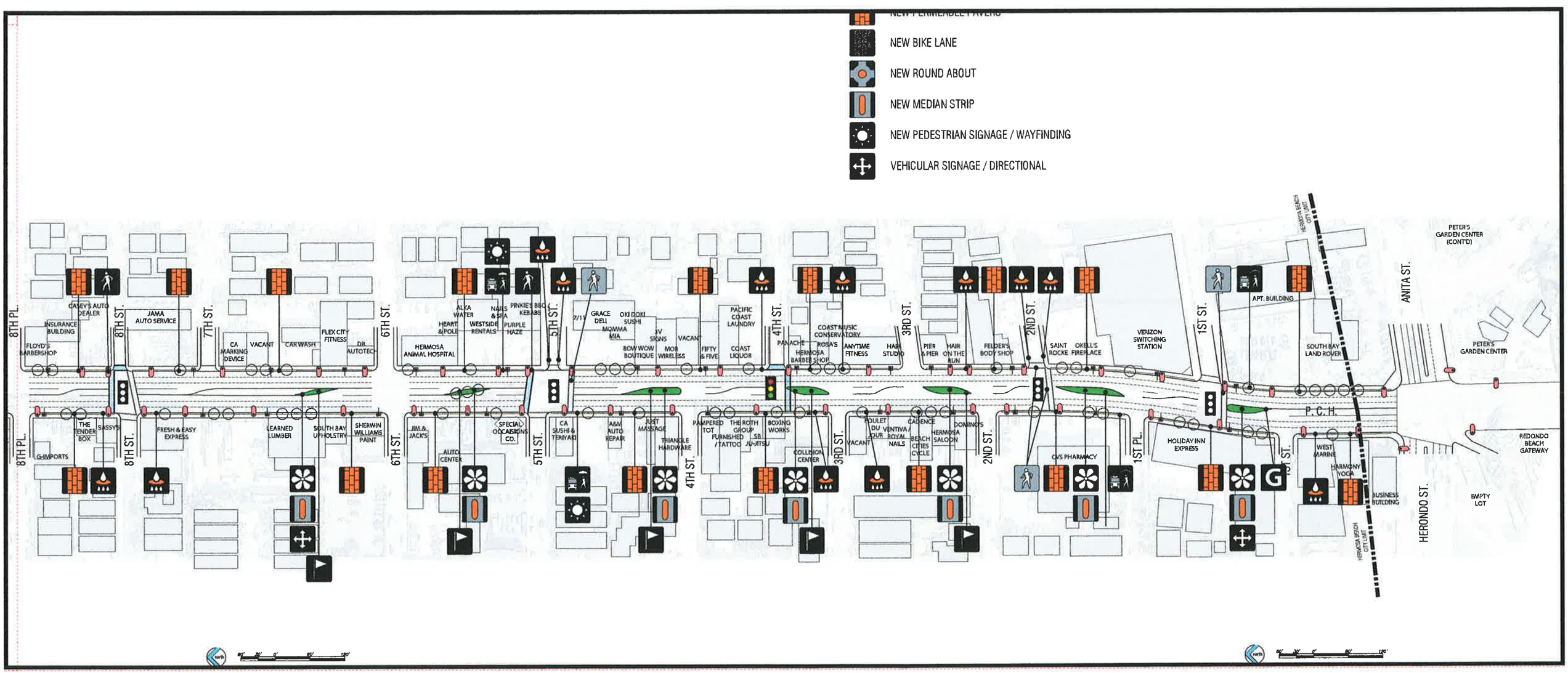
SHEET 1 of 4

ALTERNATIVE # 2

SHEET 2 of 4



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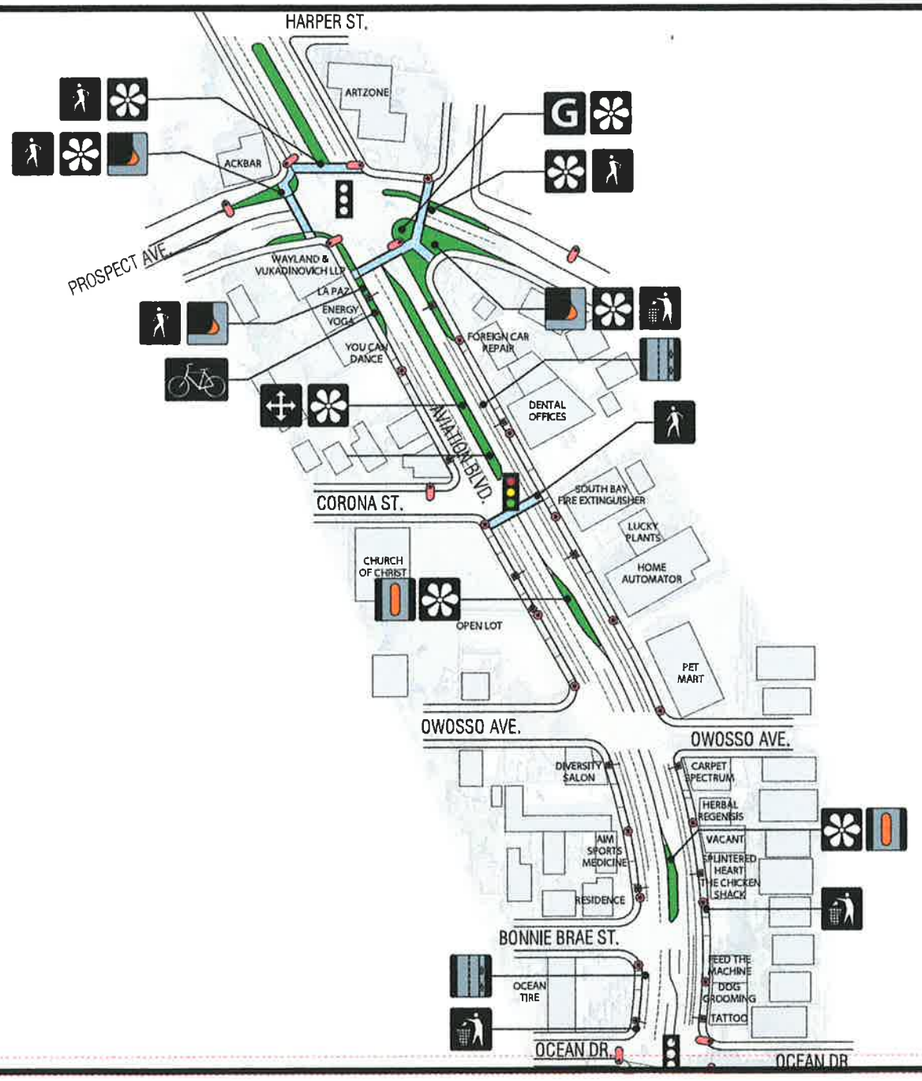

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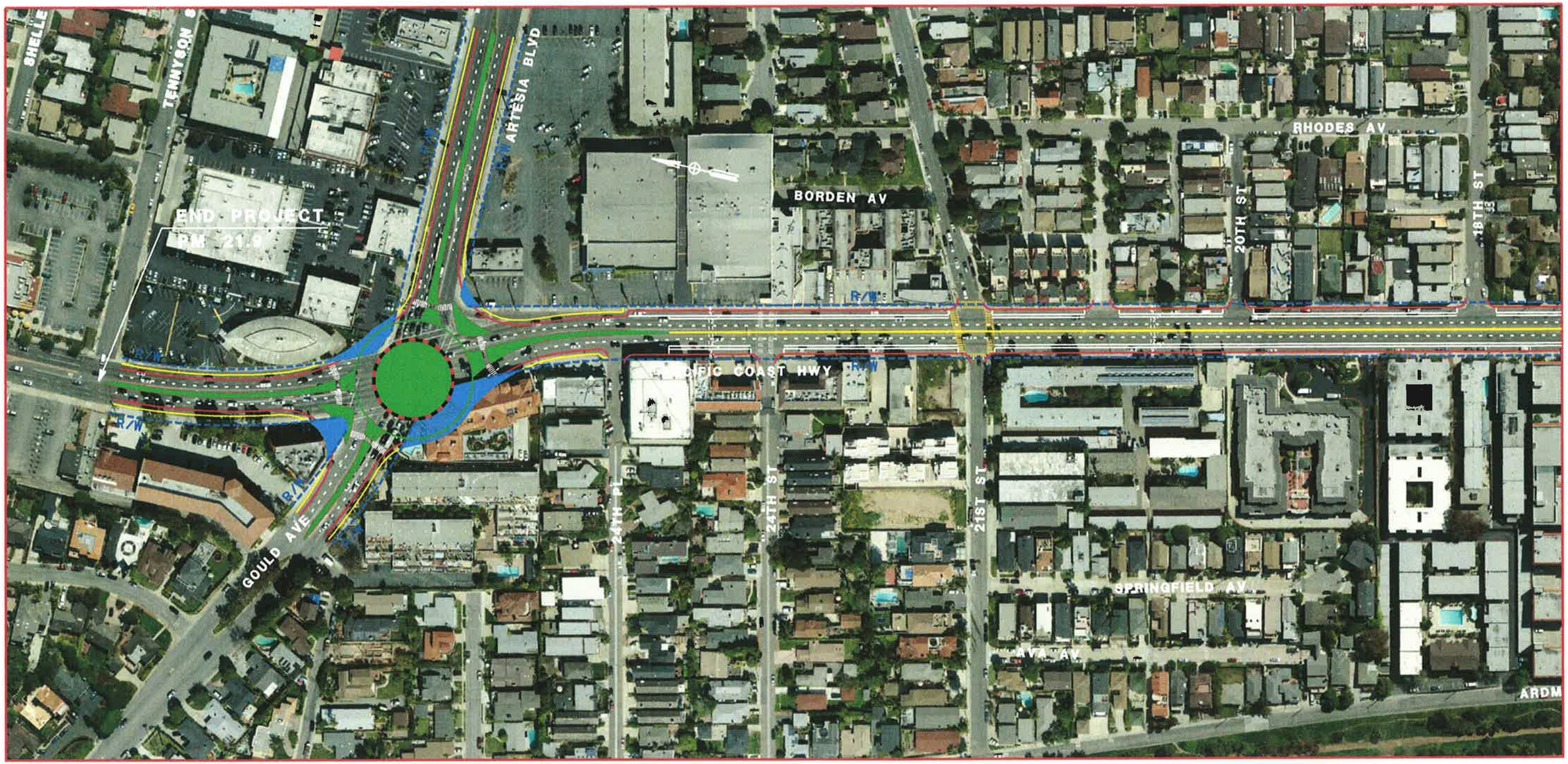

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: LANDSCAPED MEDIAN

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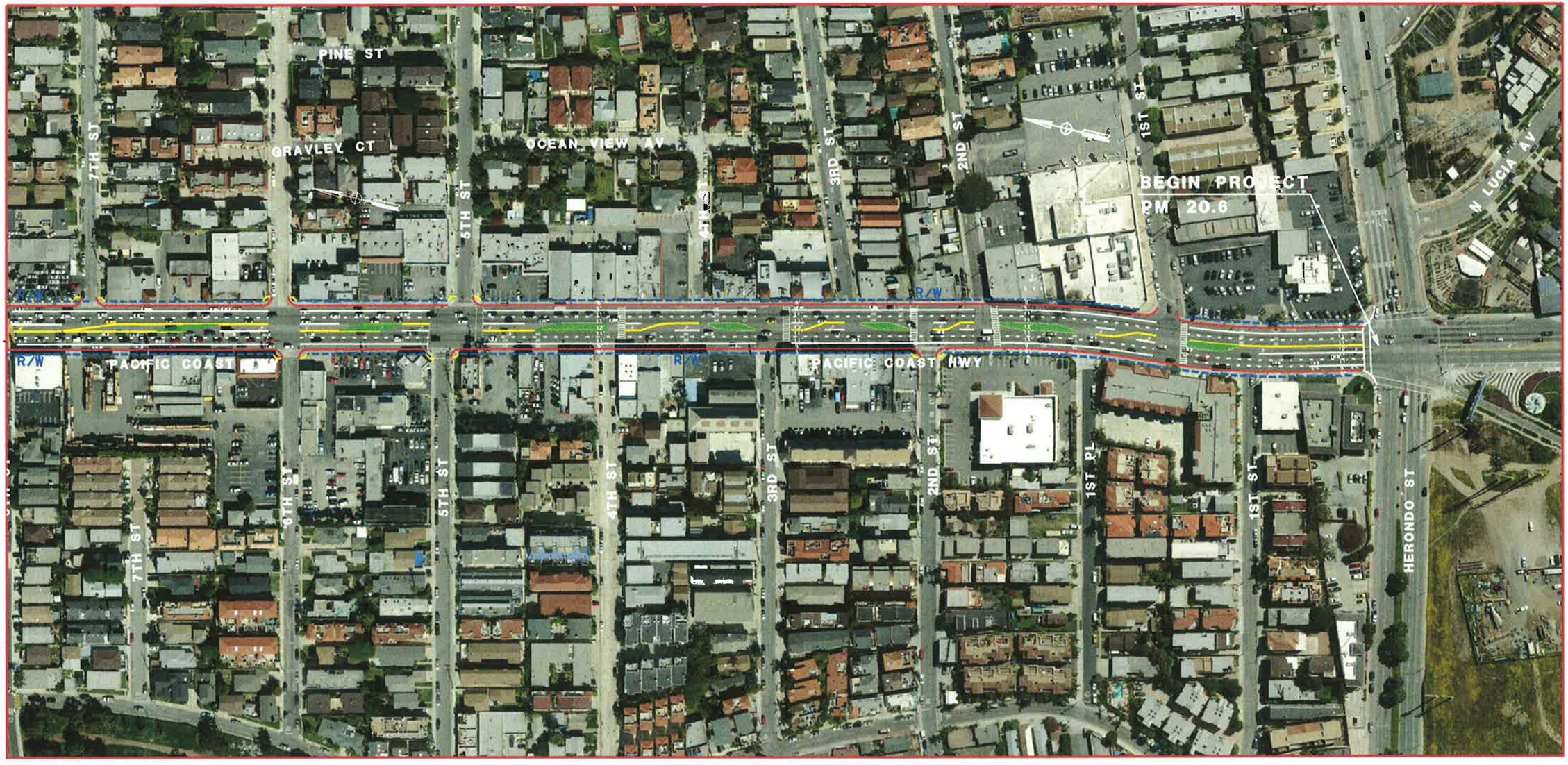

NOTE: : R/W ACQUISITION : LANDSCAPED MEDIAN

* Left turn pockets may be consolidated at minor intersections between Aviation Blvd. and Herondo St.

