

**Project Study Report-Project Development Support
(PSR-PDS)
To
Request Approval of a Locally Funded
Project to Proceed to Project Approval and
Environmental Document Phase**

On Route Interstate 605 and State Route 60

I-605 between south of Rose Hills Road (PM 15.1) and I-10 (PM 20.4)

SR-60 between Santa Anita Avenue (PM 10.2) and east of Turnbull
Canyon Road (PM 15.6)

APPROVAL RECOMMENDED:



Ernesto Chaves
Los Angeles Metro
Accepts Risks Identified in this PSR-PDS and
Attached Risk Register

APPROVAL RECOMMENDED:



Syed Huq, P.E.
CALTRANS PROJECT MANAGER

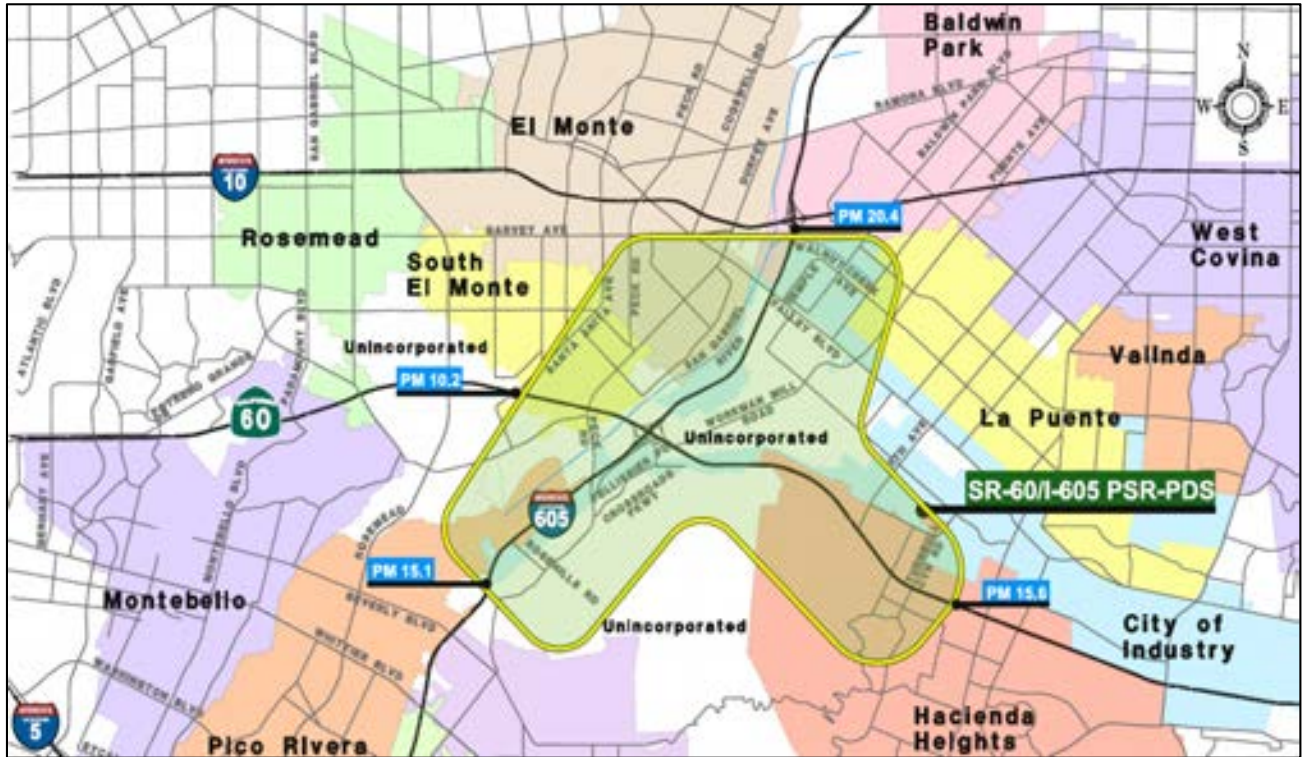
APPROVED:



for *CARRIE BOWEN*
DISTRICT DIRECTOR

12/18/15
DATE

Vicinity Map



On Route Interstate 605 and State Route 60 in Los Angeles County

I-605 between south of Rose Hills Road (PM 15.1) and I-10 (PM 20.4)

SR-60 between Santa Anita Avenue (PM 10.2) and east of Turnbull Canyon Road (PM 15.6)

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.

Michael Hynes
Michael Hynes, P.E.
REGISTERED CIVIL ENGINEER

11/16/15
DATE



Table of Contents

1. INTRODUCTION	1
2. BACKGROUND	2
3. PURPOSE AND NEED	3
4. TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT	4
Existing Conditions Traffic Analysis	4
Alternative 1 (No Build) Traffic Analysis	5
Alternative 2 Traffic Analysis	5
Alternative 3 Traffic Analysis	5
Alternative 4 Traffic Analysis	6
Traffic Analysis Summary	6
Safety / Accident Data	11
Design Features and Traffic Infrastructure	14
Traffic Engineering Studies	14
Other Traffic Considerations and Coordination	14
5. DEFICIENCIES	14
6. CORRIDOR AND SYSTEM COORDINATION	15
7. ALTERNATIVES	17
Project Alternatives	17
Considerations Requiring Further Study	22
Project Phasing	27
Nonstandard Design Features	27
Common Features for all Alternatives	28
Engineering Studies	28
Aesthetics	28
Construction Staging	29
Storm Water BMPs	29
Permits	29
8. RIGHT-OF-WAY	30
9. STAKEHOLDER INVOLVEMENT	32
10. ENVIRONMENTAL DETERMINATION/DOCUMENT	32
11. FUNDING	35
12. SCHEDULE	35
13. RISKS	35
14. FHWA COORDINATION	36
15. PROJECT REVIEWS	36
16. PROJECT PERSONNEL	37

1. INTRODUCTION

The Los Angeles County Metropolitan Transportation Authority (Metro), in cooperation with the Gateway Cities Council of Governments (GCCOG), San Gabriel Valley Council of Governments (SGVCOG), the California Department of Transportation (Caltrans) District 7, and the County of Los Angeles, is proposing to construct improvements along the I-605 and SR-60 freeway corridors (See Attachment A for the Regional Vicinity Map). I-605 and SR-60 are major facilities within Los Angeles County and carry international, interstate, interregional and intraregional travel. This area is projected to experience substantial growth for goods movement. Reconstruction of the system interchange and widening of the mainline facilities will address existing deficiencies and accommodate projected growth. The project area includes the following cities within Los Angeles County: Pico Rivera, South El Monte, Industry, El Monte, and Baldwin Park, including unincorporated areas within the County of Los Angeles.

The project improvement limits include I-605 from south of the Rose Hills Road interchange (PM 15.1) to the I-10 interchange (PM 20.4) and along SR-60 from Santa Anita Avenue (PM 10.2) to east of Turnbull Canyon Road (PM 15.6). This PSR-PDS includes three build alternatives and a no build alternative. The alternatives within this PSR-PDS consist of Alternative 1 – No Build, Alternative 2, Alternative 3, and Alternative 4. In general, the proposed build alternatives add one mixed flow lane in each direction on the I-605 and the westbound SR-60 within the project limits. Due to the widening, local street and system interchanges are affected, and therefore, the build alternatives include modifications to local and system interchanges to accommodate the mainline widening.

Below is a summary of the project information:

Project Limits	07 - LA - 605 PM 15.1/PM 20.4 07 - LA - 60 PM 10.2/PM 15.6			
Number of Alternatives	4 (One No Build, Three Build Alternatives)			
Alternative	Alt 1 No Build	Alternative 2	Alternative 3	Alternative 4
Capital Outlay Support for PA/ED	\$0	\$40M	\$40M	\$40M
Capital Outlay Construction Cost	\$0	\$960-\$1,110M	\$780-\$910M	\$680-780M
Capital Outlay Right-of-Way Cost	\$0	\$140-\$160M	\$120-\$130M	\$70-80M
Funding Sources	N/A	Mixed – Local Measure, State, Federal		
Type of Facility	Freeway	Freeway, Freeway Interchange		
Number of Structures	N/A	42 Total: 29 on I-605 and 13 on SR-60		
Anticipated Environmental Determination	N/A	EIS/EIR		
Project Development Category	N/A	4A		

Funding is expected to be provided through a combination of funds, not yet fully secured, but will likely include Measure R funds in addition to potential federal, state, and local funding sources. Caltrans will be the lead agency for California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance. Caltrans is anticipated to provide oversight of the Project Approval and Environmental Document (PA/ED) and Plans, Specifications and Estimates (PS&E). Metro is anticipated to manage the PA/ED, PS&E, and construction.

The remaining support, right-of-way, and construction components of the project are preliminary estimates and are not suitable for programming purposes. The Project Report (PR) will serve as the programming document for the remaining support and capital components of the project. For the cost estimate summary, see Attachment D – Cost Estimates. The PR will serve as the approval mechanism for the “preferred” alternative. Project environmental studies are anticipated to begin in 2016 with the PA/ED phase to be completed by 2019. Construction could begin in 2021 with a duration dependent upon the project phasing.

2. BACKGROUND

I-605, known as the San Gabriel River Freeway, is a major north-south regional interstate highway within the greater Los Angeles area of southern California used for international, interstate, and interregional (commute and non-commute) travel and goods movement. Its southerly terminus is located at Interstate 405 (I-405) and State Route 22 (SR-22) in Seal Beach, and its northerly terminus is located at its junction with Interstate 210 (I-210) in the City of Irwindale at the base of the San Gabriel Mountains. It parallels the San Gabriel River throughout its length. The interstate serves as a major route for access to the Los Angeles Central Business District (CBD) and for Orange County trips and is approximately 27 miles in length.

I-605 is functionally classified as an Interstate, State Highway, and an Urban Principal Arterial-P3. It is also included in the Strategic Highway Network (STRAHNET). The I-605 segments within the project area are currently designated as urbanized. It is also a Surface Transportation Assistance Act (STAA) National Network Route for use by oversized trucks.

The segments of I-605 within the project limits generally have four mixed flow lanes and a High Occupancy Vehicle (HOV) lane in each direction, except through the SR-60 interchange and portions of the I-10 interchange where there are three mixed flow lanes and a HOV lane in each direction.

Based on data from Caltrans 2012 Traffic Volumes on California State Highways, the Annual Average Daily Traffic (AADT) volume on the I-605 to the south of the SR-60/I-605 interchange is 250,000 vehicles and north of the interchange is approximately 218,000 vehicles. The AADT volume on the I-605 to the south of the I-605/I-10 interchange is 214,000 vehicles and north of the interchange is approximately 180,000 vehicles.

SR-60 is a major east-west facility between the San Gabriel Valley and Riverside County. Used primarily for interregional travel carrying people and goods throughout the San Gabriel Valley, Los Angeles, San Bernardino, and Riverside counties. SR-60 is also used for intraregional travel and commute travel. It is a major highway for goods movement in California. The project area is projected to experience substantial growth for goods movement. Build out of the area, as well as increased shipping traffic from the ports, will generate additional traffic on the freeways and at the SR-60/I-605 system interchange. Widening improvements to the mainline including local arterial and system interchange improvements will address existing deficiencies and accommodate projected growth.

SR-60 is part of the National Highway System (NHS) and the Freeway and Expressway (F&E) System. It is a Terminal Access (TA) route. Its functional classification is “other Freeway or Expressway”. The segment of SR-60 to the west of the I-605 generally has five mixed flow lanes in each direction. To the east of the I-605 there are five mixed flow lanes and one HOV lane in each direction. Through the interchange area itself are four mixed flow lanes in each direction. Based on data from Caltrans 2012 Traffic Volumes on California State Highways, the AADT volume on SR-60 to the west of the SR-60/I-605 interchange is 236,000 vehicles and east of the interchange is approximately 254,000 vehicles.

Metro, GCCOG and SGVCOG have identified the need for operational and capacity improvements at the SR-60/I-605 interchange and approach corridors. The agencies and adjacent cities that are members of the GCCOG Technical Advisory Committee (TAC), and the Corridor Cities Committee (CCC), which is comprised of members representing the respective city councils, and Caltrans, have been involved in the development and approval of the Purpose and Need Statement for the project and are proponents of the project. The various land uses adjacent to I-605 and SR-60 include residential, commercial, industrial, agricultural, and open space.

A feasibility study conducted for Metro and the GCCOG for the SR-91/I-605/I-405 Corridor Study Area was completed in March 2013 and became the SR-91/I-605/I-405 Congestion Hot Spots Feasibility Report (Feasibility Report). Five study areas were identified in the Feasibility Report to be further evaluated as a PSR-PDS. The I-605/SR-91 PSR-PDS and the I-605/I-5 PSR-PDS were the first two studies completed by Metro as the lead agency and approved by Caltrans in June 2014. The third study is the subject project, SR-60/I-605 PSR-PDS. This PSR-PDS was closely coordinated with the improvements proposed in the I-605/I-5 PSR-PDS, since it is adjacent to the southerly project limits.

Opportunities to incorporate Context Sensitive Solutions and Complete Streets concepts will be studied further in the PA/ED phase of the project. In addition, the GCCOG has developed Guiding Principles which help to define a balance between the needs of transportation improvement projects and the goal to minimize right-of-way impacts to be sensitive to community needs. Alternatives 3 and 4 were developed with these right-of-way principles in mind. In addition, the GCCOG Strategic Transportation Plan Active Transportation Element (Draft, September 2013) provides useful information for consideration of regional and local active transportation needs in regards to Complete Streets. Caltrans Active Transportation Program (ATP) will also complement the GCCOG active transportation guidelines, which includes the Caltrans Complete Streets Policy – Deputy Directive 64-R2 and the Traffic Operations Policy Directive 13-02: Intersection Control Evaluation (ICE).

3. PURPOSE AND NEED

Purpose:

The purpose of the project is to reduce congestion, and improve freeway operations, improve and enhance safety, and improve local and system interchange operations while minimizing adjacent right-of-way, environmental, and economic impacts.

Need:

The SR-60/I-605 system interchange area currently experiences significant congestion, which is forecast to increase in the future absent of physical and operational improvements to the facility. Congestion is a result of insufficient I-605 and SR-60 freeway mainline capacity and closely spaced freeway entrance and exit ramps. The existing freeway geometry has many features which do not meet current Caltrans Highway Design Manual (HDM) Standards, such as nonstandard shoulder and lane widths. There are also a number of areas within the project limits with a high concentration of accidents.

4. TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT

The Traffic Engineering Performance Assessment (TEPA) prepared for this project (under separate cover) provides an assessment of readily available traffic information relevant to this project, as well as the proposed traffic analysis methodology that will be performed in the PA/ED phase of project development. The TEPA serves as a reference document for this PSR-PDS.

The TEPA provides existing and forecast traffic conditions in the project area. The basis for the TEPA background information was the Feasibility Report. The Feasibility Report included traffic data and analysis for scenarios in Existing Year 2011 and Forecast Year 2035, which was supplemented with existing traffic data. Existing traffic volumes and traffic data was assembled from several sources as follows:

- Caltrans Performance Measurement System (PeMS) data
- Traffic counts collected at arterial ramp intersections
- SR-91/I-605/I-405 Congestion Hot Spots Feasibility Report dated March 26, 2013
- Direct Connector volumes were obtained from Caltrans Ramp Data

Forecasted traffic volumes and traffic conditions were obtained from the Gateway Cities Strategic Transportation Plan (STP) travel model for the future No Build; and build alternatives. Detailed methodologies and analysis can be found in the TEPA. Key findings and recommendations are summarized herein. The horizon year established for the PSR-PDS is 2040. The scenarios that are evaluated in the SR-60/I-605 TEPA include:

- Existing Baseline Conditions (2014)
- Alternative 1 (No Build) (2040)
- Alternative 2 (2040)
- Alternative 3 (2040)
- Alternative 4 (2040) – Options A and B

Existing Conditions Traffic Analysis

The results of the existing conditions basic freeway segment analysis based on the Highway Capacity Manual (HCM) analysis are shown in Table 1. The results freeway merge and diverge analysis are shown in Table 2. The results of the freeway weaving analysis are shown in Table 3.

The results of the existing conditions freeway HOV analysis are shown in Table 9 of the TEPA. The following segments are represented as having volumes exceeding 1,650 vehicles per hour per lane (LOS C threshold, also considered capacity of HOV segment):

- Eastbound (EB) SR-60 from southbound (SB) I-605 on-ramp to Crossroads Parkway on-ramp (AM and PM peak hours)
- EB SR-60 from Crossroads Parkway on-ramp to S 7th Avenue NB off-ramp (AM and PM peak hours)

The results of the existing condition intersection analysis are shown in Table 10 of the TEPA. These intersections include freeway ramp termini, along with other nearby locations that may be affected by changes to the freeway and freeway access. As shown, four locations within the vicinity of the mainline, are operating at LOS E or worse in the AM and/or PM peak hours. Intersections operating at LOS E or F for AM and/or PM peak hours include:

- Peck Road & Valley Boulevard (AM and PM peak hours, LOS E/E)
- Durfee Avenue & Valley Boulevard (AM peak hour, LOS E)
- I-605 NB off-ramp/Temple Avenue & Valley Boulevard (AM and PM peak hours, LOS F/F)
- Peck Road & Durfee Avenue (AM peak hour, LOS F)

Alternative 1 (No Build) Traffic Analysis

Operational deficiencies for the freeway mainline, freeway ramps, freeway weaving, and intersections and ramp termini for Future Year 2040 No Build (Alternative 1) conditions are were completed. The results of the basic freeway segment analysis for No Build conditions are shown in Table 1. The results of the future 2040 No Build conditions freeway merge and diverge analysis are shown in Table 2. The results of the 2040 No Build freeway weaving analysis are shown in Table 3.

The results of the 2040 No Build freeway HOV analysis are shown in Table 20 of the TEPA. As shown, the following segments are represented as having volumes exceeding 1,650 vehicles per hour per lane (LOS C threshold, also considered capacity of HOV segment):

- NB I-605 from Beverly Blvd on-ramp to Peck Rd off-ramp (PM Peak)
- NB I-605 from Peck Rd off-ramp to Valley Blvd off-ramp (PM Peak)
- SB I-605 from Rose Hills Rd off-ramp to Beverly Blvd off-ramp (PM Peak)
- EB SR-60 from SB I-605 on-ramp to Crossroads Pkwy on-ramp (AM and PM peak hours)
- EB SR-60 from Crossroads Pkwy on-ramp to S 7th Ave NB off-ramp (AM and PM peak hours)

The results of the 2040 No Build intersection analysis are shown in Table 21 of the TEPA. For 2040 No Build conditions, the following intersection locations are projected to operate at LOS E or F in the AM and/or PM peak hours, all other locations are projected to operate at LOS D or better:

- Peck Rd & Valley Blvd (AM and PM peak hours, LOS E/F)
- The I-605 NB off-ramp/Temple Ave & Valley Blvd (AM and PM peak hours, LOS F/F)
- Peck Rd & Rush St (AM and PM peak hours, LOS F/F)
- Santa Anita Ave & Merced Ave/Fawcett Ave (AM peak hour, LOS E)
- The SR-60 EB on-off ramps & Durfee Ave (PM peak hour, LOS F)
- Peck Rd & Durfee Ave (AM and PM peak hours, LOS F/F)
- Crossroads Pkwy North & Workman Mill Rd (PM peak hour, LOS E)
- San Gabriel River Pkwy/I-605 SB off-ramp & Rose Hills Rd (PM peak hour, LOS E)
- Peck Rd & Pellissier Pl (PM peak hour, LOS E)
- Pellissier Pl & the I-605 NB on-off ramps (AM peak hour, LOS E)

Alternative 2 Traffic Analysis

Alternative 2 comprises two design variations – Option A and Option B. This alternative has the same operational characteristics as Alternative 4, Option A and B, with the exceptions noted below:

- Freeway and ramp segments on I-605 Southbound through the Rose Hills Road Interchange – The results of the mainline operational analysis are shown in Table 22 of the TEPA. Alternative 2, Option A and Option B, continue the 5th mixed flow lane through the interchange, where Alternative 4, Option A and B, drop the 5th mixed flow lane at the SB I-605 Rose Hills Rd off-ramp.
- Valley Boulevard/I-605 Interchange – The results of the Alternative 2, Option B, ramp intersection analysis for the Valley Boulevard/I-605 interchange intersections are shown in Table 23 of the TEPA. The two study intersections are projected to operate at LOS D or better during AM and PM peak hours.

Refer to LOS calculations provided in Section 5.5 of the TEPA for all other locations.

Alternative 3 Traffic Analysis

This alternative has the same operational characteristics as Alternative 2. Refer to details provided above and in Section 5.2 of the TEPA.

Alternative 4 Traffic Analysis

Alternative 4 comprises two design variations – Option A and Option B. Results of the analysis for the 2040 Alternative 4 – Option A, including LOS assessments, are presented for the study area freeways and ramps, and are summarized in this section. Intersection delay has been calculated for arterial intersections.

Alternative 4 Option A

The results of the basic freeway segment analysis are shown in Table 1. The results of the future Alternative 4 Option A conditions freeway merge and diverge analysis are shown in Table 2. The results of the 2040 Alternative 4 Option A freeway weaving analysis are shown in Table 3. The results of the 2040 Alternative 4 Option A freeway HOV analysis are shown in Table 27 of the TEPA.

The results of the Alternative 4 Option A intersection analysis are shown in Table 28 of the TEPA. These intersections include freeway ramp termini, along with other nearby locations that may be affected by changes to the freeway and freeway access. For 2040 Alternative 4 Option A conditions, the following locations are projected to operate at LOS E or F in the AM and/or PM peak hours, all other locations are projected to operate at LOS D or better:

- Peck Rd & Valley Blvd (AM and PM peak hours, LOS E/F)
- Durfee Avenue & Valley Boulevard (AM and PM peak hours, LOS E/E)
- I-605 SB on-off ramps & Valley Boulevard (AM and PM peak hours, LOS E/F)
- I-605 NB off-ramp/Temple Avenue & Valley Boulevard (AM and PM peak hours, LOS F/E)
- Peck Road & Rush Street (AM and PM peak hours, LOS F/F)
- Durfee Avenue & Peck Road/Rush Street (AM and PM peak hours, LOS E/F)
- Santa Anita Avenue & Merced Avenue/Fawcett Avenue (AM peak hour, LOS E)
- SR-60 EB on-off ramps & Durfee Avenue (PM peak hour, LOS F)
- Peck Road & Durfee Avenue (AM and PM peak hours, LOS F/F)
- Crossroads Parkway North & Workman Mill Road (PM peak hour, LOS E)
- San Gabriel River Parkway/I-605 SB off-ramp & Sports Arena Drive/Rose Hills Road (PM peak hour, LOS E)
- Peck Road & Pellissier Place (PM peak hour, LOS E)
- Pellissier Place & the I-605 NB on-off ramps (AM peak hour, LOS E)

Alternative 4 Option B

The results of the basic freeway segment analysis are shown in Table 1. The results of the future Alternative 4 Option B conditions freeway merge and diverge analysis are shown in Table 2. The results of the 2040 Alternative 4 Option B freeway weaving analysis are shown in Table 3.

The results of the 2040 Alternative 4 Option B freeway HOV analysis are shown in Table 32 of the TEPA. The results of the Alternative 4 Option B intersection analysis are shown in Table 33 of the TEPA. These intersections include freeway ramp termini, along with other nearby locations that may be affected by changes to the freeway and freeway access.

Traffic Analysis Summary

Tables 1 through 3 below (or see Tables 33 through 38 in the TEPA) provide comparisons of the locations that currently operate, or are projected to operate, at LOS E or F; and were made by summarizing the LOS data by AM and PM peak hour. Since some of the alternatives change the number of mainline segments, merge and diverge locations, or weaving sections, the tables identify where these changes occur. The tables of the different analysis scenarios show that in all cases, the future Alternative 1 (No Build) conditions have more locations at LOS E and/or F than existing conditions, and project alternatives generally improve the overall operations of the freeway mainline, merge and diverge segments, and weaving sections.

Table 1: AM/PM Peak Hour Freeway Segment Analysis Summary

Freeway/ Direction	Segment Location	2014 Existing	2040 Alternative 1 (No Build)	2040 Alternative 4 Option A	2040 Alternative 4 Option B
		AM/PM Peak			
Northbound					
I-605 NB	Beverly Blvd On-Ramp to Rose Hills Rd Off-Ramp	D/C	E/E	D/D	D/D
I-605 NB	Rose Hills Rd Off-Ramp to Rose Hills Rd On-Ramp	D/C	E/E	D/D	D/D
I-605 NB	Rose Hills Rd On-Ramp to Peck Rd Off-Ramp	E/C	E/E	D/D	D/D
I-605 NB	Peck Rd Off-Ramp to Lane Addition	D/C	E/E	-	-
I-605 NB	Lane Addition to Peck Rd On-Ramp	C/C	D/D	-	-
I-605 NB	SR-60 Off-Ramp to EB SR-60 On-Ramp	C/C	C/D	-	-
I-605 NB	Peck Rd Off-Ramp to SR-60 Off-Ramp	-	-	D/D	D/D
I-605 NB	SR-60 Off-Ramp to Peck Rd On-Ramp	-	-	C/C	C/C
I-605 NB	Peck Rd On-Ramp to EB SR-60 On-Ramp	-	-	C/C	C/C
I-605 NB	EB SR-60 On-Ramp to WB SR-60 On-Ramp	C/C	D/D	B/C	B/C
I-605 NB	WB SR-60 On-Ramp to Valley Blvd Off-Ramp	C/D	D/E	-	-
I-605 NB	WB SR-60 On-Ramp to Lane Drop	-	-	C/C	C/C
I-605 NB	Lane Drop to EB I-10 Off-Ramp	-	-	C/D	-
I-605 NB	Lane Drop to Valley Blvd Off-Ramp	-	-	-	C/D
I-605 NB	EB I-10 Off-Ramp to Valley Blvd Off-Ramp	-	-	B/C	-
I-605 NB	Valley Blvd Off-Ramp to EB Valley Blvd On-Ramp	C/C	D/E	C/D	-
I-605 NB	Valley Blvd Off-Ramp to EB I-10 Off-Ramp	-	-	-	C/D
I-605 NB	EB I-10 Off-Ramp to EB Valley Blvd On-Ramp	-	-	-	C/C
I-605 NB	EB Valley Blvd On-Ramp to WB Valley Blvd On-Ramp	C/C	D/E	C/D	C/D
I-605 NB	I-10 Off-Ramp to End of HOV Lane	C/B	C/C	-	-
I-605 NB	End of HOV Lane to Lane Drop	B/B	C/C	-	-
I-605 NB	WB Valley Blvd On-Ramp to WB I-10 Off-Ramp	-	-	D/E	D/E
I-605 NB	WB I-10 Off-Ramp to Lane Drop	-	-	C/D	C/C
I-605 NB	Lane Drop to I-10 On-Ramp	C/C	C/C	D/E	D/E
Southbound					
I-605 SB	I-10 Off-Ramp to I-10 On-Ramp	B/B	B/B	-	-
I-605 SB	Valley Blvd Off-Ramp to Valley Blvd On-Ramp	C/C	D/C	-	-
I-605 SB	I-10 Off-Ramp to Valley Blvd Off-Ramp	-	-	B/B	B/B
I-605 SB	Valley Blvd Off-Ramp to I-10 On-Ramp	-	-	C/B	C/B
I-605 SB	I-10 On-Ramp to Valley Blvd On-Ramp	-	-	C/B	C/B
I-605 SB	Valley Blvd On-Ramp to SR-60 Off-Ramp	D/C	E/D	C/C	D/C
I-605 SB	SR-60 Off-Ramp to WB SR-60 On-Ramp	C/C	D/C	C/C	C/C
I-605 SB	WB SR-60 On-Ramp to EB SR-60 On-Ramp	C/C	D/D	C/C	-
I-605 SB	Peck Rd Off-Ramp to Lane Drop	B/B	C/C	-	-
I-605 SB	Lane Drop to NB Peck Rd On-Ramp	C/C	D/D	-	-
I-605 SB	Peck Rd Off-Ramp to NB Peck Rd On-Ramp	-	-	C/C	-
I-605 SB	NB Peck Rd On-Ramp to SB Peck Rd On-Ramp	C/C	E/D	C/C	-
I-605 SB	SB Peck Rd On-Ramp to Rose Hills Rd Off-Ramp	C/C	E/E	-	-
I-605 SB	Peck Rd Off-Ramp to EB SR-60 On-Ramp	-	-	-	C/C
I-605 SB	EB SR-60 On-Ramp to Peck Rd On-Ramp	-	-	-	C/C
I-605 SB	Rose Hills Rd Off-Ramp to Rose Hills Rd On-Ramp	C/C	E/D	D/D	D/D
I-605 SB	Rose Hills Rd On-Ramp to Beverly Blvd Off-Ramp	C/C	E/D	D/D	D/D
Eastbound					
SR-60 EB	Rosemead Blvd On-Ramp to Santa Anita Ave Off-Ramp	C/C	C/C	C/C	C/C
SR-60 EB	Santa Anita Ave Off-Ramp to Santa Anita Ave SB On-Ramp	C/C	C/C	C/C	C/C
SR-60 EB	Santa Anita Ave SB On-Ramp to Santa Anita Ave NB On-Ramp	C/D	D/D	D/D	D/D
SR-60 EB	Santa Anita Ave NB On-Ramp to Peck Rd Off-Ramp	C/C	D/D	D/D	D/D
SR-60 EB	Peck Rd Off-Ramp to Peck Rd On-Ramp	C/C	C/C	-	-
SR-60 EB	I-605 Off-Ramp to SB I-605 On-Ramp	B/C	C/C	-	-

Freeway/ Direction	Segment Location	2014 Existing	2040 Alternative 1 (No Build)	2040 Alternative 4 Option A	2040 Alternative 4 Option B
		AM/PM Peak			
SR-60 EB	SB I-605 On-Ramp to Addition of HOV Lane	C/C	C/C	-	-
SR-60 EB	Addition of HOV Lane to NB I-605 On-Ramp	B/B	B/C	-	-
SR-60 EB	Peck Rd Off-Ramp to I-605 Off-Ramp	-	-	C/C	C/C
SR-60 EB	I-605 Off-Ramp to Peck Rd On-Ramp	-	-	C/C	C/C
SR-60 EB	Peck Rd On-Ramp to SB I-605 On-Ramp	-	-	C/C	C/C
SR-60 EB	SB I-605 On-Ramp to NB I-605 On-Ramp	-	-	B/B	B/B
SR-60 EB	Crossroads Pkwy Off-Ramp to Crossroads Pkwy On-Ramp	B/C	C/C	C/C	C/C
SR-60 EB	Crossroads Pkwy On-Ramp to S 7th Ave SB Off-Ramp	B/C	C/C	C/C	C/C
SR-60 EB	S 7th Ave SB Off-Ramp to S 7th Ave NB Off-Ramp	B/C	C/C	C/C	C/C
SR-60 EB	S 7th Ave NB Off-Ramp to S 7th Ave On-Ramp	C/B	C/C	C/C	C/C
SR-60 EB	S 7th Ave On-Ramp to S Hacienda Blvd Off-Ramp	C/B	C/C	C/C	C/C
Westbound					
SR-60 WB	S Hacienda Blvd On-Ramp to S 7th Ave Off-Ramp	C/D	C/E	C/D	C/D
SR-60 WB	S 7th Ave Off-Ramp to S 7th Ave On-Ramp	C/D	C/E	C/D	C/D
SR-60 WB	S 7th Ave On-Ramp to End of HOV Lane	C/D	C/D	C/E	C/E
SR-60 WB	End of HOV Lane to Crossroads Pkwy Off-Ramp	C/C	C/D	C/D	C/D
SR-60 WB	Crossroads Pkwy Off-Ramp to Crossroads Pkwy On-Ramp	C/D	C/E	C/D	C/D
SR-60 WB	I-605 Off-Ramp to NB I-605 On-Ramp	D/E	D/F	-	-
SR-60 WB	NB I-605 On-Ramp to SB I-605 On-Ramp	D/D	D/E	-	-
SR-60 WB	SB I-605 On-Ramp to Peck Rd Off-Ramp	D/D	D/E	-	-
SR-60 WB	Peck Rd Off-Ramp to Peck Rd NB On-Ramp	D/D	D/D	-	-
SR-60 WB	Peck Rd NB On-Ramp to Peck Rd SB On-Ramp	D/D	D/D	-	-
SR-60 WB	Peck Rd SB On-Ramp to Santa Anita Ave Off-Ramp	D/D	D/D	-	-
SR-60 WB	I-605 Off-Ramp to Peck Rd Off-Ramp	-	-	C/E	C/D
SR-60 WB	Peck Rd Off-Ramp to SB I-605 On-Ramp	-	-	C/D	C/D
SR-60 WB	SB I-605 On-Ramp to NB I-605 On-Ramp	-	-	C/D	D/D
SR-60 WB	NB I-605 On-Ramp to Peck Rd On-Ramp	-	-	C/C	C/C
SR-60 WB	Santa Anita Ave Off-Ramp to Santa Anita Ave NB On-Ramp	D/C	D/D	D/D	D/D
SR-60 WB	Santa Anita Ave NB On-Ramp to Santa Anita Ave SB On-Ramp	D/C	D/D	D/D	D/D
SR-60 WB	Santa Anita Ave SB On-Ramp to Rosemead Blvd Off-Ramp	D/D	D/D	D/D	D/E

- Definition of freeway section has changed due to proposed alternatives at this location (section end points changed or section changes from mainline to weave or merge, etc.)