SCHEMATIC MAP

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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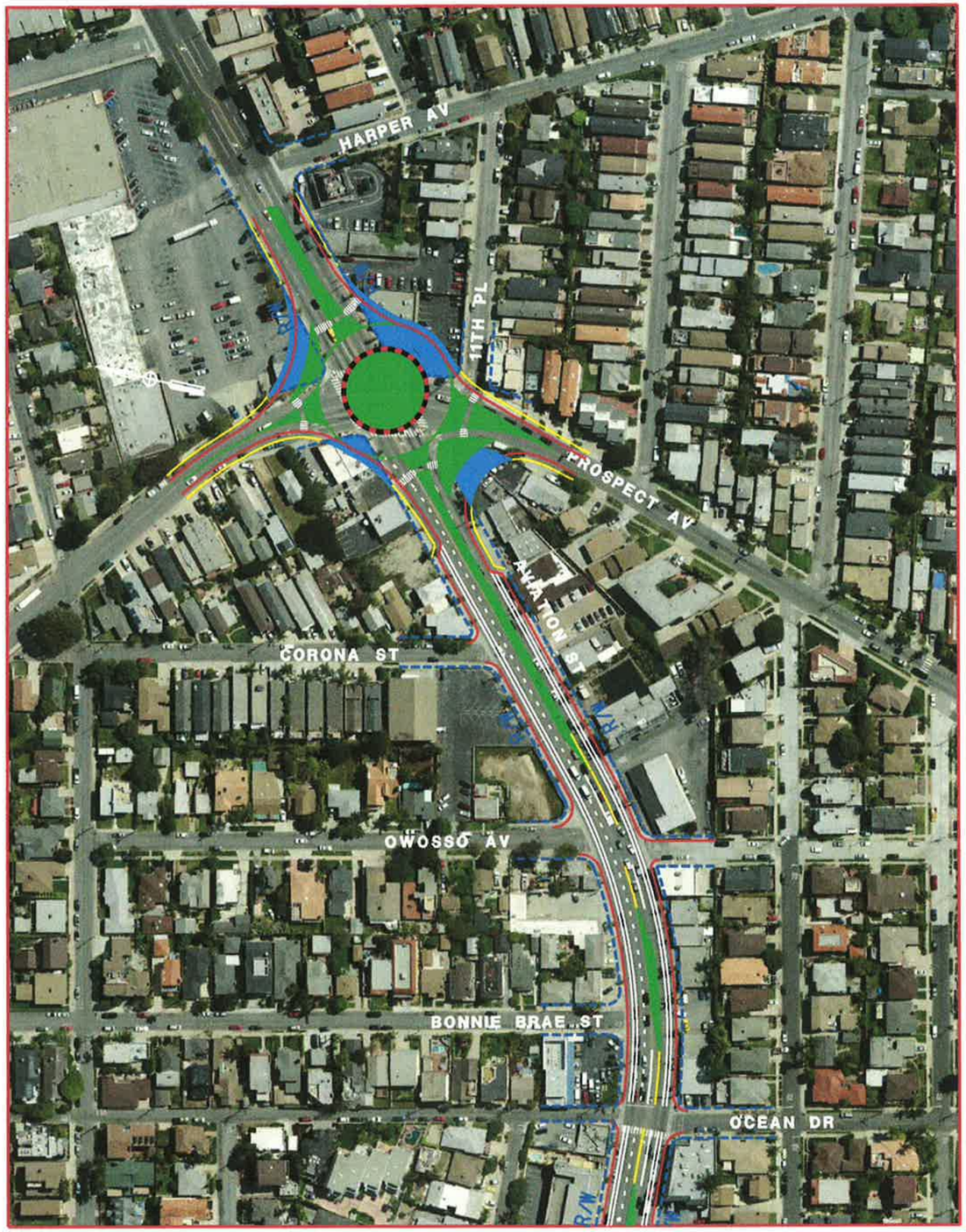

MATCH LINE

NOTE: : R/W ACQUISITION

: LANDSCAPED MEDIAN

SCHEMATIC MAP

NO SCALE

ALT. 3 S-4 of 4

CALCULATED-DESIGNED BY				
CHECKED BY				
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DATE REVISED				
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BORDER LAST REVISED 7/2/2010 | USERNAME => &USER DGN FILE => &REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1786 | PROJECT NUMBER & PHASE 0715000162

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	20.6/21.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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SCHEMATIC MAP

NO SCALE

ALT. 4 S-1 of 4

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	20.6/21.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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MATCH LINE

MATCH LINE

MATCH LINE

NOTE: : R/W ACQUISITION

: LANDSCAPED MEDIAN

SCHEMATIC MAP

NO SCALE

ALT. 4 S-2 of 4

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	20.6/21.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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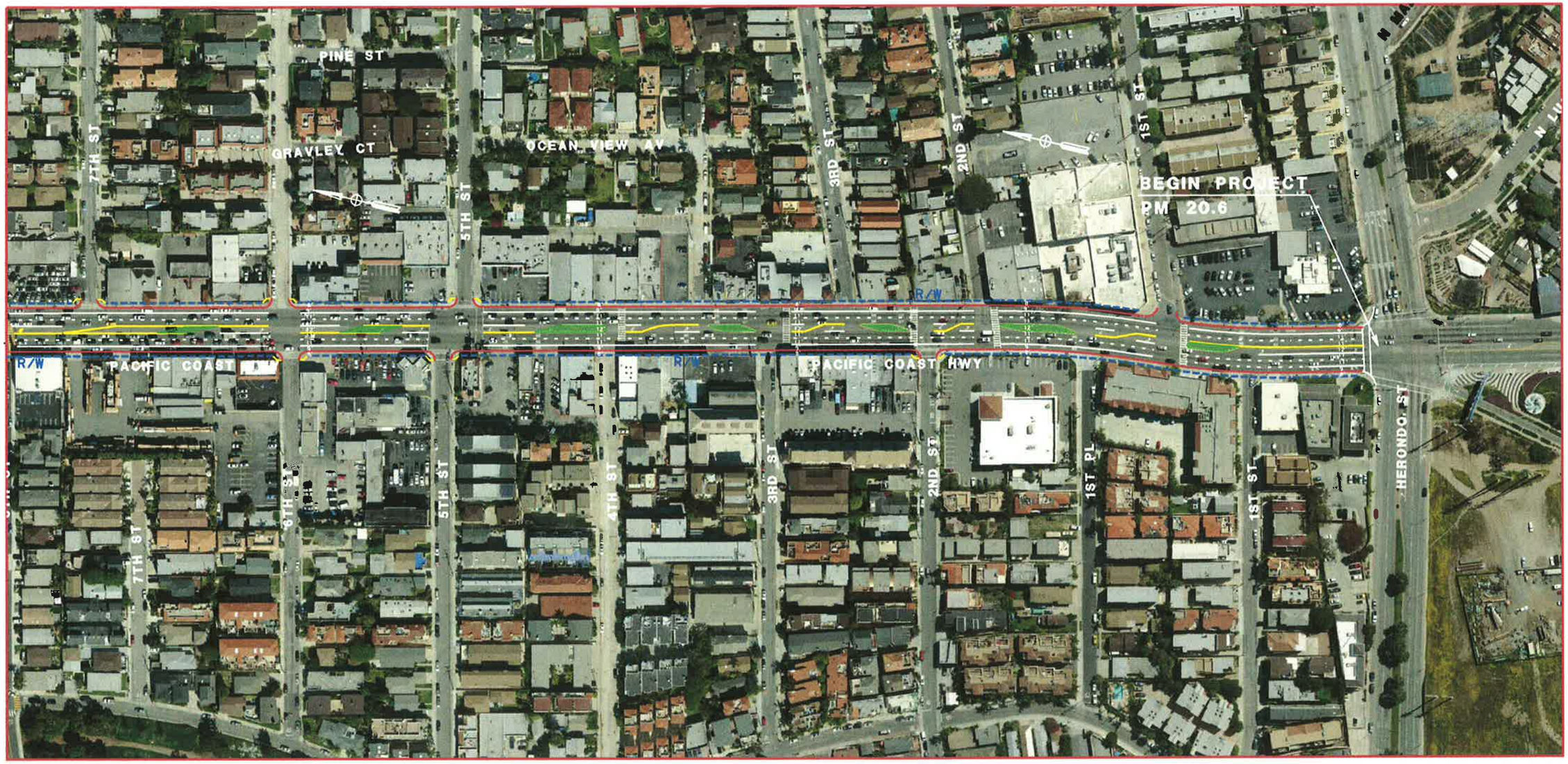
MATCH LINE



NOTE: : R/W ACQUISITION : LANDSCAPED MEDIAN

* Left turn pockets may be consolidated at minor intersections between Aviation Blvd. and Herondo St.

SCHEMATIC MAP

NO SCALE

ALT. 4 S-3 of 4

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BORDER LAST REVISED 7/2/2010

USERNAME => $USER
DGN FILE => &REQUEST

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1786

PROJECT NUMBER & PHASE 0715000162

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — NO. — EXP. — CIVIL — STATE OF CALIFORNIA

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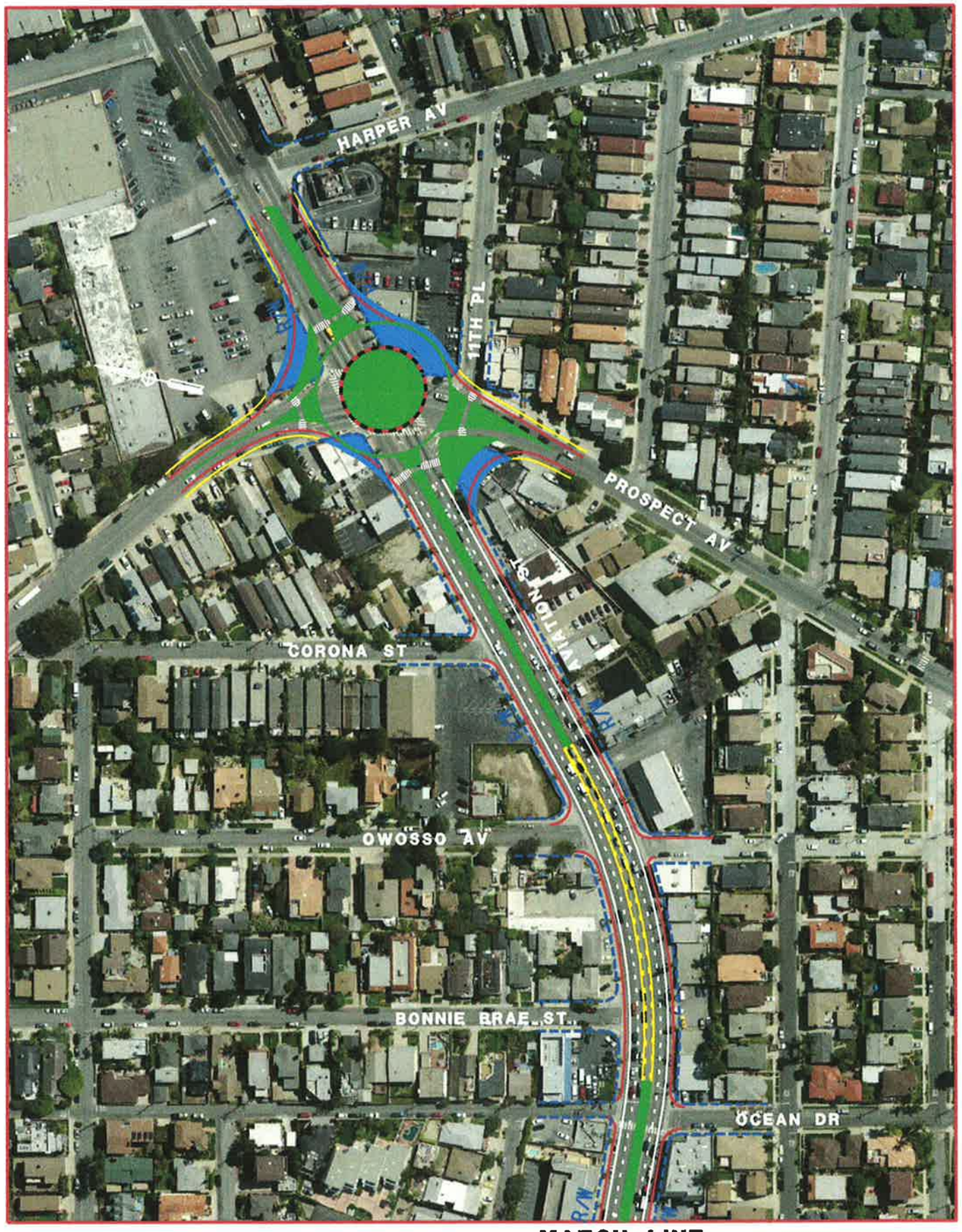

MATCH LINE

NOTE: : R/W ACQUISITION

: LANDSCAPED MEDIAN

SCHEMATIC MAP

NO SCALE

ALT. 4 S-4 of 4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR
Caltrans OFFICE OF PLANNING	

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BORDER LAST REVISED 7/2/2010

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1786

PROJECT NUMBER & PHASE 0715000162

Attachment C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	20.6/21.9	1	2

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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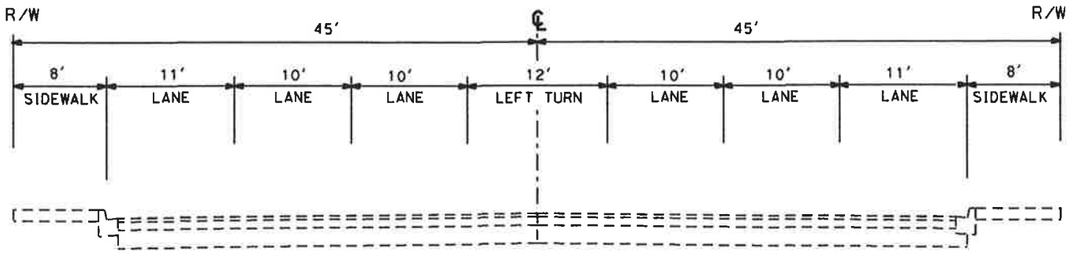
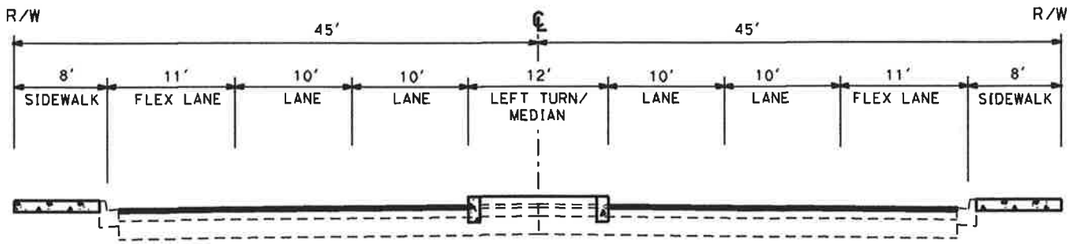
PACIFIC COAST HIGHWAY (PCH)

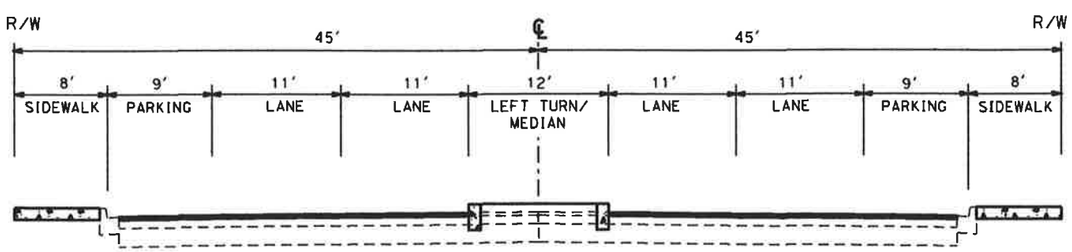
Route LA-1 (PM 20.6/21.9)



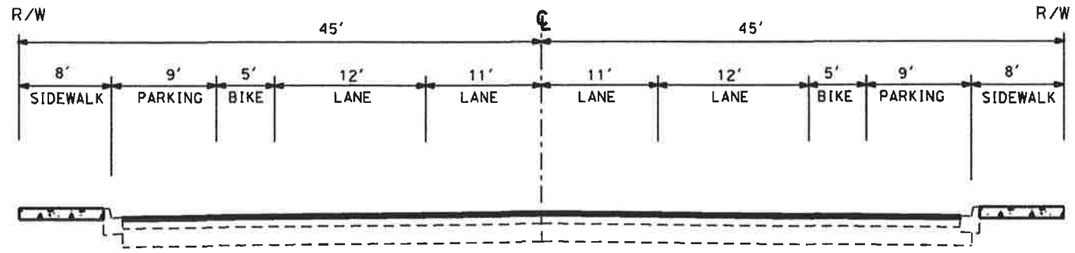
Alternative 1:No Build
(From Herondo St to Artesia Blvd.)



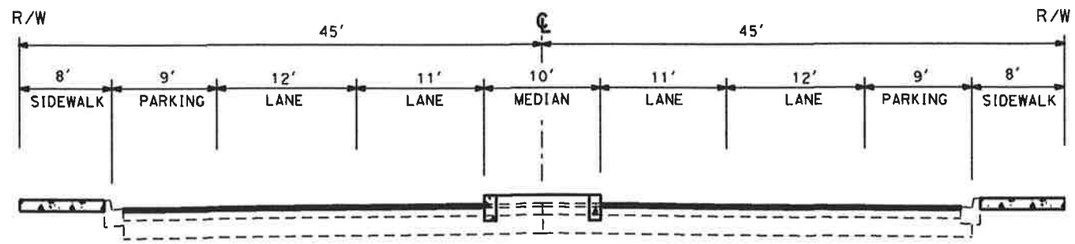
Alternative 2: - Sidewalks Reconstruction
- Median Improvement
(From Herondo St to Artesia Blvd.)



Alternative 3 & 4:
(From Herondo St to Aviation Blvd.)
PM 20.621 - 21.181



Alternative 3:Road Diet with Roundabout & Bike Lanes
(From Aviation Blvd to Artesia Blvd.)
PM 21.181 - 21.919



Alternative 4:Road Diet with Roundabout & Median
(From Aviation Blvd to Artesia Blvd.)
PM 21.181 - 21.919

TYPICAL CROSS SECTION

NOT TO SCALE

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				2	2

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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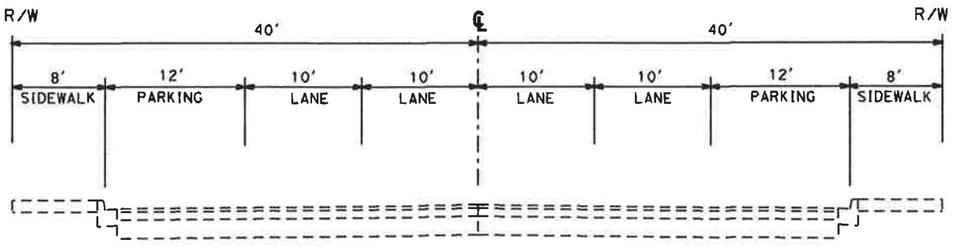
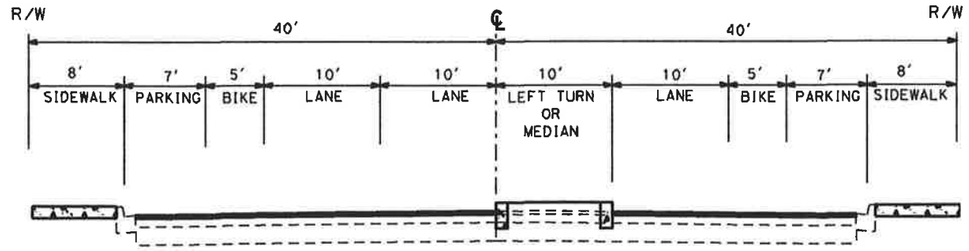
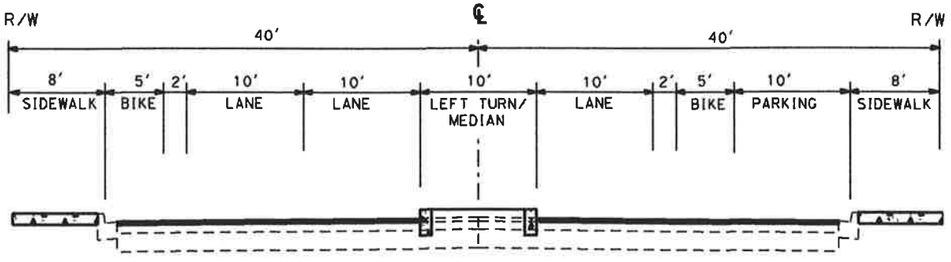
AVIATION BOULEVARD



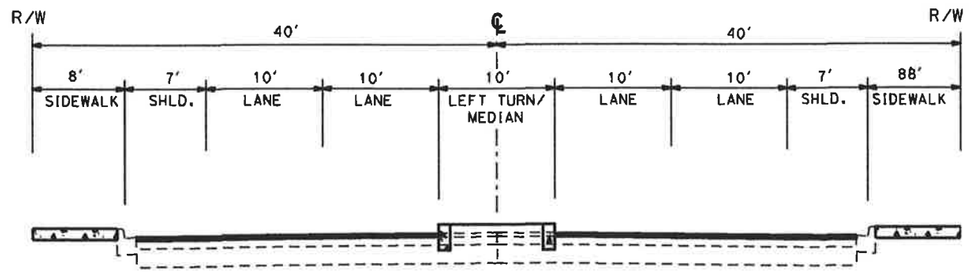
Alternative 1:No Build
(From LA-1 to Prospect Ave.)



Alternative 3:Road Diet with Roundabout & Bike Lanes
(From LA-1 to Prospect Ave.)



Alternative 2: - Sidewalks Reconstruction
- Median Improvement & Bike Lanes
(From LA-1 to Prospect Ave.)



Alternative 4:Road Diet with Roundabout & Median
(From LA-1 to Prospect Ave.)

TYPICAL CROSS SECTION

NOT TO SCALE

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

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LAST REVISION 00-00-00 | DATE PLOTTED => &DATE | TIME PLOTTED => &TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => &USER | DGN FILE => &REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1786 | PROJECT NUMBER & PHASE 0715000162

Attachment D

Project Study Report - Project Development Support
Capital Outlay Project Estimate

Dist - Co - Rte 07-LA-1
PM 20.6/21.9

Program Code 20.XX.400.100
Project Number 0715000162
Month/Year 01/2015

Project Description:

Limits:
On PCH between Anita Street/Herondo Street (PM 20.621) and Artesia Boulevard (PM 21.919).
On Aviation Boulevard between PCH and Prospect Avenue.

Proposed Improvement (Scope):
. Underground utility lines; Reconstruct sidewalks; Construct landscaped median

Alternative 2
State Right of Way
Summary of Project Cost Estimate

	Cost (Low)	Cost (High)
TOTAL ROADWAY ITEMS	$14,080,000	$14,080,000
TOTAL STRUCTURE ITEMS	$0	$0
TOTAL ENVIRONMENTAL MITIGATION ITEMS	$512,000	$848,000
SUBTOTAL CONSTRUCTION COSTS	$14,592,000	$14,928,000
RIGHT OF WAY	$7,100,000	$9,900,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$21,692,000	$24,828,000
USE	**$21,000,000**	**$25,000,000**

I. ROADWAY ITEMS

Items	Cost (Low)	Cost (High)
1. Access Improvements	$ 2,992,000	$ 2,992,000
2. Trafic Signal and Lighting Improvements	$ 6,800,000	$ 6,800,000
3. Landscape	$ 2,000,000	$ 2,000,000
4. Sidewalk Improvements	$ 2,288,000	$ 2,288,000
5. Utility Relocation/Undergrounding	$ See RoW	$ See RoW
6. Traveled way Improvements, Roundabouts	$ NA	$ NA
TOTAL ROADWAY ITEMS	$ 14,080,000	$ 14,080,000

Note: Roadway items include demolition, earthwork, structural section, drainage, landscape specialty items, traffic items, minor items, mobilization, TMP, and contingencies

II. STRUCTURES ITEMS

Structure Name	Cost (Low)	Cost (High)
N/A	$ 0	$ 0
TOTAL STRUCTURE ITEMS	$ 0	$ 0

III. ENVIRONMENTAL MITIGATION

Items	Cost (Low)	Cost (High)
1. Hazardous Materials	$ 80,000	$ 400,000
2. Storm Water (DPP, Construction Site)	$ 432,000	$ 448,000
TOTAL MITIGATION ITEMS	$ 512,000	$ 848,000

See Attachment E

IV. RIGHT OF WAY ITEMS

Items	Cost (Low)	Cost (High)
A. Acquisition, including excess lands,...	$ 0	$ 0
B. Temporary Construction Easement	$ 600,000	$ 900,000
C. Utility Relocation / Undergrounding	$ 6,500,000	$ 9,000,000
TOTAL RIGHT OF WAY ITEMS	$ 7,100,000	$ 9,900,000

See Attachment G

Project Study Report - Project Development Support
Capital Outlay Project Estimate

Dist - Co - Rte 07-LA-1
PM 20.6/21.9

Program Code 20.XX.400.100
Project Number 0715000162
Month/Year 01/2015

Project Description:

Limits:

On PCH between Anita Street/Herondo Street (PM 20.621) and Artesia Boulevard (PM 21.919).
On Aviation Boulevard between PCH and Prospect Avenue.

Proposed Improvement (Scope):

. Relocate/underground utility lines; Reconstruct sidewalks; Construct roundabouts; Remove median; Cold plane and AC Overlay

Alternative 3
State Right of Way

Summary of Project Cost Estimate

	Cost (Low)	Cost (High)
TOTAL ROADWAY ITEMS	$15,280,000	$18,336,000
TOTAL STRUCTURE ITEMS	$0	$0
TOTAL ENVIRONMENTAL MITIGATION ITEMS	$2,080,000	$5,360,000
SUBTOTAL CONSTRUCTION COSTS	$17,360,000	$23,696,000
RIGHT OF WAY	$60,600,000	$99,400,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$77,960,000	$123,096,000
USE	**$78,000,000**	**$123,000,000**

I. ROADWAY ITEMS

Items	Cost (Low)	Cost (High)
1. Access Improvements	$ 2,720,000	$ 3,264,000
2. Trafic Signal and Lighting Improvements	$ 5,600,000	$ 6,720,000
3. Landscape	$ 1,920,000	$ 2,304,000
4. Sidewalk Improvements	$ 2,400,000	$ 2,880,000
5. Utility Relocation/Undergrounding	$ See RoW	$ See RoW
6. Traveled way Improvements, Roundabouts	$ 2,640,000	$ 3,168,000.0
TOTAL ROADWAY ITEMS	$ 15,280,000	$ 18,336,000

Note: Roadway items include demolition, earthwork, structural section, drainage, landscape specialty items, traffic items, minor items, mobilization, TMP, and contingencies

II. STRUCTURES ITEMS

Structure Name	Cost (Low)	Cost (High)
N/A	$ 0	$ 0
TOTAL STRUCTURE ITEMS	$ 0	$ 0

III. ENVIRONMENTAL MITIGATION

Items	Cost (Low)	Cost (High)
1. Hazardous Materials	$ 1,600,000	$ 4,800,000
2. Storm Water (DPP, Construction Site)	$ 480,000	$ 560,000
TOTAL MITIGATION ITEMS	$ 2,080,000	$ 5,360,000

See Attachment E

IV. RIGHT OF WAY ITEMS

Items	Cost (Low)	Cost (High)
A. Acquisition, including excess lands,...	$ 55,000,000	$ 82,500,000
B. Temporary Construction Easement	$ 600,000	$ 900,000
C. Utility Relocation / Undergrounding	$ 5,000,000	$ 16,000,000
TOTAL RIGHT OF WAY ITEMS	$ 60,600,000	$ 99,400,000

See Attachment G

Project Study Report - Project Development Support
Capital Outlay Project Estimate

Dist - Co - Rte 07-LA-1
PM 20.6/21.9

Program Code 20.XX.400.100
Project Number 0715000162
Month/Year 01/2015

Project Description:

Limits:

On PCH between Anita Street/Herondo Street (PM 20.621) and Artesia Boulevard (PM 21.919).
On Aviation Boulevard between PCH and Prospect Avenue.

Proposed Improvement (Scope):

. Relocate/underground utility lines; Reconstruct sidewalks; Construct roundabouts; Reconstruct median; Cold plane and AC Overlay

Alternative 4
State Right of Way

Summary of Project Cost Estimate

	Cost (Low)	Cost (High)
TOTAL ROADWAY ITEMS	$16,720,000	$20,064,000
TOTAL STRUCTURE ITEMS	$0	$0
TOTAL ENVIRONMENTAL MITIGATION ITEMS	$2,120,000	$5,440,000
SUBTOTAL CONSTRUCTION COSTS	$18,840,000	$25,504,000
RIGHT OF WAY	$60,600,000	$99,400,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$79,440,000	$124,904,000
USE	**$80,000,000**	**$125,000,000**

I. ROADWAY ITEMS

Items	Cost (Low)	Cost (High)
1. Access Improvements	$ 3,040,000	$ 3,648,000
2. Trafic Signal and Lighting Improvements	$ 6,080,000	$ 7,296,000
3. Landscape	$ 2,800,000	$ 3,360,000
4. Sidewalk Improvements	$ 2,400,000	$ 2,880,000
5. Utility Relocation/Undergrounding	$ See RoW	$ See RoW
6. Traveled way Improvements, Roundabouts	$ 2,400,000	$ 2,880,000.0
TOTAL ROADWAY ITEMS	$ 16,720,000	$ 20,064,000

Note: Roadway items include demolition, earthwork, structural section, drainage, landscape specialty items, traffic items, minor items, mobilization, TMP, and contingencies

II. STRUCTURES ITEMS

Structure Name	Cost (Low)	Cost (High)
N/A	$ 0	$ 0
TOTAL STRUCTURE ITEMS	$ 0	$ 0

III. ENVIRONMENTAL MITIGATION

Items	Cost (Low)	Cost (High)
1. Hazardous Materials	$ 1,600,000	$ 4,800,000
2. Storm Water (DPP, Construction Site)	$ 520,000	$ 640,000
TOTAL MITIGATION ITEMS	$ 2,120,000	$ 5,440,000

See Attachment E

IV. RIGHT OF WAY ITEMS

Items	Cost (Low)	Cost (High)
A. Acquisition, including excess lands,...	$ 55,000,000	$ 82,500,000
B. Temporary Construction Easement	$ 600,000	$ 900,000
C. Utility Relocation / Undergrounding	$ 5,000,000	$ 16,000,000
TOTAL RIGHT OF WAY ITEMS	$ 60,600,000	$ 99,400,000

See Attachment G

Project Study Report - Project Development Support
Capital Outlay Project Estimate

Dist - Co - Rte 07-LA-1
PM 20.6/21.9

Program Code 20.XX.400.100
Project Number 0715000162
Month/Year 01/2015

Project Description:

Limits:
On PCH between Anita Street/Herondo Street (PM 20.621) and Artesia Boulevard (PM 21.919).
On Aviation Boulevard between PCH and Prospect Avenue.