Table 2: AM/PM Peak Hour Freeway Merge and Diverge Analysis Summary

Freeway/ Direction	Segment Location	Merge/Diverge	2014 Existing	2040 Alternative 1 (No Build)	2040 Alternative 4 Option A	2040 Alternative 4 Option B
			AM/PM Peak			
Northbound						
I-605 NB	Rose Hills Rd Off-Ramp	Diverge	E/C	E/E	D/D	D/D
I-605 NB	Rose Hills Rd On-Ramp	Merge	D/C	D/F	C?D	C/D
I-605 NB	Peck Rd Off-Ramp	Diverge	E/D	E/F	-	-
I-605 NB	Peck Rd/Pellissier Pl Off-Ramp	Diverge	-	-	D/D	D/E
I-605 NB	SR-60 Off-Ramp	Major Diverge	-	-	D/D	D/D
I-605 NB	Peck Rd On-Ramp	Merge	-	-	1 Ln Add / 1 Ln Add	1 Ln Add / 1 Ln Add
I-605 NB	EB SR-60 On-Ramp	Merge	1 Ln Add / 1 Ln Add	1 Ln Add / 1 Ln Add	2 Ln Add / 2 Ln Add	2 Ln Add / 2 Ln Add
I-605 NB	WB SR-60 On-Ramp	Merge	C/D	D/E	C/D	C/D
I-605 NB	EB I-10 Off-Ramp	Diverge	-	-	1 Ln Drop / 1 Ln Drop	-
I-605 NB	Valley Blvd Off-Ramp	Diverge	D/D	E/E	1 Ln Drop / 1 Ln Drop	1 Ln Drop / 1 Ln Drop
I-605 NB	EB I-10 Off-Ramp	Diverge	-	-	-	1 Ln Drop / 1 Ln Drop
I-605 NB	EB Valley Blvd On-Ramp	Merge	C/C	D/D	C/D	C/D
I-605 NB	WB Valley Blvd On-Ramp	Merge	-	-	E/E	E/E
I-605 NB	WB I-10 Off-Ramp	Diverge	-	-	E/E	E/E
Southbound						
I-605 SB	Valley Blvd Off-Ramp	Diverge	-	-	C/C	C/C
I-605 SB	I-10 On-Ramp	Merge	-	-	2 Ln Add / 2 Ln Add	2 Ln Add / 2 Ln Add
I-605 SB	Valley Blvd On-Ramp	Merge	D/C	E/D	D/D	D/D
I-605 SB	SR-60 Off-Ramp	Diverge	1 Ln Drop / 1 Ln Drop	1 Ln Drop / 1 Ln Drop	-	-
I-605 SB	SR-60 Off-Ramp	Major Diverge	-	-	D/C	D/C
I-605 SB	WB SR-60 On-Ramp	Merge	1 Ln Add / 1 Ln Add	1 Ln Add / 1 Ln Add	2 Ln Add / 2 Ln Add	-
I-605 SB	NB Peck Rd On-Ramp	Merge	C/C	D/D	C/C	-
I-605 SB	SB Peck Rd On-Ramp	Merge	C/C	D/D	-	-
I-605 SB	Rose Hills Rd Off-Ramp	Diverge	D/D	E/E	-	-
I-605 SB	EB SR-60 On-Ramp	Merge	-	-	-	2 Ln Add / 2 Ln Add
I-605 SB	Rose Hills Rd On-Ramp	Merge	C/C	D/C	D/C	D/D
Eastbound						
SR-60 EB	Santa Anita Ave Off-Ramp	Diverge	C/D	D/D	D/D	D/D
SR-60 EB	Santa Anita Ave SB On-Ramp	Merge	C/C	C/D	C/D	C/D
SR-60 EB	Santa Anita Ave NB On-Ramp	Merge	C/C	C/C	C/C	C/C
SR-60 EB	Peck Rd Off-Ramp	Diverge	D/D	D/D	D/D	D/D
SR-60 EB	I-605 Off-Ramp	Diverge	-	-	1 Ln Drop / 1 Ln Drop	1 Ln Drop / 1 Ln Drop
SR-60 EB	Peck Rd On-Ramp	Merge	-	-	C/C	C/C
SR-60 EB	SB I-605 On-Ramp	Merge	C/D	D/D	C//D	C/D
SR-60 EB	Crossroads Pkwy On-Ramp	Merge	B/B	B/C	B/C	B/C
SR-60 EB	S 7th Ave SB Off-Ramp	Diverge	C/C	C/D	C/D	C/D
SR-60 EB	S 7th Ave NB Off-Ramp	Diverge	C/D	C/D	C/D	C/D
SR-60 EB	S 7th Ave On-Ramp	Merge	C/B	C/C	C/C	C/C

Freeway/ Direction	Segment Location	Merge/Diverge	2014 Existing	2040 Alternative 1 (No Build)	2040 Alternative 4 Option A	2040 Alternative 4 Option B
Westbound						
SR-60 WB	S 7th Ave Off-Ramp	Diverge	C/D	D/E	C/D	C/D
SR-60 WB	S 7th Ave On-Ramp	Merge	1 Ln Add / 1 Ln Add	1 Ln Add / 1 Ln Add	D/D	D/D
SR-60 WB	Crossroads Pkwy Off- Ramp	Diverge	1 Ln Drop / 1 Ln Drop	1 Ln Drop / 1 Ln Drop	E/E	E/E
SR-60 WB	NB I-605 On-Ramp	Merge	1 Ln Add / 1 Ln Add	1 Ln Add / 1 Ln Add	-	-
SR-60 WB	SB I-605 On-Ramp	Merge	1 Ln Add / 1 Ln Add	1 Ln Add / 1 Ln Add	-	-
SR-60 WB	Peck Rd Off-Ramp	Diverge	D/E	E/E	D/E	D/E
SR-60 WB	SB I-605 On-Ramp	Merge	-	-	1 Ln Add / 1 Ln Add	1 Ln Add / 1 Ln Add
SR-60 WB	NB I-605 On-Ramp	Merge	-	-	1 Ln Add / 1 Ln Add	1 Ln Add / 1 Ln Add
SR-60 WB	Peck Rd NB On-Ramp	Merge	C/C	C/D	-	-
SR-60 WB	Peck Rd SB On-Ramp	Merge	C/C	C/C	-	-
SR-60 WB	Santa Anita Ave Off- Ramp	Diverge	D/D	E/E	-	-
SR-60 WB	Santa Anita Ave NB On-Ramp	Merge	C/C	C/C	C/C	C/C
SR-60 WB	Santa Anita Ave SB On- Ramp	Merge	C/C	D/D	D/D	D/D

- Definition of freeway section has changed due to proposed alternatives at this location (section end points changed or section changes from mainline to weave or merge, etc.)

Table 3: AM/PM Peak Hour Freeway Weaving Analysis Summary

Freeway/ Direction	Segment Location	2014 Existing	2040 Alternative 1 (No Build)	2040 Alternative 4 Option A	2040 Alternative 4 Option B
Northbound					
I-605 NB	Peck Rd On-Ramp to SR-60 Off-Ramp	F/B	F/F	-	-
I-605 NB	WB Valley Blvd On-Ramp to I-10 Off-Ramp	F/F	F/F	-	-
I-605 NB	I-10 On-Ramp to Ramona Blvd Off-Ramp	C/C	C/D	D/E	D/E
Southbound					
I-605 SB	Ramona Blvd On-Ramp to I-10 Off-Ramp	C/C	D/C	C/C	C/C
I-605 SB	I-10 On-Ramp to Valley Blvd Off-Ramp	C/C	F/C	-	-
I-605 SB	EB SR-60 On-Ramp to Peck Rd Off-Ramp	B/B	C/C	C/C	-
I-605 SB	WB SR-60 On-Ramp to Peck Rd Off-Ramp	-	-	-	C/C
I-605 SB	SB Peck Rd On-Ramp to Rose Hills Rd Off-Ramp	-	-	D/D	D/D
Eastbound					
SR-60 EB	Peck Rd On-Ramp to I-605 Off-Ramp	B/C	C/F	-	-
SR-60 EB	NB I-605 On-Ramp to Crossroads Pkwy Off-Ramp	B/C	C/C	C/C	C/D
Westbound					
SR-60 WB	Crossroads Pkwy On-Ramp to I-605 Off-Ramp	C/C	D/E	D/F	D/F
SR-60 WB	Peck Rd SB On-Ramp to Santa Anita Ave Off- Ramp	-	-	C/D	C/D

- Definition of freeway section has changed due to proposed alternatives at this location (section end points changed or section changes from mainline to weave or merge, etc.)

The tables show that while the two Alternative 4 design options improve the overall operational conditions as compared to No Build conditions, the operational characteristics are very similar between the alternatives. This is mainly due to the fact that the physical differences between the alternatives in terms of lane configurations, interchange and ramp geometrics and intersection geometrics are not of the type that result in major shifts in traffic capacity or operations. For analysis purposes, most changes were limited to different lengths of weaving, merging and diverging areas available to the motorist. In terms of levels of service, these types of changes were found to result in little difference in levels of service.

Of the multiple mainline segments that were analyzed, nearly all experience an improvement with the alternatives and only a few are shown to experience a possible worsening of LOS for the project build alternatives as compared to the future No Build conditions. At those locations the final build LOS is acceptable LOS D during the AM peak hour, three locations are at LOS E in the PM peak hour, and none are at LOS F. The vast majority of the mainline segments, merge and diverge segments, and weaving segments are shown to improve or maintain the same LOS with implementation of the build alternatives. The reasons that a small number of segments show a potential worsening of LOS in the future for project build alternatives as compared to the No Build include the following:

- With the build alternatives, in some cases the type of analysis segment changes due to the project characteristics and changes proposed as part of the alternative. For example, the project design may result in what was previously a lane addition/merge segment becoming a weaving segment, or vice-versa. The methodology and input variables for calculating LOS for merge segments differs from that for weaving segments. As an example, the available lengths (of the merge/diverge/weave areas) may have changed under a build condition, thus changing a calculation variable. Under these circumstances, even using the same traffic volumes may result in different LOS findings due to the change in density and different methodologies being applied.
- In many cases, the future build alternative model-projected traffic volumes increase from the No Build due to forecast traffic being added to the freeway due to increased capacity (such as due to adding a mainline or HOV lane in each direction), or due to changes in ramp design or removal of ramps. The traffic model did project, as expected, traffic to increase on the segments as a direct result of added capacity due to the project, either by shifting from adjacent arterials, parallel freeways, or both. In these cases, the future build alternatives LOS could worsen if the volumes increased with the project, even with freeway capacity improvements. In a few segments, the added/shifted volumes and the proposed geometric conditions result in a worse LOS. Again in nearly all segments, even with increased model forecast volumes, the LOS improves, with the exception of a few locations.

In general, all of the build alternatives are shown to benefit the mainline, merge and diverge, and weaving segments for nearly all of the study locations throughout the freeway corridors, even with higher forecasted volumes due to the proposed freeway capacity enhancements.

Safety / Accident Data

The Traffic Accident Surveillance and Analysis System (TASAS) – Transportation System Network (TSN) data was provided by Caltrans District 7 and included accidents that occurred between October 1, 2009 and September 31, 2012 on the I-605 from PM 14.41 to 21.07, and on SR-60 from PM 10.23 to 14.26, as well as the interchange ramps. This data was analyzed for the PSR-PDS and a summary of the accident data provided in TASAS Table B is shown below in Tables 4 through 6 for the freeway mainline, freeway-to-freeway direct connector and freeway-to-arterial ramps on the I-605 and SR-60.

Table 4: Freeway Mainline TASAS Table B Accident Rates from 10/01/2009 to 09/01/2012

Location		Total Actual Accident Rates	Statewide Avg. Accident Rates		
			Fatal	F+I	Total
I-605 Freeway Mainline Segments					
I-605 NB	Beverly Blvd to Rose Hills Rd	0.86	0.004	0.32	1.04
I-605 SB	Rose Hills Rd to Beverly Blvd	0.80	0.004	0.32	1.04
I-605 NB	Rose Hills Rd to Peck Rd	0.86	0.004	0.32	1.05
I-605 SB	Peck Rd to Rose Hills Rd	1.01	0.004	0.32	1.05
I-605 NB	Peck Rd to SR-60	1.53	0.005	0.31	1.01
I-605 SB	SR-60 to Peck Rd	1.03	0.005	0.31	1.01
I-605 NB	SR-60 to Valley Blvd	2.01	0.004	0.28	0.91
I-605 SB	Valley Blvd to SR-60	1.10	0.004	0.28	0.91
I-605 NB	Valley Blvd to I-10	4.71	0.004	0.29	0.95
I-605 SB	I-10 to Valley Blvd	1.45	0.004	0.29	0.95
I-605 NB	I-10 to Ramona Blvd	0.95	0.003	0.26	0.85
I-605 SB	Ramona Blvd to I-10	1.03	0.003	0.26	0.85
SR-60 Freeway Mainline Segments					
SR-60 EB	Santa Anita Ave to Peck Rd	0.79	0.004	0.31	1.00
SR-60 WB	Peck Rd to Santa Anita Ave	0.49	0.004	0.31	1.00
SR-60 EB	Peck Rd to I-605	1.31	0.004	0.28	0.93
SR-60 WB	I-605 to Peck Rd	1.05	0.004	0.28	0.93
SR-60 EB	I-605 to Crossroads Pkwy	0.72	0.004	0.29	0.97
SR-60 WB	Crossroads Pkwy to I-605	1.97	0.004	0.29	0.97
SR-60 EB	Crossroads Pkwy to 7th Ave	0.64	0.005	0.31	1.01
SR-60 WB	7th Ave to Crossroads Pkwy	1.25	0.005	0.31	1.01

Table 5: Direct Connector TASAS Table B Accident Rates from 10/01/2009 to 09/01/2012

Location		Total Actual Accident Rates	Statewide Avg. Accident Rates		
			Fatal	F+I	Total
I-605 Freeway-to-Freeway Direct Connectors					
I-605 SB	ON FROM EB RTE 60	0.29	0.003	0.11	0.32
I-605 NB	OFF TO RTE 60	0.25	0.002	0.08	0.25
I-605 SB	ON FROM WB RTE 60	0.26	0.003	0.14	0.41
I-605 NB	ON FROM EB RTE 60	1.11	0.003	0.14	0.41
I-605 SB	OFF TO RTE 60	0.23	0.002	0.08	0.25
I-605 NB	ON FROM WB RTE 60	0.51	0.003	0.11	0.32
I-605 NB	OFF TO RTE 10	1.06	0.002	0.08	0.25
I-605 SB	ON FROM FROM RTE 10	0.08	0.001	0.06	0.18
I-605 NB	OFF TO EB RTE 10	0.55	0.005	0.13	0.38
I-605 SB	OFF TO/ON FROM RTE 10	0.65	0.001	0.06	0.24
I-605 SB	OFF TO EB RTE 10	0.52	0.004	0.16	0.49
I-605 SB	OFF TO RTE 10	0.23	0.002	0.08	0.25
I-605 NB	ON FROM RTE 10	0.03	0.001	0.06	0.18
SR-60 Freeway-to-Freeway Direct Connectors					
SR-60 EB	OFF TO RTE 605	0.89	0.002	0.08	0.25
SR-60 WB	ON FROM SB RTE 605	0.56	0.003	0.11	0.32
SR-60 EB	ON FROM SB RTE 605	1.02	0.004	0.21	0.72
SR-60 WB	ON FROM NB RTE 605	0.82	0.004	0.21	0.72
SR-60 EB	ON FROM NB RTE 605	0.18	0.003	0.11	0.32
SR-60 WB	OFF TO RTE 605	0.51	0.002	0.08	0.25

Table 6: Freeway-to-Arterial Ramps TASAS Table B Accident Rates from 10/01/2009 to 09/01/2012

Location		Total Actual Accident Rates	Statewide Avg. Accident Rates		
			Fatal	F+I	Total
I-605 Freeway-to-Arterial Ramps					
I-605 NB	OFF TO ROSE HILLS RD	1.13	0.003	0.24	0.84
I-605 SB	ON FROM ROSE HILLS RD	0.94	0.000	0.13	0.41
I-605 SB	OFF TO ROSEHILL/BEVERLY	1.08	0.003	0.35	1.01
I-605 NB	ON FROM ROSE HILLS RD	0.26	0.002	0.22	0.63
I-605 SB	ON FROM SB PECK RD	0.49	0.003	0.18	0.57
I-605 NB	OFF TO PECK RD	0.49	0.003	0.35	1.01
I-605 SB	ON FROM NB PECK RD	0.29	0.003	0.18	0.57
I-605 NB	ON FROM PECK RD	0.59	0.001	0.13	0.46
I-605 SB	OFF TO PECK RD	0.33	0.001	0.17	0.54
I-605 SB	ON FROM VALLEY BLVD	0.51	0.001	0.06	0.18
I-605 NB	OFF TO VALLEY BLVD	1.38	0.003	0.35	1.01
I-605 SB	ON FROM WB VALLEY BLVD	1.04	0.003	0.14	0.41
I-605 SB	ON FROM EB VALLEY BLVD	2.26	0.003	0.18	0.57
I-605 NB	ON FROM EB VALLEY BLVD	2.35	0.002	0.21	0.73
I-605 SB	OFF TO VALLEY BLVD	1.02	0.004	0.33	1.00
I-605 NB	ON FROM WB VALLEY BLVD	0.18	0.003	0.18	0.57
SR-60 Freeway-to-Arterial Ramps					
SR-60 EB	ON FROM WB SANTA ANITA	0.29	0.002	0.21	0.73
SR-60 WB	ON FROM WB SANTA ANITA	0.00	0.003	0.18	0.57
SR-60 EB	ON FROM EB SANTA ANITA	3.29	0.003	0.18	0.57
SR-60 WB	ON FROM SANTA ANITA	0.00	0.001	0.13	0.46
SR-60 WB	OFF TO SANTA ANITA/TYLER	0.36	0.004	0.24	0.75
SR-60 EB	OFF TO DURFEE AV/PECK RD	1.10	0.003	0.35	1.01
SR-60 WB	ON FROM SB PECK RD	0.89	0.003	0.18	0.57
SR-60 EB	ON FROM DURFEE AV/PECK RD	0.78	0.003	0.24	0.72
SR-60 WB	ON FROM NB PECK RD	0.69	0.002	0.21	0.73
SR-60 WB	OFF TO PECK RD	1.87	0.003	0.35	1.01
SR-60 EB	OFF TO CROSSROADS PKWY S	0.32	0.003	0.35	1.01
SR-60 EB	ON FROM CROSSROADS PKWY S	0.33	0.002	0.22	0.63
SR-60 WB	ON FROM CROSSROADS PKWY S	0.10	0.000	0.13	0.41
SR-60 WB	OFF TO CROSSRDS PKWY S	0.98	0.001	0.17	0.54
SR-60 WB	ON FROM SEVENTH AVE	0.67	0.002	0.22	0.63
SR-60 EB	OFF TO SB SEVENTH AVE	1.80	0.004	0.24	0.75
SR-60 EB	OFF TO NB SEVENTH AVE	0.79	0.003	0.30	1.06
SR-60 WB	OFF TO SEVENTH AVE	2.93	0.003	0.24	0.84

- Notes: 1. Accident rates are expressed as # of accidents/Million vehicles for connector and ramps.
 2. F+I = fatal plus injury, PDO = Property Damage Only.
 3. **Bold** accident rates above are in excess of the statewide average.
 4. **Bold Red** accident rates above are 30% (or more) greater than the statewide average.

The build alternatives geometric plans (Attachment B) include these higher than statewide average accident location callouts to help illustrate where proposed improvements may have additional utility beyond serving capacity, circulation, or other improvement needs.

Specific accident concentration locations with accident rates generally thirty (30) percent greater than the statewide average are presented in Figure 2 of the TEPA.

Design Features and Traffic Infrastructure

The following features will be considered during PA/ED and PS&E to improve operations and safety within the SR-60/I-605 corridor study area:

- Acceleration/Deceleration lanes
- Bicyclist, pedestrian, and transit facilities
- Traffic signals
- Protective railings/barriers
- Lighting
- Ramp metering and detection systems
- CHP enforcement areas
- On- and off-ramp location analysis
- Truck lanes on SR-60
- Goods movement enhancements

Traffic Engineering Studies

The traffic analysis that will be prepared for the project during PA/ED will study existing (2016), opening year (2023/24), and long-range (2040 or 2045) conditions. The following analyses will be included:

- Capacity
- Delay
- Queue
- Level of service
- Signal warrants
- Ramp merge/diverge
- Weave analysis
- Special truck studies
- Ramp metering analysis

Other Traffic Considerations and Coordination

In addition to the traffic analyses listed above, traffic-related efforts during PA/ED should include the following:

- Electrical systems, including traffic signals, safety lighting, and overhead sign structures
- Coordination with Caltrans and the City regarding signal coordination and connection to the City Traffic Management Center
- Transportation Management Plan data sheets
- Stage construction

5. DEFICIENCIES

Based on traffic analysis in the TEPA as summarized herein (Section 4) the existing mainline segments, system interchange connectors, and local interchange ramps do not have adequate capacity to support the growth in traffic volumes anticipated by the forecast year 2040 due to future traffic growth and economic development.

Without this project, the operation and efficiency of the project corridors would continue to deteriorate over time, resulting in increased congestion, delays, and consequently decreased LOS at the system interchange, local interchanges, and adjacent intersections. Further, without safety improvements to provide improved geometric design features for mainline segments, system interchange connectors, and local interchange ramps and intersections, high accident trends may continue.

Current operational deficiencies for the freeway mainline, freeway ramps, freeway weaving, and intersections and ramp termini are described in more detail within the Traffic Analysis Summary in Section 4. From the traffic analysis, existing traffic conditions show there are a number of deficiencies including one basic freeway segment each on the NB I-605 and WB SR-60 that are projected to operate at LOS E or F. As previously discussed, the HCM analysis was supplemented with PeMS data obtained for this study. During the AM peak hour, the PeMS data illustrates congestion speeds on four segments of the WB SR-60 under 45 mph, with speeds between the I-605 on-ramps and Peck Road ranging between 25 and 35 mph. During the PM peak hour, the PeMS data illustrates congestion speeds on one segment each on the NB and SB I-605 ranging between 35 and 45 mph (on NB segment between Pellissier Place and Valley Boulevard; and, SB segment between Rose Hills off- and on-ramps), and two segments on EB SR-60 ranged between 35 and 45 mph (segment between Peck Road and Workman Mill Road; and at Santa Anita Avenue).

Other existing conditions deficiencies include the freeway merge and diverge analysis that shows three locations on I-605 and one location on the WB SR-60 experiencing LOS E or F. The freeway weaving analysis shows one location on the WB SR-60 with LOS E or F. Five local intersection locations are represented as operating at LOS E or F in the AM peak hour and four local intersection locations operate at LOS E or F in the PM peak hour. It should be noted that the intersections at freeway/arterial ramp interchange locations sometimes experience poor operating conditions due to close intersection spacing and vehicle queues which back up from one location and negatively affect the operating conditions at the adjacent location.

6. CORRIDOR AND SYSTEM COORDINATION

I-605 is functionally classified as an Interstate, State Highway, and an Urban Principal Arterial-P3. The Functional Classification for SR-60 is P1, an extension of a rural principal arterial into an urban area. I-605 is also a part of the National Highway System. I-605 and SR-60 are a part of the Federal Surface Transportation Assistance Act (STAA) route network for oversized trucks, Strategic Highway Network (STRAHNET) and Intermodal Corridors of Economic Significance (ICES). I-605 is identified as a Major International Trade Highway Route in 2014 California Freight Mobility Plan and Interregional Transportation Strategic Plan of 2012 and serves as a part of the Intermodal Corridors of Economic Significance (ICES). SR-60 is classified as a Gateway Route in the Caltrans Interregional Transportation Strategic Plan (ITSP) of 1998. Global Gateways are designated as Goods Movement Corridors connecting with other major urban highways.

The 2012 Regional Transportation Plan (RTP), titled “2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future,” adopted by SCAG in April 2012 identifies SR-60 within the project limits as having existing rail transit.

The 2013 Federal Transportation Improvement Program (FTIP) adopted by SCAG’s Executive/Administration Committee in September 2012 includes the following project, within the project limits of the SR-60/I-605 interchange project:

(1) FTIP Project ID# LA0D441, RTP Project ID# LA0D441

Description: Route 605: City of Industry. Reconfiguration of Valley Boulevard on-and off-ramps to the 605 freeway to improve mobility, circulation, and relieve the current congestion at Valley Boulevard includes; right turn from Valley Boulevard onto existing SB on-ramp, construct dual WB to SB lanes to SB on-ramp and reconstruct entire SB on-ramp, improvements at Valley Boulevard/Temple Avenue/NB 605 off-ramp intersection, widen EB Valley Boulevard to 3 lanes in advance of SB ramps. (EA 28680K, ID 0700020881-4382. PM from 18.76 to 19.77.

The 2013 FTIP only includes SR-60 project improvements at Lemon Avenue and Grand Avenue interchanges, which are outside of the study limits of this PSR-PDS.

For local highway projects, the following projects are included in the FTIP and are within the project limits of study:

- (2) FTIP Project ID# LA0D442, RTP Project ID# LA0D442
Description: City of Industry. Retrofitting the existing two-lane wide Peck Road bridge over the San Gabriel River Freeway (Route 605) and widen it to accommodate 4 lanes (2 each direction) to eliminate bottleneck. Program CAR75. Construction in 2014/15.
- (3) FTIP Project ID# LAF3507, RTP Project ID# LA1NL04
Description: Baldwin Park, South Baldwin Park Commuter Bikeway Project. Construct 3-mile commuter Class I bike path along San Gabriel River and Walnut Creek connecting to major employment centers on Baldwin Park Boulevard. Program NCN26. Construction in 2014/15.
- (4) FTIP Project ID# LAF5516, RTP Project ID# 1NL04
Description: South El Monte. Installation of Class II bike lanes on Tyler Avenue/Santa Anita Avenue from Klingerman Street to end of City limits south of Merced Avenue (1.5 mi) and on Merced Avenue from Fern Avenue to Santa Anita Avenue (1.3 mi) while Class III bike routes with shared-lane markings will be installed on Lerma Avenue from Merced Avenue to SW City Limits (0.3 mi) and on Thienes Avenue from Tyler Ave to SE City Limits (1 mi). The scope of work also includes installation of bike parking at the Civic Center and wayfinding/signage. Construction in 2016/17.

The I-605 Transportation Concept Report (TCR) (Caltrans, July 2013) shows that five lanes in each direction are required on I-605 from I-5 to SR-60 to attain LOS F1 or 11 total lanes for LOS F0, and five lanes in each direction are required on I-605 from SR-60 to I-10 to attain LOS F0. To achieve LOS D, 16 and 14 total lanes, respectively, would be needed or eight and seven lanes in each direction, respectively. Per the Concept Report's summary table, the existing I-605 includes four mixed flow lanes and one HOV lane in each direction throughout the project limits.

The SR-60 TCR (Caltrans, June 2014) shows that ten lanes (both directions) are required on SR-60 both west and east of I-605 to attain the minimum acceptable LOS F0 and that 14 lanes are required to attain LOS D. The existing SR-60 includes four mixed flow lanes, and one HOV lane west of the I-605 interchange. East of the I-605 interchange, SR-60 includes five mixed flow lanes and no HOV lane on the WB side and four mixed flow lanes and one HOV lane on the EB side.

I-605 is a California Route on the Rural and Single Interstate Routing System which is given special attention in regard to minimum vertical clearance as a result of agreements between FHWA and the Department of Defense. SR-60 within the project limits are not part of the Routing System. I-605 and SR-60 are not included as Corridor System Management Plan (CSMP) Routes.

Caltrans published the California High-Occupancy Vehicle Lane Degradation Action Plan (July 31, 2014) (HOV Action Plan) in response to the findings within the 2011 California High-Occupancy Vehicle Lane Degradation Determination Report (July 31, 2013). The HOV Action Plan includes recommendations for HOV improvements within the project study area. According to the Report, degraded segments of existing HOV lanes exist within the project limits on SB I-605 from I-10 to Beverly Boulevard. The NB I-605 and both directions on SR-60, east of I-605, are not considered degraded.

For SB I-605, the potential causes of the degradation have been determined to be due to:

- Vehicle weaving conflict at ingress/egress locations due to congestion in the mixed flow lane
- Mixed flow lane demand exceeds capacity
- High truck volume

In addition to the Caltrans HOV Degradation Report and Action Plan, SCAG has been conducting traffic modeling and analysis for an “Express Travel Choices Study” throughout the Los Angeles metropolitan region. Possible future implementation of the study findings needs to be monitored during the PA/ED phase to determine how the SR-60/I-605 study area may be impacted by, or benefit from, the SCAG study in regard to variable tolls, a network of toll express lanes, and other potential pricing scenarios.

7. ALTERNATIVES

Project Alternatives

Four alternatives were analyzed for the project: a No Build alternative and three build alternatives which include additional design options within them. Each of the three proposed build alternatives includes the addition of travel lanes by widening, removal of some non-standard features, and other operational improvements. Other alternatives were considered and discarded during the PSR-PDS process including some alternatives which were reviewed during the Feasibility Report phase. The proposed alternatives are consistent with the recommendations identified in the March 2013 “SR-91/I-605/I-405 Congestion Hot Spots Feasibility Report” prepared for Metro and GCCOG.

The local interchange geometry will need to be further refined during PA/ED for potential interchange configurations based on further Project Development Team (PDT) and GCCOG TAC input.

Improvements on I-605 are proposed between south of Rose Hills Road (PM 15.1) and the I-10 Interchange (PM 20.4) to the north. The limits of the proposed improvements to SR-60 are from Santa Anita Avenue (PM 10.2) to the west, and east of Turnbull Canyon Road (PM 15.6) to the east. Existing operational deficiencies along I-10 were not required to be improved as part of this study and will form part of a future project. For all the alternatives, the I-10 traffic analysis was completed to ensure there were no adverse impacts on I-10 as a result of the proposed improvements on SR-60 and I-605.

The project limits are predominantly located within the cities of Baldwin Park, El Monte, Industry, Pico Rivera, South El Monte, and unincorporated areas within County of Los Angeles. Proposed improvements within the project limits will be designed for compatibility with future freeway widening projects to minimize future reconstruction.

Additional details of each alternative are provided below:

ALTERNATIVE 1

This alternative is the No Build Alternative and proposes no reconstruction or improvements to the existing I-605 or SR-60. All freeway facilities remain as-is with the exception of routine roadway maintenance and currently approved improvements. Since the projected growth forecast for Los Angeles County shows an increase in the number of users, the traffic volumes will also increase in the future. Lacking additional capacity, a higher traffic volume would increase the traffic congestion, leading to a degraded LOS, and an increase in traffic delays. As a result, the No Build Alternative does not address the Purpose and Need for the project. The No Build Alternative is being considered because it serves as the baseline against which to evaluate the effectiveness of the proposed build alternatives. This alternative allows decision makers to make a comparison between the impacts of the build alternatives and the impacts of the no build scenario.

ALTERNATIVE 2

This alternative adds one mixed flow lane in each direction on I-605 and along portions of the WB SR-60, as well as auxiliary lanes where necessary. The freeway cross section is widened to meet HDM cross section standards and I-605 would be realigned vertically and horizontally from Beverly Boulevard to Rose Hills Road to improve sight distance and achieve standard vertical clearance over the Union Pacific Railroad (UPRR) tracks. Right-of-way acquisition will be necessary to accommodate the Alternative 2 improvements.

Within Alternative 2, there are two variations, Option A and Option B. These variations differ with respect to the interchange configurations. I-605 and SR-60 mainline widening requires the reconstruction of ramps at local and system interchanges as follows:

Rose Hills Road Interchange

The Rose Hills Road interchange consists of Option A and Option B configurations. For both interchange Options A and B, the NB I-605 hook off-ramp and direct on-ramp are reconstructed to a standard diamond configuration. Shepherd Street is realigned easterly to accommodate the mainline widening and the NB I-605 off-ramp modifications. Right-of-way is required for these proposed improvements.

For SB I-605, the unconventional intersection at the junction of the off- and on-ramps/Rose Hills Road/San Gabriel River Parkway/Sports Arena Drive is modified through the implementation of a signalized intersection with a partial cloverleaf interchange configuration for Option A. The existing SB I-605 on-ramp and off-ramp are reconstructed, and the on-ramp on the south side of Rose Hills Road is eliminated. The proposed on and off-ramp require short structures over the existing San Jose Creek Channel. San Gabriel River Parkway is reconstructed to accommodate the interchange improvements. The Rose Hills Road overcrossing is reconstructed and widened from three to four lanes to accommodate the additional mainline lanes and the interchange reconfiguration. Option B implements a roundabout at the SB I-605 off- and on-ramps/Rose Hills Road/San Gabriel River Parkway/Sports Arena Drive intersection. Option A requires more right-of-way than Option B.

Peck Road Interchange

At the Peck Road interchange, both Option A and B would use the same configuration for the NB I-605 hook on- and off-ramps. Pellissier Place is reconstructed to accommodate the proposed improvements and to provide space for the structure outrigger supports spanning the street. The NB I-605 Peck Road on-ramp is braided with the SR-60 connector. The NB I-605 Peck Road on-ramp joins the mainline just north of the SR-60 separation structure and provides an additional mixed flow lane. Both Option A and B replace the Peck Road overcrossing with four lanes, where Peck Road is reconstructed and widened from Rooks Road to Pellissier Place.

For SB I-605, Option A retains the existing hook on- and off-ramp configuration at Rooks Rd. The connector from the EB SR-60 to the SB I-605, and the hook off-ramp to Peck Road provides a short, nonstandard weaving distance, similar to the existing condition and no braid is proposed. Option A maintains the existing direct on-ramp from EB Peck Road to the SB I-605 and merging onto the I-605 mainline south of the hook on-ramp. Option B would braid and reconstruct the SB ramps in a diamond configuration. The EB SR-60 to SB I-605 connector merges onto the mainline immediately south of the Peck Road overcrossing and prior to the Peck Road on-ramp merge. Option A requires less right-of-way than Option B at this interchange.

SR-60/I-605 System Interchange

At the SR-60/I-605 System Interchange Option A and B use the same configuration for the connectors with the exception of the Option A addition of a Peck Rd off-ramp from the SB I-605 to WB SR-60 connector. The existing direct connectors and loop connectors are reconstructed to accommodate the mainline widening.

Both Options A and B braid the SB I-605 to WB SR-60 connector with the WB SR-60 Peck Road off-ramp. The NB I-605 to WB SR-60 connector merges with the WB SR-60 Peck Road off-ramp, and is braided over the SB I-605 to WB SR-60 connector. Option A however, adds a WB SR-60 Peck Road off-ramp from the SB I-605 to WB SR-60 connector, and requires a bridge structure over the San Gabriel River. The WB SR-60 mainline number of lanes is reduced from six to four since the off-ramp and the connector from the NB I-605 to WB SR-60 connector are separated from the mainline. Option B provides a similar configuration, however does not provide an exit for Peck Road from SB I-605.

The EB SR-60 to the SB I-605 connector is reconstructed and braided under the EB SR-60 Peck Road on-ramp. New bridge structures would be provided for the connectors/ramps as they cross the San Gabriel River. The EB side of the existing SR-60/I-605 separation structure would be widened and the remaining connectors would be realigned with configurations similar to existing. Option A requires more right-of-way than Option B at this interchange.

Valley Boulevard Interchange

For Option A at the Valley Boulevard interchange, modifications are proposed to the existing configuration, which include the proposed improvements within the PSR-PDS for the I-605/Valley Boulevard Interchange, Alternative 3, approved August 2014. The proposed improvements include adding one through lane on Valley Boulevard in each direction and removing the SB I-605 “horseshoe” on-ramp, which provided freeway access from WB Valley Boulevard and SB Temple Ave. Two left turn lanes are added on WB Valley Boulevard for the proposed SB I-605 on-ramp. The proposed SB I-605 on-ramp would now provide freeway access for both the WB and EB Valley Boulevard movements.

For Option B, the existing interchange and the configuration proposed in the I-605/Valley Boulevard Interchange PSR-PDS would be modified to accommodate the mainline widening, and to improve operations at the Valley Boulevard intersections. The WB Valley Boulevard to the NB I-605 direct on-ramp is replaced by the modified loop on-ramp in the southeast quadrant of the interchange. The existing mainline bridge is widened for the loop on-ramp merge onto NB I-605, spanning Valley Boulevard and the UPRR right-of-way. SB Temple Avenue connects to the existing “horseshoe” SB on-ramp which merges with the realigned EB Valley Boulevard to SB I-605 on-ramp at the southwest quadrant of the interchange.

For both Options A and B, the SB I-605 off-ramp to Valley Boulevard merges with the reconstructed EB I-10 to SB I-605 connector at a location north of Valley Boulevard. The SB I-605 Valley Boulevard loop off-ramp is constructed on a separate structure to span Valley Boulevard and the UPRR right-of-way. The EB I-10 to SB I-605 connector would merge onto the freeway at the Valley Boulevard undercrossing. The proposed SB I-605 Collector-Distributor road from I-10 to Valley Blvd and SB I-605 requires reconstruction of Cloverleaf Drive to accommodate the proposed improvements and to provide space for the structure outrigger supports spanning the street. New NB and SB I-605 bridge structures would be provided for the I-10 connectors as they cross Walnut Creek. Valley Boulevard and Temple Avenue would be reconstructed to accommodate the proposed interchange improvements. Option A requires less right-of-way than Option B at this interchange.

I-605/I-10 System Interchange Connectors

The EB I-10 to SB I-605 connector would be reconstructed as discussed under the Valley Boulevard Interchange section above. The NB I-605 would provide a separate location of divergence points to each of the I-10 connectors. The NB I-605 to EB I-10 connector diverges from the mainline at a location south of the Valley Boulevard interchange. The connector then parallels the mainline over Valley Boulevard, the UPRR right-of-way, and Walnut Creek and then merges with the EB I-10. The NB I-605 to WB I-10 connector would diverge from the freeway at the Walnut Creek crossing and loops in the northeast quadrant before merging onto WB I-10. Design Option A does not provide EB I-10 access from Valley Blvd, whereas Option B includes a braided connector that merges with the NB I-605 to EB I-10 connector.