Proposed Improvement (Scope):
. Underground utility lines; Reconstruct sidewalks; Construct landscaped median

Alternative 2
City Right of Way
Summary of Project Cost Estimate

	Cost (Low)	Cost (High)
TOTAL ROADWAY ITEMS	$3,520,000	$3,520,000
TOTAL STRUCTURE ITEMS	$0	$0
TOTAL ENVIRONMENTAL MITIGATION ITEMS	$128,000	$212,000
SUBTOTAL CONSTRUCTION COSTS	$3,648,000	$3,732,000
RIGHT OF WAY	$6,660,000	$7,940,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$10,308,000	$11,672,000
USE	**$10,000,000**	**$12,000,000**

I. ROADWAY ITEMS

Items	Cost (Low)	Cost (High)
1. Access Improvements	$ 748,000	$ 748,000
2. Trafic Signal and Lighting Improvements	$ 1,700,000	$ 1,700,000
3. Landscape	$ 500,000	$ 500,000
4. Sidewalk Improvements	$ 572,000	$ 572,000
5. Utility Relocation/Undergrounding	$ See RoW	$ See RoW
6. Traveled way Improvements, Roundabouts	$ NA	$ NA
TOTAL ROADWAY ITEMS	$ 3,520,000	$ 3,520,000

Note: Roadway items include demolition, earthwork, structural section, drainage, landscape specialty items, traffic items, minor items, mobilization, TMP, and contingencies

II. STRUCTURES ITEMS

Structure Name	Cost (Low)	Cost (High)
N/A	$ 0	$ 0
TOTAL STRUCTURE ITEMS	$ 0	$ 0

III. ENVIRONMENTAL MITIGATION

Items	Cost (Low)	Cost (High)
1. Hazardous Materials	$ 20,000	$ 100,000
2. Storm Water (DPP, Construction Site)	$ 108,000	$ 112,000
TOTAL MITIGATION ITEMS	$ 128,000	$ 212,000

See Attachment E

IV. RIGHT OF WAY ITEMS

Items	Cost (Low)	Cost (High)
A. Acquisition, including excess lands,...	$ 0	$ 0
B. Temporary Construction Easement	$ 160,000	$ 240,000
C. Utility Relocation / Undergrounding	$ 6,500,000	$ 7,700,000
TOTAL RIGHT OF WAY ITEMS	$ 6,660,000	$ 7,940,000

See Attachment G

Project Study Report - Project Development Support
Capital Outlay Project Estimate

Dist - Co - Rte 07-LA-1
PM 20.6/21.9

Program Code 20.XX.400.100
Project Number 0715000162
Month/Year 01/2015

Project Description:

Limits:

On PCH between Anita Street/Herondo Street (PM 20.621) and Artesia Boulevard (PM 21.919).
On Aviation Boulevard between PCH and Prospect Avenue.

Proposed Improvement (Scope):

. Relocate/underground utility lines; Reconstruct sidewalks; Construct roundabouts; Remove median; Cold plane and AC Overlay

Alternative 3
City Right of Way

Summary of Project Cost Estimate

	Cost (Low)	Cost (High)
TOTAL ROADWAY ITEMS	$3,820,000	$4,584,000
TOTAL STRUCTURE ITEMS	$0	$0
TOTAL ENVIRONMENTAL MITIGATION ITEMS	$520,000	$1,340,000
SUBTOTAL CONSTRUCTION COSTS	$4,340,000	$5,924,000
RIGHT OF WAY	$11,160,000	$14,840,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$15,500,000	$20,764,000
USE	**$15,000,000**	**$21,000,000**

I. ROADWAY ITEMS

Items	Cost (Low)	Cost (High)
1. Access Improvements	$ 680,000	$ 816,000
2. Trafic Signal and Lighting Improvements	$ 1,400,000	$ 1,680,000
3. Landscape	$ 480,000	$ 576,000
4. Sidewalk Improvements	$ 600,000	$ 720,000
5. Utility Relocation/Undergrounding	$ See RoW	$ See RoW
6. Traveled way Improvements, Roundabouts	$ 660,000	$ 792,000.0
TOTAL ROADWAY ITEMS	$ 3,820,000	$ 4,584,000

Note: Roadway items include demolition, earthwork, structural section, drainage, landscape specialty items, traffic items, minor items, mobilization, TMP, and contingencies

II. STRUCTURES ITEMS

Structure Name	Cost (Low)	Cost (High)
N/A	$ 0	$ 0
TOTAL STRUCTURE ITEMS	$ 0	$ 0

III. ENVIRONMENTAL MITIGATION

Items	Cost (Low)	Cost (High)
1. Hazardous Materials	$ 400,000	$ 1,200,000
2. Storm Water (DPP, Construction Site)	$ 120,000	$ 140,000
TOTAL MITIGATION ITEMS	$ 520,000	$ 1,340,000

See Attachment E

IV. RIGHT OF WAY ITEMS

Items	Cost (Low)	Cost (High)
A. Acquisition, including excess lands,...	$ 4,000,000	$ 6,000,000
B. Temporary Construction Easement	$ 160,000	$ 240,000
C. Utility Relocation / Undergrounding	$ 7,000,000	$ 8,600,000
TOTAL RIGHT OF WAY ITEMS	$ 11,160,000	$ 14,840,000

See Attachment G

Project Study Report - Project Development Support
Capital Outlay Project Estimate

Dist - Co - Rte 07-LA-1
PM 20.6/21.9

Program Code 20.XX.400.100
Project Number 0715000162
Month/Year 01/2015

Project Description:

Limits:

On PCH between Anita Street/Herondo Street (PM 20.621) and Artesia Boulevard (PM 21.919).
On Aviation Boulevard between PCH and Prospect Avenue.

Proposed Improvement (Scope):

. Relocate/underground utility lines; Reconstruct sidewalks; Construct roundabouts; Reconstruct median; Cold plane and AC Overlay

Alternative 4
City Right of Way

Summary of Project Cost Estimate

	Cost (Low)	Cost (High)
TOTAL ROADWAY ITEMS	$4,180,000	$5,016,000
TOTAL STRUCTURE ITEMS	$0	$0
TOTAL ENVIRONMENTAL MITIGATION ITEMS	$530,000	$1,360,000
SUBTOTAL CONSTRUCTION COSTS	$4,710,000	$6,376,000
RIGHT OF WAY	$11,160,000	$14,840,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$15,870,000	$21,216,000
USE	**$16,000,000**	**$22,000,000**

I. ROADWAY ITEMS

Items	Cost (Low)	Cost (High)
1. Access Improvements	$ 760,000	$ 912,000
2. Trafic Signal and Lighting Improvements	$ 1,520,000	$ 1,824,000
3. Landscape	$ 700,000	$ 840,000
4. Sidewalk Improvements	$ 600,000	$ 720,000
5. Utility Relocation/Undergrounding	$ See RoW	$ See RoW
6. Traveled way Improvements, Roundabouts	$ 600,000	$ 720,000.0
TOTAL ROADWAY ITEMS	$ 4,180,000	$ 5,016,000

Note: Roadway items include demolition, earthwork, structural section, drainage, landscape specialty items, traffic items, minor items, mobilization, TMP, and contingencies

II. STRUCTURES ITEMS

Structure Name	Cost (Low)	Cost (High)
N/A	$ 0	$ 0
TOTAL STRUCTURE ITEMS	$ 0	$ 0

III. ENVIRONMENTAL MITIGATION

Items	Cost (Low)	Cost (High)
1. Hazardous Materials	$ 400,000	$ 1,200,000
2. Storm Water (DPP, Construction Site)	$ 130,000	$ 160,000
TOTAL MITIGATION ITEMS	$ 530,000	$ 1,360,000

See Attachment E

IV. RIGHT OF WAY ITEMS

Items	Cost (Low)	Cost (High)
A. Acquisition, including excess lands,...	$ 4,000,000	$ 6,000,000
B. Temporary Construction Easement	$ 160,000	$ 240,000
C. Utility Relocation / Undergrounding	$ 7,000,000	$ 8,600,000
TOTAL RIGHT OF WAY ITEMS	$ 11,160,000	$ 14,840,000

See Attachment G

Attachment E

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: Amir Elsharief , Design Manager
Program Management
District 7, Los Angeles Office

Date: 1/9/15

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

07-LA-1-PMPM 20.6/21.9
Project ID #
EA: 31500K
Data Sheet ID NO: ds1183

A Field Review was conducted	Yes	
Scope of the Right of Way		
Right of Way Required	Yes	
Number of Parcels	51-100	
Type of Parcels	Suburban	
Land Area:	Fee:	Easement:
Displaced Persons/Businesses	No	
Demolition/Clearance	No	
Railroad Involvement	No	
Utility Involvement	Yes	

Cost Estimates

Support Costs	$2,500,000 - $3,500,000
Capital Costs	$7,000,000 - $10,000,000

Schedule

Right of Way will require 18 months to deliver a Right of Way Certification #1 from Final R/W Maps. This estimate is based on a Right of Way Certification date of 10/1/20.

Areas of Concern

The Right of Way cost contains an estimate for the proposed undergrounding of utilities within the project limits. It is assumed that these utilities will remain within the public right of way, and that no new right of way will be required for the undergrounding.

Undergrounding estimated at $8,600,000.00

The estimator was provided with very preliminary plans and maps, which may ultimately be significantly revised, resulting in this conceptual cost estimate to be modified and updated.

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: Amir Elsharief , Design Manager
Program Management
District 7, Los Angeles Office

Date: 1/9/15

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

07-LA-1-PMPM 20.6/21.9
Project ID #
EA: 31500K
Data Sheet ID NO: ds1182

A Field Review was conducted	Yes	
Scope of the Right of Way		
Right of Way Required	Yes	
Number of Parcels	>100	
Type of Parcels	Suburban	
Land Area:	Fee:	Easement:
Displaced Persons/Businesses	Yes	
Demolition/Clearance	Yes	
Railroad Involvement	No	
Utility Involvement	Yes	

Cost Estimates

Support Costs	$4,500,000 - $6,000,000
Capital Costs	$60,000,001 - $100,000,000

Schedule

Right of Way will require 36 months to deliver a Right of Way Certification #1 from Final R/W Maps. This estimate is based on a Right of Way Certification date of 10/1/20.

Areas of Concern

The Right of Way cost contains an estimate for the proposed undergrounding of utilities within the project limits. It is assumed that these utilities will remain within the public right of way, and that no new right of way will be required for the undergroudning.

Undergrounding estimated at $8,600,000.00

The estimator was provided with very preliminary plans and maps, which may ultimately be significantly revised, resulting in this conceptual cost estimate to be modified and updated.

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: Amir Elsharief , Design Manager
Program Management
District 7, Los Angeles Office

Date: 1/9/15

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

07-LA-1-PMPM 20.6/21.9
Project ID #
EA: 31500K
Data Sheet ID NO: ds1181

A Field Review was conducted	Yes	
Scope of the Right of Way		
Right of Way Required	Yes	
Number of Parcels	>100	
Type of Parcels	Suburban	
Land Area:	Fee:	Easement:
Displaced Persons/Businesses	Yes	
Demolition/Clearance	Yes	
Railroad Involvement	No	
Utility Involvement	Yes	

Cost Estimates

Support Costs	$4,500,000 - $6,000,000
Capital Costs	$60,000,001-$100,000,000

Schedule

Right of Way will require 36 months to deliver a Right of Way Certification #1 from Final R/W Maps. This estimate is based on a Right of Way Certification date of 10/1/20.

Areas of Concern

The Right of Way cost contains an estimate for the proposed undergrounding of utilities within the project limits. It is assumed that these utilities will remain within the public right of way, and that no new right of way will be required for the undergrounding.

Undergrounding estimated at $8,600,000.00

The estimator was provided with very preliminary plans and maps, which may ultimately be significantly revised, resulting in this conceptual cost estimate to be modified and updated.

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: Amir Elsharief , Design Manager
Program Management
District 7, Los Angeles Office

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

Date: 1/20/15

07-LA-Aviation Blvd-PMBtwn Prospect
& Pacific Coast Highway
Project ID # 0715000162
EA: 31500K Alt. 2 Aviation Blvd.
Data Sheet ID NO: ds1196

A Field Review was conducted

Scope of the Right of Way

Right of Way Required	Yes	
Number of Parcels	26-50	
Type of Parcels	Suburban	
Land Area:	Fee:	Easement:
Displaced Persons/Businesses	Yes	
Demolition/Clearance	Yes	
Railroad Involvement	No	
Utility Involvement	Yes	

Cost Estimates

Support Costs	$1,300,000.00 - $1,800,000.00
Capital Costs	$6,750,000.00 - $8,000,000.00

Schedule

Right of Way will require 30 months to deliver a Right of Way Certification #1 from Final R/W Maps. This estimate is based on a Right of Way Certification date of 6/15/17.

Areas of Concern

The Right of Way cost contains an estimate for the proposed undergrounding of utilities within the project limits. It is assumed that these utilities will remain within the public Right of Way, and that no new right of way will be required for the undergrounding.

According to information provided to the estimator, pole lines are located on both sides of Aviation Blvd. Therefore this estimate includes undergrounding for both sides of the street.

Undergrounding estimated at $6,500,000.00

The estimator was provided with very preliminary plans and maps, which may ultimately be significantly revised, resulting in the need for this conceptual cost estimate to be modified and updated.