SR-60

The proposed improvements on SR-60 have the same configuration for each alternative, given the existing lanes and shoulders are standard widths. The EB SR-60, east of I-605, would not include any improvements. The WB SR-60 improvements extend the fifth mixed flow lane from the Hacienda Blvd direct on-ramp, east of 7th Ave, to the SR-60/I-605 system interchange. The WB SR-60 mainline widening affects the interchange ramps at 7th Avenue and, therefore, the WB hook off-ramp and direct on-ramp are reconstructed at their approximate existing locations. The existing mixed flow lane terminating at the Crossroads Parkway off-ramp is extended to the I-605 interchange. The WB off-and on-ramps at Crossroads Parkway are reconstructed to accommodate the mainline widening. The Workman Mill Road median would be modified to accommodate the columns for the NB I-605 connector ramp bridge overcrossing structure.

The WB SR-60 loop on-ramp at Peck Road is reconstructed with a separate structure over Peck Road. The existing WB SR-60 Peck Road direct on-ramp is eliminated. Peck Road would be reconstructed to accommodate the Peck Road interchange improvements. A WB SR-60 auxiliary lane is proposed from the NB I-605 to WB SR-60 connector to the Santa Anita Avenue off-ramp. The EB SR-60 hook on-ramp from Durfee Ave at Peck Rd would be modified as a braided ramp with the EB SR-60 to NB/SB I-605 connector as noted under the SR-60/I-605 System Interchange section above.

Alternative 2 addresses the Purpose and Need for the project by reducing congestion and improving freeway mainline and ramp operations, improving safety, and improving local and system interchange operations. By proposing Caltrans' geometric design standards related to lane and shoulder widths, however, the alternative does not minimize adjacent right-of-way, environmental, and economic impacts.

ALTERNATIVE 3

Alternative 3 improvements are generally the same as for Alternative 2 on I-605; however, it includes non-standard design features within the mainline cross section such as 11-foot mixed flow/HOV lanes and a 1-foot HOV buffer. Truck lanes on the outside remain at 12 feet wide. This alternative has fewer right-of-way impacts than Alternative 2 due to the narrower geometric cross section. The proposed improvements on SR-60 are the same as Alternative 2. Therefore, the discussion below focuses on the I-605 improvements only as compared to Alternative 2.

In the section between Beverly Boulevard and Rose Hills Road, the NB I-605 mainline would be widened by one lane, with no widening of the median shoulder. In this section, the existing SB I-605 mainline and shoulders are maintained, where no additional mixed flow lane is proposed due to the UPRR crossing minimum vertical clearance constraint. One 12-foot wide standard mixed flow lane is added in each direction on I-605 and the median shoulders are widened from two feet to ten feet beginning north of the Rose Hills Road overcrossing and extending to Valley Boulevard. In addition, the Peck Road/I-605 interchange options are the same as Alternative 2 Options A and B, however, Alternative 3 does not require the reconstruction of Pellissier Place.

Alternative 3 addresses the Purpose and Need for the project by reducing congestion, and improving freeway mainline and ramp operations, safety, and interchange operations, while minimizing adjacent right-of-way, environmental, and economic impacts as compared to Alternative 2.

ALTERNATIVE 4

Alternative 4 improvements are largely the same as Alternative 2, however, the intent is to maintain the existing lane and median shoulder widths for the mainline freeway and provide standard widths for the added mixed flow lanes, interchange modifications, and newly constructed ramps to the extent possible. Alternative 4 minimizes right-of-way, environmental, and economic impacts compared to Alternatives 2 and 3.

I-605 within the project limits generally consists of existing 11-foot mixed flow lanes, 2-foot median shoulders and 1-foot HOV buffers. Where proposed outside widening occurs, the existing right shoulder is removed and a standard 12-foot mixed flow lane and 10-foot shoulder are added. The existing median shoulder and mixed flow lane widths would remain unchanged. Any proposed ramp realignment or widening includes standard shoulder and lane widths. The proposed improvements to SR-60 are the same as in Alternative 2. Therefore, the discussion below focuses on the I-605 improvements only as compared to Alternative 2.

In the section between Beverly Boulevard and Rose Hills Road, the NB I-605 mainline would be widened by one lane, with no widening of the median shoulder. The existing SB I-605 mainline lane and shoulder widths are maintained, where no additional mixed flow lane would be added due to the UPRR crossing minimum vertical clearance constraint. One mixed flow lane is added in each direction on I-605 from Rose Hills Road to Valley Boulevard.

Peck Road Interchange

The Peck Road interchange options are the same as Alternative 2 Options A and B. However, Alternative 4 does not require the reconstruction of Pellissier Place, given the mainline widening does not impact this arterial roadway.

Valley Boulevard Interchange

At the Valley Boulevard interchange, Options A and B, modifications are proposed to the existing configuration, which include the proposed improvements within the PSR-PDS for the I-605/Valley Boulevard Interchange, Alternative 3, approved August 2014. The diverge location for the NB I-605 off-ramp to Valley Boulevard differs between Option A and B, where Option A is similar to Option A of Alternatives 2 and 3 with the off-ramp diverging after the EB I-10 connector ramp. Option B proposes the Valley Blvd NB off-ramp to diverge before the NB I-605 connector to increase the length of the Valley Boulevard NB off-ramp.

A grade separation option at Valley Boulevard is also provided within Attachment B. This option grade separates Temple Avenue with UPRR and Valley Boulevard. This option has major residential impacts and will require further study during PA/ED. The construction cost for the Valley Boulevard grade separation is not included in the alternatives.

Alternative 4 addresses the Purpose and Need for the project by reducing congestion and improving freeway operations (both mainline and ramps), improving safety, improving local and system interchange operations, utilizing a non-standard design cross section where possible and minimizing right-of-way acquisition needs to minimize environmental and economic impacts compared to Alternatives 2 and 3.

For all build alternatives, FHWA involvement will be required. Any proposed modifications to the highway access control (such as at arterial interchanges) will require California Transportation Commission (CTC) action. Additional right-of-way would be required where nonstandard features

cannot be justified. Lane and ramp closures would be required during construction of the build alternatives, and potential agency limitations on such closures could impact the project schedule and cost (cost estimate ranges for all alternatives are provided in Section 11 - Funding).

Considerations Requiring Further Study

Consideration for the truck lanes on SR-60 will be evaluated during the PA/ED phase to determine whether a truck lane study will become part of the scope. Several truck lane studies have been conducted and are ongoing by SCAG, including the SR-60 Truck Lane Feasibility Study, February 2014. The truck lane study should consider future truck route performance, operations, goods movement, safety, and pollution reduction.

Consideration for High Occupancy Toll (HOT) lanes on I-605 will be evaluated during the PA/ED phase to determine whether the HOT lane studies become part of the scope. Consideration for HOT lanes or conversion of HOV lanes to HOT lanes was not included in this PSR-PDS.

An evaluation of the projected volumes on HOV to HOV direct connectors was completed using available modeling resources including the Gateway Cities travel model and other regional traffic models. The four HOV to HOV connector pairs below were evaluated. Based on unadjusted (raw) model volumes it was possible to rank them in order of traffic volumes.

- Between I-605 and I-10 (NB to EB and WB to SB) – Projected Very High Demand
- Between I-605 and SR-60 (NB to EB and WB to SB) – Projected Moderate to High Demand
- Between I-605 and SR-60 (WB to NB and SB to EB) – Projected Low to Moderate Demand
- Between I-605 and I-10 (NB to WB and EB to SB) – Projected Low Demand

The models were used as available, and there was no additional effort to validate or adjust the models for purposes of HOV forecasting for this PSR-PDS. It is therefore recommended that the PA/ED phase conduct a more detailed and focused/customized analysis. This analysis would possibly utilize the SCAG 2012 model, and the Gateway Cities Mesoscopic model being developed with the Aimsun platform, for further review of the possible HOV to HOV direct connector volumes. Construction of the required direct connectors would be stand-alone projects and were evaluated for the purpose of determining the impact on improvements proposed under this PSR-PDS. It was determined that construction of the HOV connectors after completion of the project would not degrade the operation of the proposed improvements. Major reconstruction of the project would be required in the future to accommodate the HOV to HOV direct connectors. The analysis and results are documented in a Technical Memorandum dated November 21, 2014 (See Attachment M).

Table 7: SR-60/I-605 PSR-PDS Alternative Descriptions

Location	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
I-605: Beverly Blvd to Rose Hills Rd	Mainline: No Improvements.	Mainline: Adds one NB and SB mixed flow lane. Terminates added SB mixed flow lane before UPRR tracks. Realigns mainline to provide adequate sight distance, vertical clearance over UPRR tracks, and to stage project during construction. All lanes and shoulders are standard widths, including a 4' HOV buffer (Typical).	Mainline: Adds one standard width mixed flow lane NB. Maintains existing 11' mixed flow lanes in SB direction due to the UPRR constraint.	Mainline: Adds one NB mixed flow lane. Maintains same number of existing SB lanes due to the UPRR constraint. Maintains width of existing median and 11' lanes and adds standard lane and outside shoulder widths (typical).
	Ramps: No Improvements.	Ramps: Reconfigures the NB side of the I-605 Rose Hills Rd IC to a standard diamond interchange with signalized intersection at Rose Hills Rd. Reconfigures SB side of interchange with Option A and B. Option A provides a partial clover leaf and the SB I-605 Rose Hills Rd on-ramp is a loop on-ramp. Option B provides a 5 leg roundabout. Reconfigures all ramps to connect to the added mixed flow lane.	Ramps: Reconfigures NB side of the I-605 Rose Hills Rd interchange to a standard diamond interchange with a signalized intersection at Rose Hills Rd. Reconfigures SB side of interchange with Option A and B. Option A provides a partial clover leaf and the SB I-605 Rose Hills Rd on-ramp is a loop on-ramp. Option B provides a 5 leg roundabout. Reconfigures all ramps to connect to the added mixed flow lane.	Ramps: Reconfigures NB side of the I-605 Rose Hills Rd interchange to a standard diamond interchange with a signalized intersection at Rose Hills Rd. Reconfigures SB side of interchange with Option A and B. Option A provides a partial clover leaf and the SB I-605 Rose Hills Rd on-ramp is a loop on-ramp. Option B provides a 5 leg roundabout. Reconfigures all ramps to connect to the added mixed flow lane.
	Local Streets: No Improvements.	Local Streets: Replaces Rose Hills Rd OC structure to accommodate I-605 widening. Widens Rose Hills Rd OC structure to 4 lanes and adds sidewalks on both sides of the bridge. Widens Sports Arena Drive to 4 lanes with tapers to match the existing 2 lanes. Realigns Shepherd Street to maintain access to properties adjacent to the freeway.	Local Streets: Replaces Rose Hills Rd OC structure to accommodate I-605 widening. Widens Rose Hills Rd OC structure to 4 lanes. Adds side walks on both sides of the bridge. Widens Sports Arena Dr access road to 4 lanes and taper to match existing 2 lanes. Realigns Shepherd Street to maintain access to properties adjacent to the freeway.	Local Streets: Provides the same improvements as Alternative 2 and 3.
I-605: Rose Hills Rd to Peck Rd	Mainline: No Improvements.	Mainline: Adds one NB and SB mixed flow lane. All lanes and shoulders are standard widths, including a 4' HOV buffer (Typical).	Mainline: Adds one mixed lane to NB and SB I-605. Reduces the width of the three inner mixed flow lanes from 12' to 11' and HOV buffer from 4' to 1' to minimize R/W takes (Typical).	Mainline: Adds one NB and SB mixed flow lane. Maintains width of existing median and 11' lanes and adds standard lane and outside shoulder widths (typical).
	Ramps: No Improvements.	Ramps: Maintains the same configuration for NB side of the Peck Rd IC. Maintains the NB hook ramps at Pellissier Place. Provides Option A and B for SB side of the Peck Rd IC. Maintains the existing SB hook on and off ramps for Option A. Removes the hook ramps and provides a standard diamond interchange with a signalized intersection on Peck Rd for Option B.	Ramps: Provides same configuration as Alternative 2.	Ramps: Provides same configuration as Alternative 2.
	Local Streets: No Improvements.	Local Streets: Replaces the Peck Rd OC structure to accommodate the I-605 widening. Widens the Peck Rd structure to 4 lanes for Option A. Adds a 5th lane on Peck Rd for the left-turn pocket to the SB I-605 on-ramp for Option B.	Local Streets: Provides same street configuration as Alternative 2.	Local Streets: Provides same street configuration as Alternative 2.

Location	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
I-605: Peck Rd to SR-60	Mainline: No Improvements.	Mainline: Maintains same number of mainline lanes. Connects mixed flow lane with auxiliary lanes extending to SR 60. NB direction with Peck Rd on ramp braided with the NB I-605 to SR 60 connector ramp for Option A and B. Maintains existing SB mainline configuration for Option A. Braids the SB I-605 Peck Rd ramps with the system interchange connector ramps to eliminate weaving with mainline for Option B. All lanes and shoulders are standard widths, including a 4' HOV buffer (Typical).	Mainline: Provides same lane configuration as Alternative 2. Provides standard width for median and outside shoulders. Reduces the three inner mixed flow lane widths from 12' to 11' and HOV buffer from 4' to 1' to minimize R/W takes (Typical).	Mainline: Provides the same lane configuration as Alternative 2 and 3. Maintain width of existing median and 11' lanes and adds standard lane and outside shoulder widths (Typical).
	Ramps: No Improvements.	Ramps: Braids the NB Peck Rd hook on ramp with the NB I-605 to SR 60 connector ramps and shifts the on ramp merge to the north for both Options A and B. Maintains existing SB mainline configuration for Option A. Braids the SB Peck Rd off ramp with the EB SR 60 to SB I-605 connector ramp and shifts the connector ramp merge to the south for Option B. Adds two lanes from the WB SR 60 to SB I-605 connector ramp to the SB I-605 mainline. Adds two lanes from the EB SR 60 to NB I-605 connector ramp to the NB I-605 mainline. Widens the SB I-605 to SR-60 connectors from 2 to 3 lanes.	Ramps: Provides same improvements and ramp configurations as Alternative 2. Maintains the same configuration for the I-605/SR 60 IC.	Ramps: Provides the same lane configuration as Alternatives 2 and 3. Maintains the same configuration for the I-605/SR 60 IC.
	Local Streets: No Improvements.	Local Streets: Realigns Pellissier Place to accommodate I-605 widening.	Local Streets: Pellissier Place is not impacted with this alternative, given the mainline has a smaller footprint as compared to Alternative 2.	Local Streets: Pellissier Place is not impacted with this alternative, given the mainline has a smaller footprint as compared to Alternative 2 and 3.
I-605: SR-60 to Valley Blvd	Mainline: No Improvements.	Mainline: Adds one mixed flow lane NB and SB. All lanes and shoulders are standard widths, including a 4' HOV buffer (Typical).	Mainline: Adds one NB and SB mixed flow lane. Provides standard median and outside shoulders. Reduces the three inner mixed flow lanes from 12' to 11' and HOV buffer from 4' to 1' to minimize R/W takes (Typical).	Mainline: Adds one mixed flow lane NB and SB I-605. Widens outside with standard lane and outside shoulder widths, while maintaining existing median shoulder and 11' mixed flow lanes (Typical).
	Ramps: No Improvements.	Ramps: Maintains the NB I-605 on ramps from Valley Blvd while removing the SB I-605 "horseshoe" on ramp for Option A. Reconfigures SB I-605 side of the Valley Blvd interchange to a partial clover leaf with one SB I-605 on ramp and a signalized ramp intersection. Removes existing SB I-605 "horseshoe" on ramp for Option A. Shifts NB I-605 to EB I-10 connector ramp diverge point to south of NB Valley Blvd off ramp for both options. Reconfigures NB side of the Valley Blvd IC to partial clover leaf with a NB I-605 loop on ramp replacing both existing NB on ramps for Option B. The existing SB I-605 "horseshoe" on ramp is maintained for Option B.	Ramps: Provides the same ramp configurations as Alternative 2.	Ramps: Maintains the NB I-605 on ramps from Valley Blvd while removing the SB I-605 "horseshoe" on ramp for both Options A and B. Two options are provided for the NB Valley Blvd off ramp. For Option A the I-10 connector ramp diverges before the Valley Blvd off ramp and for Option B the off ramp diverges before the I-10 connector ramp. The SB side of the Valley Blvd interchange is a partial clover leaf with the same configuration as Alternatives 2 and 3.
	Local Streets: No Improvements.	Local Streets: Adds traffic signal at SB on and off ramp termini at Valley Blvd. Adds two left turn lanes from WB Valley Blvd to SB I-605 on ramp. Adds one right turn lane on Temple Avenue to WB Valley Blvd.	Local Streets: Adds a signal at the SB on and off ramp termini at Valley Blvd. Adds two left turn lanes from WB Valley Blvd to SB I-605 on ramp. Adds a right turn lane on Temple Avenue onto WB Valley Blvd.	Local Streets: Provides signalization at the SB on and off ramp termini at Valley Blvd. Adds two left turn lanes for the WB Valley Blvd to SB I-605 on ramp. Adds a right turn lane on Temple Avenue for movements onto WB Valley Blvd.

Location	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
I-605: Valley Blvd to I-10	Mainline: No Improvements.	Mainline: Maintains same number of lanes from Valley Blvd to I-10. Shifts diverge point of NB I-605 to EB I-10 connector to south of Valley Blvd IC. Adds CD road to SB direction. All lanes and shoulders are standard widths, including a 4' HOV buffer (Typical).	Mainline: Provides the same lane configuration as Alternative 2. Provides standard median and outside shoulders. Reduces the three inner mixed flow lanes from 12' to 11' and HOV buffer from 4' to 1' to minimize R/W takes (Typical).	Mainline: Provides the same lane configuration as Alternative 2. Widens the outside with standard lane and outside shoulder widths, while maintaining existing median shoulder and 11' mixed flow lanes (Typical).
	Ramps: No Improvements.	Ramps: Maintain NB weave between the Valley Blvd on ramp and WB I-10 connector ramp the same length. Shifts the EB I-10 connector ramp diverge to south of Valley Blvd IC. Shifts the SB I-605 off ramp to Valley Blvd diverge point to the north, where the off ramp joins with the EB and WB I-10 connector ramps to form a CD road. Merges the I-10 connector ramp with SB I-605 at the Valley Blvd interchange.	Ramps: Provides the same ramp configurations as Alternative 2.	Ramps: Provides the same ramp configurations as Alternative 2.
	Local Streets: No Improvements.	Local Streets: Realigns Cloverleaf Drive to accommodate the SB I-605 CD road. Maintains Cloverleaf Drive as a two lane roadway.	Local Streets: Realigns Cloverleaf Drive to accommodate the I-605 CD road from Valley Blvd to I-10. Maintain Cloverleaf Drive as a two lane roadway.	Local Streets: Realigns Cloverleaf Drive to accommodate the CD road between Valley Blvd and I-10 on SB I-605. Maintains Cloverleaf Drive as a two lane roadway.
SR-60: Santa Anita Ave to Peck Rd	Mainline: No Improvements.	Mainline: Maintains EB SR-60 unchanged. Adds 1 auxiliary lane on WB SR-60 from the NB I-605 to WB SR-60 connector ramp merge to the Santa Anita Ave off-ramp.	Mainline: Provides the same configuration and width of freeway as Alternative 2.	Mainline: Maintains the same configuration and width of freeway as Alternative 2.
	Ramps: No Improvements.	Ramps: Reconfigures the WB-60 Santa Anita Ave off-ramp to accommodate the addition of the auxiliary lane from the NB I-605 to WB SR-60 connector ramp.	Ramps: Provides the same improvements as Alternative 2.	Ramps: Provides the same improvements as Alternative 2.
	Local Streets: No Improvements.	Local Streets: Maintains existing configuration at Santa Anita Avenue.	Local Streets: Maintains existing condition at Santa Anita Avenue.	Local Streets: Maintains existing conditions at Santa Anita Avenue.
SR-60: Peck Rd to I-605	Mainline: No Improvements.	Mainline: Braids the EB SR-60 Peck Rd on ramp with the EB SR-60 to NB/SB I-605 connector ramp and eliminates the weave between the two interchanges. Eliminates access from EB SR-60 Peck Rd on ramp to NB and SB I-605. Braids the WB SR-60 Peck Rd off ramp with the SB I-605 to WB SR-60 connector ramp and the weave on WB SR 60 between I-605 and Peck Rd is eliminated.	Mainline: Provides the same configuration and width of freeway as Alternative 2.	Mainline: Provides the same configuration and width of freeway as Alternative 2.
	Ramps: No Improvements.	Ramps: Eliminates the WB SR-60 Peck Rd direct on ramp. EB Peck Road adds a left turn lane to access the WB SR-60 loop on ramp. Shifts the WB SR-60 Peck Rd off ramp diverge point to the east within the SR-60/I-605 IC. Provides access from the NB I-605 to WB SR-60 connector ramp to the Peck Rd off ramp. Provides an additional ramp connection in Option A, so that movements from SB I-605 can exit at Peck Rd on WB SR-60. Option B does not provide this connection.	Ramps: Provides the same improvements as Alternative 2.	Ramps: Provides the same improvements as Alternative 2.
	Local Streets: No Improvements.	Local Streets: Adds left and right turn lanes on Peck Rd to provide access to WB SR-60 loop on-ramp. Provides a 665' right turn lane from SB Peck Rd to WB Durfee Ave to relieve congestion for through movements. Increases left turn lane length for NB Peck Rd to WB Durfee Ave.	Local Streets: Provides the same improvements as Alternative 2.	Local Streets: Provides the same improvements as Alternative 2.

Location	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
SR-60: I-605 to Crossroads Pkwy	Mainline: No Improvements.	Mainline: Maintains existing conditions along EB SR-60. Adds 1 WB SR-60 mixed flow lane from east of the Crossroads Parkway IC through the I-605 freeway interchange.	Mainline: This segment of the freeway has existing standard lane and shoulder widths. Therefore the configuration and width of freeway is the same as Alternative 2.	Mainline: Maintains existing standard lane and shoulder widths. Therefore the configuration and width of freeway is the same as Alternative 2.
	Ramps: No Improvements.	Ramps: Reconfigures the Crossroads Parkway WB SR-60 on/off-ramps to match the added mixed flow lane. Shifts the WB SR-60 to NB/SB I-605 connector ramp diverge point to the east. Replaces and widens portion of the structure over Workman Mill Rd to accommodate the proposed WB SR-60 to SB/NB I-605 connector ramp. Maintains the 2 lane diverge of the connector.	Ramps: Provides the same improvements as Alternative 2.	Ramps: Maintains same configuration as Alternative 2.
	Local Streets: No Improvements.	Local Streets: Widens Workman Mill Rd and adds islands to accommodate the proposed WB SR-60 to SB/NB I-605 connector ramp structure.	Local Streets: Modifies the median island at Workman Mill Rd to accommodate proposed bridge bent.	Local Streets: Modifies the median island at Workman Mill Rd to accommodate the proposed bridge bent location.
SR-60: Crossroads Pkwy to 7th Street	Mainline: No Improvements.	Mainline: Maintains existing conditions along EB SR-60. Adds 1 mixed flow lane through WB SR-60/7th Street IC. Connects added mixed flow lane with existing auxiliary lane from 7th Street to Crossroads Parkway. Maintains existing standard freeway lane and shoulder widths.	Mainline: Maintains existing standard lane and shoulder widths. Maintains same configuration and width of freeway as Alternative 2.	Mainline: Maintains the existing standard lane and shoulder widths. Maintains the same configuration and width of freeway as Alternative 2.
	Ramps: No Improvements.	Ramps: Reconfigures the 7th Street WB SR-60 on/off-ramps to conform to the added mixed flow lane.	Ramps: Provides the same improvements as Alternative 2.	Ramps: Maintains the same improvements as Alternative 2.
	Local Streets: No Improvements.	Local Streets: Maintains existing conditions.	Local Streets: Maintain existing conditions.	Local Streets: Maintains the existing configuration.
SR-60: 7th Street to Hacienda Blvd	Mainline: No Improvements.	Mainline: Maintains existing conditions on EB SR-60. Adds 1 mixed flow lane on WB SR-60 from where the existing auxiliary lane ends at Hacienda Blvd WB SR-60 on ramp. Maintains existing standard lane and shoulder widths.	Mainline: Maintains existing standard lane and shoulder widths. Maintains same configuration and width of freeway as Alternative 2.	Mainline: Maintains the existing standard lane and shoulder widths. Maintains the same configuration and width of freeway as Alternative 2.
	Ramps: No Improvements.	Ramps: Maintains existing conditions at Hacienda Blvd IC.	Ramps: Maintains existing conditions at Hacienda Blvd interchange.	Ramps: Maintains existing conditions at the Hacienda Blvd interchange.
	Local Streets: No Improvements.	Local Streets: Maintains existing conditions.	Local Streets: Maintains existing conditions.	Local Streets: Maintains existing conditions.

Project Phasing

Preliminary review and analysis has identified that the project can be feasibly divided into four (4) separate construction projects that have logical termini and independent utility. The four separate projects identified in Attachment N are as follows:

- Construction Project 1: I-605 corridor segment from south of Valley Boulevard to I-10.
- Construction Project 2: I-605 corridor segment from south of the SR-60/I-605 Interchange to south of Valley Boulevard Interchange, including improvements along SR-60 west of the SR-60/I-605 Interchange.
- Construction Project 3: I-605 corridor segment from south of Rose Hills Road to South of the SR-60/I-605 Interchange.
- Construction Project 4: SR-60 corridor segment from east of the SR-60/I-605 Interchange to east of Turnbull Canyon Road.

Each of the four projects can be standalone projects with an identified need that the projects are of sufficient length to address environmental impacts on a broad scope, and that none of the projects would force immediate transportation improvements on the remainder of the facility. Preliminary analysis conducted as part of the PEAR for the SR-60/I-605 PSR-PDS indicates that an EIR-EIS would be required for the overall project assuming that all alternatives (Alternatives 2, 3 and 4) are carried forward into the PA/ED phase of project development. The table below shows the limits and cost of the four individual projects:

Table 8: Project Phasing Limits and Cost

Construction Project	Construction Project Limits (Post Mile)	Project Cost (Million)		
	Alternative	2	3	4
1	I-605: 18.6 to 20.4	\$360-\$420	\$340-\$400	\$230-\$270
2	I-605: 16.4 to 18.6 SR-60: 10.2 to 12.1	\$710-\$820	\$700-\$800	\$610-\$710
3	I-605: 15.1 to 16.4	\$340-\$390	\$110-\$130	\$110-\$120
4	SR-60: 12.1 to 15.6	\$50-\$60	\$50-\$60	\$40-\$50

Nonstandard Design Features

There are nonstandard features that have been identified in the No Build and proposed build Alternatives based on the 2012 Caltrans Highway Design Manual (HDM) 6th Edition standards. Further analysis will be performed in the PA/ED phase. Fact sheets for exceptions to design standards will be prepared to document nonstandard features prior to completion of the PA/ED phase. See Attachment K for the Nonstandard Design Features Matrix that has been developed for the No Build and the three build Alternatives. The segments of I-605 and SR-60 within the project limits are currently designated as urban.

Mandatory Design Exception Features

Attachment K – Nonstandard Design Features Matrix for mandatory design exceptions.

Advisory Design Exception Features

Attachment K – Nonstandard Design Features Matrix for advisory design exceptions.

Common Features for all Alternatives

Engineering Studies

The following engineering studies are anticipated to obtain approval of Build Alternatives 2, 3, and 4 during the PA/ED phase of the project:

- Fact Sheets for proposed exceptions to design standards;
- Modified Access Report (MAR);
- Right of Way Data Sheets including Utility Information Sheet and Railroad Information Sheet;
- Advanced Planning Studies (APS) for all bridges and non-standard retaining walls;
- Preliminary materials and geotechnical design reports;
- Life-Cycle Cost Analysis for pavement design;
- Preliminary Drainage Report to address existing and proposed hydrology and hydraulic designs;
- Storm Water Data Report (PA/ED level);
- Traffic Forecasting and Methodology;
- Traffic Analyses, and;
- Traffic Management Plan (TMP) and Ramp Closure Study.

Aesthetics

Design of the proposed improvements during the PA/ED and PS&E phases will include aesthetics consistent with Caltrans and the local agency master plans for aesthetics and landscaping, if applicable. The corridor theme will be applied to project elements including bridge aesthetics, slope paving, walls, lighting, landscaping, and hardscaping.

Intelligent Transportation Systems (ITS)

The project ITS elements will be further studied during the PA/ED and PS&E. The ITS elements will include the communication trunk line within the I-605 shoulder, which would be impacted by the build alternatives. Based on existing as-builts, the trunk line is comprised of 2-4" conduits with 4 size 25 innerducts. The trunk line is a combination of 50P22 cable for data/phone, and 60SMFO for video/data.

The communication trunk line serves ramp meters, Changeable Message Signs (CMSs), CCTV cameras and traffic monitoring stations within the project limits. Specific items that will be relocated or replaced would include conduit innerducts, cables, traffic monitoring stations, count stations, CCTV cameras with pole and cabinet, traffic related communication pull boxes, cable nodes and Type 334 cabinets. All CCTV cameras that are on existing overhead signs would be replaced and relocated onto a new pole and foundation. The cost estimate breakdown for the ITS items are within Attachment D.

Transportation Management Plan

Based on the initial examination of items related to the Transportation Management Plan (TMP) Data Sheet, lane closures will be required, and lane closure charts will be included in Caltrans Standard Special Provisions (SSP). It may be necessary to temporarily close on/off-ramps and connectors during the project construction. The PS&E package will include detour plans, staging plans, and traffic handling plans. Supporting traffic counts for rerouting traffic during construction will be developed during PA/ED. TMP data sheets will be further developed during the PA/ED phase to recommend specific methods of reducing construction and circulation impacts. Preliminary TMP data sheets have been prepared for each alternative and are included as Attachment G.

Construction Staging

It is anticipated the project will be designed and constructed as separate segments to facilitate project delivery based on available funding. Each project segment would include construction staging to minimize impacts to existing traffic. The same number of existing mainline freeway lanes will be maintained open to traffic during construction whenever feasible.

A preliminary stage construction concept was prepared and independently reviewed to ensure there were no fatal flaws and that the improvements are constructible. Refer to Attachment L for the preliminary stage construction concept. More detailed stage construction and detour plans will be developed in the PA/ED phase. Detailed stage construction plans and traffic handling plans will also be developed in PS&E.

Storm Water BMPs

A Storm Water Data Report (SWDR) has been prepared to accompany this PSR-PDS and is based on Alternative 2 Option B, which has the largest footprint compared to Alternatives 3 and 4. The anticipated storm water project risk level is Level 2. The SWDR recommends the implementation of treatment BMPs to treat the project targeted design pollutants. It is anticipated that post-project State right-of-way will provide adequate area for BMPs. This will be confirmed during the PA/ED and PS&E phases. The SWDR will be updated during both the PA/ED and PS&E phases to confirm the risk level, disturbed soil area, change in amount of impervious area and specific BMPs to be implemented for design pollution prevention, treatment and construction. The contractor for each project segment will prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) to address construction site BMPs. For this phase, permanent BMPs have been evaluated from a corridor scoping level and locations have been indicated on the project alternative plans, Attachment B. The Caltrans Corridor Storm Water Management Study for I-605 (dated February 2010) and SR-60 (dated September 2010) were used as references to identify proposed BMP locations and types of treatment BMPs.

The downstream receiving water bodies for the project are San Gabriel River and San Jose Creek. The San Gabriel River Reaches 2 is on the 2010 303(d) list for coliform bacteria, cyanide and lead with a required Total Maximum Daily Load (TMDL). The San Gabriel River generally flows from the north to south collecting water from the San Gabriel Mountains down through the Los Angeles Basin and across the San Gabriel Valley. The total impervious area treated by the proposed treatment BMPs is approximately 79 acres. The new impervious area for Alternative 2 Option B, which includes the largest footprint of all the Alternatives, is approximately 79 acres; therefore, the treatment BMPs are expected to provide 100% treatment of the added impervious area. The SWDR cover is included as Attachment J.

Permits

It is anticipated that the following permits will be required for the project:

- 401 Certification (Regional Water Quality Control Board)
- Clean Water Act (CWA) Section 404 Permit (U.S. Army Corps of Engineers)
- Section 1602 Agreement (California Dept. of Fish and Wildlife)
- National Pollutant Discharge Elimination System (NPDES)
- Permit Notice of Intent (NOI)
- Clean Air Act, Transportation Conformity Determination (FHWA; Caltrans)
- South Coast Air Quality Management District Rules 403, 1403 and 1166
- Section 106 Compliance with National Historic Preservation Act
- Section 7 Consultation with U.S. Fish and Wildlife Service in the event Waters of the U.S.

- State Right-of-Way and Rail Road Encroachment Permits
- Monitoring wells and de-watering Permits
- Various City Encroachment Permits.

The Initial Site Assessment (ISA) prepared during PA/ED will identify any contaminated sites that require site investigation and mitigation and anticipated entry permits. Permits would be required for residential, commercial, industrial and railroad properties.

The Aerially Deposited Lead (ADL) testing, analysis, and reporting will be completed during the PS&E phase of the project. Testing for lead-based paint and asbestos containing material surveys will be required.

8. RIGHT-OF-WAY

Below is a summary of the right-of-way required for each project alternative. Attachment H provides the Conceptual Cost Estimate – Right-of-Way Component. Table 9 below includes the number of permanently affected properties (full or partial takes as shown) by land use type.

Table 9: Number of Affected Properties by Land Use Type

Land Use	No Build	Alternative 2		Alternative 3		Alternative 4	
	Partial/Full	Partial	Full	Partial	Full	Partial	Full
Residential	0	19	29	13	29	11	11
Commercial/Industrial	0	46	12	35	9	34	2
Agency/Other	0	49	0	45	0	29	0
TOTAL	0	114	41	93	38	74	13

In addition, temporary construction and highway aerial easements would be required for all three build alternatives. Due to the urbanized nature of the communities adjacent to the project area and the local vacancy rates, it is assumed that replacement housing or office space is available for displaced families or businesses. The goal for each alternative was to minimize the impacts to residential, major business, and industrial areas.

Utilities

A utility investigation was performed as part of the PSR-PDS. Potential utility owners were contacted to obtain information about their existing facilities. Based on the gathering of that information, the following types of facilities and owners are present within the project limits:

<u>Utility</u>	<u>Owner</u>
Water	Rincon Ditch Company
	San Gabriel Valley Water Company
	California Domestic Water Company
	Suburban Water Systems
	Metropolitan Water District (MWD)
Sewer	City of South El Monte
	Los Angeles County Sanitation District
	City of El Monte

Telephone/Communications	AT&T Verizon Level 3 Communications Sprint Pacific Telephone and Telegraph (PT&T)
Electrical	Southern California Edison (SCE)
Gas	The Gas Company

Information provided by the Dig Alert web site and available utility as-built plans was used to prepare this list. Coordination with the identified utility companies will be carried out during the PA/ED, PS&E, and construction phases. It is anticipated that all proposed build alternatives will impact existing facilities. The specific facilities in conflict with the proposed build alternative, and subsequent need for relocation of, will be confirmed and coordinated during PA/ED.

Railroad

Within the study limits of the PSR-PDS there are three (3) railroad/freeway crossings and one (1) at-grade roadway crossing as follows:

- Freeway Overhead I-605 – South of Rose Hills Road (Rose Hills OH)
- Freeway Overhead SR-60 – East of the SR-60/I-605 interchange (Clayton OH)
- Freeway Overhead I-605 – North of Valley Boulevard (Rivergrade OH)
- Roadway at-grade crossing – Valley Boulevard/Temple Avenue

The Rose Hills OH location is maintained by Union Pacific Railroad (UPRR) and is jointly operated by Metrolink. Alternative 2 widens both sides of the freeway structure, where the current vertical clearance is at a minimum. The freeway is required to be re-aligned vertically and horizontally to maintain the minimum vertical clearance at this location. Alternative 3 and 4 do not add a lane in the SB direction to avoid this rail structure and its resulting impacts. Depending upon the existing width of the easement, additional aerial railroad right-of-way may be required, and a Construction and Maintenance (C&M) Agreement with UPRR will be needed prior to construction. There are currently 40-45 trains per day operating over these tracks and projected to increase to 75-80 trains per day in 2025. Because of the train operating frequency, requesting a work window in between train traffic will be difficult, and working next to live tracks is not permitted.

The Clayton OH location is maintained by Union Pacific Railroad (UPRR) and is jointly operated by Metrolink. Alternatives 2, 3 and 4 propose to widen this structure on the WB side of SR-60. The location has two main line tracks and a siding track currently under construction which will be used by the Los Angeles County Sanitation District for the purpose of shipping waste by rail to the Mesquite Regional Landfill in Imperial County. The existing vertical clearance is above the minimum required for a rail crossing based on as-built information, therefore widening will be possible without raising the existing structure.

Improvements at Temple Road as part of the Valley Boulevard interchange may affect the UPRR/Metrolink crossing Temple Avenue. All alternatives attempt to avoid the existing railroad switch to the west of Temple Avenue. A Valley Boulevard/Temple Avenue/UPRR grade separation option is included in Attachment B. This option has additional 30 residential impacts, which will be further studied during PA/ED, while coordinating with the County of Los Angeles and City of Industry.

9. STAKEHOLDER INVOLVEMENT

The cities of Baldwin Park, Industry, El Monte, South El Monte, and Pico Rivera; County of Los Angeles; Metro (the project sponsor); GCCOG; and Caltrans have attended PDT and/or TAC meetings and geometric workshops to develop the purpose and need in addition to reviewing the alternatives and design options. The stakeholders' input has been reviewed and incorporated as applicable and, to their knowledge; there is no known opposition to the proposed project. In addition, the TAC meetings with the cities and County of Los Angeles have served as the process by which community input and involvement has occurred to balance transportation needs with community values. Further concurrence has been provided at a GCCOG public meeting by the Corridor Cities Committee (CCC), which is composed of a City Council representative for each city within the project vicinity. Two of the three build alternatives (Alternatives 3 and 4) were also developed with the GCCOG SR-91/I-605/I-405 Guiding Principles of balancing transportation needs with community concerns regarding right-of-way impacts to preserve and enhance local economies and environments.

The draft environmental document prepared for this project during PA/ED will be publicly noticed and circulated as applicable. A series of public workshops and/or potential interviews with stakeholders and property owners are anticipated to gain input prior to completion of the draft environmental document during the PA/ED phase. In addition, a public workshop is anticipated to be held during the public circulation of the draft environmental document.

10. ENVIRONMENTAL DETERMINATION/DOCUMENT

A Preliminary Environmental Analysis Report (PEAR) has been prepared for this project, and is included as Attachment E. The PEAR includes an initial evaluation of the project, summarizes key environmental issues, and identifies the environmental documentation that could be required for the project.

Based on the preliminary evaluation conducted as part of the PEAR, the project could have significant impacts on the environment. Therefore, the anticipated environmental document to comply with CEQA is an Environmental Impact Report (EIR). This determination is based on review of Appendix G of the CEQA Guidelines, as well as preliminary geometric plans and other available information. Under NEPA, if a federal agency anticipates that an undertaking is environmentally controversial, a federal agency may choose to prepare an Environmental Impact Statement (EIS). Because there is potential for public controversy associated with land acquisitions required for the build alternatives, an EIS is the anticipated environmental review document to comply with NEPA.

Based on the results of initial environmental studies included in the PEAR, it is unknown at this time if all potential impacts associated with the build alternatives could be reduced or mitigated. Potential mitigation measures and permits associated with the build alternatives are preliminary at this time because the extent of required mitigation has still not been confirmed. Completion of the EIR/EIS is expected to require approximately 36 to 48 months.

The preliminary assessment of the build alternatives has identified the potential for impacts related to existing and future land use, parks and recreation, community character and cohesion, relocations, environmental justice, utilities, emergency services, visual/aesthetics, cultural resources, hydrology and floodplain, water quality and storm water runoff, geology, soils, seismicity, paleontology, hazardous waste/materials, transportation and traffic, air quality, noise, the biological environment, and cumulative impacts. Alternative 2 would result in the highest impacts on environmental resources because of property acquisition needed to accommodate lane and shoulder widths required by Caltrans Highway Design Manual standards and identified in preliminary geometric plans.

All build alternatives will require the reports and studies listed below, with Alternative 2 requiring the highest level of environmental studies:

- Air Quality Study Report and Air Quality Conformity Analysis
- Community Impact Assessment
- Cumulative Impact Analysis
- Historic Property Survey Report, Archaeological Survey Report, Historic Resource Evaluation Report, Finding of Effect (if historic properties are included in the area of potential effect), and Memorandum of Agreement (if there would be adverse effects)
- Initial Site Assessment and Site Investigation
- Location Hydraulic Study, and Summary Floodplain Evaluation Report or Floodplain Evaluation Report (depending on potential for floodplain encroachment)
- Natural Environment Study
- Noise Study Report
- Noise Abatement Decision Report (if traffic noise abatement is required)
- Paleontological Identification Report/Paleontological Evaluation Report and Paleontological Mitigation Plan (if required)
- Relocation Impact Report
- Section 4(f) Evaluation
- Visual Impact Assessment
- Water Quality Assessment Report

Environmental Commitments for all build alternatives are identified below, with a greater level of effort likely required for Alternative 2 to accommodate Caltrans Highway Design Manual standards for lane and shoulder widths:

- Relocations – Relocations would be subject to the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and Title 49 Code of Federal Regulations, Part 24. Relocations and right-of-way acquisitions would be processed through the Caltrans' Relocation Assistance Program, and costs associated with the property acquisitions and assistance would be included in the project cost estimates.
- Utilities – Any disruptions to utility service would be scheduled and coordinated to ensure they would not adversely affect the surrounding community.
- Emergency Services – Coordination with local emergency service providers and communication with the surrounding community would be conducted to minimize traffic impacts during construction.
- Visual/Aesthetics – Landscaping and aesthetic treatments would be required to enhance the aesthetic appearance of project elements, including interchanges, bridges, and structures, and to reduce visual impacts. Recommended measures would be presented in the Visual Impact Assessment to be completed for the project, and would be finalized during final project design.
- Water Quality and Storm Water Runoff – A Stormwater Data Report (SWDR) has been completed for the project and identifies design, treatment, and construction Best Management Practices (BMP) to be incorporated into the project. Design and treatment BMPs would include the installation of biofiltration swales and strips, and infiltration devices to capture pollutants in stormwater runoff. Construction BMPs would include implementation of erosion control

- measures, street sweeping, and installation of hydraulic mulch, cover, fences, concrete washout bins, fiber rolls, drainage inlet protection, and sediment barriers.
- Geology, Soils, Seismic, and Topography – Temporary erosion control measures and project design elements to address slope stability, pile driving, soils, seismicity, and topography would be developed based on needs identified during completion of the geotechnical report required during the PA/ED phase, and would be finalized during final project design.
 - Hazardous Waste/Materials – Standard specifications and/or testing for lead-based paint, trichloroethylene, PCE, TWW, VOCs, SVOCs, PCBS, pesticides, aerially deposited lead, asbestos-containing materials, and thermoplastic traffic striping removal would be included in the project. Site assessments, site investigations, and remediation (if required) would be conducted within the ROW and on parcels to be acquired for the project in compliance with applicable entry permits, utility agreements, and regulatory agency approvals. If activities are required on parcels contaminated with hazardous materials or hazardous wastes, these activities would be conducted using proper removal, transport, and disposal measures to contain excess material/wastes generated by the project, and prevent the exposure of workers and the surrounding environment. The project would be designed to avoid or minimize potential cross-contamination between the two aquifers in the project area. If monitoring wells conflict with the construction area, the wells would be destroyed and reinstalled under appropriate regulatory agency oversight. According to Caltrans policy, new ROW for a project must be free of hazardous materials before title to such property is transferred to Caltrans.
 - Traffic/Transportation – During the environmental process, traffic analysis would be conducted to identify temporary impacts and construction staging requirements, including, but not limited to, avoidance of staging in residential areas, detours, signage, and coordination with local communities, to minimize access impacts from temporary closures of local streets, freeway lanes, ramps, and bridges, as well as permanent ramp design and replacement.
 - Air Quality –The project would be constructed in compliance with Caltrans’ Standard Specifications, Section 14-9 “Air Quality” and Caltrans’ specifications for the control of construction-generated emissions.
 - Noise – Abatement measures, including the replacement of existing sound walls and the construction of new sound walls, are anticipated. Preliminary recommended sound wall locations would be identified in a Noise Study Report and a Noise Abatement Decision Report, including a reasonable and feasible determination with recommendations and project cost estimates included in the draft environmental document.
 - Biological Environment – Measures to avoid and minimize impacts on jurisdictional features, nesting migratory birds and raptors, special-status bird species, bats, and fish species would be implemented, such as conducting pre-construction surveys, installing BMPs to prevent construction debris and dust from entering waterways, reducing work areas to the extent feasible, and conducting vegetation removal outside the nesting season to the extent practicable.

11. FUNDING

Funding sources have not been identified and secured at this time, however, it is anticipated a combination of funds may be sought including federal, State, and local Measure R for this project.

Capital Outlay Project Cost Estimate

	Range of Cost Estimate		Measure R Funds	
	Construction	Right-of-Way	Construction	Right-of-Way
Alternative 1	\$0	\$0	\$0	\$0
Alternative 2	\$960-\$1,110M	\$140-\$160M	TBD	TBD
Alternative 3	\$780-910M	\$120-\$130M	TBD	TBD
Alternative 4	\$680-780M	\$70-80M	TBD	TBD

The level of detail available to develop these capital outlay project estimates is only accurate to within the above cost estimate 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. The Project Report (PR) will serve as the appropriate document from which the remaining support and capital components of the project will be programmed. For the cost estimate summary, see Attachment D – Cost Estimates.

Capital Outlay PA/ED Support Estimate

Capital outlay support estimate for programming PA/ED in the 2015 State Transportation Improvement Program (STIP) for this project: \$40M.

12. SCHEDULE

Project Milestones		Scheduled Delivery Date (Month/Year)
Program Project	M015	12/2015
Begin Environmental Document	M020	6/2016
Circulate Draft Project Report & Draft Environmental Document Externally	M120	8/2018
Approve PA & ED	M200	6/2020

The anticipated funding fiscal year for construction is 2022/2023. Pending availability of project construction funding, the project may be implemented in phases. This phasing approach would extend the overall project schedule accordingly.

13. RISKS

The Project Risk Management Team has identified 35 potential risks, all threats. While probability and impact varies with each one, these risks require close attention throughout the project. These risks should be monitored and updated during the PA/ED, PS&E and the construction phase. See Attachment I for the Risk Register and Attachment K for the nonstandard design feature risk evaluation.

14. FHWA COORDINATION

This PSR-PDS has been discussed with the Caltrans Federal Highway Administration (FHWA) Liaison, Josue Yambo on September 23, 2015 and is eligible for federal aid funding. Interstate 605 is on the federal interstate system and will require federal approval for design. The project is anticipated to be a High Profile Project (HPP) due to the anticipated Major Project cost being in excess of \$500M. This status may change due to the final phasing of improvements that may fall under the Major Project threshold.

15. PROJECT REVIEWS

Internal Quality Control (QC) reviews were completed in accordance with the Quality Management Plan (QMP).

Caltrans completed the following reviews on the PSR-PDS and attachments:

District Maintenance	Larry Wiering	Date:9/11/2015
District Traffic Safety Engineer	Kenneth Young	Date:9/11/2015
District Quality Review	Mohamed Ahmed	Date:9/11/2015
District Office of Design	Simon Kuo	Date:9/17/2015
HQ Design Coordinator	Brian Frazier	Date:9/17/2015
District ICE Coordinator	Ken Hatai	Date:11/3/2015
Project Manager	Syed Huq	Date:11/12/2015

16. PROJECT PERSONNEL

Ernesto Chaves (213) 922-7343
Project Manager
LA Metro

Kekoa Anderson (949) 887-0731
Consultant
Gateway Cities Council of Governments

Mark Christoffels..... (626) 962-9292
Chief Engineer
San Gabriel Valley Council of Governments

Syed Huq (213) 897-6714
Project Manager
Caltrans District 7

Mohamed A. Ahmed (213) 897-5975
PID Design Manager
Office of Project and Special Studies, Caltrans District 7

Carlos Cadena..... (714) 955-7186
Consultant Project Manager
WKE, Inc.

Michael Hynes..... (714) 955-7186
Consultant Engineering Lead
WKE, Inc.

Rich Galvin (310) 792-2624
Environmental Studies
GPA

Gary Hamrick (562) 432-8484
Traffic Studies
Cambridge Systematics

John Duesing (212) 209-6640
Traffic Modeling
Cambridge Systematics

Gary Warkentin (949) 855-3625
Water Quality
Michael Baker International

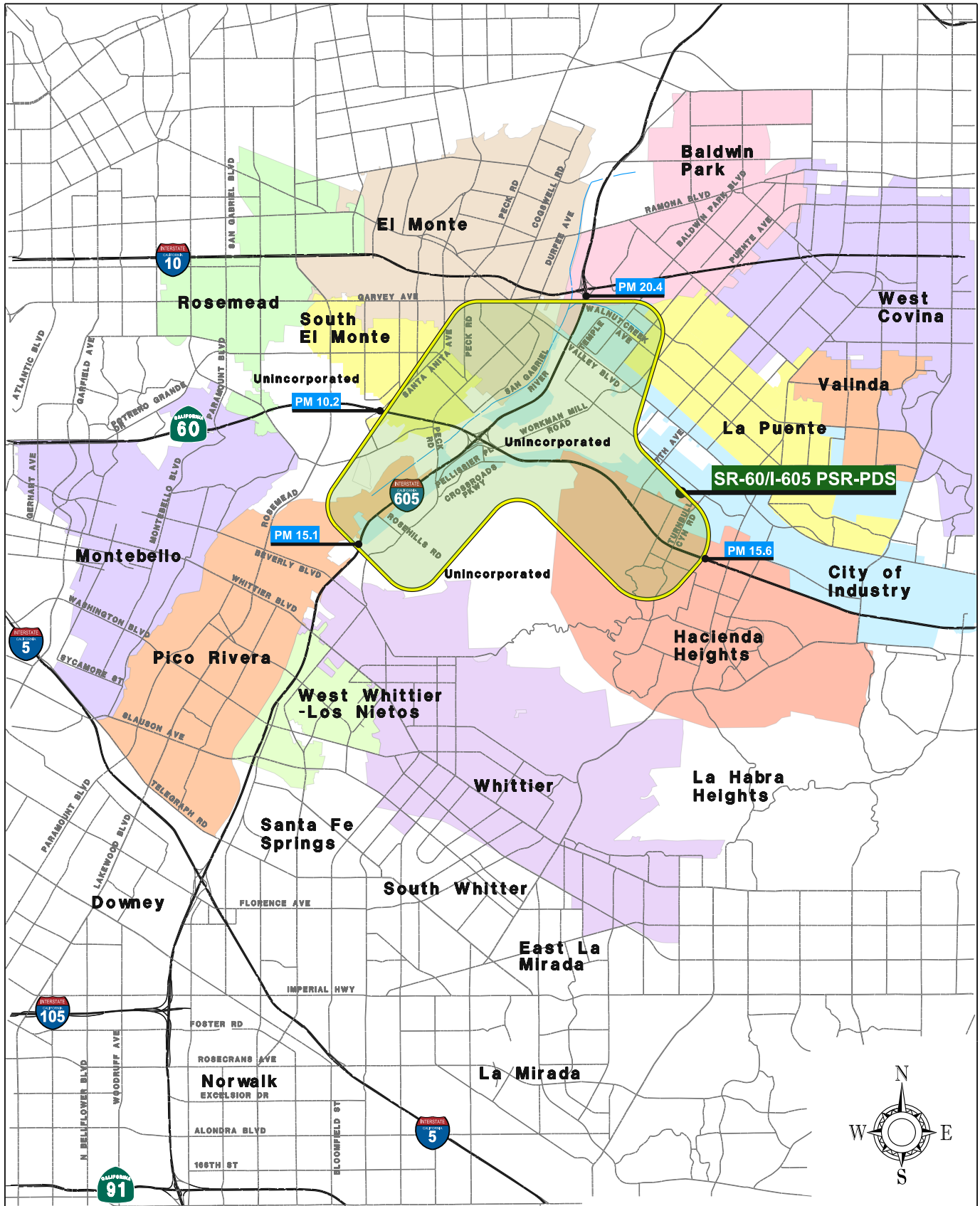
ATTACHMENTS

- Attachment A – Regional Vicinity Map
- Attachment B – Project Area and Alternatives Plans
- Attachment C – Typical Cross Sections
- Attachment D – Cost Estimates
- Attachment E – Preliminary Environmental Analysis Report (PEAR)
- Attachment F – Transportation Planning Scoping Information Sheet
- Attachment G – TMP Data Sheets
- Attachment H – Conceptual Cost Estimate – Right-of-Way Component
- Attachment I – Risk Register
- Attachment J – Storm Water Data Report (SWDR) Cover
- Attachment K – Nonstandard Design Features Matrix
- Attachment L – Preliminary Stage Construction Concept for the SR-60/I-605 Improvements
- Attachment M – I-605/I-10 and SR-60/I-605 HOV to HOV Direct Connector Technical Memo
- Attachment N – Construction Phasing/Project Phasing Concept
- Attachment O – PSR-PDS Survey Needs Questionnaire

Attachment A

Regional Vicinity Map

SR-60/I-605 Regional Vicinity Map



Attachment B

Project Area and Alternatives Plans (bound separately)

Attachment C

Typical Cross Sections (bound separately)

Attachment D

Cost Estimates

Attachment D - Cost Summary SR-60/I-605 PSR-PDS

Alternative	Estimated Construction Cost (with 30% contingency) (\$M)	Estimated Capital Cost for R/W (with 30% contingency) (\$M)	Estimated Project Support Costs (Including R/W support) (\$M)	Total Estimate Cost (\$M)
Alternative 2	\$1,001	\$143	\$390	\$1,534
Alternative 3	\$821	\$118	\$320	\$1,259
Alternative 4	\$708	\$67	\$264	\$1,038

Alternative	Total Estimated Construction Cost Range (\$M)		Total Estimated R/W Capital Cost Range (\$M)		Total Estimated Project Support Cost Range (\$M)		Total Estimate Cost Range (\$M)	
Alternative 2	\$951	\$1,101	\$136	\$157	\$371	\$429	\$1,458	\$1,688
Alternative 3	\$780	\$903	\$112	\$129	\$304	\$352	\$1,196	\$1,384
Alternative 4	\$672	\$778	\$63	\$73	\$251	\$290	\$986	\$1,142

Rounded to the nearest \$10M

Alternative	Total Estimated Construction Cost Range (\$M)		Total Estimated R/W Capital Cost Range (\$M)		Total Estimated Project Support Cost Range (\$M)		Total Estimate Cost Range (\$M)	
Alternative 2	\$960	\$1,110	\$140	\$160	\$380	\$430	\$1,460	\$1,690
Alternative 3	\$780	\$910	\$120	\$130	\$310	\$360	\$1,200	\$1,390
Alternative 4	\$680	\$780	\$70	\$80	\$260	\$300	\$990	\$1,150

Cost Summary By Corridor - Alternative 2															
FREEWAY SEGMENTS	Northbound/Eastbound					Southbound/Westbound					Totals				
Location	Mainline/ Connector Ramp Construction Cost (\$M) [1]	Cap. Cost for Fee R/W (\$M)	Bridge Structure Modif. Cost (\$M)	Major Utilites Cost (\$M)	Total Estimated Construction Cost - without 30% contingency (\$M)	Mainline/ Connector Ramp Construction Cost (\$M)	Cap. Cost for Fee R/W (\$M)	Bridge Structure Modif. Cost (\$M)	Major Utilites Cost (\$M)	Total Estimated Construction Cost - without 30% contingency (\$M)	Total Estimated Construction Cost - without 30% contingency (\$M)	Total Estimated Construction Cost - with 30% contingency (\$M)	Total Estimated Cost for Fee R/W - with 30% contingency (\$M)	Total Estimated Project Support Cost - includes R/W Support (\$M)	Total Estimated Segment Cost (\$M) - with 30% contingency (\$M)
I-605	\$149	\$65	\$106	\$46	\$301	\$127	\$35	\$81	\$25	\$233	\$534	\$694	\$130	\$281	\$1,106
SR-60	\$27	\$5	\$64	\$3	\$94	\$59	\$5	\$79	\$4	\$142	\$236	\$307	\$13	\$109	\$429
Alternative 2 Total	\$176	\$71	\$170	\$49	\$395	\$186	\$39	\$160	\$29	\$375	\$770	\$1,001	\$143	\$390	\$1,534

Cost Summary By Corridor - Alternative 3															
FREEWAY SEGMENTS	Northbound/Eastbound					Southbound/Westbound					Totals				
Location	Mainline/ Connector Ramp Construction Cost (\$M) [2]	Cap. Cost for Fee R/W (\$M)	Bridge Structure Modif. Cost (\$M)	Major Utilites Cost (\$M)	Total Estimated Construction Cost - without 30% contingency (\$M)	Mainline/ Connector Ramp Construction Cost (\$M)	Cap. Cost for Fee R/W (\$M)	Bridge Structure Modif. Cost (\$M)	Major Utilites Cost (\$M)	Total Estimated Construction Cost - without 30% contingency (\$M)	Total Estimated Construction Cost - without 30% contingency (\$M)	Total Estimated Construction Cost - with 30% contingency (\$M)	Total Estimated Cost for Fee R/W - with 30% contingency (\$M)	Total Estimated Project Support Cost - includes R/W Support (\$M)	Total Estimated Segment Cost (\$M) - with 30% contingency (\$M)
I-605	\$99	\$50	\$94	\$36	\$230	\$72	\$30	\$74	\$21	\$167	\$397	\$516	\$105	\$212	\$833
SR-60	\$26	\$5	\$64	\$3	\$93	\$58	\$5	\$79	\$4	\$141	\$234	\$304	\$13	\$108	\$425
Alternative 3 Total	\$126	\$55	\$158	\$39	\$323	\$130	\$35	\$153	\$25	\$308	\$631	\$821	\$118	\$320	\$1,259

Cost Summary By Corridor - Alternative 4															
FREEWAY SEGMENTS	Northbound/Eastbound					Southbound/Westbound					Totals				
Location	Mainline/ Connector Ramp Construction Cost (\$M) [3]	Cap. Cost for Fee R/W (\$M)	Bridge Structure Modif. Cost (\$M)	Major Utilites Cost (\$M)	Total Estimated Construction Cost - without 30% contingency (\$M)	Mainline/ Connector Ramp Construction Cost (\$M)	Cap. Cost for Fee R/W (\$M)	Bridge Structure Modif. Cost (\$M)	Major Utilites Cost (\$M)	Total Estimated Construction Cost - without 30% contingency (\$M)	Total Estimated Construction Cost - without 30% contingency (\$M)	Total Estimated Construction Cost - with 30% contingency (\$M)	Total Estimated Cost for Fee R/W - with 30% contingency (\$M)	Total Estimated Project Support Cost - includes R/W Support (\$M)	Total Estimated Segment Cost (\$M) - with 30% contingency (\$M)
I-605	\$86	\$15	\$63	\$32	\$181	\$66	\$26	\$53	\$20	\$139	\$320	\$416	\$54	\$160	\$630
SR-60	\$25	\$5	\$63	\$3	\$91	\$55	\$5	\$74	\$4	\$133	\$225	\$292	\$13	\$104	\$409
Alternative 4 Total	\$111	\$20	\$126	\$35	\$272	\$121	\$31	\$127	\$24	\$272	\$544	\$708	\$67	\$264	\$1,038

Notes: [1] Unit price of Mainline Widening is assumed to be \$11.0 million per lane mile for Alternative 2.
 [2] Unit price of Mainline Widening is assumed to be \$10.75 million per lane mile for Alternative 3.
 [3] Unit price of Mainline Widening is assumed to be \$10.0 million per lane mile for Alternative 4.

Project Study Report – Project Development Support Capital Outlay Project Estimate

Dist - Co - Rte: 07-LA-605, 07-LA-60

PM: 605 (PM15.1/20.4), 60 (PM 10.2/15.6)

Program Code: 20.XX.400.100

Project Number: 0714000331

Month/Year: December 2015

PROJECT DESCRIPTION: SR-60 / I-605 Interchange Improvements

Limits: Interstate 605 and State Route 60 in Los Angeles County

I-605 between south of Rose Hills Road (PM 15.1) and I-10 (PM 20.4)

SR-60 between Santa Anita Avenue (PM 10.2) and east of Turnbull Canyon Road (PM 15.6)

Proposed Improvement (Scope) The purpose of the project is to reduce congestion, and improve freeway operations, improve and enhance safety, and improve local and system interchange operations while minimizing adjacent right-of-way, environmental, and economic impacts.

Alternative 2 – In general, Alternative 2 adds one 12 feet mixed flow lane in each direction on the I-605 and the westbound SR-60 within the project limits. The remaining mixed flow lanes are also 12 feet. Due to the widening, local street and system interchanges are affected, and therefore, the build alternatives include modifications to local and system interchanges to accommodate the mainline widening.

SUMMARY OF PROJECT COST ESTIMATE

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL ROADWAY ITEMS	<u>\$ 425M</u>	<u>\$ 492M</u>
TOTAL STRUCTURE ITEMS	<u>\$407M</u>	<u>\$ 472M</u>
TOTAL ENVIRONMENTAL MITIGATION ITEMS	<u>\$22M</u>	<u>\$ 25M</u>
SUBTOTAL CONSTRUCTION COSTS	<u>\$855M</u>	<u>\$ 989M</u>
TOTAL RIGHT-OF-WAY ITEMS	<u>\$232M</u>	<u>\$ 269M</u>
TOTAL PROJECT CAPITAL OUTLAY COSTS	<u>\$1,087M</u>	<u>\$ 1,258M</u>

I. ROADWAY ITEMS

	<u>Cost (Low)</u>	<u>Cost (High)</u>
<u>Mainline Cost:</u>	\$250M	\$ 290M
<u>Ramp Cost:</u>	\$175M	\$ 202M
<u>Total Roadway Items:</u>	\$425M	\$ 492M

Explanation:

An average cost per mile approach was used for this project. The method calculated mainline and ramps separately. Reconfigured ramp lane mile costs were estimated to be half the mainline lane mile cost. The mainline costs also included the cost of any realignment of ramps. Items that are included in the Average Cost per Lane Mile are: one lane, shoulder, pavement, retaining wall, BMPs, detours, TMP, traffic items, drainage, specialty items, realignment of ramps and contingencies. The Roadway cost is calculated out to be 95% of the total calculated cost.

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL ROADWAY ITEMS	<u>\$425M</u>	<u>\$492M</u>

II. STRUCTURES ITEMS

<u>Total Number of Structures:</u>	42
<u>Total Structure Cost:</u>	\$ 472M

Explanation:

The cost per square foot for structures ranges from \$175 to \$470. This cost is determined by evaluating various components of the structure, such as: construction method, structure and abutment types. These costs also include contingencies.

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL STRUCTURE ITEMS	<u>\$407M</u>	<u>\$472M</u>

III. ENVIRONMENTAL MITIGATION

Explanation:

The environmental mitigation is calculated out to be 5% of the total calculated roadway cost. These costs also include contingencies

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL ENVIRONMENTAL MITIGATION ITEMS	<u>\$22M</u>	<u>\$26M</u>

IV. RIGHT-OF-WAY ITEMS

	<u>Cost (Low)</u>	<u>Cost (High)</u>
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	<u>\$136M</u>	<u>\$157M</u>
B. Utility Relocation (State share)	<u>\$96M</u>	<u>\$112M</u>

Anticipated Date of Right-of-Way Certification July 12, 2021
(Date to which values are escalated)

Explanation:

Included in the Total Right-of-Way Items cost estimate are project costs within Caltrans R/W. The costs per square foot of Residential, Commercial, Agency, and TCE costs were calculated on a case by case basis. The utility conflicts were also estimated based on layout drawings and current utility relocations. These costs also include contingencies.

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL RIGHT-OF-WAY ITEMS	<u>\$232M</u>	<u>\$269M</u>

Project Study Report – Project Development Support Capital Outlay Project Estimate

Dist - Co - Rte: 07-LA-605, 07-LA-60

PM: 605 (PM15.1/20.4), 60 (PM 10.2/15.6)

Program Code: 20.XX.400.100

Project Number: 0714000331

Month/Year: December 2015

PROJECT DESCRIPTION: SR-60 / I-605 Interchange Improvements

Limits: Interstate 605 and State Route 60 in Los Angeles County

I-605 between south of Rose Hills Road (PM 15.1) and I-10 (PM 20.4)

SR-60 between Santa Anita Avenue (PM 10.2) and east of Turnbull Canyon Road (PM 15.6)

Proposed Improvement (Scope) The purpose of the project is to reduce congestion, and improve freeway operations, improve and enhance safety, and improve local and system interchange operations while minimizing adjacent right-of-way, environmental, and economic impacts.

Alternative 3 – In general, Alternative 3 adds one 12 feet mixed flow lane in each direction on the I-605 and the westbound SR-60 within the project limits. The remaining mixed flow lanes are 11 feet. Due to the widening, local street and system interchanges are affected, and therefore, the build alternatives include modifications to local and system interchanges to accommodate the mainline widening.

SUMMARY OF PROJECT COST ESTIMATE

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL ROADWAY ITEMS	<u>\$ 300M</u>	<u>\$ 347M</u>
TOTAL STRUCTURE ITEMS	<u>\$ 385M</u>	<u>\$ 445M</u>
TOTAL ENVIRONMENTAL MITIGATION ITEMS	<u>\$ 15M</u>	<u>\$ 18M</u>
SUBTOTAL CONSTRUCTION COSTS	<u>\$700M</u>	<u>\$ 811M</u>
TOTAL RIGHT-OF-WAY ITEMS	<u>\$191M</u>	<u>\$ 222M</u>
TOTAL PROJECT CAPITAL OUTLAY COSTS	<u>\$891M</u>	<u>\$ 1,032M</u>

I. ROADWAY ITEMS

	<u>Cost (Low)</u>	<u>Cost (High)</u>
<u>Mainline Cost:</u>	\$129M	\$ 150M
<u>Ramp Cost:</u>	\$171M	\$ 197M
<u>Total Roadway Items:</u>	\$300M	\$ 347M

Explanation:

An average cost per mile approach was used for this project. The method calculated mainline and ramps separately. Reconfigured ramp lane mile costs were estimated to be half the mainline lane mile cost. The mainline costs also included the cost of any realignment of ramps. Items that are included in the Average Cost per Lane Mile are: one lane, shoulder, pavement, retaining wall, BMPs, detours, TMP, traffic items, drainage, specialty items, realignment of ramps and contingencies. The Roadway cost is calculated out to be 95% of the total calculated cost.

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL ROADWAY ITEMS	<u>\$300M</u>	<u>\$347M</u>

II. STRUCTURES ITEMS

<u>Total Number of Structures:</u>	42
<u>Total Structure Cost:</u>	\$ 445M

Explanation:

The cost per square foot for structures ranges from \$175 to \$470. This cost is determined by evaluating various components of the structure, such as: construction method, structure and abutment types. These costs also include contingencies.

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL STRUCTURE ITEMS	<u>\$385M</u>	<u>\$445M</u>

III. ENVIRONMENTAL MITIGATION

Explanation:

The environmental mitigation is calculated out to be 5% of the total calculated roadway cost. These costs also include contingencies

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL ENVIRONMENTAL MITIGATION ITEMS	<u>\$16M</u>	<u>\$18M</u>

IV. RIGHT-OF-WAY ITEMS

	<u>Cost (Low)</u>	<u>Cost (High)</u>
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	<u>\$111M</u>	<u>\$ 129M</u>
B. Utility Relocation (State share)	<u>\$80M</u>	<u>\$ 93M</u>

Anticipated Date of Right-of-Way Certification July 12, 2021
(Date to which values are escalated)

Explanation:

Included in the Total Right-of-Way Items cost estimate are project costs within Caltrans R/W. The costs per square foot of Residential, Commercial, Agency, and TCE costs were calculated on a case by case basis. The utility conflicts were also estimated based on layout drawings and current utility relocations. These costs also include contingencies.

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL RIGHT-OF-WAY ITEMS	<u>\$191M</u>	<u>\$222M</u>

Project Study Report – Project Development Support Capital Outlay Project Estimate

Dist - Co - Rte: 07-LA-605, 07-LA-60

PM: 605 (PM15.1/20.4), 60 (PM 10.2/15.6)

Program Code: 20.XX.400.100

Project Number: 0714000331

Month/Year: December 2015

PROJECT DESCRIPTION: SR-60 / I-605 Interchange Improvements

Limits: Interstate 605 and State Route 60 in Los Angeles County

I-605 between south of Rose Hills Road (PM 15.1) and I-10 (PM 20.4)

SR-60 between Santa Anita Avenue (PM 10.2) and east of Turnbull Canyon Road (PM 15.6)

Proposed Improvement (Scope) The purpose of the project is to reduce congestion, and improve freeway operations, improve and enhance safety, and improve local and system interchange operations while minimizing adjacent right-of-way, environmental, and economic impacts.

Alternative 4 – In general, Alternative 4 adds one 12 feet mixed flow lane in each direction on the I-605 and the westbound SR-60 within the project limits. All remaining lanes are in their existing conditions. Due to the widening, local street and system interchanges are affected, and therefore, the build alternatives include modifications to local and system interchanges to accommodate the mainline widening.

SUMMARY OF PROJECT COST ESTIMATE

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL ROADWAY ITEMS	<u>\$ 268M</u>	<u>\$ 310M</u>
TOTAL STRUCTURE ITEMS	<u>\$ 313M</u>	<u>\$ 362M</u>
TOTAL ENVIRONMENTAL MITIGATION ITEMS	<u>\$ 14M</u>	<u>\$ 16M</u>
SUBTOTAL CONSTRUCTION COSTS	<u>\$595M</u>	<u>\$ 689M</u>
TOTAL RIGHT-OF-WAY ITEMS	<u>\$136M</u>	<u>\$ 158M</u>
TOTAL PROJECT CAPITAL OUTLAY COSTS	<u>\$731M</u>	<u>\$ 846M</u>

I. ROADWAY ITEMS

	<u>Cost (Low)</u>	<u>Cost (High)</u>
<u>Mainline Cost:</u>	\$121M	\$ 140M
<u>Ramp Cost:</u>	\$147M	\$ 170M
<u>Total Roadway Items:</u>	\$268M	\$ 310M

Explanation:

An average cost per mile approach was used for this project. The method calculated mainline and ramps separately. Reconfigured ramp lane mile costs were estimated to be half the mainline lane mile cost. The mainline costs also included the cost of any realignment of ramps. Items that are included in the Average Cost per Lane Mile are: one lane, shoulder, pavement, retaining wall, BMPs, detours, TMP, traffic items, drainage, specialty items, realignment of ramps and contingencies. The Roadway cost is calculated out to be 95% of the total calculated cost.