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: Amir Elsharief , Design Manager
Program Manager
District 7, Los Angeles Office

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

Date: 1/20/15

07-LA-Aviation Blvd-PMProspect /
Pacific Coast Highway
Project ID # 0715000162
EA: 31500K Alt. 3 Aviation Blvd.
Data Sheet ID NO: ds1191

A Field Review was conducted	Yes	
Scope of the Right of Way		
Right of Way Required	Yes	
Number of Parcels	26-50	
Type of Parcels	Suburban	
Land Area:	Fee:	Easement:
Displaced Persons/Businesses	Yes	
Demolition/Clearance	Yes	
Railroad Involvement	No	
Utility Involvement	Yes	

Cost Estimates

Support Costs	$1,400,000.00 - $2,000,000.00
Capital Costs	$11,000,000.00 - $15,000,000.00

Schedule

Right of Way will require 30 months to deliver a Right of Way Certification #1 from Final R/W Maps. This estimate is based on a Right of Way Certification date of 6/15/17.

Areas of Concern

The Right of Way cost contains an estimate for the proposed undergrounding of utilities within the project limits. It is assumed that these utilities will remain within the public Right of Way, and that no new right of way will be required for the undergrounding.

According to information provided to the estimator, pole lines are located on both sides of Aviation Blvd. Therefore this estimate includes undergrounding for both sides of the street.

Undergrounding estimated at $6,500,000.00

The estimator was provided with very preliminary plans and maps, which may ultimately be significantly revised, resulting in the need for this conceptual cost estimate to be modified and updated.

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: Amir Elsharief , Design Manager
Program Management
District 7, Los Angeles Office

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

Date: 1/20/15

07-LA-Aviation Blvd-PMProspect /
Pacific Coast Highway
Project ID # 0715000162
EA: 31500K Alt. 4 Aviation
Data Sheet ID NO: ds1190

A Field Review was conducted	Yes	
Scope of the Right of Way		
Right of Way Required	Yes	
Number of Parcels	26-50	
Type of Parcels	Suburban	
Land Area:	Fee:	Easement:
Displaced Persons/Businesses	Yes	
Demolition/Clearance	Yes	
Railroad Involvement	No	
Utility Involvement	Yes	

Cost Estimates

Support Costs	$1,400,000.00 - $2,000,000.00
Capital Costs	$11,000,000.00 - $15,000,000.00

Schedule
Right of Way will require 30 months to deliver a Right of Way Certification #1 from Final R/W Maps. This estimate is based on a Right of Way Certification date of 6/15/17.

Areas of Concern
The Right of Way cost contains an estimate for the proposed undergrounding of utilities within the project limits. It is assumed that these utilities will remain within the public Right of Way, and that no new right of way will be required for the undergrounding.

According to information provided to the estimator, pole lines are located on both sides of Aviation Blvd. Therefore this estimate includes undergrounding for both sides of the street.

Undergrounding estimated at $6,500,000.00

The estimator was provided with very preliminary plans and maps, which may ultimately be significantly revised, resulting in the need for this conceptual cost estimate to be modified and updated.

Attachment F

PRELIMINARY ENVIRONMENTAL ANALYSIS REPORT

1. Project Information

District	County	Route	PM	EA
07	LA	1	20.62/21.92	31500K
Project Title: PCH/Hermosa Beach Improvement Project Alternative Proposals				
Project Manager Zoe Yue			Phone # 213-897-1051	
Project Engineer James Vu			Phone # 213-897-0116	
Environmental Office Chief/Manager Karl Price			Phone # 213-897-1839	
PEAR Preparer Christine Lan			Phone # 213-897-2936	

2. Project Description

Purpose and Need

The City of Hermosa Beach has proposed a highway improvement project on Pacific Coast Highway (PCH/LA-1) between Herondo Street/Anita Street (PM 20.6) and Artesia Boulevard (PM 21.9). The project will also include Aviation Blvd between the intersections of Prospect Ave/Aviation Blvd and PCH/ Aviation Blvd. The purpose of this project is to incorporate complete street features, improve pedestrian and bicycle mobility, beautify the roadway, enhance traffic safety, and fulfill Americans with Disabilities Act (ADA) requirements.

The project is needed for four reasons: 1) the existing sidewalk is not ADA compliant, is in poor condition, and is generally narrow with protruding obstacles (i.e. utility poles) which discourages pedestrian use of the sidewalks, 2) there is no existing bike access on this section of PCH, 3) the bus stops are small and lack visibility, 4) the existing travel lanes are at non-standard widths and the intersection geometrics are inadequate for u-turn movements, hindering traffic flow.

Description of Work

All build alternatives will likely include right of way acquisition, demolition, earthwork, cold planing, grading, concrete work, re-striping, traffic control, staging, storm water BMPs and General BMPs.

Alternatives

There are three build alternatives and a no build alternative that are being considered:

Alternative 1: No-build

This alternative will maintain the existing facility in its current condition.

Alternative 2:

Within State Right of Way

This alternative will beautify Pacific Coast Highway and upgrade the existing sidewalks to ADA standards. Protruding obstacles that limit the clear width of the sidewalks will be removed and exposed utility lines will be buried underground. The existing two-way left turn lane will be reconstructed to provide space for a raised landscaped median. This alternative will maintain the existing travel lanes in their current condition.

Temporary Construction Easements will be required for adjusting driveways along the sidewalk to meet ADA requirements.

Within City Right of Way

On Aviation Blvd this alternative would remove protruding obstacles that limit the clear width of the sidewalks and exposed utility lines will be buried underground. The existing two-way left turn lane will be reconstructed to provide space for a raised landscaped median. One through-lane in the east bound direction will be eliminated, leaving only one through-lane in that direction. A 5ft bike lane will be added in each direction and parking will be provided on the side of the east bound direction.

Temporary Construction Easements will be required for adjusting driveways along the sidewalk to meet ADA requirements.

Alternative 3:

Within State Right of Way

This alternative proposes to develop two distinct segments on PCH within the project limit. The first segment is between Aviation Blvd and Artesia Blvd and the second segment is between Aviation Blvd and Anita St/Herondo St. Common design features between the two segments are: upgrading the sidewalks to current ADA standards; eliminating the outside (#3) lane in each direction to provide space for two lanes with standard widths of 11ft and providing permanent parking (9 ft wide) in each direction.

The first segment (between Aviation Blvd and Artesia Blvd) would have 5ft bike lanes in each direction and roundabouts proposed at the following intersections: PCH/Aviation Blvd, PCH/Pier Ave. and PCH/Artesia Blvd. The second segment (between Aviation Blvd and Anita St/Herondo St.) will have raised landscaped median and left-turn lanes at various intersections.

Temporary Construction Easements will be required for adjusting driveways along the sidewalk to meet the ADA requirements. Right of way acquisition will be required for construction of roundabouts. Utility obstacles along the sidewalks will be relocated underground.

Within City Right of Way

On Aviation Blvd this alternative would remove protruding obstacles that limit the clear width of the sidewalks and exposed utility lines will be buried underground. One through-lane in the east bound direction will be eliminated, leaving only one through-lane in that direction. A 5ft bike lane will be added in each direction and parking will be provided on the side of the east bound direction. A roundabout will be added at the intersection of Aviation Blvd andProspect Ave.

Right of way acquisition will be required to construct the roundabout. Temporary Construction Easements will be required for adjusting driveways along the sidewalk to meet the ADA requirements.

Alternative 4

This alternative is similar to alternative 3, except that a landscaped median would be constructed instead of the bike lanes throughout the project area on both PCH and Aviation Blvd.

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	☐		
Categorical Exemption	☐	Categorical Exclusion	☐
Environmental Document			
Initial Study or Focused Initial Study with proposed Negative Declaration (ND) or Mitigated ND	☐	Routine Environmental Assessment with proposed Finding of No Significant Impact Complex Environmental Assessment with proposed Finding of No Significant Impact	☐ ☐
Environmental Impact Report	☒	Environmental Impact Statement	☒
CEQA Lead Agency (if determined):		California Department of Transportation	
Estimated length of time (months) to obtain environmental approval:		24 months	
Estimated person hours to complete identified tasks:		See Attachment B	

4. Special Environmental Considerations

Alternatives 3 and 4 will require new right of way from private properties which may result in additional time needed to prepare the environmental document if there is project controversy regarding right of way.

5. Anticipated Environmental Commitments

Lead Compliance Plan (LCP)

Work Plan (WP)
Contractors will devise a work plan to address health and safety of workers performing the task of removal, containment, storage, and disposal of yellow thermoplastic and lead-based painted traffic stripe and pavement marking.

Storm Water Pollution Prevention Plan (SWPPP)
SWPPP will be required if the soil disturbance area is more than 1 acre.

Day Time Work Window
Potential day time work windows and limited night time construction due to noise concerns for adjacent residential areas.

Cultural Pre-Construction Survey
A Pre-Construction Survey is required for any uninvestigated areas within the APE to determine the presence of archeological resources.

Biology Pre-Construction Survey

A Pre-Construction Survey is required to determine if any endangered/threatened species is within the project impact area.

Endangered Species Sighting and Construction Halting
If any state and federal species are sighted during construction then all construction activities will cease and the district biologist will be notified immediately. Work should not resume until clearance is given by the district biologist.

Work Window and Biologist Monitor for Nesting Birds
No vegetation removal should take place between February 15th and September 1st if at all possible. A qualified biology monitor should be on site to monitor any vegetation removal activity. If nesting birds are observed before or during vegetation removal then all vegetation removal activities will be halted until it is determined that the fledglings have left the nest. Nesting birds may not be impacted by any construction activity including noise and dust pollution or the destruction of habitat.

Best Management Practices (BMPs)
Best Management Practices should be implemented to the Maximum Extent Practicable. They will be in place before and during project construction to avoid any water quality impacts. If at any time work, debris, or staging of equipment shall occur inside any channel, drainage, stream, rivers, or creek beds, the environmental division must be notified immediately.

6. Permits and Approvals

Local Coastal Development Permit (to be determined)- A short section of the project's south side post mile extends into the local coastal jurisdiction. The need for this permit will be determined during the next phase.

7. Level of Effort: Risks and Assumptions

Assumptions:

- Study limits and design alternatives have been properly identified by the City of Hermosa Beach and Caltrans' design team and will remain unchanged throughout the project study duration.
- The environmental document level identified in this report has been determined based on a preliminary evaluation of the project. However, it is impossible to foresee all project impacts at the preliminary project study stage. If additional unforeseen impacts arise a higher level environmental document may be required.
- There will be sufficient opportunities to address public concerns.

Risks:

- Additional right of way and relocation is needed for alternatives 3 and 4 of this project which may create public controversy for the project. Opposition from landowners may elevate the level of environmental document needed and will increase the time and cost needed to complete the project.
- Delays in obtaining a full description of engineering design details and other materials that are needed for environmental studies or permitting can cause additional delays.
- Delays from outside agencies in responding and processing permits can cause additional delays.

8. *PEAR Technical Summaries*

8.1 Land Use: No Effect

8.2 Growth: No Effect

8.3 Farmlands/Timberlands: No Effect

8.4 Community Impacts:

Based on the current project scope there will be substantial impacts to the community due to the acquiring of right of way from adjacent properties. 16 properties will be permanently impacted by alternatives 3 and 4 and relocation will be required for many of the properties. The project is also expected to impact numerous driveways to existing housing along PCH and Aviation Blvd. A Community Impacts Assessment will be needed along with a Relocation Study.

The installation of roundabouts proposed by alternatives 3 and 4 is somewhat controversial within the PDT and will likely generate controversy among the local residents and business owners. There is also concern that the roundabouts could adversely affect access to businesses within the project area and create an economic hardship. It has also been suggested by the City of Hermosa Beach that this may set a precedent that other adjacent cities will want to emulate, thereby potentially increasing whatever impacts (positive or negative) their construction may cause.

This determination is based on approximate project footprint maps. Actual impact of the surrounding area will be determined in later phases when right of way data is available.

8.5 Visual/Aesthetics:

The project is expected to have a positive effect on Visual and Aesthetics with the addition of landscaped medians and roundabouts. A study on visual and aesthetics can be requested during the PAED phase to assess for the project improvements.

8.6 Cultural Resources:

According to the current project scope this project has low archaeological sensitivity. There are no archaeological sites within or adjacent to the project based on the district 7 records search. Any uninvestigated areas within the APE should be surveyed by a qualified archaeologist prior to project approval. The estimated time for cultural review is one to three months.

8.7 Hydrology and Floodplain:

The project location is outside of the 100 Year Flood Zones in the USA based on a Federal Emergency Management Agency (FEMA) Flood Zones search.

8.8 Water Quality and Storm Water Runoff:

The Storm Water Pollution Prevention Plan (SWPPP) is a document that addresses water pollution control for a construction project. The Construction General Permit (CGP) requires that all storm water discharges associated with construction activity, where said activity results in soil disturbance of one acre or more of land area, must be permitted under the CGP and have a fully developed site SWPPP on-site prior to beginning any soil disturbing activities. Caltrans may require the development of a SWPPP for projects with disturbed soil areas of less than 1 acre if it is determined that the project possesses a significant water quality risk.

All of the build alternatives will be subject to the same requirements.

8.9 Geology, Soils, Seismic and Topography:

A geotechnical review of the project area will be required during PA/ED to fully evaluate potential effects.

8.10 Paleontology: No Effect

8.11 Hazardous Waste/Materials:

It is recommended that a Phase I Environmental Site Assessment (ESA) be prepared in accordance with ASTM guideline during the PAED/PS&E Phase to identify potential recognized environmental conditions (RECs) for the intersections specifically related to new R/W acquisition and construction activities.

Additionally, for new R/W acquisition purposes, it will be necessary to conduct a Phase II environmental site investigation (SI) for the parcels that are located within the reported REC sites. The SI must provide sufficient information to address the lateral extent and maximum depth of proposed excavation and proposed acquisition type (fees/easements).

Project concerns include:

- 25 recognized environmental conditions (RECs) sites were reported within 1,000 feet radius search from the project footprint.
- Yellow thermoplastic/paint striping that needs to be removed may contain lead and chromium at concentrations that are considered hazardous. The level of lead and chromium will be analyzed during later project phases to determine if the product needs to be disposed at a Class I facility.
- Roadway Improvements and Utility Relocation: These improvements will involve excavation work. A Phase II environmental SI shall be conducted that provides sufficient information to address the lateral extent and maximum depth of proposed excavation for all roadway improvements and utility relocation work.
- Right of Entry Permit and Property Access: Before Caltrans/consultant can access properties to conduct the recommended Phase I Environmental Site Assessment and Phase II Site Investigation, "Permit to Enter" permits (Permits) shall be required. It is important that the Permits must be obtained as early as possible to minimize project delay as the process can take up to 18 months to complete.

8.12 Air Quality:

Based on the current project's scope of work the proposed project is not exempt from conformity requirements according to 40 CFR 93.126-128. The proposed project must be included in the latest conforming Regional Transportation Plan (RTP) and Federal Transportation Improvement Program (FTIP) to satisfy regional conformity requirements and a conformity analysis should be prepared to demonstrate conformity at the project level.