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL ROADWAY ITEMS	<u>\$268M</u>	<u>\$310M</u>

II. STRUCTURES ITEMS

<u>Total Number of Structures:</u>	42
<u>Total Structure Cost:</u>	\$ 362M

Explanation:

The cost per square foot for structures ranges from \$175 to \$470. This cost is determined by evaluating various components of the structure, such as: construction method, structure and abutment types. These costs also include contingencies.

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL STRUCTURE ITEMS	<u>\$313M</u>	<u>\$362M</u>

III. ENVIRONMENTAL MITIGATION

Explanation:

The environmental mitigation is calculated out to be 5% of the total calculated roadway cost. These costs also include contingencies

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL ENVIRONMENTAL MITIGATION ITEMS	<u>\$14M</u>	<u>\$16M</u>

IV. RIGHT-OF-WAY ITEMS

	Cost (Low)	Cost (High)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	<u>\$63M</u>	<u>\$ 73M</u>
B. Utility Relocation (State share)	<u>\$73M</u>	<u>\$ 85M</u>

Anticipated Date of Right-of-Way Certification July 12, 2021
(Date to which values are escalated)

Explanation:

Included in the Total Right-of-Way Items cost estimate are project costs within Caltrans R/W. The costs per square foot of Residential, Commercial, Agency, and TCE costs were calculated on a case by case basis. The utility conflicts were also estimated based on layout drawings and current utility relocations. These costs also include contingencies.

	<u>Cost (Low)</u>	<u>Cost (High)</u>
TOTAL RIGHT-OF-WAY ITEMS	<u>\$136M</u>	<u>\$158M</u>

Attachment D
SR60/I-605 PSR-PDS Traffic Cost Estimate

Traffic Control	\$ 19,000,000
Temporary Railing (Type K)	
Construction Area Signs	
Stage Construction and Traffic Handling	
Traffic Management Plan (TMP)	
Lighting	\$ 12,000,000
Lighting and Sign Illumination	
Lighting (Stage Construction)	
Signs and Pavement Delineation	\$ 23,000,000
Sign Structure (Truss)	
Roadside Signs	
Traffic Delineation Items	
ITS	\$ 21,390,000
4" Conduit with Innerducts - 55,000 LF	\$ 5,500,000
3" Conduit with Innerducts - 12,000 LF	\$ 1,500,000
Furnish and Install 72 SMFO Cable - 30,000 LF	\$ 200,000
Furnish and Install 60 SMFO Cable - 30,000 LF	\$ 180,000
Furnish and Install 48 SMFO Cable - 20,000 LF	\$ 150,000
Furnish and Install 36 SMFO Cable - 20,000 LF	\$ 150,000
Relocate Traffic Monitoring Station - 5 EA	\$ 180,000
Relocate Count Station - 4 EA	\$ 160,000
Furnish and Install CCTV Camera with Pole and Cabinet - 10 EA	\$ 200,000
Furnish and Install Traffic-Rated Communication Pullbox - 120 EA	\$ 220,000
Relocate Cable Node and Type 334 Cabinet - 7 EA	\$ 100,000
Relocate Ramp Meter Controller - 12 EA	\$ 350,000
Traffic Control Systems	\$ 3,500,000
Communication System	\$ 2,500,000
Modify Ramp Meter System (Stage Construction)	\$ 1,500,000
Maintain Existing TMS Elements During Construction	\$ 2,000,000
Changeable Message Sign System	\$ 2,500,000
Additional Closed Circuit Television System	\$ 500,000
Traffic Signals	\$ 8,500,000
Traffic Signals	
Traffic Signal (Staging)	
Subtotal Traffic Items	\$ 83,890,000

Traffic Items will range from \$84m for Alternative 2 to \$74m for Alternative 3 and 4
The traffic items are estimated to be 10% of the construction cost for each alternative

Attachment E

Preliminary Environmental Analysis Report (PEAR)

I-605/SR-60

Project Study Report-Project Development Support

Preliminary Environmental Analysis Report

Prepared for



Prepared by



November 2015



PRELIMINARY ENVIRONMENTAL ANALYSIS REPORT

1. Project Information

District 7	County Los Angeles	Route Interstate 605 (I-605) State Route 60 (SR-60)	PM 15.1 to 20.4 10.2 to 15.6	EA 07-31010K
Project Title: I-605/SR-60 Project – Addition of Mixed Flow Lane and Re-alignment/Re-configuration of Interchanges				
Project Manager Syed Huq, P.E.			Phone # (213) 897-6714	
Project Engineer Carlos Cadena, WKE, Inc.			Phone # (714) 953-1003	
Environmental Office Chief/Manager Garrett Damrath, Caltrans District 7			Phone # (213) 897-9016	
PEAR Preparer Richard Galvin and Jeanne Ogar, GPA Consulting			Phone # (310) 792-2690	

2. Project Description

The Los Angeles County Metropolitan Transportation Authority (Metro), Gateway Cities Council of Governments (GCCOG), and Caltrans District 7 are preparing the Project Study Report – Project Development Support (PSR- PDS) for improvements to the I-605 and SR-60 freeway corridors. Improvements are consistent with the recommendations identified in the March 2013 *SR-91/I-605/I-405 Congestion Hot Spots Feasibility Report* prepared for Metro and GCCOG.

Purpose and Need

The purpose of the project is to reduce congestion and improve freeway operations, improve safety, and improve local and system interchange operations.

The I-605/SR-60 system interchange areas currently experience significant congestion, which is forecast to increase in the future absent physical and operational improvements to the facility. Congestion is a result of insufficient I-605 and SR-60 freeway mainline capacity, closely spaced freeway entrance and exit ramps. The existing freeway geometry has many features which do not meet current Caltrans Highway Design Manual (HDM) Standards. There are also a number of areas within the project limits with a high concentration of accidents.

Description of Work

Improvements on I-605 are proposed between south of Rose Hills Road (Post Mile (PM) 15.1) and Interstate 10 (I-10) Interchange (PM 20.4), and improvements on SR-60 are proposed between Santa Anita Avenue (PM 10.2) and east of Turnbull Canyon Road (PM 15.6). The project is predominantly located within the Cities of Baldwin Park, El Monte, Industry, Pico Rivera, South El Monte, and unincorporated Los Angeles County.

The project initiation process includes identifying the proposed scope, schedule, support costs, and resources needed to move forward to the Project Approval and Environmental Documentation (PA&ED) phase. Four project alternatives are under consideration, and are detailed below. It is anticipated that construction of the overall improvements will be phased using logical termini dependent upon funding, environmental processing, and need under multiple phases.

Alternative 1 – No Build Alternative

The No Build Alternative assumes the proposed project would not be constructed and allows decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. This alternative is based on existing (baseline) conditions at the time the Notice of Preparation (NOP) is published, as well as activities that would be reasonably expected to occur in the foreseeable future if the project were not approved.

Alternative 2

Alternative 2 would include widening the freeway mainline to add one mixed flow lane (i.e., a standard freeway lane where vehicles with any number of occupants can drive anytime) and auxiliary lanes (i.e., a lane other than a through lane, used to separate entering, exiting or turning traffic from through traffic), as necessary, on both the southbound and northbound I-605 and portions of westbound SR-60. Alternative 2 would meet Caltrans' Highway Design Manual standards with 12-foot lane widths, but shoulder widths would range from four feet to 10 feet. Right of Way (ROW) impacts, including full and partial property acquisitions and temporary construction easements (TCE), would be necessary to accommodate the proposed improvements and meet Caltrans standards.

Improvements on I-605 would include reconstructing the northbound I-605 hook off-ramp and direct off-ramp to a standard diamond configuration at the I-605/Rose Hills Road interchange, modifying the southbound I-605 unconventional intersection with a partial cloverleaf at the I-605/Rose Hills Road interchange, revising the southbound I-605 hook ramp to a diamond interchange realignment at the I-605/Peck Road interchange, replacing the direct on-ramp on northbound I-605 with a modified loop on-ramp at the I-605/Valley Boulevard interchange, and reconstructing connectors at the I-605/SR-60

interchange to accommodate the mainline widening. Alternative 2 would also include adding braided ramps on southbound I-605 between the I-605/Peck Road interchange and the I-605/SR-60 interchange, and braided ramps on northbound I-605 between the I-605/Valley Boulevard interchange and the I-605/I-10 interchange.

Improvements on SR-60 would include an additional mixed flow lane on westbound SR-60 from the SR-60/I-605 interchange to Kwis Avenue. Alternative 2 would also include braided ramps on eastbound and westbound SR-60 between the SR-60/Peck Road interchange and the I-605/SR-60 interchange.

Alternative 2 includes two options for interchange design – Option A and Option B. This alternative has the same operational characteristics as Alternative 4, Option A and B, with the following exceptions:

- Valley Boulevard Interchange – The results of the Alternative 2 intersection analysis for the Valley Boulevard interchange are shown in Table 22 of the Traffic Engineering Performance Assessment (TEPA) (dated October 2015). The two study intersections are projected to operate at level of service (LOS) D or better during AM and PM peak hours.

Alternative 3

Alternative 3 would include many of the design elements identified in Alternative 2, except that the three inside mixed flow lanes would be 11 feet in width, the outer two lanes would be 12 feet in width, and the 4-foot high-occupancy vehicle (HOV) buffer would be removed to keep improvements within the existing ROW to the extent feasible. I-605 would consist of a mixture of 11-foot and 12-foot mixed flow lanes between Rose Hills Road and I-605/I-10 interchange. Proposed improvements to interchanges and SR-60 are the same as Alternative 2. Alternative 3 includes two options for interchange design – Option A and Option B. This alternative has the same operational characteristics as Alternative 4, Option A and B.

Alternative 4

Alternative 4 would be similar to Alternative 2 in that one additional mixed flow lane would be added to both sides of the freeway mainline, but existing lane and shoulder widths would be maintained and standard widths would be provided for the additional mixed flow lane. I-605 would consist of a mixture of 11-foot and 12-foot mixed flow lanes between Rose Hills Road and the I-605/I-10 interchange. Any new ramp realignments or widening would meet Caltrans' Highway Design Manual standards for lane and shoulder widths.

Alternative 4 includes two options for interchange design – Option A and Option B. Option A would include a partial clover leaf at the I-605/Rose Hills Road interchange, a direct on-ramp at the I-605/Peck Road interchange, braided ramps on the SR-60/Peck Road interchange and the I-605/SR-60 interchange, separate entries to the I-605 on-ramps at the I-605/Valley Boulevard interchange, and braided ramps on northbound I-605 between the I-605/Valley Boulevard interchange and the I-605/ I-10 interchange.

Option B would include a roundabout at the I-605/Rose Hills Road interchange, a diamond interchange at the I-605/Peck Road interchange, braided ramps on northbound I-605 between the SR-60/Peck Road interchange and the I-605/SR-60 interchange, separate entries to the I-605 on-ramps at the I-605/Valley Boulevard interchange, braided ramps on northbound I-605 between the I-605/Valley Boulevard interchange and the I-605/ I-10 interchange, and a collector road on southbound I-605 connecting the I-605/I-10 interchange connector ramps and the I-605/Valley Boulevard interchange off-ramp.

3. Anticipated Environmental Approval

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

CEQA		NEPA	
Environmental Determination			
Statutory Exemption	<input type="checkbox"/>		
Categorical Exemption	<input type="checkbox"/>	Categorical Exclusion	<input type="checkbox"/>
Environmental Document			
Initial Study or Focused Initial Study with proposed Negative Declaration (ND) or Mitigated ND	<input type="checkbox"/>	Routine Environmental Assessment with proposed Finding of No Significant Impact	<input type="checkbox"/>
		Complex Environmental Assessment with proposed Finding of No Significant Impact	<input type="checkbox"/>
Environmental Impact Report	<input checked="" type="checkbox"/>	Environmental Impact Statement	<input checked="" type="checkbox"/>
CEQA Lead Agency (if determined):	Caltrans District 7		
Estimated length of time (months) to obtain environmental approval:	36 to 48 months		
Estimated person hours to complete identified tasks:	Not Applicable (Oversight Project)		

Based on the preliminary evaluation conducted as part of this Preliminary Environmental Analysis Report (PEAR), the project could result in significant environmental impacts. Therefore, the anticipated environmental document to comply with the California Environmental Quality Act (CEQA) is an Environmental Impact Report (EIR). This determination is based on review of Appendix G of the CEQA Guidelines, as well as preliminary geometric plans and other available information.

Under the National Environmental Policy Act (NEPA), if a federal agency anticipates that an undertaking is environmentally controversial, a federal agency may choose to prepare an Environmental Impact Statement (EIS). Because there is potential for public controversy associated with land acquisitions required for the build alternatives, an EIS is the anticipated environmental review document to comply with NEPA.

4. Special Environmental Considerations

Preliminary assessment of the three build alternatives has identified a number of potential environmental impacts that may require special considerations. The following environmental issues have been identified:

Section 4(f) Resources – Resources subject to Section 4(f) consideration include publicly owned lands consisting of a public park/recreational area; public wildlife and waterfowl refuges of national, state, or local significance; or historic sites of national, state, or local significance, whether publicly or privately owned. Temporary impacts on Section 4(f) facilities, specifically recreational trail facilities, are expected during construction activities for all alternatives. Potential impacts may also result from the project on other Section 4(f) facilities in proximity to the project area, which include the Barnes Park and Family Recreation Center (adjacent to and east of I-605 to the north of I-10), Woodland Duck Farm and Equestrian Center (south of the I-605/Valley Boulevard Interchange), Bicentennial Park Recreation Area and the Pico Rivera Sports Arena (adjacent to and west of southbound I-605 to the south of Peck Road), Whittier Narrows (adjacent to and south of eastbound SR-60 to the west of I-605), and the Hacienda Heights Community Center (north of SR-60 and west of I-605 on Valencia Avenue). The California Country Club is a privately owned golf course, located east of northbound I-605, and was designed by William Bell in the 1950s. Because the property is privately owned, it would not be eligible for protection as a recreation area under Section 4(f). However, if the golf course were to be determined eligible for the National Register of Historic Places (NRHP), it would be eligible for protection under Section 4(f). In addition, acquisition of right of way (ROW) from the San Gabriel River Trail property, under all alternatives, would require a Section 4(f) Evaluation. Coordination with agencies that have jurisdiction over Section 4(f) resources will be conducted, and any findings and

recommendations will be included in the Section 4(f) Evaluation. If ROW is required from Whittier Narrows, a Section 6(f) Evaluation would also be required.

Relocations and Real Property Acquisitions – All build alternatives would require additional ROW acquisition and would result in the displacement of residential and commercial properties. Alternative 2 would require the greatest partial and full ROW acquisitions. Anticipated acquisitions are included in **Table 8-1** in this PEAR (see Section 8.4.2, Relocations). Substantial ROW acquisitions associated with the build alternatives have the potential to result in controversy and/or legal challenges; therefore, early and ongoing public outreach efforts will be a key consideration during project development to address public concern and avoid project delays. Special public outreach efforts may be warranted to identify concerns from potentially impacted residents and property owners.

Visual/Aesthetics – The project would include elevated roadway and bridge profiles, new and replacement sound walls along project segments, and vegetation removal. Affected viewers and visual impacts would need to be considered as part of the project design. For example, aesthetic design considerations may be warranted for residential areas adjacent to the project area. Public outreach efforts consistent with the Caltrans' Context Sensitive Solutions (CSS) objectives may be warranted to identify concerns from potentially impacted residents and property owners.

Water Quality and Storm Water Runoff, and Hydrology and Floodplain – All build alternatives would require widening the existing bridges over the San Gabriel River, Walnut Creek, and San Jose Creek. Proposed activities within the river would require coordination with, and permits from several regulatory agencies, which would require additional time to coordinate. The anticipated reviews/permits associated with the improvements are as follows:

- Section 401 Water Quality Certification (Los Angeles Regional Water Quality Control Board)
- Section 404 Permit (U.S. Army Corps of Engineers)
- Section 408 Permit (U.S. Army Corps of Engineers) (This is not an environmental permit, but rather a design permit.)
- Section 1602 Streambed Alteration Agreement (California Department of Fish and Wildlife)

Hazardous Waste/Materials – The project would require ROW acquisition from residential and commercial properties, and would require demolition of structures with potential for lead-based paint and asbestos-containing materials. The project would also

require excavation (depth to be determined), and dewatering if groundwater extraction is required for pile driving. The project area is located within the San Gabriel Valley, Baldwin Park Operable Unit Superfund site, and groundwater beneath this area is contaminated with t oroethylene, tetrachloroethylene (or perchloroethylene, (PCE)), and other volatile organic compounds (VOCs) (BonTerra Consulting, 2014). The project would also require construction within railroad properties, which have potential for treated wood waste (TWW), lead-based paint, VOCs, semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCB), and pesticides; and construction within Caltrans ROW, which has potential for aerially deposited lead and thermoplastic traffic striping. In addition, the project would require construction in two aquifers, with potential for cross-contamination of hazardous materials between the two water-bearing zones. Therefore, there is potential for hazardous waste, hazardous materials, and contamination during project construction, which would require the protection of the health and safety of workers and the surrounding environment, and specific handling/waste management procedures for excess materials/wastes generated by the project. Site assessments and site investigations would be conducted within the ROW and on parcels to be acquired for the project, which would require entry permits to access private and state-owned properties; utility relocations and agreements with utility companies; and potential installation of monitoring wells and remediation activities. Regulatory agency approval would be needed for soil disturbance and remediation activities in the San Gabriel Valley, Baldwin Park Operable Unit Superfund site. Monitoring wells may conflict with the construction area; therefore, the destruction and reinstallation of monitoring/extraction wells may be required.

Noise – This project is considered a Type I project, as defined by Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects* (2011), and requires a detailed noise analysis during the PA&ED phase. Type I projects are defined as “federal or federal-aid highway projects that involve the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes.” Noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact. Therefore, proposed improvements adjacent to sensitive receivers, particularly residential uses and schools, will require noise measurements and modeling to develop appropriate abatement measures.

5. Anticipated Environmental Commitments

The following environmental commitment measures are based on the typical requirements to minimize or mitigate project-related impacts for similar types of transportation projects.

- Relocations – Relocations would be subject to the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and Title 49 Code of Federal Regulations, Part 24. Relocations and ROW acquisitions would be processed through the Caltrans’ Relocation Assistance program, and costs associated with the property acquisitions and assistance would be included in the project cost estimates.
- Utilities – Any disruptions to utility service would be scheduled and coordinated to ensure they would not adversely affect the surrounding community.
- Emergency Services – Coordination with local emergency service providers and communication with the surrounding community would be conducted to minimize traffic impacts during construction.
- Visual/Aesthetics – Landscaping and aesthetic treatments would be required to enhance the aesthetic appearance of project elements, including interchanges, bridges, and structures, and to reduce visual impacts. Recommended measures would be presented in the Visual Impact Assessment to be completed for the project, and would be finalized during final project design.
- Water Quality and Storm Water Runoff – A Stormwater Data Report (SWDR) has been completed for the project and identifies design, treatment, and construction Best Management Practices (BMP) to be incorporated into the project (HDR, 2014). Design and treatment BMPs would include the installation of biofiltration swales and strips, and infiltration devices to capture pollutants in stormwater runoff. Construction BMPs would include implementation of erosion control measures, street sweeping and vacuuming, and installation of temporary check dams, hydraulic mulch, cover, fences, concrete washout bins, fiber rolls, drainage inlet protection, and sediment barriers. BMPs would be finalized during final project design.
- Geology, Soils, Seismic, and Topography – Temporary erosion control measures and project design elements to address slope stability, pile driving, soils, seismicity, and topography would be developed based on needs identified during completion of the geotechnical report required during the PA&ED phase, and would be finalized during final project design.
- Hazardous Waste/Materials – Standard specifications and/or testing for lead-based paint, trichloroethylene, PCE, TWW, VOCs, SVOCs, PCBS, pesticides, aerially

deposited lead, asbestos-containing materials, and thermoplastic traffic striping removal would be included in the project. Site assessments, site investigations, and remediation (if required) would be conducted within the ROW and on parcels to be acquired for the project in compliance with applicable entry permits, utility agreements, and regulatory agency approvals. If activities are required on parcels contaminated with hazardous materials or hazardous wastes, these activities would be conducted using proper removal, transport, and disposal measures to contain excess material/wastes generated by the project, and prevent the exposure of workers and the surrounding environment. The project would be designed to avoid or minimize potential cross-contamination between the two aquifers in the project area. If monitoring wells conflict with the construction area, the wells would be destroyed and reinstalled under appropriate regulatory agency oversight. According to Caltrans policy, new ROW for a project must be free of hazardous materials before title to such property is transferred to Caltrans.

- Traffic/Transportation – During the environmental process, traffic analysis would be conducted to identify temporary impacts and construction staging requirements, including, but not limited to, avoidance of staging in residential areas, detours, signage, and coordination with local communities, to minimize access impacts from temporary closures of local streets, freeway lanes, ramps, and bridges, as well as permanent ramp design and replacement.
- Air Quality – The project would be constructed in compliance with Caltrans’ Standard Specifications, Section 14-9 “Air Quality” and Caltrans’ specifications for the control of construction-generated emissions.
- Noise – Abatement measures, including the replacement of existing sound walls and the construction of new sound walls, are anticipated. Preliminary recommended sound wall locations would be identified in a Noise Study Report (NSR) and a Noise Abatement Decision Report (NADR), including a reasonable and feasible determination with recommendations and project cost estimates included in the draft environmental document.
- Biological Environment – Measures to avoid and minimize impacts on jurisdictional features, nesting migratory birds and raptors, special-status bird species, bats, and fish species would be implemented, such as conducting pre-construction surveys, installing BMPs to prevent construction debris and dust from entering waterways, reducing work areas to the extent feasible, and conducting vegetation removal outside the nesting season to the extent practicable.

6. Permits and Approvals

In addition to the necessary NEPA and CEQA environmental documents, anticipated environmental permits and approvals for the three build alternatives include the following:

Permit/Statute	Agency	Purpose	Approval Time Frame	Alternatives Impacted
<i>Federal</i>				
Clean Water Act (CWA), Section 404 Permit	U.S. Army Corps of Engineers (USACE)	Required for any dredge or fill within wetlands or other waters of the U.S. under USACE jurisdiction (San Gabriel River, Walnut Creek, San Jose Creek, or drainages in the project area).	Three to six months for a Nationwide Permit; nine to 14 months for an Individual Permit	2, 3, 4A, and 4B
CWA Section 401 Water Quality Certification and/or Waste Discharge Requirement (WDR)	Regional Water Quality Control Board (RWQCB) Los Angeles Region	Required for projects where a USACE Section 404 permit is applicable.	Eight to 12 months	2, 3, 4A, and 4B
33 United States Code (USC), Section 408 Permit	USACE	Required for any change to an existing USACE civil works project	Six to 10 months	2, 3, 4A, and 4B
Clean Air Act, Transportation Conformity Determination	Federal Highway Administration (FHWA); Caltrans	Required for federally funded projects that are in nonattainment or maintenance areas for National Ambient Air Quality Standard (NAAQS).	Three to six months	2, 3, 4A, and 4B
Federal Endangered Species Act, Section 7 Consultation	U.S. Fish and Wildlife Service (USFWS)	Required if Federally-listed species are found in the project area.	Four to five months	2, 3, 4A, and 4B
National Historic Preservation Act, Section 106	State Historic Preservation Officer (SHPO)	Required if the project will affect properties listed or eligible for listing in the NRHP.	Six to 12 months	2, 3, 4A, and 4B

Compliance				
<i>State</i>				
California Department of Fish and Game Code, Section 1602 Streambed Alteration Agreement	California Department of Fish and Wildlife (CDFW)	Required for any work in the San Gabriel River, Walnut Creek, San Jose Creek, or drainages in the project area.	Three to six months	2, 3, 4A, and 4B
National Pollutant Discharge Elimination System (NPDES) Construction General Permit and Caltrans Statewide Permit	State Water Resources Control Board (SWRCB)	Coverage under the General Construction Permit is required for projects that impact greater than one acre of land. The Construction General Permit requires a Notice of Intent (NOI) and the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Compliance with the Caltrans Statewide Permit is required to conform to Caltrans MS4 Waste Discharge Requirements.	Three to six months	2, 3, 4A, and 4B
California Endangered Species Act Section 2080 Consultation and Incidental Take Permit	California Department of Fish and Wildlife	Consultation is required if State-listed species are found in the project area. If the project would result in take of a species that is state-listed only, then an incidental take permit is required.	Four to five months	2, 3, 4A, and 4B
Health and Safety Code, Section 25200, Hazardous Waste Facility Permit	California Department of Toxic Substances Control (DTSC)	Required if the project would include the storage, treatment, or disposal of hazardous waste.	Three to six months	2, 3, 4A, and 4B
State ROW Encroachment Permit	California Department of Transportation (Caltrans)	Required for activities within, under, or over State highway ROW.	Three to six months	2, 3, 4A, and 4B
General Order 88-B, Authorization to Modify an Existing Rail Crossing	California Public Utilities Commission (CPUC)	Required for modifications to an existing public rail crossing.	Eight to 12 months	2, 3, 4A, and 4B

Assembly Bill 52, Native American Consultation	Native American Heritage Commission (NAHC)	Requires CEQA Lead Agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the project, if the tribe requested to the Lead Agency, in writing, to be informed by the Lead Agency of proposed projects in that geographic area and the tribe requests consultation.	Eight to 12 months	2, 3, 4A, and 4B
<i>Local</i>				
Rule 1403 (Asbestos Emissions From Demolition/Renovation Activities), Asbestos Survey Report and Notification of Demolition and Asbestos Removal	Southern California Air Quality Management District (SCAQMD)	Required if asbestos-containing materials would be disturbed during project construction.	Three to six months	2, 3, 4A, and 4B
Rule 403 (Fugitive Dust), Large Operation Notification	SCAQMD	Required if the project would result in more than 50 acres of disturbed surface area, or would include earth moving operations that exceed a daily earth moving throughput of 5,000 cubic yards three times during the most recent 365-day period from the date grading begins.	Three to six months	2, 3, 4A, and 4B
Rule 1166 (Volatile Organic Compound (VOC) Emissions From Decontamination of Soil), VOC Contaminated Soil Mitigation Plan	SCAQMD	Required if the project would include excavation of an underground storage tank and/or transfer piping storing or previously storing VOC materials, or excavation or grading of soil containing VOC materials.	Three to six months	2, 3, 4A, and 4B
Various City Encroachment Permits	Local Jurisdictions in Project Area	Required for work in City ROW.	Four to five months	2, 3, 4A, and 4B

<i>Other</i>				
Right of Entry Agreement	Union Pacific Railroad	Required for work within railroad ROW.	Eight to 12 months	2, 3, 4A, and 4B

7. Level of Effort: Risks and Assumptions

The PEAR technical summaries listed in Section 8 include information and discussions based on data gathered from windshield surveys of the project area and existing public data, including local general plans and environmental documents. The information is based on assumptions about project design, project area, and accuracy of information gathered. In order to manage risk, potential issues that could affect project design, timeline, and budget are identified and planned for. These project assumptions and potential risks are listed below:

- The project is subject to federal action, and analysis pursuant to NEPA is required.
- The scope of the discussion includes the three proposed build alternatives. Additional impact analysis may be required if there are changes to the current scope of alternatives, or if other conditions changes which could affect the analysis.
- Parcels on which partial ROW acquisitions are expected will meet all requirements associated with existing land uses, including lot size and setback requirements. If additional ROW acquisitions are required to accommodate improvements included in the final project design, there is a potential for additional land use impacts.
- The preliminary environmental analysis and cost estimates do not include potential impacts from temporary construction easements because specific locations of construction staging areas or other additional areas required for construction have not yet been identified. Temporary construction easements could result in additional community impacts and project costs, depending on the needs of the project.
- Cultural resources, including historic, archaeological, and paleontological resources, are not expected to be within the project's Area of Potential Effect (APE). If it is determined that there are cultural resources within the APE, or if any cultural resources are discovered during project construction, additional studies and coordination would be required. This could extend the project schedule and increase project costs.
- Aerially deposited lead and other hazardous wastes and materials are likely in the project area. In addition, a portion of the project area north of the I-605/Valley Boulevard Interchange is within the San Gabriel Valley, Baldwin Park Operable Unit Superfund site, and groundwater beneath this area is contaminated with trichloroethylene, PCE, and other VOCs (BonTerra Consulting, 2014). If hazardous materials are confirmed in the project area, additional mitigation and remediation efforts would be required. This could extend the project schedule and increase project costs.

- Impacts on federally and state listed species are not expected. If listed species are found in the project area, consultation under the Federal Endangered Species Act (FESA) or California Endangered Species Act (CESA) may be required, which could extend the project schedule.
- It is currently unknown whether all potentially significant impacts can be reduced or mitigated, and an EIR and EIS may be required. Under CEQA, if a lead agency determines that the project may have significant environmental impacts, an EIR is required. Under NEPA, if a federal agency anticipates that an undertaking may significantly impact the environment, or if a project is environmentally controversial, a federal agency may choose to prepare an EIS. The appropriate environmental document will be confirmed during the PA&ED phase of the environmental process, in accordance with recommendations of the technical studies.

8. PEAR Technical Summaries

The technical summaries included in this section are based on the findings of the following technical memos prepared for the project:

- *Land Use, Community, and Section 4(f) Impacts Technical Memorandum*, Prepared by GPA Consulting (2015)
- *Visual and Aesthetics Technical Memorandum*, Prepared by GPA Consulting (2015)
- *Cultural Resources Technical Memorandum*, Prepared by GPA Consulting and Duke Cultural Resources Management (CRM) (2015)
- *Hydrology and Floodplain Memorandum*, Prepared by HDR (2015)
- *Storm Water Data Report*, Prepared by HDR (2015)
- *Groundwater and Seismic Data*, Prepared by Earth Mechanics, Inc. (2015)
- *Paleontological Identification Report*, Prepared by Duke CRM (2015)
- *Initial Site Assessment (ISA) Checklist*, Prepared by GPA Consulting (2015)
- *Air Quality and Greenhouse Gas Impacts Technical Memorandum*, Prepared by Ambient Air Quality and Noise Consulting (2015)
- *Noise and Ground-Borne Vibration Impacts Technical Memorandum*, Prepared by Ambient Air Quality and Noise Consulting (2015)
- *Biology Technical Memorandum*, Prepared by GPA Consulting (2015)

8.1 Land Use:

8.1.1 Existing and Future Land Use:

The majority of the project area is located within an existing transportation corridor; therefore, the project would be unlikely to result in changes in existing and future land use in the majority of the project area. However, the project would require full and partial acquisition of ROW from several residential and commercial properties, which may require changes in land use and zoning designations for some of the properties. Therefore, a Community Impact Assessment (CIA), which would include further analysis and discussion of land use changes, is required to be prepared during the PA&ED phase of the environmental process.

8.1.2 Consistency with State, Regional, and Local Plans:

The project is consistent with the goals, policies, and objectives listed in applicable regional and local plans, which include the following:

- Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (SCAG, 2012)
- SCAG 2008 Regional Comprehensive Plan (SCAG, 2008)
- Metro 2009 Long Range Transportation Plan (Metro, 2009)
- GCCOG Subregional Sustainable Community Strategy (GCCOG, 2011)
- Gateway Cities, A Profile of a Decade of the 21st Century (GCCOG and Department of Economics, CSULB, 2012)
- County of Los Angeles General Plan (Los Angeles County Department of Regional Planning (LACDRP), 1980)
- Hacienda Heights Community Plan (LACDRP, 2011)
- City of Pico Rivera General Plan (City of Pico Rivera, 1993)
- City of Industry 2014 General Plan (City of Industry, 2014)
- City of South El Monte General Plan (City of South El Monte, 2000)
- Vision El Monte General Plan (City of El Monte, 2011)
- City of Baldwin Park 2020 General Plan (City of Baldwin Park, 2002)

There are no state plans that are applicable to the project.

8.1.3 Parks and Recreation:

Under Section 4(f), a use is defined as any of the following:

- An actual use – property is permanently incorporated into the transportation project;
- A temporary occupancy – property is temporarily occupied in a way that is adverse to the property’s purpose; or
- A constructive use – when “the transportation project does not incorporate land from a Section 4(f) property, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protect activities, features, or attributes of the property are substantially diminished.” (23 Code of Federal Regulations (CFR) Section 774.15(a))

The project would require the acquisition of ROW from a portion of the San Gabriel River Trail, which would result in an actual use of the Section 4(f) resource. Therefore, a Section 4(f) Evaluation is required and will be prepared during the PA&ED phase of the project. Because it is anticipated that the project would require an EIS, an Individual Section 4(f) Evaluation must be prepared. Other Section 4(f) facilities in proximity to the project area include the Barnes Park and Family Recreation Center (adjacent to and east of I-605 to the north of I-10), Woodland Duck Farm and Equestrian Center (south of the I-605/Valley Boulevard Interchange), Bicentennial Park Recreation Area and the Pico Rivera Sports Arena (adjacent to and west of southbound I-605 to the south of Peck Road), Whittier Narrows Recreational Area (adjacent to and south of eastbound SR-60 to the west of I-605), and the Hacienda Heights Community Center (north of SR-60 and west of I-605 on Valencia Avenue). The California Country Club is a privately owned golf course, located east of northbound I-605, and was designed by William Bell in the 1950s. Because the property is privately owned, it would not be eligible for protection as a recreation area under Section 4(f). However, if the golf course were to be determined eligible for the NRHP, it would be eligible for protection under Section 4(f). In addition, Rose Hills Memorial Park and Mortuary, located east of northbound I-605, was founded in 1914. Because the mortuary is privately owned, it would not be eligible for protection as a publicly owned park under Section 4(f). However, if the mortuary were to be determined eligible for the NRHP, it would be eligible for protection under Section 4(f). Actual, temporary, and constructive uses of all Section 4(f) resources within 0.5-mile of the project would be evaluated for inclusion in the evaluation. If ROW is required from Whittier Narrows, a Section 6(f) evaluation would also be required.

8.2 Growth:

The project area is located within an existing transportation corridor and would not be located along a new alignment. Some interchange ramps may be closed permanently, and ramp access to the freeways may be re-directed to other interchanges; however, the project would not be providing new access to surrounding areas. Adjacent and surrounding areas are highly developed, and only scattered parcels in the area could be subject to redevelopment. Therefore, there is limited potential for growth and new development in the area. ROW acquisition from adjacent properties would not result in new development, as these properties would be incorporated into the existing transportation facility.

Although the project would increase the capacity of the freeways, the project would not be expected to induce substantial growth in the project area; rather, it would support the circulation needs of existing developments. Therefore, it is anticipated that Caltrans' First Cut Screening Analysis during the PA&ED phase would conclude that no growth-related impacts would result from the project, and a Growth Impact Study would not be required. Further analysis would be provided by Caltrans' First Cut Screening Analysis and the environmental document.

8.3 Farmlands/Timberlands:

There are no designated farmlands or timberlands in the project area. Therefore, the project would have no impact on farmlands or timberlands, and a detailed analysis of farmlands/timberlands impacts would not be required during the PA&ED phase of the project.

8.4 Community Impacts:

A discussion of community impacts is provided below and includes potential impacts related to community character and cohesion, relocations, environmental justice, and utilities/emergency services/public facilities.

8.4.1 Community Character and Cohesion:

The project is located along existing freeways and interchanges, which typically serve as community delineators and neighborhood separators. The existing communities are mostly developed adjacent to the existing transportation infrastructure. Based on the preliminary census data gathered, the project area has a high degree of community cohesion. The project is not expected to divide existing neighborhoods; however, because of the large scope of the project, acquisition of ROW, and potential relocation of on-and off-ramps, the project could result in changes to community character and cohesion, including changes to neighborhood access. A Community Impact Assessment (CIA) is

required to analyze and discuss community character and cohesion, and will be prepared during the PA&ED phase of the environmental process.