The project is located in the South Coast Air Basin (SCAB) which has the following pollutant attainment status:

	Federal Status	State Status
Sulfur Dioxide (SO_2)	Nonattainment	Nonattainment
Nitrogen Dioxide (NO_2)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Maintenance	Attainment
ozone	Nonattainment	Nonattainment
PM_{10}	Maintenance	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Nonattainment	Nonattainment

For projects in areas that are in maintenance or nonattainment of federal standards for CO, PM_{10}, or $PM_{2.5}$, a hot-spot analysis is required for CO, PM_{10}, or $PM_{2.5}$ in accordance with the US EPA transportation conformity regulations for projects that are not considered exempt pursuant to 40 CFR 93.126.

Los Angeles County, where the proposed project is located, is within the South Coast Air Basin (SCAB), which is an attainment-maintenance area for PM_{10} and non-attainment for $PM_{2.5}$. Per the EPA's final rule, for projects located in a PM nonattainment and maintenance area, an Interagency Consultation is required as part of the demonstration of transportation conformity requirements. The Interagency Coordination takes the form of the SCAG Transportation Conformity Working Group (TCWG), which includes representatives from Federal Highway Administration (FHWA), Environmental Protection Agency (EPA), Air Resource Board (ARB), South Coast Air Quality Management District (SCAQMD), and other local and state partners.

The proposed project is located within the boundary of SCAB; therefore, this project must comply with, among others, the SCAQMD Fugitive Dust Implementation Rule 403 to minimize temporary emissions during construction of the project as applicable and appropriate.

It is requested that the AQB be informed of any further changes to the proposed scope or the class of action determined for this project. Such changes may require an update or reassessment of air quality issues for the proposed project.

8.13 Noise and Vibration:

The project is located in a densely populated area adjacent to residential and commercial facilities. A number of sensitive receptors (e.g., schools) are located within 1000 feet. A Noise Study will be required during PAED to assess potential construction impacts.

8.14 Energy and Climate Change:

Improved traffic circulation, reduced traffic flow, and multimodal access will reduce the amount of vehicular traffic at this section of the roadway. All of the build alternatives are expected to result in a slight reduction in energy and vehicular usage and therefore a reduction in greenhouse gas emissions.

8.15 Biological Environment:

Based on the current project scope, impacts to biological resources are expected to be minimal because the immediate vicinity of the project is highly disturbed.

However, there are 11 state and/or federally listed threatened/endangered wildlife species in the areas adjacent to the project area. There are also four listed threatened/endangered plant species. There is no critical habitat in this area. The high number of threatened/endangered species is due to the project's close proximity to the Pacific Ocean's shore.

Additional evaluation of impacts on listed and sensitive bird species will be needed during the PA/ED phase of the project. Biology review is expected to take approximately six to nine months to deliver should biological surveys and endangered species consultation be required.

8.16 Cumulative Impacts: No Effect

8.17 Context Sensitive Solutions:

This project provides a transportation system that enhances the place in which it serves. The project will improve traffic operation by providing improved traffic flow through roundabouts. The project will also promote multi-modal transportation by improving bike, transit, and pedestrian access, thereby enhancing the quality of life of the local community.

9. Summary Statement for PSR or PSR-PDS

For each of the build alternatives, the primary environmental issue centers around the need to acquire additional right of way property.

Studies required:

- Natural Environmental Study (NES)
- Cultural Study
- Hazardous Waste Site Investigation (SI)
- Air Quality Report (AQR)
- Community Impacts Assessment
- Relocation Study
- Geotechnical Investigation
- Visual Analysis (optional)

Permits

- Local Coastal Permit (to be determined)

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	Date: 1/9/2015
Biologist Celina Oliveri	Date: 1/12/2015
Community Impacts specialist N/A	Date:
Noise and Vibration specialist Jin Lee	Date: 1/20/2015
Air Quality specialist Andrew Yoon	Date: 1/9/2015
Paleontology specialist/liaison N/A	Date:
Water Quality specialist N/A	Date:
Hydrology and Floodplain specialist N/A	Date:
Hazardous Waste/Materials specialist	Date: 1/13/2015

Steve Chan Visual/Aesthetics specialist N/A	Date:
Energy and Climate Change specialist N/A	Date:
Other: N/A	Date:
PEAR Preparer (Name and Title) Christine Lan/ Associate Environmental Planner	Date: 1/21/2015

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.

Karl Price
Environmental Branch Chief — Date: 1/23/15

Project Manager — Date: 1/26/15

REQUIRED ATTACHMENTS:

Attachment A: PEAR Environmental Studies Checklist
Attachment B: Estimated Resources by WBS Code
Attachment C: Schedule (Gantt Chart)
Attachment D: 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	☒	☐	☐	L	
Growth	☒	☐	☐	L	
Farmlands/Timberlands	☒	☐	☐	L	
Community Impacts	☐	☐	☒	L	
Community Character and Cohesion	☐	☐	☒	L	
Relocations	☐	☐	☒	L	
Environmental Justice	☐	☒	☐	L	
Utilities/Emergency Services	☐	☐	☒	L	
Visual/Aesthetics	☐	☐	☒	L	
Cultural Resources:	☐	☒	☐	L	
Archaeological Survey Report	☒	☐	☐	L	
Historic Resources Evaluation Report	☒	☐	☐	L	
Historic Property Survey Report	☒	☐	☐	L	
Historic Resource Compliance Report	☒	☐	☐	L	
Section 106 / PRC 5024 & 5024.5	☐	☒	☐	L	
Native American Coordination	☒	☐	☐	L	
Finding of Effect	☒	☐	☐	L	
Data Recovery Plan	☒	☐	☐	L	
Memorandum of Agreement	☒	☐	☐	L	
Other:	☒	☐	☐	L	
Hydrology and Floodplain	☒	☐	☐	L	
Water Quality and Stormwater Runoff	☐	☒	☐	L	
Geology, Soils, Seismic and Topography	☒	☐	☐	L	
Paleontology	☒	☐	☐	L	
PER	☒	☐	☐	L	
PMP	☒	☐	☐	L	
Hazardous Waste/Materials:	☐	☐	☒	L	
ISA (Additional)	☐	☐	☒	L	
PSI	☒	☐	☐	L	
Other:	☒	☐	☐	L	
Air Quality	☐	☐	☒	L	
Noise and Vibration	☐	☐	☒	L	
Energy and Climate Change	☒	☐	☐	L	
Biological Environment	☐	☐	☒	L	
Natural Environment Study	☐	☐	☒	L	
Section 7:	☒	☐	☐	L	
Formal	☒	☐	☐	L	
Informal	☒	☐	☐	L	
No effect	☒	☐	☐	L	
Section 10	☒	☐	☐	L	
USFWS Consultation	☒	☐	☐	L	
NMFS Consultation	☒	☐	☐	L	
Species of Concern (CNPS, USFS, BLM, S, F)	☒	☐	☐	L	

Environmental Studies for PA&ED Checklist					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Wetlands & Other Waters/Delineation	☒	☐	☐	L	
404(b)(1) Alternatives Analysis	☒	☐	☐	L	
Invasive Species	☒	☐	☐	L	
Wild & Scenic River Consistency	☒	☐	☐	L	
Coastal Management Plan	☒	☐	☐	L	
HMMP	☒	☐	☐	L	
DFG Consistency Determination	☒	☐	☐	L	
2081	☒	☐	☐	L	
Other:	☒	☐	☐	L	
Cumulative Impacts	☐	☒	☐	L	
Context Sensitive Solutions	☐	☒	☐	L	
Section 4(f) Evaluation	☒	☐	☐	L	
Permits:					
401 Certification Coordination	☒	☐	☐	L	
404 Permit Coordination, IP, NWP, or LOP	☒	☐	☐	L	
1602 Agreement Coordination	☒	☐	☐	L	
Local Coastal Development Permit Coordination	☐	☐	☒	L	
State Coastal Development Permit Coordination	☒	☐	☐	L	
NPDES Coordination	☒	☐	☐	L	
US Coast Guard (Section 10)	☒	☐	☐	L	
TRPA	☒	☐	☐	L	
BCDC	☒	☐	☐	L	

ATTACHMENT B - Resources by WBS Code

Project ID: 07-1500-0162
EA: 07-31500K
Description: Hermosa Beach Roadway Improvement

WBS Task Activity Code	Division Chief	Office Chief	Senior	Generalist	Biology	Cultural	Haz Waste	Socio-Economic	Storm Water To be Determined in later phases	ECL	Steward-ship	Noise/Air- To be Determined in later phases	Sup Svcs	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																				-
160.15 – Draft Project Report																				-
160.30 – Environmental Study Request																				-
160.40 – NEPA Assignment																				-
Total Perform Prelim Eng Studies & Draft PR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perform Environmental Studies and Prepare Draft Environmental Document - Task Management Activities																				
165.05 – Env Scoping of Alternatives			70	200	16	16	16		16				8							342
165.10 – General Env Studies			100	300	4		400													804
165.15 – Biological Studies					40															40
165.20 – Cultural Resource Studies						200														200
165.25 – Draft Env Document			200	2,800	8															3,008
165.30 – NEPA Assignment				8																8
Total Perform Env Studies & Prepare DED	-	-	370	3,308	68	216	416	-	16	-	-	-	8	-	-	-	-	-	-	4,402
Obtain Permits, Licenses, Agreements and Certifications (PLACs) and Route Adoptions during PA&ED Component - Task Management Activities																				
170.05 – Reqired PLACs				40																40
170.10 – PLACs					8															8
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	-	-	-	40	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
Circulate Draft Environmental Document and Select Preferred Project Alternative - Task Management Activities																				
175.05 – DED Circulation			20	100																120
175.10 – Public Hearing			20	160																180
175.15 – Public Comment Responses & Corr			60	200	20	20														300
175.20 – Project Preferred Alternative				8																8
175.25 – NEPA Assignment				8																8
Total Circ DED & Select Preferred Proj Alt	-	-	100	476	20	20	-	-	-	-	-	-	-	-	-	-	-	-	-	616
Prepare and Approve Project Report and Final Environmental Document																				
180.05 – Final Project Report				30																30
180.10 – Final Env Document			16	450	16	16														498
180.15 – Completed Env Document				100																100
180.20 – NEPA Assignment				8																8
Total Prep and Approve PR & FED	-	-	16	588	16	16	-	-	-	-	-	-	-	-	-	-	-	-	-	636
Prepare Base Maps and Plan Sheets for PS&E Development																				
185.05 – Updated Project Information				320																320
185.15 – Preliminary Design																				-
Total Prep Base Maps & Plan Sheets	-	-	-	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320

Project ID: 07-1500-0162
EA: 07-31500K
Description: Hermosa Beach Roadway Improvement

WBS Task Activity Code	Division Chief	Office Chief	Senior	Generalist	Biology	Cultural	Haz Waste	Socio-Economic	Storm Water To be Determined in later phases	ECL	Steward-ship	Noise/Air- To be Determined in later phases	Sup Svcs	Design	Hydraulics	Landscape	Planning	Right of Way	Surveys	Total
Assigned Unit																				
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				10																10
205.10 – PLACs											80									80
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	-	-	-	10	-	-	-	-	-	-	80	-	-	-	-	-	-	-	-	90
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 Actitivities																				
235.05 – Environmental Mitigation				20		-					150									170
235.10 – Detailed Site Investigation for HW							600													800
235.15 – HW Management Plan																				-
235.20 – HW PS&E							200													200
235.25 – HW Clean-up																				-
235.30 – Haz Substances Disclosure Doc																				-
235.35 – Long Term Mitigation Monitoring																				-
235.40 – Updated Env Commitments Record											20									20
235.45 – NEPA Assignment																				-
Total Mit Env Impacts & Clean-up HW	-	-	-	20	-	-	1,000	-	-	-	170	-	-	-	-	-	-	-	-	1,190
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				50									4							54
255.10 – Updated PS&E Package							20													20
255.15 – Environmental Reevaluation				200	20	20														240
255.20 – Final District PS&E Package				5																5
255.40 – Resident Engineer's Pending File				20																20
255.45 – NEPA Assignment																				-
Total Circ, Rev and Prepare Final Dist PS&E Pkg	-	-	-	275	20	20	20	-	-	-	-	-	4	-	-	-	-	-	-	339

Project ID: 07-1500-0162
EA: 07-31500K
Description: Hermosa Beach Roadway Improvement

WBS Task Activity Code	Division Chief	Office Chief	Senior	Generalist	Biology	Cultural	Haz Waste	Socio-Economic	Storm Water To be Determined in later phases	ECL	Steward-ship	Noise/Air- To be Determined in later phases	Sup Svcs	Design	Hydraulics	Landscape	Planning	Right of Way	Surveys	Total
Assigned Unit																				
Contract Bid Documents "Ready to List"																				
260.75 - Env Cert at RTL				10							40									50
Total Contract Bid Documents "RTL"	-	-	-	10	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-
Construction Engineering and General Contract Administration																				
270.15 – Construction Stakes																				-
270.33 – Construction Inspection					20	20														40
270.66 – Technical Support																				-
Total Const Engineering & Gen Contract Admin	-	-	-	-	20	20	-	-	-	-	-	-	-	-	-	-	-	-	-	40
Administration of Permits, Licenses, Agreements and Certifications (PLACs) and Environmental Stewardship																				
280.10 – PLAC Compliance				8							100									108
280.40 – PLAC Violations																				-
280.50 – Other Environmental Compliance											180									180
280.60 – Other Environmental Violations																				-
280.70 – Updated ECR				8	4	4					20									36
280.75 – Environmental Reevaluation				8	4	4														16
280.80 – Updated PLACs																				-
Total Admin of PLACs and Env Stewardship	-	-	-	24	8	8	-	-	-	-	300	-	-	-	-	-	-	-	-	340
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				40	2	2					12									56
295.40 – Long Term Env Mit/Mont after CCA													8							8
Total Accept Contract	-	-	-	40	2	2	-	-	-	-	12	-	8	-	-	-	-	-	-	64
Total Project Hours	-	-	486	5,111	162	302	1,436	-	16	-	602	-	20	-	-	-	-	-	-	8,085

Attachment C: Project Schedule

Project Milestones		Scheduled Delivery Date (Month/Day/Year)
PROGRAM PROJECT	M015	2/2/2015
BEGIN ENVIRONMENTAL	M020	7/1/2015
CIRCULATE DPR & DED EXTERNALLY	M120	3/1/2017
PA&ED	M200	8/1/2017
PROJECT PS&E	M380	11/1/2019
RIGHT OF WAY CERTIFICATION	M410	1/1/2020
READY TO LIST	M460	6/1/2020
AWARD	M495	9/1/2020
APPROVE CONTRACT	M500	11/1/2020
CONTRACT ACCEPTANCE	M600	10/1/2021
END PROJECT	M800	12/1/2022

Attachment D: 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/1-20.62/21.92	EA: 31500K
Project Description: PCH/Hermosa Beach Improvement Project	
Form completed by (Name/District Office): Karl Price	
Project Manager: Zoe Yue	Phone Number: 213-897-1051
Date: 1/23/15	

PART 2 PERMITS AND AGREEMENTS

	Permits and Agreements **($$)**
☐ Fish and Game 1602 Agreement	0
☐ Coastal Development Permit	0
☐ State Lands Agreement	0
☐ Section 401 Water Quality Certification	0
☐ Section 404 Permit – Nationwide (U.S. Army Corps)	0
☐ Section 404 Permit – Individual (U.S. Army Corps)	0
☐ Section 10 Navigable Waters Permit (U.S. Army Corps)	0
☐ Section 9 Permit (U.S. Coast Guard)	0
☐ Other:	0
Total (enter zeros if no cost)	0

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 Alternative					
	Estimated Cost in $1,000's				Notes
	Phases				
	Design	ROW	Construction	Sub-Total	
Noise abatement or mitigation	???	???	???	???	Unknown at this time
Special landscaping	0	0	0	0	
Archaeological resources	0	0	0	0	
Biological resources	0	0	0	0	
Historical resources	0	0	0	0	
Scenic resources	0	0	0	0	
Wetland/riparian resources	0	0	0	0	
Res./bus. relocations	???	???	???	???	Unknown at this time
Other:	0	0	0	0	
Total (enter zeros if no cost)	???	???	???	???	

Attachment G

Dist-County-Route: 07-LA-1

Post Mile Limits: 20.6 - 21.9

Project Type: Beautify roadway & Improve mobility

Project ID (or EA): 0715000162 (EA: 31500K)

Program Identification: 20.XX.400.100

Phase: ☒ PID-PSR-PDS ☐ 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: 02/15/2016

Total Disturbed Soil Area: 1.74 acres (0.6 acres within State R/W) Risk Level: 1

Estimated: Construction Start Date: 04/15/2016 Construction Completion Date: 08/25/2016

Notice of Intent (NOI) Date to be submitted: 03/15/2016

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.

Tommy Tran, Registered Project Engineer/Landscape Architect — Date: 01/13/2015

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

Zoe Yue, Project Manager — Date: 1/14/15

Roger Castillo, Designated Maintenance Representative — Date: 01-13-15

Ron Russak, Designated Landscape Architect Representative — Date: 01.15.15

[Stamp Required for PS&E only) *Shirley Pak, District/Regional Design SW Coordinator or Designee* — Date: 1/15/2015

STORM WATER DATA INFORMATION

1. Project Description

The Project Study Report-Project Development Support (PSR-PDS) proposes to improve mobility and beautify the roadway at the following locations within the city of Hermosa Beach:

- On Pacific Coast Highway (PCH) State Route 1 between Anita Street/Herondo Street (PM 20.6) and Artesia Boulevard (PM 21.9).
- On Aviation Boulevard between PCH and Prospect Avenue.

There are four alternatives proposed for this project, including one "No Build" alternative and three "Build" alternatives:

- Alternative 1 (No Build): Maintain the current configuration of the existing facility. It is presented as a basis of comparison with the other alternatives.
- Alternative 2 ("City's Proposal"): This alternative proposes to bury utility lines, reconstruct sidewalks, and construct landscaped medians.
- Alternative 3 ("Road diet with bike lanes"): This alternative proposes to relocate/bury utility lines, reconstruct sidewalks, construct roundabouts, coldplane/overlay, and restripe for new bike lanes.
- Alternative 4 ("Road diet with landscaped median"): This alternative is similar to Alternative 3, except that a landscaped median would be constructed instead of the bike lanes.

- This Storm Water Data Report will evaluate potential storm water impacts, document storm water decisions, and BMP selections/strategies based on alternative 4.
- The total disturbed soil area (DSA) for the project is estimated at 1.74 acres (0.60 acres within State R/W) for alternative 4. This figure was calculated by accounting areas for construction of landscaped median and roundabouts.
- Proposed landscaped median and roundabouts will increase total permeable area within the project limits. The net impervious surface area decrease after the project completed is approximately 1.54 acres (0.40 acres within State R/W).
- The cost of Storm Water is based on Alternative 4 (the most costly alternative), which is $24.1 million; this estimate is at early stage and will change on the later phases.

- This project lies within the limits of the Los Angeles County Municipal Separate Sewer Storm System (MS4) area.

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

- The project site is within the Los Angeles Regional Water Quality Control Board (LARWQCB 4) jurisdiction.
- Within the project limits, the receiving water body Santa Monica Bay Offshore/Nearshore 303(d) is listed. It is within the Lower Santa Monica Hydrologic Area and belongs to 404.70 Hydrological Sub-Area.
- The pollutants of concern for the project are identified based on California's 2010 303(d) list. Santa Monica Bay Offshore/Nearshore has been designated as impaired for DDT (tissue & sediment), Debris, Fish Consumption Advisory, PCBs (Polychlorinated biphenyls) (tissue & sediment), and Sediment Toxicity.
- The project limits are in the Santa Monica Bay. The total maximum daily loads (TMDLs) are:

Santa Monica Bay

Established TMDLs

Dry Weather Bacteria TMDL for the Santa Monica Bay Beaches and Wet Weather Bacteria TMDL for the Santa Monica Bay Beaches

The Dry Weather Bacteria TMDL for the Santa Monica Bay Beaches focuses on storm drain flows during summer and winter dry weathers. Caltrans is in compliance with the TMDL. The Wet Weather Bacteria TMDL for the Santa Monica Bay Beaches outlines 7 Jurisdiction Groups in the Santa Monica Bay coastal watersheds and assigns a Primary Responsible Jurisdiction and the Additional Responsible Jurisdictions and Agencies to each Jurisdiction Group. Caltrans participates in the Jurisdiction Groups as an Additional Responsible Agency and is working cooperatively with other Responsible Agencies toward compliance of the TMDL. Project Engineer shall consider treatment controls for the project and consult with the District NPDES Storm Water Coordinator.

Santa Monica Bay Nearshore and Offshore Debris TMDL

The Santa Monica Bay Nearshore and Offshore Debris TMDL became effective on March 20, 2012. The TMDL requires the Responsible Agencies in the Santa Monica Bay, Ballona Creek and Malibu Creek Watersheds, including Caltrans, to reduce amount of trash and plastic pellets in the storm water discharges to "zero" in eight (8) years. Responsible Agencies may implement a Minimum Frequency of Assessment and Collection (MFAC) Program in or adjacent to the waterbody or place full capture devices at the drainage outfalls. Project Engineer shall consider treatment controls for the project and consult with the District NPDES Storm Water Coordinator.

Santa Monica Bay Total Maximum Daily Load for DDT and PCBs

The Santa Monica Bay Total Maximum Daily Load for DDT and PCBs was adopted by the United States Environmental Protection Agency (USEPA) on March 26, 2012. The TMDL assigns waste load allocations for DDT and PCB to the Responsible Agencies in the Santa Monica Bay, Ballona Creek and Malibu Creek Watersheds, including Caltrans. Caltrans will be working with other Responsible Agencies to jointly comply with the TMDL. Project Engineer shall consider treatment controls for the project and consult with the District NPDES Storm Water Coordinator.

- There are no known drinking water reservoirs or recharge facilities within project limits.
- California Regional Water Quality Board 401 water certification permit is not required.
- The Environmental Document for this project is anticipated to be a Categorical Exemption /Categorical Exclusion.
- Within the project limits area, the average rainfall is 12.37 inches per year, rainy season starts from October 1st to May 1st with an approximate 265 sunny days annually.
- Risk Level Determination is 1.
- There will be no reuse of any soil containing Aerially Deposited Lead (ADL).
- Measures for avoiding or reducing potential storm water impacts are as follow: implemented during construction.
  - Disturb soil area only when necessary.
  - Early reseed on disturbed soil area as soon as possible.
- There is no existing treatment BMPs within the project limits and their association with the project.
- Any LARWQCB special requirements and concerns as well as the local agency will be finalized at the PS&E stage of the project development process.

3. Regional Water Quality Control Board Agreements

The Los Angeles Regional Water Quality Control Board (RWQCB) requires all new/major reconstruction projects that increase impervious area to evaluate the feasibility of post construction Treatment BMP's as a condition of the permit process.

Since this project is anticipating a CE (Categorical Exemption), there is no additional requirement from other permit based on the information available at this time.

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

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

- This project will decrease the volume and the sediment load of downstream flow.
- Within project limits, existing sidewalk will be removed and reconstructed with inlets and connect to existing storm drain systems that lead to receiving water body of the area.

- Hydraulic downstream is anticipated no change because the project will not encroach, cross or realign.
- The project will discharge to existing storm drains, and change the hydraulic capacity.

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

- The project scope will not create new slope or modify existing slopes.
- In the project area, most if not all areas are flat.

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

- The project will not create or modify ditches, swales, and oversize drains. Surface runoff from proposed elevated structures will be conveyed through existing/proposed storm drain system and ultimately drain into the receiving water body of the area.

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

- Clearing and grubbing limits will be clearly identified in the next phase.

The cost for Design Pollution Prevention BMPs at this phase is estimated to be $480,000 based on the most costly alternative.

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

Treatment BMP Strategy, Checklist T-1

- In accordance with Deputy Directive DD-92 dated March 17, 2008 this project is required to consider all treatment BMPs recommended in the Corridor Stormwater Management Study (Corridor Study) completed on Route 1 (PM 0.0/31.3) in August, 2013.
- Per the Evaluation Documentation Form (EDF), this project is required to consider Treatment BMPs; however, no Treatment BMPs was recommended by the Corridor Stormwater Management Study (Corridor Study) within project limits.
- This project will not incorporate any Treatment BMPs.

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

- Project requires a Storm Water Pollution Prevention Plan (SWPPP) since the disturbed Soil Area (DSA) created by the project is more than one acre.
- On January 08, 2015, Jimmy Chan, District 7 Construction Storm Water Coordinator, agreed to the temporary construction strategy used for the scope of this project.

Total budgetary cost for construction site BMPs is approximately $250,000 based on the most costly build alternative.

7. Maintenance BMPs (Drain Inlet Stenciling)

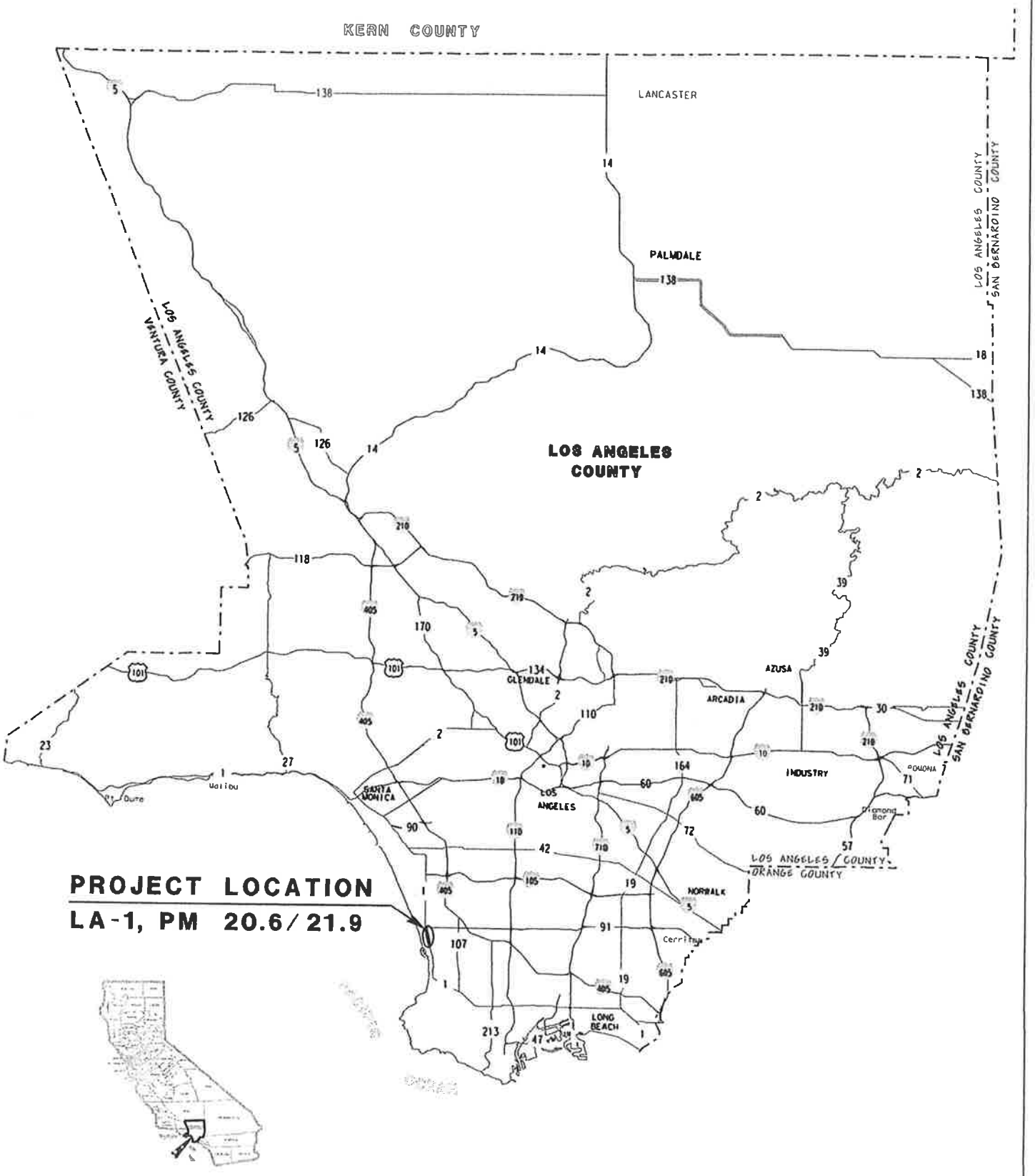
To be identified at a later project phase.

Required Attachments

- Vicinity Map
- Evaluation Documentation Form (EDF)
- Risk level Determination Documentation

Supplemental Attachments

Due to fact that this is PID (PSR-PDS) SWDR, the typical supplemental attachments are not required. No additional documentation / check lists were identified by the District Stormwater Coordinator as being necessary.