8.4.2 Relocations:

The project would require full and partial acquisition of ROW from several residential and commercial properties, including some relocations, as shown in **Table 8-1**. ROW acquisitions for the project would be completed in accordance with the requirements of the Caltrans’ Relocation Assistance Program (RAP), the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended), and Title 49 CFR Part 24. Relocations need to be further analyzed and discussed in a Relocation Impact Report (RIR), which will be included as an appendix to the CIA.

Table 8-1 – Number of Full and Partial Property Acquisitions by Land Use Type

Land Use	Alternative 2		Alternative 3		Alternative 4	
	Partial	Full	Partial	Full	Partial	Full
Residential	19	29	13	29	11	11
Commercial/ Industrial	46	12	35	9	34	2
Agency/Other	49	0	45	0	29	0
TOTAL	114	41	93	38	74	13

Source: WKE, 2015

8.4.3 Environmental Justice:

The study area contains low-income and minority populations that are in higher concentration than Los Angeles County, as shown in **Table 8-2**. Therefore, the project has the potential to result in disproportionately high or adverse effect on environmental justice populations located in the study area. A CIA is required to identify and discuss potential effects.

Table 8-2 – Racial/Ethnic Characteristics

Race/Ethnicity	Study Area		Los Angeles County	
	Number	Percent	Number	Percent
Total Population (All Races/Ethnicities)	125,755	100.0	9,818,605	100.0
White	58,582	46.6	4,936,599	50.3
Black or African American	1,302	1.0	856,874	8.7
American Indian and Alaska Native	1,220	1.0	72,828	0.7
Asian	20,139	16.0	1,346,865	13.7
Native Hawaiian and Other Pacific Islander	147	0.1	26,094	0.3
Some Other Race	39,762	31.6	2,140,632	21.8
Two or More Races	4,603	3.7	438,713	4.5
Hispanic or Latino ¹	95,632	76.0	4,687,889	47.7

Source: U.S. Census Bureau, 2010

Notes: ¹Hispanic or Latino is considered an ethnicity, rather than a race, in accordance with the guidelines adopted by the Office of Management and Budget. As a result, the sum of all categories will exceed 100 percent.

8.4.4 Utilities/Emergency Services/Public Facilities:

Utilities

There are several utilities that cross or are adjacent to the project area. Intermittent disruptions of utilities or relocation of utilities could be required to complete the project. In addition, the project would result in impacts on Caltrans' existing communication system trunk line, and relocation of communication conduits and Transportation Management Systems (TMS) would be required. The project would also require work within railroad ROW and modifications to existing railroad crossings. Coordination with Caltrans, Union Pacific Railroad, the CPUC, and local jurisdictions, and communication with the surrounding community would minimize impacts and will be discussed further in the CIA.

Emergency Services

Emergency vehicles or personal vehicles traveling during an emergency may use segments of the roadway in the project area; therefore, construction-related traffic

impacts could affect emergency services. Coordination with local emergency service providers and communication with the surrounding community would minimize impacts and will be discussed further in the CIA.

Public Facilities

There are several public facilities that are adjacent to the project area. Construction of the project would require temporary lane closures, ramp closures, and other activities that could result in traffic impacts, which could affect access to adjacent public facilities. In addition, there are three railroad/freeway overcrossings and one at-grade roadway crossing in the project area. Railroad operations could be affected at these crossings during construction of the project. Coordination with local jurisdictions, Union Pacific Railroad, and the CPUC, and communication with the surrounding community would minimize impacts and will be discussed further in the CIA.

8.5 Visual/Aesthetics:

There are no designated or eligible scenic highways within or adjacent to the project area. Existing views to and from the project area are dominated by transportation infrastructure, and the project is located in an urban environment. The project includes the construction of above-grade transportation structures, the construction of new sound walls adjacent to residential areas, the replacement of existing sound walls closer to residential, the removal of landscaping, and an increase in the width of the existing freeway. The project would not obstruct views of visual resources, including the Puente Hills and the San Gabriel Mountains. However, the project would result in noticeable changes to the visual environment, and sensitive viewers in residential areas (i.e., residents with views of the freeway in the foreground) are located adjacent to the project area.

According to the results of the Caltrans Questionnaire to Determine Visual Impact Assessment (VIA) Level (21 points out of 30 total possible points), a fully developed VIA is the appropriate level of documentation to assess potential project impacts on visual resources in the project area. To minimize visual impacts, the project would incorporate input from local jurisdictions within the project area and would be designed in accordance with Caltrans context sensitive design solutions. The VIA to be completed during the PA&ED phase of the project would include further analysis of project impacts and provide specific avoidance, minimization, and/or mitigation measures.

8.6 Cultural Resources:

The records search, research, and reconnaissance survey identified the following historic resources adjacent to the project area: the Woodland Duck Farm and Equestrian Center

(eligible for the NRHP) and the Los Angeles Department of Water and Power Boulder Lines 1 and 2 (listed in the NRHP as elements of a historic district). The Duck Farm site is proposed for development into a 37.5-acre park along the San Gabriel River. On this site, the Louise Ward Residence has been evaluated as eligible for the California Register of Historical Resources (CRHR) and is proposed for preservation as part of the park.

Depending on the project design, required ROW acquisitions, and resulting APE, these historic resources could be impacted by the project. Because the extent of ROW acquisition for the project is unknown at this time, it is not possible to determine how many additional built-environment resources, if any, would have to be evaluated for NRHP eligibility and potential impacts.

The records search, research, and reconnaissance survey did not identify any archaeological resources adjacent to the project area. Consultation to date with local Native American groups did not identify any Native American cultural resources within or adjacent to the project area. Because of the presence of archaeological resources in the vicinity, the area is considered sensitive for cultural resources; however, previous extensive development and ground disturbance has diminished the sensitivity for these resources in the project area.

To adequately document cultural resources, some combination of the following studies will be required: Historic Property Survey Report (HPSR), Archaeological Survey Report (ASR), Historic Resource Evaluation Report (HRER), Finding of Effect (FOE), Memorandum of Agreement (MOA), and Section 4(f) documentation. The exact combination of these studies will depend on the project design, required ROW acquisitions, and the resulting APE. Consultation with Native American tribes would be conducted in compliance with Section 106 of the NHPA and Assembly Bill 52.

8.7 Hydrology and Floodplain:

The project is located within Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) numbers 06037C1664F, 06037C1668F, 06037C1670F, and 06037C1700F (September 26, 2008). Based on the latest FIRMs, the project area is primarily located within areas of minimal flood hazard Zone X, which are areas outside the Special Flood Hazard Area (SFHA) and higher than the elevation of the 0.2-percent-annual-chance (or 500-year) flood.

Portions of the project area are also adjacent to and/or lie within Floodplain Zone X, which are areas in which flood hazards are undetermined, but possible. In addition, the San Gabriel River is identified as a SFHA, and is delineated as Zone A. According to FEMA, Zone A is defined as areas subject to inundation by the 1-percent-annual-chance

(or 100-year) flood event. All build alternatives would require widening the existing bridge over the San Gabriel River, which is a flood control channel.

A Location Hydraulic Study will be prepared in the PA&ED phase to evaluate the base (100-year) flood along the San Gabriel River and the project's impact to the base floodplain. This study will involve the use of Flood Insurance Study data and National Flood Insurance Program (NFIP) maps as a baseline, and a hydraulic computer model to determine the new base flood elevation (BFE) that would result from the project. If the study concludes there would be no encroachment and/or no impact from the project, a Summary Floodplain Evaluation Report will be prepared. If there is substantial encroachment, a Floodplain Evaluation Report will be required. The project would also require a 33 USC Section 408 Permit from the USACE to allow changes to an existing USACE civil works project as a result of widening the bridge over the San Gabriel River.

8.8 Water Quality and Storm Water Runoff:

The project would include upgrading the storm drain facilities in the project area. BMPs would be developed and implemented according to the RWQCB and NPDES requirements, and a water quality analysis would be conducted to analyze water quality impacts. Impacts to groundwater hydrogeology and groundwater quality would be analyzed during the PA&ED phase of the project through the completion of a Water Quality Assessment Report. The project would conform to the requirements of Caltrans' Statewide NPDES Storm Water Permit (Order No. 99-06-DWQ, NPDES No. CAS000003) and the NPDES General Permit, Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction Activity, and the Statewide Storm Water Management Plan (SSWMP). The Construction General Permit requires the development and implementation of a SWPPP. The project would also require a CWA Section 404 Permit from the USACE, a CWA Section 401 Water Quality Certification and/or WDR from the RWQCB, Los Angeles Region, and a Section 1602 Streambed Alteration Agreement from the CDFW.

8.9 Geology, Soils, Seismic and Topography:

The State of California Seismic Hazard Zones Map of the El Monte Quadrangle indicates that the project area is within a liquefaction zone. A geotechnical report will be required during the PA&ED phase of the project to guide final engineering drawings and to ensure that potential impacts are less than significant. In addition, there are several earthquake faults in the project vicinity, including an Alquist-Priolo Earthquake Fault Zone (the Elsinore Fault Zone), which is located approximately 800 feet from the southern end of the project area. According to Caltrans' *Memo to Designers 20-10* (January 2013), fault studies are required for any structures that fall within an Alquist-Priolo Earthquake Fault

Zone or within 1,000 feet of an unzoned fault that is Holocene (11,700 years old) or younger in age. Because of the project's proximity to an Alquist-Priolo Earthquake Fault Zone, a subsurface fault rupture study may be needed for structures located near the southern end of the project area at I-605. The geotechnical report to be prepared during the PA&ED phase of the project would identify whether the project would be affected by the Elsinore Fault Zone and if a subsurface fault rupture study would be required.

8.10 Paleontology:

The majority of the project area is heavily developed, and underlying sediments are likely disturbed. The only area with potentially undisturbed sediment is the hills on the southern border of SR-60 east of I-605, which are undeveloped and vegetated. This area overlaps the exposures of the Fernando Formation, which suggests a high potential for paleontological resources in this location.

The records search did not identify any paleontological resources within the project area, but located several fossil localities adjacent to the southeastern portion of the project, as well as several fossil localities in similar deposits within the Los Angeles Basin. Surficial sediments in much of the project area have a low potential for containing fossil resources, but older underlying sediments, as well as exposures of the Fernando Formation in the southeastern portion of the project area, have a high potential for containing fossil resources.

Project plans are not yet far enough along to know the depth of excavation associated with the project. Therefore, the extent of potential impacts on paleontological resources cannot be determined at this time. It is recommended that geotechnical reports, including bore logs, be reviewed for the project area. Following this review, a Paleontological Evaluation Report (PER) will be prepared during the PA&ED phase to document identified resources. If required, a Paleontological Mitigation Plan (PMP) will be prepared to provide details on any required construction monitoring for the project.

8.11 Hazardous Waste/Materials:

The project would require ROW acquisition from residential and commercial properties, and would require demolition of structures with potential for lead-based paint and asbestos-containing materials. The project would also require excavation (depth to be determined), and dewatering if groundwater extraction is required for pile driving. Several hazardous materials cleanup sites are within and adjacent to the project area. In addition, a portion of the project area north of the I-605/Valley Boulevard Interchange is within the San Gabriel Valley, Baldwin Park Operable Unit Superfund site, and groundwater beneath this area is contaminated with trichloroethylene, PCE, and other VOCs (BonTerra Consulting, 2014). The project would also require construction within

railroad properties, which have potential for TWW, lead-based paint, VOCs, SVOCs, PCBs, and pesticides; and construction within Caltrans ROW, which has potential for aerially deposited lead and thermoplastic traffic striping. In addition, the project would also require construction in two aquifers, with potential for cross-contamination of hazardous materials between the two water-bearing zones. Therefore, there is potential for hazardous waste, hazardous materials, and contamination during project construction, which would require the protection of the health and safety of workers and the surrounding environment, and specific handling/waste management procedures for excess materials/wastes generated by the project.

A preliminary Initial Site Assessment (ISA) and a Site Investigation (SI) will be prepared during the PA&ED phase to further identify and assess hazardous waste cleanup sites and prepare a list of any Recognized Environmental Conditions (REC) within the project area. The ISA would be conducted in accordance with the latest American Society for Testing and Materials (ASTM) Standard, ASTM E1527-13, Standard for Practice of Environmental Site Assessments: Phase I Environmental Site Assessment Process, and different categories of RECs will be identified for the properties. Several sources will be reviewed in the ISA, including the State Water Resources Control Board Geotracker database, ENVIROSTOR, EnviroFACTS, metadata, and commercially available databases, such as Environmental Data Resources (EDR) and Environmental FirstSearch. Standard specifications and/or testing for lead-based paint, trichloroethylene, PCE, TWW, VOCs, SVOCs, PCBs, pesticides, aerially deposited lead, asbestos-containing materials, and thermoplastic traffic striping removal would be included in the project.

8.12 Traffic/Transportation:

The project would include widening the freeway and constructing interchange improvements to reduce existing and predicted congestion as identified in the March 2013 “SR-91/I-605/I-405 Congestion Hot Spots Feasibility Report” prepared for Los Angeles County Metro and the Gateway Cities Council of Governments. Temporary lane and ramp closures would be required during construction, which would impact traffic in the project area. A Traffic Impact/Circulation Study, Modified Access Report, Traffic Management Plan, and Ramp Closure Study will be prepared during the PA&ED phase to analyze project impacts on traffic and identify appropriate design and construction measures.

8.13 Air Quality:

The project area is located in an urban setting within the Los Angeles County portion of the South Coast Air Basin (SCAB). Within the SCAB, air quality is managed by various federal, state, regional, and local agencies, including the United States Environmental

Protection Agency (U.S. EPA), the California Air Resources Board (ARB), and the SCAQMD.

The project would increase capacity in an area designated as a nonattainment area for the state and federal ozone and particulate matter standards, and the state nitrogen dioxide and lead standards. However, the project would be expected to result in a reduction in overall vehicle congestion and delay within the project area. These reductions would result in long-term reductions in emissions of criteria air pollutants and greenhouse gases. Project construction is expected to result in short-term increases in emissions; therefore, emissions control measures would be required to reduce short-term impacts.

It is anticipated that the project would not fall under any of the five categories of projects that are defined as a Project of Air Quality Concern (POAQC) according to the Environmental Protection Agency *Transportation Conformity Rule* (40 Code of Federal Regulations (CFR) Parts 51 and 93), and that the project would meet air quality conformity requirements. An Air Quality Study Report (AQSR), Air Quality Conformity Analysis (AQCA), and applicable AQCA checklist will be prepared during the PA&ED phase, and the project will be reviewed by the Transportation Conformity Working Group (TCWG) to comply with project level particulate matter (PM) hot spot analysis requirements. The project is currently not included in a SCAG Regional Transportation Plan (RTP) or Federal Transportation Improvement Program (FTIP). To satisfy the regional conformity requirements, the project must be included in the RTP and FTIP, and the route concept and design scope must be consistent with those identified in the latest conforming RTP and FTIP. The District Regional Conformity Coordinator will be notified for an amendment to the conforming RTP and FTIP, which would include the concept and scope that is consistent with the project prior to completion of the AQSR during the PA&ED phase of the project.

8.14 Noise and Vibration:

There are sensitive receivers near the project area, a majority of which are largely shielded by existing sound barriers. However, some existing residential properties within the project area are currently unshielded from freeway noise, including properties located near the SR-60/I-605 interchange ramp.

All of the build alternatives would include relocating portions of the freeway facility closer to sensitive receivers; in some locations, freeway travel lanes would be located beyond the existing freeway ROW. In some neighborhoods, new sound walls would be constructed less than 50 feet from residential structures. In addition, the project would increase the capacity of the freeway, which could result in long-term increases in ambient noise levels. A NSR will be prepared during the PA&ED phase to document existing

conditions and evaluate potential noise impacts resulting from the project, in accordance with 23 CFR 772 and FHWA/Caltrans requirements.

Based on the scope of work, the project is considered a Type I project, as defined by Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects* (2011). Type I projects are defined as "federal or federal-aid highway projects that involve the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes." Noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact.

If noise impacts are identified, noise abatement will be considered based on whether it would be reasonable and feasible. A NADR would be required if traffic noise abatement is required. The NSR and NADR (if required) would satisfy NEPA/CEQA, FHWA, and California Streets and Highways Code (Section 216) requirements. Construction noise abatement measures, as outlined in the Caltrans Specifications, would be incorporated into the project to minimize the impacts to sensitive receivers.

Groundborne vibration levels associated with highway traffic are typically not considered to present a risk to buildings or to adversely affect people; therefore, long-term vibration impacts associated with the project are anticipated to be minimal. However, project construction may require the use of heavy equipment that could potentially generate groundborne vibration. Construction-generated groundborne vibration levels will be evaluated based on information and evaluation procedures identified in Caltrans' *Transportation- and Construction-Induced Vibration Guidance Manual* (2004). If required, control measures will be developed and included in the NSR, and the effectiveness of proposed abatement measures will be discussed.

8.15 Energy and Climate Change:

Project construction would result in energy use; however, it is anticipated that energy used during construction and operation would be offset by energy saved by operational improvements resulting from the project. Therefore, the project would not be expected to result in substantial energy impacts, and only a general discussion will be included in the environmental document.

The project is anticipated to result in a reduction in overall delay and associated emissions within the area. As a result, the project would have a long-term beneficial impact on greenhouse gas emissions. However, project construction would result in short-term increases of greenhouse gas emissions. To assess potential climate change impacts, a quantitative analysis of the carbon dioxide equivalents (CO₂e) produced from

the project will be completed during the PA&ED phase using ARB's Emission FACTors (EMFAC) model.

8.16 Biological Environment:

The project area is highly developed; however, there is dense riparian habitat within and along the banks of the San Gabriel River and San Jose Creek that could provide habitat for the least Bell's vireo (*Vireo bellii pusillus*) and coastal California gnatcatcher (*Polioptila californica californica*). The project could have potential impacts on migratory birds if they are nesting in the trees and vegetation to be removed. The project could have potential impacts on native aquatic species including arroyo chub (*Gila orcuttii*), western pond turtle (*Emys marmorata*), and two-striped garter snake (*Thamnophis hammondi*) because there is potential for construction debris and materials to fall into the waterways. The project could also have potential impacts on jurisdictional waters, natural communities, and wetlands if work would be required on the existing bridge piers, or new bridge piers would be constructed in the San Gabriel River and tributary drainages. A Natural Environment Study (NES) and Jurisdictional Determination (JD) are required for the project to investigate the potential for special-status species and jurisdictional waters to be in the project area, and analyze potential impacts. The project would require a CWA Section 404 Permit from the USACE, a CWA Section 401 Water Quality Certification and/or WDR from the RWQCB, Los Angeles Region, and a Section 1602 Streambed Alteration Agreement from the CDFW.

Environmentally Sensitive Areas (ESAs) have been identified within the project area. The ESAs consist of the natural communities (willow riparian woodland areas) that have been observed along the San Gabriel River and San Jose Creek, especially in areas where there was water near the confluence of San Jose Creek and San Gabriel River. Additionally, all the wetland areas within the same general location are considered ESAs. Formal wetland and ESA limits will be delineated during the PA&ED phase of the project, and will be placed off-limits to the contractor, if possible. ESAs that cannot be preserved will be mitigated with appropriate measures, which will be developed during the design phase.

8.17 Cumulative Impacts

A list of projects for the cumulative impact analysis will be prepared during the PA&ED phase of the project. This list will include major development projects and transportation projects that have been or would be completed within the project vicinity in the past, present, or reasonably foreseeable future. Potential transportation projects may include other freeway segments identified and discussed in the March 2013 "SR-91/I-605/I-405 Congestion Hot Spots Feasibility Report" prepared for Metro and GCCOG, the I-710

Corridor Project, as well as other local projects identified within the 2012-2035 Regional Transportation Plan (RTIP) prepared for the SCAG. Coordination with local jurisdictions may provide details on local development projects that should be considered in the analysis.

8.18 Context Sensitive Solutions:

Caltrans implements CSS to plan, design, construct, maintain, and operate its transportation system. CSS includes innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals, and are developed through a collaborative, interdisciplinary approach involving all stakeholders. To ensure that CSS is fully integrated into the project development process, early planning is required along with ongoing community involvement. Early agency coordination for each resource area, as well as early outreach to the community, will help to ensure successful implementation of CSS.

9. Summary Statement for PSR or PSR-PDS

A PEAR has been prepared for this project, and includes an initial evaluation of the project, summarizes key environmental issues, and identifies the environmental documentation that could be required for the project.

The project is being undertaken by a public agency and has the potential to result in a direct physical change to the environment. Therefore, the project requires environmental review under the California Environmental Quality Act (CEQA). In addition, because federal funds may be secured to implement the project and the project could affect the quality of the human environment, environmental review is required under the National Environmental Policy Act (NEPA).

Based on the preliminary evaluation conducted as part of the PEAR, the project could have significant impacts on the environment. Therefore, the anticipated environmental document to comply with CEQA is an EIR. This determination is based on review of Appendix G of the CEQA Guidelines, as well as preliminary geometric plans and other available information. Under NEPA, if a federal agency anticipates that an undertaking is environmentally controversial, a federal agency may choose to prepare an EIS. Because there is potential for public controversy associated with land acquisitions required for the build alternatives, an EIS is the anticipated environmental review document to comply with NEPA.

Based on the results of initial environmental studies included in the PEAR, it is unknown at this time if all potentially significant impacts associated with the build alternatives

could be reduced or mitigated. Potential mitigation measures and permits associated with the build alternatives are preliminary at this time because the extent of required mitigation has still not been confirmed. Completion of the EIR/EIS is expected to require approximately 36 to 48 months.

The preliminary assessment of the build alternatives has identified the potential for impacts related to existing and future land use, parks and recreation, community character and cohesion, relocations, environmental justice, utilities, emergency services, visual/aesthetics, cultural resources, hydrology and floodplain, water quality and storm water runoff, geology, soils, seismicity, paleontology, hazardous waste/materials, transportation and traffic, air quality, noise, the biological environment, and cumulative impacts. Alternative 2 would result in the highest impacts on environmental resources because of property acquisition needed to accommodate lane and shoulder widths required by Caltrans Highway Design Manual standards and identified in preliminary geometric plans.

All build alternatives will require the reports and studies listed below, with Alternative 2 requiring the highest level of studies:

- Air Quality Study Report and Air Quality Conformity Analysis
- Community Impact Assessment
- Cumulative Impact Analysis
- Geotechnical Study and Subsurface Fault Rupture Study (if required)
- Historic Property Survey Report, Archaeological Survey Report, Historic Resource Evaluation Report, Finding of Effect (if historic properties are included in the area of potential effect), and Memorandum of Agreement (if there would be adverse effects)
- Initial Site Assessment and Site Investigation
- Jurisdictional Delineation Report
- Location Hydraulic Study, and Summary Floodplain Evaluation Report or Floodplain Evaluation Report (depending on potential for floodplain encroachment)
- Natural Environment Study
- Noise Study Report
- Noise Abatement Decision Report (if traffic noise abatement is required)
- Paleontological Identification Report/Paleontological Evaluation Report and Paleontological Mitigation Plan (if required)
- Relocation Impact Report
- Section 4(f) Evaluation
- Storm Water Data Report
- Traffic Impact/Circulation Study

- Traffic Management Plan, Ramp Closure Study, and Modified Access Report
- Visual Impact Assessment
- Water Quality Assessment Report

Environmental Commitments for all build alternatives are identified below, with a greater level of effort likely required for Alternative 2 to accommodate Caltrans Highway Design Manual standards for lane and shoulder widths:

- Relocations – Relocations would be subject to the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and Title 49 Code of Federal Regulations, Part 24. Relocations and ROW acquisitions would be processed through the Caltrans’ Relocation Assistance program, and costs associated with the property acquisitions and assistance would be included in the project cost estimates.
- Utilities – Any disruptions to utility service would be scheduled and coordinated to ensure they would not adversely affect the surrounding community.
- Emergency Services – Coordination with local emergency service providers and communication with the surrounding community would be conducted to minimize traffic impacts during construction.
- Visual/Aesthetics – Landscaping and aesthetic treatments would be required to enhance the aesthetic appearance of project elements, including interchanges, bridges, and structures, and to reduce visual impacts. Recommended measures would be presented in the Visual Impact Assessment to be completed for the project, and would be finalized during final project design.
- Water Quality and Storm Water Runoff – An SWDR has been completed for the project and identifies design, treatment, and construction BMPs to be incorporated into the project (HDR, 2014). Design and treatment BMPs would include the installation of biofiltration swales and strips, and infiltration devices to capture pollutants in stormwater runoff. Construction BMPs would include implementation of erosion control measures, street sweeping and vacuuming, and installation of temporary check dams, hydraulic mulch, cover, fences, concrete washout bins, fiber rolls, drainage inlet protection, and sediment barriers. BMPs would be finalized during final project design.
- Geology, Soils, Seismic, and Topography – Temporary erosion control measures and project design elements to address slope stability, pile driving, soils, seismicity, and topography would be developed based on needs identified during completion of the geotechnical report required during the PA&ED phase, and would be finalized during final project design.
- Hazardous Waste/Materials – Standard specifications and/or testing for lead-based paint, trichloroethylene, PCE, TWW, VOCs, SVOCs, PCBS, pesticides, aerially

deposited lead, asbestos-containing materials, and thermoplastic traffic striping removal would be included in the project. Site assessments, site investigations, and remediation (if required) would be conducted within the ROW and on parcels to be acquired for the project in compliance with applicable entry permits, utility agreements, and regulatory agency approvals. If activities are required on parcels contaminated with hazardous materials or hazardous wastes, these activities would be conducted using proper removal, transport, and disposal measures to contain excess material/wastes generated by the project, and prevent the exposure of workers and the surrounding environment. The project would be designed to avoid or minimize potential cross-contamination between the two aquifers in the project area. If monitoring wells conflict with the construction area, the wells would be destroyed and reinstalled under appropriate regulatory agency oversight. According to Caltrans policy, new ROW for a project must be free of hazardous materials before title to such property is transferred to Caltrans.

- Traffic/Transportation – During the environmental process, traffic analysis would be conducted to identify temporary impacts and construction staging requirements, including, but not limited to, avoidance of staging in residential areas, detours, signage, and coordination with local communities, to minimize access impacts from temporary closures of local streets, freeway lanes, ramps, and bridges, as well as permanent ramp design and replacement.
- Air Quality –The project would be constructed in compliance with Caltrans’ Standard Specifications, Section 14-9 “Air Quality” and Caltrans’ specifications for the control of construction-generated emissions.
- Noise – Abatement measures, including the replacement of existing sound walls and the construction of new sound walls, are anticipated. Preliminary recommended sound wall locations would be identified in a NSR and a NADR, including a reasonable and feasible determination with recommendations and project cost estimates included in the draft environmental document.
- Biological Environment – Measures to avoid and minimize impacts on jurisdictional features, nesting migratory birds and raptors, special-status bird species, bats, and fish species would be implemented, such as conducting pre-construction surveys, installing BMPs to prevent construction debris and dust from entering waterways, reducing work areas to the extent feasible, and conducting vegetation removal outside the nesting season to the extent practicable.

10. Disclaimer

This 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-Project Development Support (PSR-PDS). 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

Project Manager Syed Huq, P.E.	Date: 1/21/15
Cultural Resources Specialists Laura O'Neill, Christopher Purtell, and Curt Duke	Date: 1/21/15
Biologists Jennifer Morrison and Stan Glowacki	Date: 1/21/15
Community Impacts Specialists Mandy Jones and Jeanne Ogar	Date: 1/21/15
Noise and Vibration Specialist Kurt Legleiter	Date: 1/21/15
Air Quality Specialist Kurt Legleiter	Date: 1/21/15
Paleontology Specialists/Liaisons Benjamin Scherzer and Curt Duke	Date: 1/21/15
Water Quality Specialist Vahid Haghdoost	Date: 1/21/15
Hydrology and Floodplain Specialist Yvette Hanna	Date: 1/21/15
Hazardous Waste/Materials Specialist Jeanne Ogar	Date: 1/21/15
Visual/Aesthetics Specialist Jeanne Ogar	Date: 1/21/15
Energy and Climate Change Specialist Kurt Legleiter	Date: 1/21/15
Geology, Soils, Seismic, Topography Specialist: Lino Cheang	Date: 1/21/15
PEAR Preparer (Name and Title) Richard Galvin, Vice President and Jeanne Ogar, Project Manager/Associate Environmental Planner	Date: 1/21/15


12. Review and Approval

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



Garrett Damrath, Environmental Office Chief/Manager

Date: 11/20/2015



Project Manager

Date: NOV. 18, 2015

REQUIRED ATTACHMENTS:

Attachment A: PEAR Environmental Studies Checklist

Attachment B: Estimated Resources by WBS Code

Attachment C: Schedule (Gantt Chart)

REFERENCES

- Air Resources Board. (2013, January). *EMFAC2011*. Retrieved December 31, 2014, from Air Resources Board, Mobile Source Emission Inventory -- Current Methods and Data: <http://www.arb.ca.gov/msei/modeling.htm>
- Ambient Air Quality and Noise Consulting. (2014). *Air Quality and Greenhouse Gas Impacts Technical Memorandum, SR-60/I-605 Project Study Report – Project Development Support*. Paso Robles: Ambient Air Quality and Noise Consulting.
- Ambient Air Quality and Noise Consulting. (2014). *Noise and Ground-Borne Vibration Impacts Technical Memorandum, SR-60/I-605 Project Study Report – Project Development Support*. Paso Robles: Ambient Air Quality and Noise Consulting.
- BonTerra Consulting. (2014). *Preliminary Environmental Analysis Report, I-605/Valley Boulevard Interchange Improvement Project*. Pasadena: BonTerra Consulting.
- Caltrans. (2004, June). *Transportation- and Construction-Induced Vibration Guidance Manual*. Retrieved December 31, 2014, from CA.Gov: <http://www.dot.ca.gov/hq/env/noise/pub/vibrationmanFINAL.pdf>
- Caltrans. (2011, May). *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects*. Retrieved December 31, 2014, from Ca.Gov: http://www.dot.ca.gov/hq/env/noise/pub/ca_tnap_may2011.pdf
- Caltrans. (2013, January). *Memo to Designers 2010, Fault Rupture*. Retrieved December 31, 2014, from CA.Gov: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-memo-to-designer/page/Section_20/20-10.pdf
- City of El Monte. (2011, June). *Vision El Monte General Plan*. Retrieved 29 2014, June, from <http://www.elmonteca.gov/LinkClick.aspx?fileticket=fxX1AXvVXhQ%3d&tabid=660>
- City of Baldwin Park. (2002, November 20). *2020 General Plan*. Retrieved June 29, 2014, from http://www.baldwinpark.com/index.php?option=com_docman&task=cat_view&gid=135
- City of Industry. (2014, June 12). *2014 General Plan*. Retrieved June 25, 2014, from <http://www.cityofindustry.org/?p=city-hall&s=general-plan>
- City of Pico Rivera. (1993, August 16). *City of Pico Rivera General Plan*. Retrieved June 25, 2014, from <http://www.pico-rivera.org/documents/generalplan.pdf>

- City of South El Monte. (2000, October). *City of South El Monte General Plan*. Retrieved June 25, 2014, from <http://www.ci.south-el-monte.ca.us/ABOUTUS/GeneralPlan.aspx>
- Duke CRM. (2014). *Paleontological Identification Report for the Proposed State Route 60/Interstate 605 (SR-60/I-605) Interchange Improvement Project, Los Angeles County, California*. Rancho Santa Margarita: Duke CRM.
- Earth Mechanics, Inc. (2014). *Groundwater and Seismic Data*. Fountain Valley: Earth Mechanics, Inc.
- Environmental Protection Agency. (2012, April). *Transportation Conformity Regulations as of April 2012, EPA-420-B-12-013*. Retrieved December 31, 2014, from EPA, Regulations: <http://www.epa.gov/otaq/stateresources/transconf/regs/420b12013.pdf>
- FEMA. (2008, September 26). *Flood Insurance Rate Maps (FIRM) numbers 06037C1664F, 06037C1668F, 06037C1670F, and 06037C1700F*. Retrieved November 2014, from FEMA Map Service Center: <https://msc.fema.gov/portal>
- GCCOG. (2011, June 21). *Gateway Cities Council of Governments Subregional Sustainable Communities Strategy*. Retrieved July 4, 2014, from http://gatewaycog.org/publications/FR1_GCCOG_SCS_SectionsFinal%5B5%5D.pdf
- GCCOG and Department of Economics, CSULB. (2012, October). *Gateway Cities, A Profile of a Decade of the 21st Century*. Retrieved July 4, 2014, from [http://www.gatewaycog.org/download/business-opportunities/Gateway%20Cities%20Economic%20Takeaway%20Publication%](http://www.gatewaycog.org/download/business-opportunities/Gateway%20Cities%20Economic%20Takeaway%20Publication%20)
- GPA Consulting. (2014). *Biology Technical Memo, SR-60/I-605 Project Study Report – Project Development Support*. El Segundo: GPA Consulting.
- GPA Consulting. (2014). *Initial Site Assessment Checklist, SR-60/I-605 Project Study Report – Project Development Support*. El Segundo: GPA Consulting.
- GPA Consulting. (2014). *Land Use, Community, and Section 4(f) Impacts Technical Memorandum, SR-60/I-605 Project Study Report – Project Development Support*. El Segundo: GPA Consulting.
- GPA Consulting. (2014). *Visual and Aesthetics Technical Memorandum, SR-60/I-605 Project Study Report – Project Development Support*. El Segundo: GPA Consulting.

- GPA Consulting and Duke CRM. (2014). *Cultural Resources Technical Memorandum, SR-60/I-605 Project Study Report – Project Development Support*. El Segundo: GPA Consulting.
- HDR. (2014). *LAMTA SR-60/I605 PSR-PDS PEAR Hydrology and Floodplain Memorandum*. Irvine: HDR.
- HDR. (2014). *Long Form - Storm Water Data Report, SR-60/I-605 Project Study Report – Project Development Support*. Irvine: HDR.
- LACDRP. (1980, November 25). *County of Los Angeles General Plan*. Retrieved June 25, 2014, from <http://planning.lacounty.gov/generalplan/existing>
- LACDRP. (2011, May 24). *Hacienda Heights Community Plan*. Retrieved June 26, 2014, from http://planning.lacounty.gov/assets/upl/project/HHCP_Adopted_Plan_052411.pdf
- Metro. (2009). *2009 Long Range Transportation Plan*. Retrieved July 2, 2014, from http://media.metro.net/projects_studies/images/final-2009-LRTP.pdf
- Metro and GCCOG. (2013, March). *SR-91/I-605/I-405 Congestion Hot Spots Feasibility Report*. Retrieved December 31, 2014, from Metro Projects, Programs, and Plans: <http://www.metro.net/projects/I-605/I-605-feasibility-report/>
- SCAG. (2008). *2008 Regional Comprehensive Plan*. Retrieved July 2, 2014, from <http://www.scag.ca.gov/NewsAndMedia/Pages/RegionalComprehensivePlan.aspx>
- SCAG. (2012). *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy*. Retrieved July 2, 2014, from <http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf>
- State Water Resources Control Board. (2014). *Geotracker*. Retrieved December 31, 2014, from CA.Gov: <http://geotracker.waterboards.ca.gov/>
- U.S. Census Bureau. (2010). *2010 Census Summary File 1: Table DP-1: Profile of General Population and Housing Characteristics*. Retrieved November 25, 2014, from American Factfinder: <http://factfinder2.census.gov/>
- WKE. (2014). *Number of Full and Partial Property Acquisitions by Land Use Type, SR-60/I-605 Project Study Report – Project Development Support*. Santa Ana: WKE.