EA: 31500K

VICINITY MAP

NOT TO SCALE

DATE: 01/06/2015

Project ID (or EA): 0715000162 (EA: 31500K)

NO.	CRITERIA	YES ✓	NO ✓	SUPPLEMENTAL INFORMATION FOR EVALUATION
1.	Begin Project Evaluation regarding requirement for consideration of Treatment BMPs	✓		See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs. Go to 2
2.	Is this an emergency project?		✓	If Yes, go to 10. If No, continue to 3.
3.	Have TMDLs or other Pollution Control Requirements been established for surface waters within the project limits? Information provided in the water quality assessment or equivalent document.	✓		If Yes, contact the District/Regional NPDES Coordinator to discuss the Department's obligations under the TMDL (if Applicable) or Pollution Control Requirements, go to 9 or 4. SP (CON) 1/13/2015 _____ (Dist./Reg. SW Coordinator initials) If No, continue to 4.
4.	Is the project located within an area of a local MS4 Permittee?			If Yes, *(Los Angeles County)*, go to 5. If No, document in SWDR go to 5.
5.	Is the project directly or indirectly discharging to surface waters?			If Yes, continue to 6. If No, go to 10.
6.	Is it a new facility or major reconstruction?			If Yes, continue to 8. If No, go to 7.
7.	Will there be a change in line/grade or hydraulic capacity?			If Yes, continue to 8. If No, go to 10.
8.	Does the project result in a net increase of one acre or more of new impervious surface?			If Yes, continue to 9. If No, go to 10. -1.54 ac. *(Net Increase New Impervious Surface)*
9.	Project is required to consider approved Treatment BMPs.	✓	See Sections 2.4 and either Section 5.5or 6.5 for BMP Evaluation and Selection Process. Complete Checklist T-1 in this Appendix E.	
10.	Project is not required to consider Treatment BMPs. _____*(Dist./Reg. Design SW Coord. Initials)* _____*(Project Engineer Initials)* _____*(Date)*		Document for Project Files by completing this form, and attaching it to the SWDR.	

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

Water: Stormwater

LEW Results

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Start Date:	04/15/2016
End Date:	08/25/2016
Latitude:	33.8647
Longitude:	-118.3930

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **1.59** HAS BEEN DETERMINED FOR THE CONSTRUCTION PERIOD OF **04/15/2016 - 08/25/2016**.

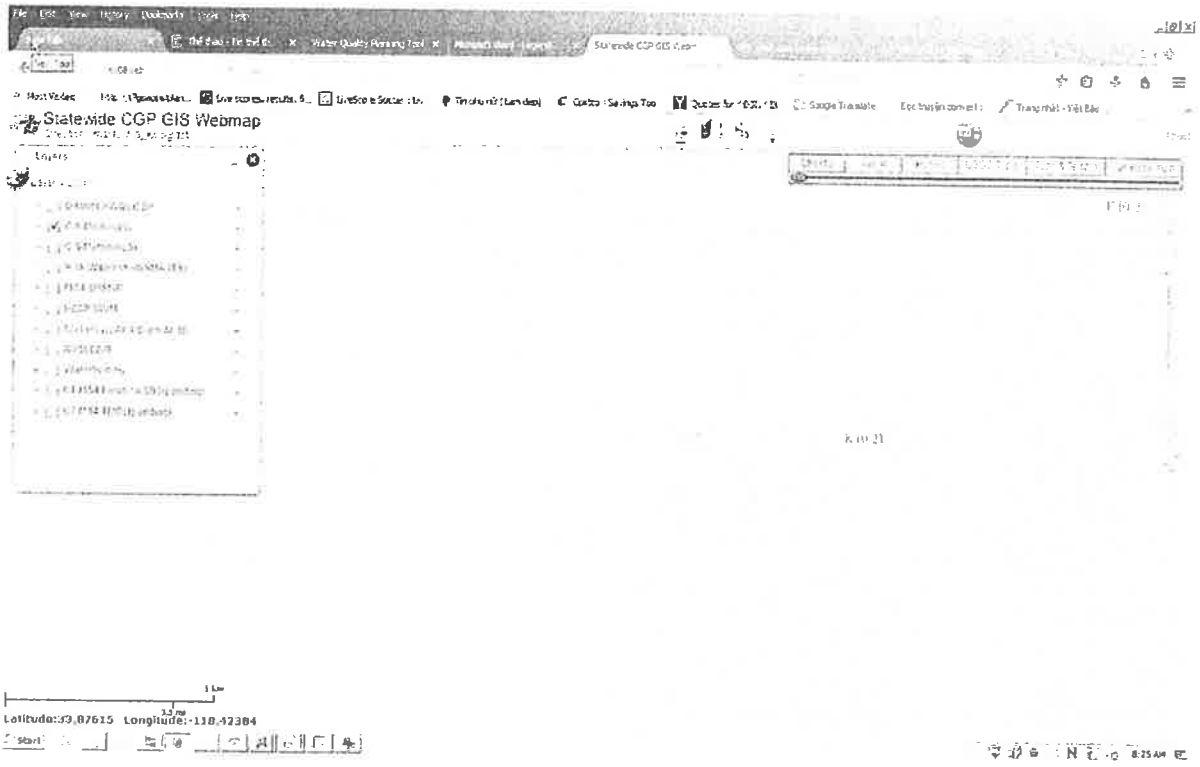
A rainfall erosivity factor of less than 5.0 has been calculated for your site and period of construction. Contact your permitting authority to determine if you are eligible for a waiver from NPDES permitting requirements. If you are covered under EPA's construction general permit then you can use eNOI to submit your low erosivity waiver certification.

If your construction activity extends past the project completion date you specified above, you must recalculate the R factor using the original start date and a new project completion date. If the recalculated R factor is still less than 5.0, a new waiver certification form must be submitted before the end of the original construction period. If the new R factor is 5.0 or greater, the operator must submit a Notice of Intent to be covered by the Construction General Permit before the original project completion date.

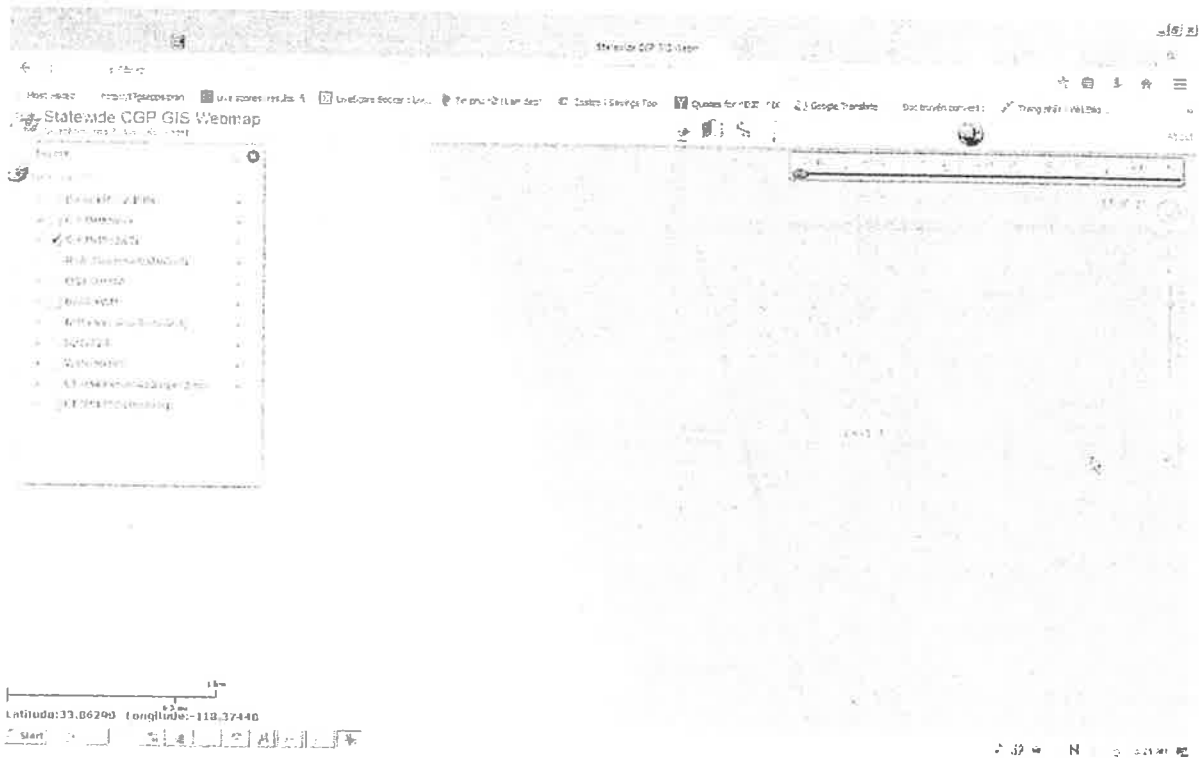
Start Over

Last updated on Monday, July 28, 2014

1. K = 0.2


Statewide CGP GIS Webmap
Latitude:33.87615 Longitude:-118.42384

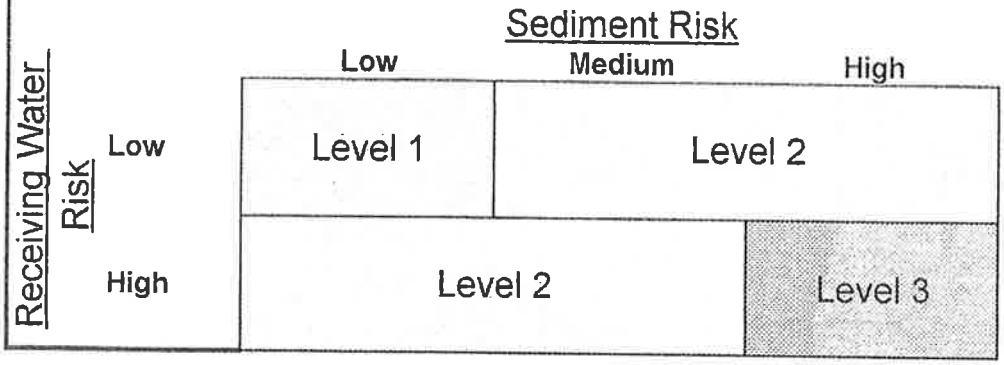
2. LS = 1.4


Statewide CGP GIS Webmap
Latitude:33.86295 Longitude:-118.37440

	A	B	C
1	**Sediment Risk Factor Worksheet**		**Entry**
2	**A) R Factor**		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
5		**R Factor Value**	1.59
6	**B) K Factor (weighted average, by area, for all site soils)**		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.		
8	Site-specific K factor guidance		
9		**K Factor Value**	0.2
10	**C) LS Factor (weighted average, by area, for all slopes)**		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	LS Table		
13		**LS Factor Value**	1.4
14			
15		**Watershed Erosion Estimate (=RxKxLS) in tons/acre**	0.4452
16		**Site Sediment Risk Factor**	
17		Low Sediment Risk: < 15 tons/acre	
18		Medium Sediment Risk: >=15 and <75 tons/acre	Low
19		High Sediment Risk: >= 75 tons/acre	
20			

Receiving Water (RW) Risk Factor Worksheet	Entry	Score
A. Watershed Characteristics	yes/no	
A.1. Does the disturbed area discharge (either directly or indirectly) to a **303(d)-listed waterbody impaired by sediment** (For help with impaired waterbodies please visit the link below) or has a **USEPA approved TMDL implementation plan for sediment**?: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml OR	no	Low
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan) http://www.waterboards.ca.gov/waterboards_map.shtml		
Region 1 Basin Plan Region 2 Basin Plan Region 3 Basin Plan Region 4 Basin Plan Region 5 Basin Plan Region 6 Basin Plan Region 7 Basin Plan Region 8 Basin Plan Region 9 Basin Plan		

Combined Risk Level Matrix



Project Sediment Risk: Low

Project RW Risk: Low

Project Combined Risk: Level 1

Attachment H

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

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:0715000162/EA:07-31500
Project Description	LA-001-20.6/21.9- -
Project Manager (PM)	Zoe Yue
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: 1/26/2015

PID (Recommended for Capital Projects Only excluding Minor Projects)

Project Manager		Date: 1/26/2015
Deputy District Director, Planning		Date: 1/26/2015
Deputy District Director*, Design**		Date: 1/26/2015
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 as of 01/26/15

EFIS ID 0715000162
DIST EA 31500
PM YUE, ZOE

No.	Status	ID	Risk Type	RDS 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 Impact ($K)			Probable Cost Impact ($K)	Time (Months)			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
															Low	Most Likely	High		Low	Most Likely	High												
1	Active	24014		DGN			Mandatory Lane width (HDM Section 301.1		Within the project limits, existing/proposed lane width is 10'. Upgrading the lane width to standard 11' would require reconfiguration of the roadway.	Linear	60-99%	Very High		25 (HIGH)																	Zoe Yue		01/26/2015 08:26:00
2	Active	24017		DGN			Nonstandard design features not approved	Nonstandard design features may not be approved during PA/ED and PS&E phases	Delay in approving the project and completing design. Need to change design and acquire more right of way.	Linear	60-99%	Very High		25 (HIGH)																	Zoe Yue		01/26/2015 08:25:00
3	Active	24013		R/W			Right of Way acquisition may require condemnation	R/W acquisition may require condemnation	Delay in advertising the project	Linear	40-59%	High		16 (HIGH)																	Zoe Yue		01/26/2015 08:29:00
4	Active	24015		DGN			Mandatory shoulder width			Linear	40-59%	High		16 (HIGH)																	Zoe Yue		01/26/2015 08:27:00
5	Active	24020		ENV			Public may not support the project	Public may pose objection to the project during Environmental document circulation	Public challenge to project may lead to project being cancelled or revised significantly	Linear	20-39%	Moderate		9 (MEDIUM)																	Zoe Yue		01/26/2015 08:29:00
6	Active	24023		TRA			Project traffic impact may be adverse.	The project alternatives may cause significant impact to traffic and increase delays due to road diet strategy and roundabout involved.	Lengthy and complex traffic study may be needed. Alternatives may need to be revised.	Linear	20-39%	Moderate		9 (MEDIUM)																	Zoe Yue		01/26/2015 08:31:00
7	Active	24021		DGN			Hazardous materials may exist in acquired R/W	Parcels contaminated with hazardous materials may need to be acquired permanently or as construction easement	Delay in R/W process that would lead to delay in delivering the project	Linear	20-39%	Very Low		3 (LOW)																	Zoe Yue		01/26/2015 08:05:00
8	Active	24016		R/W			Undiscovered utility	Unknown utilities maybe encountered during construction	Delay in construction	Linear	10-19%	Very Low		2 (LOW)																	Zoe Yue		01/23/2015 13:56:00
9	Active	24018		PM			Local Agency supporty not attained	Funding may not be obtained from LA MTA	Project approval is delayed until funding is secured from another source.	Linear	1-9%	Very Low		1 (LOW)																	Zoe Yue		01/23/2015 14:02:00
10	Active	24019		DGN			Project construction may go higher	Due to unforeseen circumstances, project cost may go higher than the cost estimates	Delay in project delivery, additional funding may need to be	Linear	1-9%	Very Low		1 (LOW)																	Zoe Yue		01/23/2015 14:08:00
11	Active	24022		ENV			Environmentally sensitive areas may be impacted	Parcels impacted may be environmentally sensitive and may need mitigations	Environmental process would be long and EIR/EIS may be needed	Linear	1-9%	Very Low		1 (LOW)																	Zoe Yue		01/23/2015 14:14:00
TOTAL EXPECTED IMPACT																		$0(K)				0 (Mos.)										