Attachment A: PEAR Environmental Studies Checklist

Rev. 11/08

Environmental Studies for PA&ED Checklist							
	Not anticipated	Memo to file	Report required	Risk*			Comments
				L	M	H	
Land Use	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Growth	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	L			
Farmlands/Timberlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Community Impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Community Character and Cohesion	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L			
Relocations	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H			
Environmental Justice	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Utilities/Emergency Services	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Visual/Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Cultural Resources:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Archaeological Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Historic Resources Evaluation Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Historic Property Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Historic Resource Compliance Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Section 106 / PRC 5024 & 5024.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Native American Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	L			
Finding of Effect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Data Recovery Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Memorandum of Agreement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Other: Not Applicable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Hydrology and Floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Water Quality and Stormwater Runoff	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H			
Geology, Soils, Seismic and Topography	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L			
Paleontology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
PER	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
PMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Hazardous Waste/Materials:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H			
ISA (Additional)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H			
PSI	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L			
Other: Not Applicable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Air Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Noise and Vibration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Energy and Climate Change	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	L			
Biological Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Natural Environment Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M			
Section 7:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Formal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Informal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
No effect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Section 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
USFWS Consultation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M			
NMFS Consultation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			
Species of Concern (CNPS, USFS,	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L			

Environmental Studies for PA&ED Checklist

	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
BLM, S, F)					
Wetlands & Other Waters/Delineation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
404(b)(1) Alternatives Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Invasive Species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Wild & Scenic River Consistency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Coastal Management Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
HMMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
DFG Consistency Determination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
2081	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Other: Not Applicable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Cumulative Impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>M</u>	
Context Sensitive Solutions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Permits:					
401 Certification Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
404 Permit Coordination, IP, NWP, or LOP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
1602 Agreement Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Local Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
State Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
NPDES Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
US Coast Guard (Section 10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
TRPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
BCDC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	

ATTACHMENT B - Resources by WBS Code

Project ID: 714000331
EA: 31010K
Description: I 605-60

WBS Task Activity Code	Generalist	Biology	Cultural	Haz Waste	Socio-Economic	Storm Water	ECL	Stewardship	Noise/Air	Sup Svcs	Total
Assigned Unit	1776	1787	1779	1846			1782	1782	1845/1848		
Project Management											
100.10 – Project Management - PA&ED	24	2	2	2		4		4	4	36	78
100.15 – Project Management - PS&E	19	2	2	2		2		2	2	16	47
100.20 – Project Management - Construction	7						10	10		15	42
100.25 – Project Management - Right of Way											-
Total Project Management	50	4	4	4	-	6	10	16	6	67	167
Perform Preliminary Engineering Studies and Draft Project Report											
160.05 – Updated Project Information	8										8
160.10 – Engineering Studies											-
160.15 – Draft Project Report											-
160.30 – Environmental Study Request	12	15		10	10	5					52
160.40 – NEPA Assignment	12	15	10								37
Total Perform Prelim Eng Studies & Draft PR	32	30	10	10	10	5	-	-	-	-	97
Perform Environmental Studies and Prepare Draft Environmental Document - Task Management Activities											
165.05 – Env Scoping of Alternatives	100	40	40	40		30			50		300
165.10 – General Env Studies	80		8	50	100	25			200		463
165.15 – Biological Studies		350				75					425
165.20 – Cultural Resource Studies			600								600
165.25 – Draft Env Document	1,342	40	40	40	40				40	35	1,577
165.30 – NEPA Assignment		20	20	20	20	20			20		120
Total Perform Env Studies & Prepare DED	1,522	450	708	150	160	150	-	-	310	35	3,485
Obtain Permits, Licenses, Agreements and Certifications (PLACs) and Route Adoptions during PA&ED Component - Task Management Activities											
170.05 – Required PLACs		10	5	10		10			10		45
170.10 – PLACs		10	5	10		10			10		45
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	-	20	10	20	-	20	-	-	20	-	90
Circulate Draft Environmental Document and Select Preferred Project Alternative - Task Management Activities											
175.05 – DED Circulation	40										40
175.10 – Public Hearing	70	4	4	4		4			4		90
175.15 – Public Comment Responses & Corr	150	16	16	16		16			16		230
175.20 – Project Preferred Alternative	200										200
175.25 – NEPA Assignment	100	4	4	4		4					116
Total Circ DED & Select Preferred Proj Alt	560	24	24	24	-	24	-	-	20	-	676
Prepare and Approve Project Report and Final Environmental Document											
180.05 – Final Project Report	90					35					125
180.10 – Final Env Document	400	10	10	10		10			10	40	490
180.15 – Completed Env Document	40						40	40			120
180.20 – NEPA Assignment	10										10
Total Prep and Approve PR & FED	540	10	10	10	-	45	40	40	10	40	745
Total Project Hours	2,704	538	766	218	170	250	50	56	366	142	5,260

Attachment C: Schedule

ID	WBS Code	Task Name	Duration	Start	Finish	2016				2017				2018					
						Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	
1		Environmental Document	36 mons	Mon 1/4/16	Fri 10/5/18	[Gantt bar spanning from Q4 2016 to Q4 2018]													
2		Technical Studies	8 mons	Mon 1/4/16	Fri 8/12/16	[Gantt bar spanning from Q4 2016 to Q3 2017]													
3	165.10	General Environmental Studies	8 mons	Mon 1/4/16	Fri 8/12/16	[Blue task bar spanning from Q4 2016 to Q3 2017]													
4	165.15	Biological Studies	6 mons	Mon 1/4/16	Fri 6/17/16	[Blue task bar spanning from Q4 2016 to Q2 2017]													
5	165.20	Cultural Resource Studies	6 mons	Mon 1/4/16	Fri 6/17/16	[Blue task bar spanning from Q4 2016 to Q2 2017]													
6	165.25	Draft EIR/EIS	20 mons	Mon 8/15/16	Fri 2/23/18	[Gantt bar spanning from Q3 2017 to Q4 2018]													
7	3.1	Prepare Screencheck DEIR/EIS	9 mons	Mon 8/15/16	Fri 4/21/17	[Blue task bar spanning from Q3 2017 to Q2 2018]													
8	3.2	Agency Review Screencheck DEIR/EIS	30 days	Mon 4/24/17	Fri 6/2/17	[Blue task bar spanning from Q2 2018 to Q3 2018]													
9	3.3	Prepare Revised DEIR/EIS	25 days	Mon 6/5/17	Fri 7/7/17	[Blue task bar spanning from Q3 2017 to Q4 2017]													
10	3.4	Agency Review of Revised DEIR/EIS	30 days	Mon 7/10/17	Fri 8/18/17	[Blue task bar spanning from Q4 2017 to Q1 2018]													
11	3.5	Prepare DEIR/EIS for QA/QC	25 days	Mon 8/21/17	Fri 9/22/17	[Blue task bar spanning from Q3 2017 to Q4 2017]													
12	3.6	QA/QC Review of DEIR/EIS	30 days	Mon 9/25/17	Fri 11/3/17	[Blue task bar spanning from Q4 2017 to Q1 2018]													
13	3.7	Prepare Admin DEIR/EIS	30 days	Mon 11/6/17	Fri 12/15/17	[Blue task bar spanning from Q4 2017 to Q1 2018]													
14	3.8	Agency Approval/Signature of DEIR/EIS	20 days	Mon 12/18/17	Fri 1/12/18	[Blue task bar spanning from Q1 2018 to Q2 2018]													
15	175.05	DEIR/EIS Public Review	30 days	Mon 1/15/18	Fri 2/23/18	[Blue task bar spanning from Q1 2018 to Q2 2018]													
16	180.10	Final EIR/EIS	8 mons	Mon 2/26/18	Fri 10/5/18	[Gantt bar spanning from Q2 2018 to Q4 2018]													
17	4.1	Prepare Draft FEIR/EIS	25 days	Mon 2/26/18	Fri 3/30/18	[Blue task bar spanning from Q2 2018 to Q3 2018]													
18	4.2	Agency Review of Draft FEIR/EIS	25 days	Mon 4/2/18	Fri 5/4/18	[Blue task bar spanning from Q3 2018 to Q4 2018]													
19	4.3	Revise FEIR/EIS	25 days	Mon 5/7/18	Fri 6/8/18	[Blue task bar spanning from Q3 2018 to Q4 2018]													
20	4.4	Agency Review of Revised FEIR/EIS	20 days	Mon 6/11/18	Fri 7/6/18	[Blue task bar spanning from Q4 2018 to Q1 2019]													
21	4.5	Prepare FEIR/EIS for QA/QC	15 days	Mon 7/9/18	Fri 7/27/18	[Blue task bar spanning from Q4 2018 to Q1 2019]													
22	4.6	QA/QC Review of FEIR/EIS	20 days	Mon 7/30/18	Fri 8/24/18	[Blue task bar spanning from Q1 2019 to Q2 2019]													
23	4.7	Prepare Admin FEIR/EIS	15 days	Mon 8/27/18	Fri 9/14/18	[Blue task bar spanning from Q1 2019 to Q2 2019]													
24	4.8	Agency Approval/Signature of FEIR/EIS	15 days	Mon 9/17/18	Fri 10/5/18	[Blue task bar spanning from Q2 2019 to Q3 2019]													

Project: I-605/SR-60 PEAR Date: November 2015	Task		External Tasks		Manual Task		Finish-only	
	Split		External Milestone		Duration-only		Deadline	
	Milestone		Inactive Task		Manual Summary Rollup		Progress	
	Summary		Inactive Milestone		Manual Summary			
	Project Summary		Inactive Summary		Start-only			

Attachment F

Transportation Planning Scoping Information Sheet

ARTICLE 4 Transportation Planning Scoping Information Sheet

PROJECT INFORMATION

				Project ID No:
District	County	Route	Post Miles	Expenditure Authorization No.
07	LA	I-605/SR-60	15.10 – 20.40 / 10.2 – 15.6	ID 0714000331 / EA 07-31010K
Project Name and Description: I-605/SR-60 highway improvement project. Involves widening, improving non-standard features, local and system interchange reconfiguration, and safety enhancements.				

Prepared by:

District Information Sheet Point of Contact*:	Name: Mohamed A. Ahmed	Functional Unit:	Office of Project and Special Studies
---	------------------------	------------------	---------------------------------------

* The District Information Sheet Point of Contact is responsible for completing Project Information, PDT Team and Stakeholder Information, and coordinating the completion of project-related information with the Transportation Planning Stakeholders. Upon completion, provides the Transportation Planning PDT Representative and Project Manager with a copy of the Information Sheet.

Project Development Team (PDT) Information		
Title	Name	Phone Number
Project Manager	Syed Huq	213.897.6714
Project Engineer	I Chung (Ivan) Chu	213.897.0097
Transportation Planning PDT Representative**		

Transportation Planning Stakeholder Information		
Title	Name	Phone Number
Regional Planner	Emmanuel Aggreh	
System Planner		
Local Development- Intergovernmental Review (LD-IGR) Planner		
Community Planner		
Goods Movement Planner		
Transit Planner		
Bicycle and Pedestrian Coordinator		
Park and Ride Coordinator		
Native American Liaison		
Other Coordinators:		

Project Purpose and Need –**

Purpose: The purpose of the project is to reduce congestion and improve freeway operations (both mainline and ramps), improve safety, improve local and system interchange operations, while minimizing adjacent right-of-way, environmental and economic impacts.

Need: The I-605/SR-60 system interchange area currently experiences significant congestion, which is forecast to increase in the future absent physical and operational improvements to the facility. Congestion is a result of

insufficient I-605 and SR-60 freeway mainline capacity, closely spaced freeway entrance and exit ramps and inadequate older design features at the freeway-to-freeway interchange such as nonstandard connector ramp shoulder widths and superelevation rates. The existing freeway geometry has many features which do not meet current Caltrans Highway Design Manual Standards. There are also a number of areas within the project limits with a high concentration of accidents.

** The Transportation Planning PDT Representative is responsible for providing the PDT with the system-wide and corridor level deficiencies identified by Transportation Planning. The PDT uses the information provided by Transportation Planning to develop the purpose and need with contributions from other Caltrans functional units and external stakeholders at the initiation of the PID and is refined throughout the PID process. As the project moves past the project initiation stage and more data becomes available, the purpose and need is refined. For additional information on purpose and need see: www.dot.ca.gov/hq/env/emo/purpose_need.htm

1. Project Funding:

a	List all known and potential funding sources and percent splits: (i.e. State Transportation Improvement Program (STIP)/State Highway Operations and Protection Program (SHOPP)/Transportation Enhancement (TE)/Environmental Enhancement and Mitigation (EEM)/Safe Routes to School (SR2S)/etc.).
	Measure R, STIP, SHOPP, Federal funding sources
b	Is this a measure project? Yes <input checked="" type="checkbox"/> /No <input type="checkbox"/> . If yes, name and describe the measure.
	Measure R (Los Angeles)

2. Regional Planning:

a	Name of and contact information for Metropolitan Planning Organization (MPO) or Regional Transportation Planning Agency (RTPA).
	Ernesto Chaves, LA Metro, 213.922.7343, chavese@metro.net
b	Name of and contact information for local jurisdiction (City or County)
	Los Angeles County, James Yang, jyang@dpw.lacounty.gov or Bella Hernandez, bhernan@dpw.lacounty.gov
c	Provide the page number and project description as identified in the Regional Transportation Plan (RTP) and the date of adoption, or provide an explanation if not in RTP.
	RTP 2012 Financially constrained projects list – I-605 corridor HOT SPOT INTERCHANGES IN GATEWAY CITIES (Project Completion by 2025) (RTP ID 1M 1004). RTP Strategic projects: RTP ID S1120078 – Additional SR-91/I-605/I-405 Solutions (beyond identified hot spots).
d	Provide nexus between the RTP objectives and the project to establish the basis for the project purpose and need.
	Project provides for congestion hot spot relief by proposing standard geometric design improvements, and capacity enhancements.
e	Is the project located in an area susceptible to sea-level rise?
	No
f	Name of Air Quality Management District (AQMD)
	South Coast AQMD
g	If the project is located in a federal non-attainment or attainment-maintenance area is the project:
	• Regionally Significant? (per 40 (Code of Federal Regulations (CFR) 93.101) Y <input checked="" type="checkbox"/> /N <input type="checkbox"/>
	• Exempt from conformity? (per 40 CFR 93.126 and 93.128) Y <input type="checkbox"/> /N <input type="checkbox"/>
	• Exempt from regional analysis? (per 40 CFR 93.127) Y <input type="checkbox"/> /N <input type="checkbox"/>
	• Not exempt from conformity (must meet all requirements)? Y <input type="checkbox"/> /N <input type="checkbox"/>

3. Native American Consultation and Coordination:

a	If project is within or near an Indian Reservation or Rancheria? If so, provide the name of Tribe.
	N/A

b	Has/have the Tribal Government(s) been consulted? Y___/N <input checked="" type="checkbox"/> . If no, why not? N/A
c	If the project requires Caltrans to use right-of-way on trust or allotted lands, this information needs to be included as soon as possible as a key topic in the consultation with the Tribe(s). Has the Tribe been consulted on this topic? Y___/N <input checked="" type="checkbox"/> . If no, why not? N/A
d	Has the Bureau of Indian Affairs (BIA) been notified? Y___/N <input checked="" type="checkbox"/>
e	Have all applicable Tribal laws, ordinances and regulations [Tribal Employment Rights Ordinances (TERO), etc.] been reviewed for required contract language and coordination? N/A
f	If the Tribe has a TERO, is there a related Memorandum of Understanding between the District and the Tribe? N/A
g	Has the area surrounding the project been checked for prehistoric, archeological, cultural, spiritual, or ceremonial sites, or areas of potentially high sensitivity? If such areas exist, has the Tribe, Native American Heritage Commission or other applicable persons or entities been consulted? No. This will be conducted during the PA/ED phase.
h	If a Native American monitor is required for this project, will this cost be reflected in cost estimates? Yes
i	In the event of project redesign, will the changes impact a Native American community as described above in d, e, or h? This will be determined during the PA/ED phase.

4. System Planning:

a	Is the project consistent with the DSMP? Y___/N___ . If yes document approval date. If no, explain. The District System Development Plan was “In Progress” as of October 2013 per the District 7 website http://www.dot.ca.gov/hq/tpp/corridor-mobility/d7-page.html
b	Is the project identified in the TSDP? Y___/N___? If yes, document approval date___. If no, explain. The Transportation System Management Plan was “In Progress” as of October 2013 per the District 7 website http://www.dot.ca.gov/hq/tpp/corridor-mobility/d7-page.html
c	Is the project identified in the TCR/RCR or CSMP? Y <input checked="" type="checkbox"/> /N___ . If yes, document approval date 7/15/2013. If no, explain. Is the project consistent with the future route concept? Y___/N___ . If no, explain. From I-605 TCR: RTP 2012 Financially constrained projects list – I-605 corridor HOT SPOT INTERCHANGES IN GATEWAY CITIES (Project Completion by 2025) (RTP ID 1M 1004). RTP Strategic projects: RTP ID S1120078 – Additional SR-91/I-605/I-405 Solutions (beyond identified hot spots).
d	Provide the Concept Level of Service (LOS) through project area. Per the TCR, LOS F0 is the minimum acceptable for I-605 and SR-60, though the desired LOS is D.
e	Provide the Concept Facility – include the number of lanes. Does the Concept Facility include High Occupancy Vehicle lanes? Y <input checked="" type="checkbox"/> /N___ . I-605: 4 general purpose lanes Freeway and 1 HOV lane (each direction) SR-60: 5 general purpose lanes Freeway (each direction) I-10: 4 general purpose lanes Freeway (each direction)
f	Provide the Ultimate Transportation Corridor (UTC) – include the number of lanes. Does the UTC include High Occupancy Vehicle Lanes? Y <input checked="" type="checkbox"/> /N___ .

	I-5 to SR-60 segment UTC is 16 lanes for LOS D, or 11 lanes for LOS F0 (per Draft I-605 TCR). 4-Lane Freeway and 2 HOV (per District 7 CCP Fact Sheet). SR-60 to I-10 segment UTC is 16 lanes for LOS D, or 11 lanes for LOS F0 (per Draft I-605 TCR).
g	Describe the physical characteristics of the corridor through the project area (i.e. flat, rolling or mountainous terrain...).
	Flat terrain
h	Is the highway in an urban or rural area? Urban <input checked="" type="checkbox"/> /Rural <input type="checkbox"/> . Provide Functional Classification.
	I-605, SR-60 and I-10 Urban Interstates, NHS
i	Is facility a freeway, expressway or conventional highway?
	I-605, SR-60 and I-10 are freeway facilities.
j	Provide Route Designations: (i.e. Interregional Transportation Strategic Plan (ITSP) High Emphasis or Focus Route, Surface Transportation Assistance Act (STAA) Route, Scenic Route...).
	I-605, SR-60 and I-10f: NHS, STAA, Interregional Road System Route, High Emphasis Route, Goods Movement Route
k	Describe the land uses adjacent to project limits (i.e. agricultural, industrial...).
	Urban principal arterial. Industrial, commercial, residential and recreational land uses.
l	Describe any park and ride facility needs identified in the TCR/CSMP, local plans, and RTP.
	Unknown
m	Describe the Forecasted 10 and 20-year Vehicle Miles Traveled (VMT), Annual Average Daily Traffic (AADT), and Peak Hour truck data in the TCR. Include the source and year of Forecast, and names and types of traffic and travel demand analysis tools used.
	I-605: Segment I-5 to SR-60 – 255,000 ADT; directional split 52.8%; Peak Hour 16,900; Truck Peak Hour 1,100; source 2012-2035 RTP/SCS, 2008 for existing. Segment SR-60 to I-10 – 220,000 ADT; directional split 52.6%; Peak Hour 14,700; Truck Peak Hour 900; source 2012-2035 RTP/SCS, 2008 for existing.
n	Has analysis on Daily Vehicle Hours of Delay (DVHD) from the Highway Congestion Monitoring Program (HICOMP) been completed and included? Y___/N___.

5. Local Development – Intergovernmental Review (LD-IGR):

List LD-IGR projects that may directly or indirectly impact the proposed Caltrans project or that the proposed Caltrans project may impact. (Attach additional project information if needed.)

LD-IGR Project Information		Project
a	County-Route-Postmile & Distance to Development.	LA – 605 – PM 15.10/20.50 LA – 60 – PM 10.23/14.26 LA – 10 – PM 29.43/32.22
b	Development name, type, and size.	I-605/SR-60 interchange and corridors
c	Local agency and/or private sponsor, and contact information.	Ernesto Chaves, LA Metro, 213.922.7343, chavese@metro.net
d	California Environmental Quality Act (CEQA) status and Implementation Date.	
e	If project includes federal funding, National Environmental Policy Act (NEPA) status.	
f	All vehicular and non-vehicular unmitigated impacts and planned mitigation measures including Transportation Demand Management (TDM) and Transportation System Management (TSM) that would affect Caltrans facilities.	

g	Approved mitigation measures and implementing party.	
h	Value of constructed mitigation and/or amount of funds provided.	
i	Encroachment Permit, Transportation Permit, Traffic Management Plan, or California Transportation Commission (CTC) Access approvals needed.	
j	Describe relationship to Regional Blueprint, General Plans, or County Congestion Management Plans.	
k	Inclusion in a Regional Transportation Plan Sustainable Community Strategy or Alternative Planning Strategy?	
l	Regional or local mitigation fee program in place?	

6. Community Planning:

INITIAL PID INFORMATION	
a	Has lead agency staff worked with any neighborhood/community groups in the area of the proposed improvements? Y <input checked="" type="checkbox"/> /N <input type="checkbox"/> . If yes, summarize the process and its results including any commitments made to the community. If no, why not? Multiple GCCOG Technical Advisory Committee (TAC) (made up of cities and LA County staff) and Corridor Cities Committee (CCC) (composed of City Council delegates, public meeting) meetings have been held to date. Input from all cities and County has been incorporated or responded to. The TAC and CCC have both concurred with the current set of Alternatives to move forward to PA/ED.
b	Are any active/completed/proposed Environmental Justice (EJ) or Community-Based Transportation (CBTP) Planning Grants in the project area? Y <input type="checkbox"/> /N <input type="checkbox"/> . If yes, summarize the project, its location, and whether/how it may interact with the proposed project. Unknown
c	Describe any community participation plans for this PID including how recommendations will be incorporated and/or addressed. Has a context sensitive solutions (CSS) approach been applied? Y <input checked="" type="checkbox"/> /N <input type="checkbox"/> Community participation has been conducted through the TAC and CCC. Project development has included the local cities and County of Los Angeles in addition to GCCOG and Metro. The GCCOG CCC meetings included geometric plans review and information available for public review and comment by the community.
FINAL PID INFORMATION	
d	How will the proposed transportation improvements impact the local community? Is the project likely to create or exacerbate existing environmental or other issues, including public health and safety, air quality, water quality, noise, environmental justice or social equity? Y <input type="checkbox"/> /N <input type="checkbox"/> . Describe issues, concerns, and recommendations (from sources including neighborhood/community groups) and what measures will be taken to reduce existing or potential negative effects. See PEAR in attachment E of the PSR-PDS.
e	Does this highway serve as a main street? Y <input type="checkbox"/> /N <input checked="" type="checkbox"/> . If yes, what main street functions and features need to be protected or preserved?

7. Freight Planning:

INITIAL PID INFORMATION	
a	Identify all modal and intermodal facilities that may affect or be affected by the project.

	Ports of Los Angeles and Long Beach, and local/regional intermodal facilities.
FINAL PID INFORMATION	
b	Describe how the design of this project could facilitate or impede Goods Movement and relieve choke points both locally and statewide through grade separations, lane separations, or other measures (e.g., special features to accommodate truck traffic and at-grade railroad crossings).
	The project will add general purpose lanes and correct existing non-standard conditions for most system and local interchanges, helping to enhance safety and relieve traffic congestion which will improve Goods Movement throughout the project area.
c	Describe how the project integrates and interconnects with other modes (rail, maritime, air, etc.). Do possibilities exist for an intermodal facility or other features to improve long-distance hauling, farm-to-market transportation and/or accessibility between warehouses, storage facilities, and terminals?
	The project does not propose revised integration with other modes. Existing modal integration will be maintained.
d	Is the project located in a high priority goods movement area, included in the Goods Movement Action Plan (GMAP) or on a Global Gateways Development Program (GGDP) route? Y <input checked="" type="checkbox"/> /N <input type="checkbox"/> . If yes, describe.
	SR-60 is a High Emphasis Route for Goods Movement. I-605 is considered a Major Int'l Trade Highway Routes within the GMAP.
e	Is the project on a current and/or projected high truck volume route [e.g., Average Annual Daily Truck Traffic (AADTT) of 5 axle trucks is greater than 3000]? Yes <input checked="" type="checkbox"/> /N <input type="checkbox"/> . If yes, describe how the project addresses this demand.
	Providing additional general purpose lanes to reduce congestion and reducing mainline lane drops to decrease merging movements address the high truck volumes within each of the build Alternatives.
f	If the project is located near an airport, seaport, or railroad depot, describe how circulation (including truck parking) needs are addressed.
	N/A
g	Describe any other freight issues.
	Ongoing coordination with I-710 truck corridor and other regional studies is warranted.

8. Transit (bus, light rail, commuter rail, intercity rail, high speed rail):

INITIAL PID INFORMATION	
a	List all local transit providers that operate within the corridor.
	LA Metro and various local city bus routes
b	Have transit agencies been contacted for possible project coordination? Y <input type="checkbox"/> /N <input checked="" type="checkbox"/> . If no, why not?
	Impacts to transit will be determined in greater detail during the PA/ED phase.
c	Describe existing transit services and transit features (bus stops, train crossings, and transit lines) within the corridor.
	There are multiple bus lines and rail lines crossing the corridors.
d	Describe transit facility needs identified in short- and long-range transit plans and RTP. Describe how these future plans affect the corridor.
	Metro Gold Line. (Transit facility needs will be determined in greater detail during the PA/ED phase).
FINAL PID INFORMATION	
e	Describe how the proposed project integrates transit and addresses impacts to transit services and transit facilities.
	The proposed project continues to accommodate transit services, and impacts to transit services will be temporary and addressed during PA/ED.
f	Have transit alternatives and improvement features been considered in this project? Y <input type="checkbox"/> /N <input checked="" type="checkbox"/> . If yes, describe. If no, why not?
	Transit alternatives and improvement features needs will be determined in greater detail during the PA/ED phase.

9. Bicycle:

INITIAL PID INFORMATION	
a	Does the facility provide for bicyclist safety and mobility needs? If no, please explain.
	Yes. Local interchange interface with local streets will be reconfigured where improvements are planned to accommodate bicyclists.
b	Are any improvements for bicyclist safety and mobility proposed for this facility by any local agencies or included in bicycle master plans? If yes, describe (including location, time frame, funding, etc.).
	Unknown. Interface with local agency plans will be conducted in the PA/ED phase.
c	Are there any external bicycle advocacy groups and bicycle advisory committees that should be included in the project stakeholder list? If so, provide contact information.
	Unknown. This will be studied in the PA/ED phase.
FINAL PID INFORMATION	
d	Will bicycle travel deficiencies be corrected? How or why not?
	Unknown. This will be studied in the PA/ED phase.
e	How will this project affect local agency plans for bicycle safety and mobility improvements?
	This project will not affect local agency plans for bicycle safety and mobility.
f	If the project is the construction of a new freeway or modification to an existing freeway, will it sever or destroy existing provisions for bicycle travel? If yes, describe how bicycle travel provisions will be included in this project.
	This project does not propose to sever or destroy any existing provisions for bicycle travel.

10. Pedestrian including Americans with Disabilities Act (ADA):

INITIAL PID INFORMATION	
a	Does this facility provide for pedestrian safety and mobility needs? If so, describe pedestrian facilities. Do continuous and well-maintained sidewalks exist? Are pedestrians forced to walk in the roadway at any locations due to lack of adequate pedestrian facilities? Please explain.
	There are locations with non ADA compliant pedestrian facilities. Improving said facilities will be further analyzed in the PA/ED phase.
b	Are pedestrian crossings located at reasonable intervals?
	Yes. However, additional opportunities can be investigated during the PA/ED phase.
c	Are all pedestrian facilities within the corridor ADA accessible and in compliance with Federal and State ADA laws and regulations?
	Existing facilities are not all in compliance with ADA, Federal and State laws and regulations.
FINAL PID INFORMATION	
d	Will pedestrian travel deficiencies be corrected? How or why not?
	Where feasible, pedestrian travel deficiencies will be corrected by providing ADA compliant ramps and sidewalks, roadway signs, ADA compliant traffic signal hardware (PPBs, ped heads, etc.).
e	How will this project affect local agency plans for pedestrian safety and mobility improvements?
	This project will not affect local agency plans for pedestrian safety and mobility.
f	If the project is the construction of a new freeway or modification to an existing freeway, will it sever or destroy existing provisions for pedestrian travel? If yes, describe how pedestrian travel provisions will be included in this project.
	This project does not propose to sever or destroy any existing provisions for pedestrian travel.
g	Are there any external pedestrian advocacy groups and advisory committees that should be included in the project stakeholder list? If so, provide contact information.
	Unknown. This will be studied in the PA/ED phase.
h	Have ADA barriers as noted in the District's ADA Transition Plan been identified within the project limits? If not included in the project, provide justification and indicate whether District Design coordinator approval was obtained.
	No. ADA barriers will be studied in the PA/ED phase.

11. Equestrian:

	INITIAL PID INFORMATION
a	If this corridor accommodates equestrian traffic, describe any project features that are being considered to improve safety for equestrian and vehicular traffic? Yes, each feature will be taken into account during the Intersection Control Evaluation (ICE) process for the PSR-PDS.
	FINAL PID INFORMATION
b	Have features that accommodate equestrian traffic been identified? If so, are they included a part of this project? Describe. If no, why not? The Rose Hills Road and Peck Road Interchanges currently cater to equestrian traffic from Bicentennial Park. There is also an existing undercrossing structure at the Rose Hills Road NB I-605 on ramp. These features will be included in the project alternatives and further studied in PA/ED.

12. Intelligent Transportation Systems (ITS):

	INITIAL PID INFORMATION
a	Have ITS features such as closed-circuit television cameras, signal timing, multi-jurisdictional or multimodal system coordination been considered in the project? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> . If yes, describe. If no, explain. CCTV and signal timing coordination will be considered to enhance highway and adjacent arterial operations/emergency response.
	FINAL PID INFORMATION
b	Have ITS features been identified? If so, are they included a part of this project? Describe. If no, why not? No. ITS features will be studied in the PA/ED phase.

Attachment G

TMP Data Sheets

TRANSPORTATION MANAGEMENT PLAN DATA SHEET (Preliminary TMP Elements and Costs)

Co/Rte/PM LA-SR-60 (PM 10.2-15.6) / I-605 (PM 15.1-20.4)Project ID No. 0714000331 EA 07-31010K Alternative No. 2Project Limit I-605 from S/O Rose Hills Rd to I-10 & SR-60 from Santa Anita Ave to E/OTurnbull Canyon RdProject Description SR-60 and I-605 Interchange and Mainline Improvements

1) Public Information

<input checked="" type="checkbox"/> a. Brochures and Mailers	\$ <u>801,000</u>
<input checked="" type="checkbox"/> b. Press Release	
<input checked="" type="checkbox"/> c. Paid Advertising	\$ <u>120,000</u>
<input type="checkbox"/> d. Public Information Center/Kiosk	\$ _____
<input checked="" type="checkbox"/> e. Public Meeting/Speakers Bureau	\$ <u>320,000</u>
<input type="checkbox"/> f. Telephone Hotline	
<input checked="" type="checkbox"/> g. Internet	\$ <u>250,000</u>
<input type="checkbox"/> h. Others _____	\$ _____

2) Motorists Information Strategies

<input type="checkbox"/> a. Changeable Message Signs (Fixed)	\$ _____
<input checked="" type="checkbox"/> b. Changeable Message Signs (Portable)	\$ <u>350,000</u>
<input checked="" type="checkbox"/> c. Ground Mounted Signs	\$ <u>450,000</u>
<input type="checkbox"/> d. Highway Advisory Radio	\$ _____
<input type="checkbox"/> e. Caltrans Highway Information Network (CHIN)	
<input type="checkbox"/> f. Others _____	\$ _____

3) Incident Management

<input checked="" type="checkbox"/> a. Construction Zone Enhanced Enforcement Program (COZEEP)	\$ <u>2,380,000</u>
<input checked="" type="checkbox"/> b. Freeway Service Patrol	\$ <u>1,844,000</u>
<input type="checkbox"/> c. Traffic Management Team	
<input type="checkbox"/> d. Helicopter Surveillance	\$ _____
<input type="checkbox"/> e. Traffic Surveillance Stations (Loop Detector and CCTV)	\$ _____
<input type="checkbox"/> f. Others _____	\$ _____

4) Construction Strategies

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

5) Demand Management

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

6) Alternative Route Strategies

- a. Add Capacity to Freeway Connector \$ _____
- b. Street Improvement (widening, traffic signal... etc) \$ 1,500,000
- c. Traffic Control Officers \$ _____
- d. Parking Restrictions
- e. Others _____ \$ _____

7) Other Strategies

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

TOTAL ESTIMATED COST OF TMP ELEMENTS = \$ 8,015,000

Project Notes:

The project will modify SR-60/I-605 interchange which will include addition of lanes, connector ramps and bridges.

PUBLIC INFORMATION**BROCHURES AND MAILERS:**

Send courtesy notices by direct mail to the project neighborhood to inform them of construction and work zone information. The information provided will include the project's start date, schedules and alternative routes. It is anticipated that 267,000 brochures and mailers will be needed at \$3 each = \$801,000.

PRESS RELEASE:

Provide press release whenever any facilities are closed for construction. During any ramp closures necessitated for the construction of a new ramp, Caltrans will implement the press release upon receiving ramp closure information from the Project Resident Engineer. No costs are associated with press releases.

PAID ADVERTISING:

Paid advertising includes additional advertising through other media means and may include local television advertising, social media advertising, newspaper advertising, cost for these types of advertisements are expected to be approximately \$120,000.

PUBLIC MEETING:

It is anticipated that public meetings will be held at the project start and at the beginning of each stage to present the project information to the community. It is anticipated that the meetings will be held in four locations. This yields a total of 16 meetings at \$20,000 = \$320,000.

INTERNET:

A project website will be designed to provide real-time interactive information on project plans and progress which will cost \$250,000.

MOTORISTS INFORMATION STRATEGIES**PORTABLE CHANGEABLE MESSAGE SIGNS:**

PCMS will be placed at key locations to notify motorists of construction activities, ramp closures, road closures and detours. It is assumed that a total of 35 PCMS at a cost of \$10,000 each = \$350,000 would be used as a TMP measure to be used for all stages of construction. The PCMS will be moved for each stage as needed. Additional PCMSs may be specified as part of the project signing.

GROUND MOUNTED SIGNS:

Temporary ground mounted signs will provide traveler information to guide motorists through the work zone.

Each stage will require up to 375 signs at \$400 per sign = \$150,000 per stage X 3 Stages = \$450,000

INCIDENT MANAGEMENT

RAMP CLOSURE:

It may be necessary to temporarily close on/off ramp during the course of the project. Detour plans shall be prepared as a part of the PS&E package identifying alternate routes for surface traffic onto the nearby alternative routes. Supporting traffic counts and analysis shall also be prepared.

COZEEP:

It is assumed that CHP enforcement will be used during setting of K-rail and construction of on and off-ramps, retaining walls and bridges for a total of 1,400 working days at 10 hours per shift including travel time to and from the project site.

\$85/Officer/Hour (2 officers): $\$85 \times 2 \times 14,000 \text{ hours} = \$2,380,000$

FREEWAY SERVICE PATROL:

It is assumed that Freeway Service Patrol will be required. FSP will include tow truck service by METRO that will be needed during construction when the shoulders are reduced in width or temporarily eliminated. This cost is the cost of additional truck hours beyond the regularly scheduled Metro FSP service.

\$60/Truck/Hour (2 trucks): $\$60 \times 2 \text{ truck} \times 11,200 \text{ hours} = \$1,344,000$

Other costs include, but are not limited to: dispatch (\$35 per hour, 40 hours per week), MTA administration cost (5% of truck cost), and CHP safety inspection cost (\$60 per hour for 8 hours per month), and a 7% contingency in subtotal. These costs total approximately \$500,000.

CONSTRUCTION STRATEGIES

STAGE CONSTRUCTION:

Construction is to be completed in multiple stages with multiple phases within each major stage. Detailed staging for this alternative will be considered in the next project phase.

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLANS:

As part of the PS&E package Construction Staging Plans shall be prepared that show the sequence of construction activities. The construction staging approach for this project is to be completed in a specific sequence to minimize impacts to the traveling public.

In addition to the construction staging plans, traffic handling plans shall be included. The traffic handling plans shall contain sufficient alignment detail, profiles and typical cross-sections to guide traffic through the work zone in the sequence shown in the stage construction plans.

LANE CLOSURE CHART:

Lane closure charts will identify the number of lanes that must be open for traffic each hour of the day. Short term lane closures may be needed to perform some of the tasks identified in the construction documents. Lane closure charts will be included in Caltrans Standard Special Provision (SSP) for this project.

ALTERNATE ROUTE STRATEGIES

STREET IMPROVEMENTS

Improvements on streets and intersections may be required for the alternate routes used to handle traffic flow through the work zone. It is anticipated that these costs would be approximately \$1,500,000.

PREPARED BY

Steve Crouch
Steve Crouch, P.E.

DATE 11/16/15

APPROVAL RECOMMENDED BY

Ali Bamshad
Ali Bamshad

DATE 11/18/2015

APPROVED BY

Sam Esquenazi
Sam Esquenazi

DATE 11/19/2015

TRANSPORTATION MANAGEMENT PLAN DATA SHEET (Preliminary TMP Elements and Costs)

Co/Rte/PM LA-SR-60 (PM 10.2-15.6) / I-605 (PM 15.1-20.4)Project ID No. 0714000331 EA 07-31010K Alternative No. 3Project Limit I-605 from S/O Rose Hills Rd to I-10 & SR-60 from Santa Anita Ave to E/OTurnbull Canyon RdProject Description SR-60 and I-605 Interchange and Mainline Improvements

1) Public Information

<input checked="" type="checkbox"/> a. Brochures and Mailers	\$ <u>690,000</u>
<input checked="" type="checkbox"/> b. Press Release	
<input checked="" type="checkbox"/> c. Paid Advertising	\$ <u>120,000</u>
<input type="checkbox"/> d. Public Information Center/Kiosk	\$ _____
<input checked="" type="checkbox"/> e. Public Meeting/Speakers Bureau	\$ <u>320,000</u>
<input type="checkbox"/> f. Telephone Hotline	
<input checked="" type="checkbox"/> g. Internet	\$ <u>200,000</u>
<input type="checkbox"/> h. Others _____	\$ _____

2) Motorists Information Strategies

<input type="checkbox"/> a. Changeable Message Signs (Fixed)	\$ _____
<input checked="" type="checkbox"/> b. Changeable Message Signs (Portable)	\$ <u>300,000</u>
<input checked="" type="checkbox"/> c. Ground Mounted Signs	\$ <u>396,000</u>
<input type="checkbox"/> d. Highway Advisory Radio	\$ _____
<input type="checkbox"/> e. Caltrans Highway Information Network (CHIN)	
<input type="checkbox"/> f. Others _____	\$ _____

3) Incident Management

<input checked="" type="checkbox"/> a. Construction Zone Enhanced Enforcement Program (COZEEP)	\$ <u>2,380,000</u>
<input checked="" type="checkbox"/> b. Freeway Service Patrol	\$ <u>1,644,000</u>
<input type="checkbox"/> c. Traffic Management Team	
<input type="checkbox"/> d. Helicopter Surveillance	\$ _____
<input type="checkbox"/> e. Traffic Surveillance Stations (Loop Detector and CCTV)	\$ _____
<input type="checkbox"/> f. Others _____	\$ _____

4) Construction Strategies

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

5) Demand Management

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

6) Alternative Route Strategies

- a. Add Capacity to Freeway Connector \$ _____
- b. Street Improvement (widening, traffic signal... etc) \$ 1,000,000
- c. Traffic Control Officers \$ _____
- d. Parking Restrictions
- e. Others _____ \$ _____

7) Other Strategies

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

TOTAL ESTIMATED COST OF TMP ELEMENTS = \$ 7,050,000

Project Notes:

The project will modify SR-60/I-605 interchange which will include addition of lanes, connector ramps and bridges.

PUBLIC INFORMATION**BROCHURES AND MAILERS:**

Send courtesy notices by direct mail to the project neighborhood to inform them of construction and work zone information. The information provided will include the project's start date, schedules and alternative routes. It is anticipated that 230,000 brochures and mailers will be needed at \$3 each = \$690,000.

PRESS RELEASE:

Provide press release whenever any facilities are closed for construction. During any ramp closures necessitated for the construction of a new ramp, Caltrans will implement the press release upon receiving ramp closure information from the Project Resident Engineer. No costs are associated with press releases.

PAID ADVERTISING:

Paid advertising includes additional advertising through other media means and may include local television advertising, social media advertising, newspaper advertising, cost for these types of advertisements are expected to be approximately \$120,000.

PUBLIC MEETING:

It is anticipated that public meetings will be held at the project start and at the beginning of each stage to present the project information to the community. It is anticipated that the meetings will be held in four locations. This yields a total of 16 meetings at \$20,000 = \$320,000.

INTERNET:

A project website will be designed to provide real-time interactive information on project plans and progress which will cost \$200,000.

MOTORISTS INFORMATION STRATEGIES**PORTABLE CHANGEABLE MESSAGE SIGNS:**

PCMS will be placed at key locations to notify motorists of construction activities, ramp closures, road closures and detours. It is assumed that a total of 30 PCMS at a cost of \$10,000 each = \$300,000 would be used as a TMP measure to be used for all stages of construction. The PCMS will be moved for each stage as needed. Additional PCMSs may be specified as part of the project signing.

GROUND MOUNTED SIGNS:

Temporary ground mounted signs will provide traveler information to guide motorists through the work zone.

Each stage will require up to 330 signs at \$400 per sign = \$132,000 per stage X 3 Stages = \$396,000

INCIDENT MANAGEMENT

RAMP CLOSURE:

It may be necessary to temporarily close on/off ramp during the course of the project. Detour plans shall be prepared as a part of the PS&E package identifying alternate routes for surface traffic onto the nearby alternative routes. Supporting traffic counts and analysis shall also be prepared.

COZEEP:

It is assumed that CHP enforcement will be used during setting of K-rail and construction of on and off-ramps, retaining walls and bridges for a total of 1,400 working days at 10 hours per shift including travel time to and from the project site.

\$85/Officer/Hour (2 officers): $\$85 \times 2 \times 14,000 \text{ hours} = \$2,380,000$

FREEWAY SERVICE PATROL:

It is assumed that Freeway Service Patrol will be required. FSP will include tow truck service by METRO that will be needed during construction when the shoulders are reduced in width or temporarily eliminated. This cost is the cost of additional truck hours beyond the regularly scheduled Metro FSP service.

\$60/Truck/Hour (2 truck): $\$60 \times 2 \text{ trucks} \times 11,200 \text{ hours} = \$1,344,000$

Other costs include, but are not limited to: dispatch (\$35 per hour, 40 hours per week), MTA administration cost (5% of truck cost), and CHP safety inspection cost (\$60 per hour for 8 hours per month), and a 7% contingency in subtotal. These costs total approximately \$300,000.

CONSTRUCTION STRATEGIES

STAGE CONSTRUCTION:

Construction is to be completed in multiple stages with multiple phases within each major stage. Detailed staging for this alternative will be considered in the next project phase.

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLANS:

As part of the PS&E package Construction Staging Plans shall be prepared that show the sequence of construction activities. The construction staging approach for this project is to be completed in a specific sequence to minimize impacts to the traveling public.

In addition to the construction staging plans, traffic handling plans shall be included. The traffic handling plans shall contain sufficient alignment detail, profiles and typical cross-sections to guide traffic through the work zone in the sequence shown in the stage construction plans.

LANE CLOSURE CHART:

Lane closure charts will identify the number of lanes that must be open for traffic each hour of the day. Short term lane closures may be needed to perform some of the tasks identified in the construction documents. Lane closure charts will be included in Caltrans Standard Special Provision (SSP) for this project.

ALTERNATE ROUTE STRATEGIES

STREET IMPROVEMENTS

Improvements on streets and intersections may be required for the alternate routes used to handle traffic flow through the work zone. It is anticipated that these costs would be approximately \$1,000,000.

PREPARED BY	<u>Steve Crouch</u> Steve Crouch, P.E.	DATE	<u>11/16/15</u>
APPROVAL RECOMMENDED BY	<u>Ali Bamshad</u> Ali Bamshad	DATE	<u>11/18/2015</u>
APPROVED BY	<u>Sam Esquenazi</u> Sam Esquenazi	DATE	<u>11/19/2015</u>

TRANSPORTATION MANAGEMENT PLAN DATA SHEET (Preliminary TMP Elements and Costs)

Co/Rte/PM LA-SR-60 (PM 10.2-15.6) / I-605 (PM 15.1-20.4)Project ID No. 0714000331 EA 07-31010K Alternative No. 4Project Limit I-605 from S/O Rose Hills Rd to I-10 & SR-60 from Santa Anita Ave to E/OTurnbull Canyon RdProject Description SR-60 and I-605 Interchange and Mainline Improvements

1) Public Information

<input checked="" type="checkbox"/> a. Brochures and Mailers	\$ <u>600,000</u>
<input checked="" type="checkbox"/> b. Press Release	
<input checked="" type="checkbox"/> c. Paid Advertising	\$ <u>120,000</u>
<input type="checkbox"/> d. Public Information Center/Kiosk	\$ _____
<input checked="" type="checkbox"/> e. Public Meeting/Speakers Bureau	\$ <u>320,000</u>
<input type="checkbox"/> f. Telephone Hotline	
<input checked="" type="checkbox"/> g. Internet	\$ <u>100,000</u>
<input type="checkbox"/> h. Others _____	\$ _____

2) Motorists Information Strategies

<input type="checkbox"/> a. Changeable Message Signs (Fixed)	\$ _____
<input checked="" type="checkbox"/> b. Changeable Message Signs (Portable)	\$ <u>200,000</u>
<input checked="" type="checkbox"/> c. Ground Mounted Signs	\$ <u>240,000</u>
<input type="checkbox"/> d. Highway Advisory Radio	\$ _____
<input type="checkbox"/> e. Caltrans Highway Information Network (CHIN)	
<input type="checkbox"/> f. Others _____	\$ _____

3) Incident Management

<input checked="" type="checkbox"/> a. Construction Zone Enhanced Enforcement Program (COZEEP)	\$ <u>2,380,000</u>
<input checked="" type="checkbox"/> b. Freeway Service Patrol	\$ <u>1,844,000</u>
<input type="checkbox"/> c. Traffic Management Team	
<input type="checkbox"/> d. Helicopter Surveillance	\$ _____
<input type="checkbox"/> e. Traffic Surveillance Stations (Loop Detector and CCTV)	\$ _____
<input type="checkbox"/> f. Others _____	\$ _____

4) Construction Strategies

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

5) Demand Management

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

6) Alternative Route Strategies

- a. Add Capacity to Freeway Connector \$ _____
- b. Street Improvement (widening, traffic signal... etc) \$ 1,000,000
- c. Traffic Control Officers \$ _____
- d. Parking Restrictions
- e. Others _____ \$ _____

7) Other Strategies

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

TOTAL ESTIMATED COST OF TMP ELEMENTS = \$ 6,804,000

Project Notes:

The project will modify SR-60/I-605 interchange which will include addition of lanes, connector ramps and bridges.

PUBLIC INFORMATION**BROCHURES AND MAILERS:**

Send courtesy notices by direct mail to the project neighborhood to inform them of construction and work zone information. The information provided will include the project's start date, schedules and alternative routes. It is anticipated that 200,000 brochures and mailers will be needed at \$3 each = \$600,000.

PRESS RELEASE:

Provide press release whenever any facilities are closed for construction. During any ramp closures necessitated for the construction of a new ramp, Caltrans will implement the press release upon receiving ramp closure information from the Project Resident Engineer. No costs are associated with press releases.

PAID ADVERTISING:

Paid advertising includes additional advertising through other media means and may include local television advertising, social media advertising, newspaper advertising, cost for these types of advertisements are expected to be approximately \$120,000.

PUBLIC MEETING:

It is anticipated that public meetings will be held at the project start and at the beginning of each stage to present the project information to the community. It is anticipated that the meetings will be held in four locations. This yields a total of 16 meetings at \$20,000 = \$320,000.

INTERNET:

A project website will be designed to provide real-time interactive information on project plans and progress which will cost \$100,000.

MOTORISTS INFORMATION STRATEGIES**PORTABLE CHANGEABLE MESSAGE SIGNS:**

PCMS will be placed at key locations to notify motorists of construction activities, ramp closures, road closures and detours. It is assumed that a total of 20 PCMS at a cost of \$10,000 each = \$200,000 would be used as a TMP measure to be used for all stages of construction. The PCMS will be moved for each stage as needed. Additional PCMSs may be specified as part of the project signing.

GROUND MOUNTED SIGNS:

Temporary ground mounted signs will provide traveler information to guide motorists through the work zone.

Each stage will require up to 200 signs at \$400 per sign = \$80,000 per stage X 3 Stages = \$240,000

INCIDENT MANAGEMENT

RAMP CLOSURE:

It may be necessary to temporarily close on/off ramp during the course of the project. Detour plans shall be prepared as a part of the PS&E package identifying alternate routes for surface traffic onto the nearby alternative routes. Supporting traffic counts and analysis shall also be prepared.

COZEEP:

It is assumed that CHP enforcement will be used during setting of K-rail and construction of on and off-ramps, retaining walls and bridges for a total of 1,400 working days at 10 hours per shift including travel time to and from the project site.

\$85/Officer/Hour (2 officers): $\$85 \times 2 \times 14,000 \text{ hours} = \$2,380,000$

FREEWAY SERVICE PATROL:

It is assumed that Freeway Service Patrol will be required. FSP will include tow truck service by METRO that will be needed during construction when the shoulders are reduced in width or temporarily eliminated. This cost is the cost of additional truck hours beyond the regularly scheduled Metro FSP service.

\$60/Truck/Hour (1 truck): $\$60 \times 2 \text{ truck} \times 11,200 \text{ hours} = \$1,344,000$

Other costs include, but are not limited to: dispatch (\$35 per hour, 40 hours per week), MTA administration cost (5% of truck cost), and CHP safety inspection cost (\$60 per hour for 8 hours per month), and a 7% contingency in subtotal. These costs total approximately \$500,000.

CONSTRUCTION STRATEGIES

STAGE CONSTRUCTION:

Construction is to be completed in 3 stages with multiple phases within each major stage. The following highlights the major activities to be undertaken in each stage:

Stage 1:

During Stage 1, mainline traffic lanes will generally be shifted towards the left (inside) shoulder to provide room for temporary railing on the outside of the highways. The majority of construction will occur on the outside of the highway and will not require lane drops on mainline SR-60 nor I-605. At the SR-60/I-605 interchange, the realigned connectors will be constructed in order to maintain traffic lanes on the existing connectors. For connectors that aren't being realigned, the first half of the connector will be constructed during this stage. In addition to the major construction activities, there will be short-term sub-stages to construct the remaining portions of the improvements that couldn't be captured in the main stage.

List of construction activities during Stage 1:

- Phase 1A
 - Construct I-605 at Peck Road overcrossing bridge
 - Construct SR-60 at Peck Road ramp bridges
 - Construct portions of ramps and connectors, and restripe temporary ramps if applicable
 - Construct bridge for WB connectors along SR-60 at San Gabriel River
- Phase 1B
 - Construct portions of ramps and connectors, and restripe temporary ramps if applicable
 - Complete construction for I-605 at Peck Road overcrossing bridge
 - Construct bridges for connectors along I-605 at SR-60 interchange
 - Construct widening along I-605
 - Remove portion of existing pavement for loop ramp connector from NB I-605 to WB SR-60.
 - Construct bridge along I-605 at San Jose Creek
 - Construct bridges along SR-60 for WB connectors over UPRR, Workman Mill Road, and San Gabriel River

Stage 2:

During Stage 2, traffic will be shifted onto the new connectors and the old connectors will be removed. Traffic lanes will also be shifted onto the widened portion of I-605.

List of construction activities during Stage 2:

- Phase 2A
 - Complete ultimate striping along I-605
 - Construct portion of off-ramp on I-605 to Peck Rd and Pellissier Pl
 - Construct portion of bridge along I-605 from Pellissier Pl
 - Complete ultimate striping along SR-60
 - Complete ultimate striping on EB on-ramp to SR-60 from Durfee Ave and along Peck Rd
 - Complete ultimate striping along I-605 at SR-60 interchange
 - Complete ultimate striping along SR-60 bridge connectors at San Gabriel River
- Phase 2B
 - Remove existing pavement at I-605 & Peck Road on-ramps
 - Construct portions of ramps and connectors, and restripe temporary ramps if applicable
 - Construct portion of off-ramp on I-605 to Peck Rd and Pellissier Pl
 - Construct widening along I-605
 - Construct widening at NB off-ramp to Peck Rd and Pellissier Pl
 - Construct widening at NB on-ramp from Pellissier Pl to I-605
 - Remove existing pavement from Rooks Rd to I-605
 - Remove existing pavement along I-605 & SR-60 interchange
 - Remove existing bridge for WB SR-60 to SB I-605 connector
 - Construct portion of WB off-ramp from SR-60 to Peck Rd
 - Remove existing pavement at Peck Rd
 - Remove existing bridge along SR-60 at Peck Rd

Stage 3:

During Stage 3 the ultimate striping will be installed and any remaining pavement removals will occur.

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLANS:

As part of the PS&E package Construction Staging Plans shall be prepared that show the sequence of construction activities. The construction staging approach for this project is to be completed in a specific sequence to minimize impacts to the traveling public.

In addition to the construction staging plans, traffic handling plans shall be included. The traffic handling plans shall contain sufficient alignment detail, profiles and typical cross-sections to guide traffic through the work zone in the sequence shown in the stage construction plans.

LANE CLOSURE CHART:

Lane closure charts will identify the number of lanes that must be open for traffic each hour of the day. Short term lane closures may be needed to perform some of the tasks identified in the construction documents. Lane closure charts will be included in Caltrans Standard Special Provision (SSP) for this project.

ALTERNATE ROUTE STRATEGIES

STREET IMPROVEMENTS

Improvements on streets and intersections may be required for the alternate routes used to handle traffic flow through the work zone. It is anticipated that these costs would be approximately \$1,000,000.

PREPARED BY

Steve Crouch
Steve Crouch, P.E.

DATE 11/16/15

APPROVAL RECOMMENDED BY

Ali Bamshad
Ali Bamshad

DATE 11/18/2015

APPROVED BY

Sam Esquenazi
Sam Esquenazi

DATE 11/19/2015

Attachment H

Conceptual Cost Estimate – Right-of-Way Component

CONCEPTUAL COST ESTIMATE – RIGHT OF WAY COMPONENT

To: TBD

Date: October 15, 2015

From: Michael Hynes
 WKE, Inc.

07-LA-605-15.1/20.49,
 LA-60-10.23/14.26,
 LA-10-29.43/32.22
 Project ID:
 EA:
 Project Description:
 I-605/SR-60 PSR-PDS
 Alternative 2

A Field Review was conducted Yes No

Scope of the Right of Way

Provide a general description of the right of way including the location attributes.

Right of Way Required Yes No

Number of Fee Parcels 1-10 11-25 26-50 51-100 >100

Number of Easement Parcels 1-10 11-25 26-50 51-100 >100

Urban Rural

Land Area: Fee 1,850,000 SF Easement _____

Displaced Persons/Businesses Yes No

Demolition/Clearance Yes No

Railroad Involvement Yes No

Utility Involvements Yes No 130 Number of Utilities in area

Cost Estimates

Support Costs	<input type="checkbox"/> \$0-\$25,000	<input type="checkbox"/> \$500,001-\$1,000,000
	<input type="checkbox"/> \$25,001-\$100,000	<input type="checkbox"/> \$1,000,001-\$5,000,000
	<input type="checkbox"/> \$100,001-\$250,000	<input type="checkbox"/> \$5,000,001-\$10,000,000
	<input type="checkbox"/> \$250,001-\$500,000	<input checked="" type="checkbox"/> >\$10,000,000

Capital Costs	<input type="checkbox"/> \$0-\$100,000	<input type="checkbox"/> \$5,000,001-\$15,000,000
	<input type="checkbox"/> \$100,001-\$500,000	<input type="checkbox"/> \$15,000,001-\$50,000,000
	<input type="checkbox"/> \$500,001-\$1,000,000	<input type="checkbox"/> \$50,000,001-\$100,000,000
	<input type="checkbox"/> \$1,000,001-\$5,000,000	<input checked="" type="checkbox"/> >\$100,000,000

Schedule

Right of Way will require _____ 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 _____.

CONCEPTUAL COST ESTIMATE – RIGHT OF WAY COMPONENT

To: TBD

Date: October 15, 2015

From: Michael Hynes
 WKE, Inc.

07-LA-605-15.1/20.49,
 LA-60-10.23/14.26,
 LA-10-29.43/32.22
 Project ID:
 EA:
 Project Description:
 I-605/SR-60 PSR-PDS
 Alternative 3

A Field Review was conducted Yes No

Scope of the Right of Way

Provide a general description of the right of way including the location attributes.

Right of Way Required Yes No

Number of Fee Parcels 1-10 11-25 26-50 51-100 >100

Number of Easement Parcels 1-10 11-25 26-50 51-100 >100

Urban Rural

Land Area: Fee 1,500,000 SF Easement _____

Displaced Persons/Businesses Yes No

Demolition/Clearance Yes No

Railroad Involvement Yes No

Utility Involvements Yes No 118 Number of Utilities in area

Cost Estimates

Support Costs	<input type="checkbox"/> \$0-\$25,000	<input type="checkbox"/> \$500,001-\$1,000,000
	<input type="checkbox"/> \$25,001-\$100,000	<input type="checkbox"/> \$1,000,001-\$5,000,000
	<input type="checkbox"/> \$100,001-\$250,000	<input type="checkbox"/> \$5,000,001-\$10,000,000
	<input type="checkbox"/> \$250,001-\$500,000	<input checked="" type="checkbox"/> >\$10,000,000

Capital Costs	<input type="checkbox"/> \$0-\$100,000	<input type="checkbox"/> \$5,000,001-\$15,000,000
	<input type="checkbox"/> \$100,001-\$500,000	<input type="checkbox"/> \$15,000,001-\$50,000,000
	<input type="checkbox"/> \$500,001-\$1,000,000	<input type="checkbox"/> \$50,000,001-\$100,000,000
	<input type="checkbox"/> \$1,000,001-\$5,000,000	<input checked="" type="checkbox"/> >\$100,000,000

Schedule

Right of Way will require _____ 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 _____.

CONCEPTUAL COST ESTIMATE – RIGHT OF WAY COMPONENT

To: TBD
Caltrans District 7

Date: October 15, 2015

From: Michael Hynes
WKE, Inc.

07-LA-605-15.1/20.49,
LA-60-10.23/14.26,
LA-10-29.43/32.22
Project ID:
EA:
Project Description:
I-605/SR-60 PSR-PDS
Alternative 4B

A Field Review was conducted Yes No

Scope of the Right of Way

Provide a general description of the right of way including the location attributes.

Right of Way Required Yes No

Number of Fee Parcels 1-10 11-25 26-50 51-100 >100

Number of Easement Parcels 1-10 11-25 26-50 51-100 >100

Urban Rural

Land Area: Fee 900,000 SF Easement _____

Displaced Persons/Businesses Yes No

Demolition/Clearance Yes No

Railroad Involvement Yes No

Utility Involvements Yes No 113 Number of Utilities in area

Cost Estimates

Support Costs	<input type="checkbox"/> \$0-\$25,000	<input type="checkbox"/> \$500,001-\$1,000,000
	<input type="checkbox"/> \$25,001-\$100,000	<input type="checkbox"/> \$1,000,001-\$5,000,000
	<input type="checkbox"/> \$100,001-\$250,000	<input type="checkbox"/> \$5,000,001-\$10,000,000
	<input type="checkbox"/> \$250,001-\$500,000	<input checked="" type="checkbox"/> >\$10,000,000

Capital Costs	<input type="checkbox"/> \$0-\$100,000	<input type="checkbox"/> \$5,000,001-\$15,000,000
	<input type="checkbox"/> \$100,001-\$500,000	<input type="checkbox"/> \$15,000,001-\$50,000,000
	<input type="checkbox"/> \$500,001-\$1,000,000	<input type="checkbox"/> \$50,000,001-\$100,000,000
	<input type="checkbox"/> \$1,000,001-\$5,000,000	<input checked="" type="checkbox"/> >\$100,000,000

Schedule

Right of Way will require _____ 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 _____.

Attachment I

Risk Register

LEVEL 2 - RISK REGISTER						Project Name:	SR-60/I-605 PSR-PDS			DIST- EA	07-31010K	Project Manager	Carlos Cadena					
Risk Identification									Risk Assessment					Risk Response				
Status	ID #	Type	Category	Date Risk Identified	Cost or Schedule Risk?	Title	Risk Statement	Current status/assumptions	Probability	Cost Impact	Cost Score	Time Impact	Time Score	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	1	Threat	Design	6/6/2014	Both	Survey File	Inaccurate or insufficient survey information could require the completion of supplemental surveys and the rework of the project design.		2-Low	2 -Low	4	4 -Moderate	8	Need to obtain additional surveys could require 30-60 days.	Avoid	Check available survey information against project limits to determine if coverage is sufficient. Have survey data independently checked to confirm accuracy.		
Active	2	Threat	Design	6/6/2014	Schedule	New or revised design standard	As a result of new design standards in the HDM, significant modifications and/or enhancements to the Alt. 2 design are required, which would require additional time than allocated in the baseline schedule.		2-Low	2 -Low	4	4 -Moderate	8	Significant changes were made to interchange design standards in most recent HDM which affect designs completed prior to this release.	Accept	Cross check current hybrid design against HDM as a first step in design to determine if any changes to HDM would affect geometrics.		
Active	3	Threat	Organizational	6/6/2014	Schedule	Delay in cooperative agreement	As a result of a delay in the sign-off of the cooperative agreement, Caltrans will not review project deliverables or participate in PDT meetings, which would result in project delays.		2-Low	2 -Low	4	8 -High	16	Significant delays in getting coop agreement signed could have large impacts on being able to complete project in a timely fashion.	Mitigate	Reinforce with Metro the importance of establishing the agreement as it relates to project completion and discuss associated schedule impacts if it is not obtained.		
Active	4	Threat	Organizational	6/6/2014	Schedule	Deliverable reviews by Caltrans	Due to other commitments by key Caltrans staff, Caltrans reviews of project deliverables exceed allocated 30 day period, delaying project schedule.		3-Moderate	1 -Very Low	3	4 -Moderate	12	Availability of necessary review staff has been an issue on past projects.	Mitigate	Work early with Caltrans to define dates for review periods so that they can program these commitments into their work plan.		
Active	5	Threat	Organizational	6/6/2014	Schedule	New Caltrans procedural requirements	Due to changes in or enactment of new procedural requirements by Caltrans, additional studies must be completed as part of PSR phase that were not accounted for in baseline schedule.		2-Low	4 -Moderate	8	4 -Moderate	8	This has been a persistent issue on past projects which can affect both budget and schedule.	Accept	Coordinate with Caltrans on continual basis throughout life of project to identify any new procedural requirements as early as possible to minimize impacts to project schedule.		
Active	6	Threat	Environmental	6/6/2014	Both	Bad traffic count data	Anomalies within count data received requires that new counts be obtained.		1-Very Low	2 -Low	2	4 -Moderate	4	Garbage in-garbage out when it comes to count and model data, so it must be checked carefully.	Mitigate	Review count data thoroughly when received to check for validity.		
Active	7	Threat	Environmental	6/6/2014	Schedule	Bad model forecasts	Anomalies within model forecast data received requires revisions to model and rerunning of future year forecasts		1-Very Low	2 -Low	2	4 -Moderate	4	Garbage in-garbage out when it comes to count and model data, so it must be checked carefully.	Mitigate	Review traffic data generated from model carefully to check for potential bad output.		
Active	8	Threat	Design	6/6/2014	Schedule	Different horizon year traffic numbers	Drastically different future year traffic volumes relative to feasibility study require detailed review and modifications to Alt. 4		1-Very Low	1 -Very Low	1	4 -Moderate	4	Horizon year is being shifted to 2040 from 2035 for feasibility study, so numbers will go up.	Accept			
Active	9	Threat	Design	6/6/2014	Schedule	Caltrans comments on designs for build alts.	Caltrans first review of design for build alternatives results in large number of design related comments requiring significant design modifications.		1-Very Low	1 -Very Low	1	4 -Moderate	4	The ability to engage Caltrans staff throughout the design process is critical to avoid receiving large numbers of comments.	Mitigate	Engage Caltrans throughout design process to solicit input and comments in order to minimize the number of comments generated as part of formal review.		
Active	10	Threat	Environmental	6/6/2014	Schedule	Delays in scheduling stakeholder meetings	Difficulty in contacting stakeholders or unwillingness for them to meet delays the scheduling of project meetings which could impact overall project schedule		1-Very Low	1 -Very Low	1	4 -Moderate	4	It is likely that impacted cities are well aware of these proposed improvements through the feasibility study and will be willing/eager to coordinate.	Mitigate	Reach out to stakeholders early on during project to give them a heads up regarding the need for upcoming coordination.		
Active	11	Threat	Design	6/6/2014	Schedule	Additional Alt. 2 improvements north of Valley Blvd.	Traffic forecasts show a need for significant improvements along I-10 north of Valley Boulevard that must be incorporated into Alt. 2, which take time and resources.		4-High	2 -Low	8	1 -Very Low	4	It is anticipated that any additions to Alt. 2 resulting from new traffic analysis can be done concurrently with development of Alts. 3 and 4.	Mitigate	Conduct this work concurrently with the development of Alts. 3 and 4.		
Active	12	Threat	Environmental	6/6/2014	Schedule	Delays in obtaining concurrence on design exceptions.	Delays in obtaining Caltrans District 7 geometrician concurrence on nonstandard features associated with Alt. 4 delay overall project schedule.		2-Low	1 -Very Low	2	4 -Moderate	8	Based on previous experience on past projects, working through nonstandard features with Caltrans can be time consuming. However, fact sheets are not required at this phase.	Mitigate	Engage district geometrician as early as possible in design development for Alt. 4 to obtain concurrence as exceptions are identified.		

LEVEL 2 - RISK REGISTER						Project Name:	SR-60/I-605 PSR-PDS			DIST- EA	07-31010K	Project Manager	Carlos Cadena					
Risk Identification									Risk Assessment					Risk Response				
Status	ID #	Type	Category	Date Risk Identified	Cost or Schedule Risk?	Title	Risk Statement	Current status/assumptions	Probability	Cost Impact	Cost Score	Time Impact	Time Score	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	13	Threat	Environmental	11/26/2014	Both	Section 7 consultation under the Federal Endangered Species Act (FESA) and Section 2080 consultation under the California Endangered Species Act (CESA), associated mitigation	If federally or state listed species are found in the project area, Section 7 consultation under FESA and/or Section 2080 consultation under CESA may be required. A Biological Assessment may need to be prepared and submitted to the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife to obtain concurrence, which could delay the schedule, and mitigation may be required, which could result in additional cost.		3-Moderate	4 -Moderate	12	4 -Moderate	12	The project area includes habitat for listed species. Formal consultation could take up to 135 days, and NEPA cannot be approved until consultation is completed.	Accept	Complete Section 7 and Section 2080 consultation, and adjust schedule.		
Active	14	Threat	Environmental	11/26/2014	Cost	Loss of habitat or jurisdictional wetlands	If the project would result in the loss of habitat or jurisdictional wetlands, habitat restoration or compensation through participation in a mitigation bank may be required, resulting in additional costs.		3-Moderate	4 -Moderate	12	1 -Very Low	3	The project area has potential to include wetlands.	Accept	Complete habitat restoration, and/or participate in a mitigation bank (as required).		
Active	15	Threat	Environmental	11/26/2014	Schedule	Delays in regulatory permitting	If the review time for regulatory permitting takes more time than expected, the schedule would be delayed.		3-Moderate	1 -Very Low	3	4 -Moderate	12	Regulatory agencies may need a longer review time to process permit applications.	Mitigate	Initiate formal application process with each regulatory agency as early as possible, and continue to follow up with each agency to minimize review time.		
Active	16	Threat	Environmental	11/26/2014	Schedule, Cost	Section 106 consultation under the National Historic Preservation Act for effects on historic properties, mitigation for impacts on historic resources	If the Area of Potential Effect (APE) includes historic properties, Section 106 consultation with the State Historic Preservation Officer (SHPO) would be required, and a Finding of Effect (FOE) would need to be submitted for SHPO concurrence. If the findings of the FOE indicate adverse effects on historic properties, a Memorandum of Agreement (MOA) and mitigation may be required.		3-Moderate	4 -Moderate	12	4 -Moderate	12	Historic properties are located in proximity to the project area, and may be included in the APE for the project.	Accept	Complete Section 106 consultation and adjust schedule.		
Active	17	Threat	Environmental	11/26/2014	Schedule	Right of entry for cultural resource surveys	If property owners do not allow right of entry for cultural resource surveys, negotiation with property owners would be required, which could delay the schedule.		2-Low	2 -Low	4	2 -Low	4	Negotiations with property owners are not expected to result in significant delays.	Mitigate	Negotiate with property owners as early as possible to avoid delays.		
Active	18	Threat	Environmental	11/26/2014	Schedule, Cost	Unanticipated discoveries of cultural resources during field surveys, geotechnical investigations, or construction, associated mitigation	If unanticipated cultural resources are discovered, cultural resources would need to be treated in accordance with environmental regulations, which could delay the schedule and result in additional cost.		3-Moderate	4 -Moderate	12	4 -Moderate	12	The project area has a moderate sensitivity for cultural resources.	Accept	Treat unanticipated discoveries and adjust schedule.		
Active	19	Threat	Environmental	11/26/2014	Schedule and cost	Discovery of hazardous materials	If hazardous materials are discovered during construction, the materials would need to be removed and disposed of in accordance with environmental regulations, resulting in schedule delays and disposal costs.		2-Low	4 -Moderate	8	4 -Moderate	8	Several hazardous release sites are located in proximity to the project area. Excavation and structure demolition could disturb hazardous materials.	Accept	Prepare and implement a hazardous materials removal plan, and adjust schedule.		
Active	20	Threat	Environmental	11/26/2014	Schedule	Discovery of Aerially Deposited Lead (ADL)	If hazardous ADL (Type Y and Z material) is identified in the state right of way, this material would need to be addressed through mitigation or avoidance measures, resulting in schedule delays.		3-Moderate	2 -Low	6	4 -Moderate	12	Hazardous ADL may be located in the state right of way.	Mitigate	Identify locations within state right of way for burial sites.		
Active	21	Threat	ROW	11/26/2014	Schedule	Public controversy over business and residential displacements	Public controversy may result from business and residential displacements and could require additional public meetings to address concerns, which could delay the schedule.		3-Moderate	1 -Very Low	3	2 -Low	6	A public outreach campaign could be conducted to communicate with property owners and community members.	Avoid	Conduct early and ongoing public outreach, and ensure that compensation and relocation assistance are provided, in accordance with regulations.		

LEVEL 2 - RISK REGISTER						Project Name:	SR-60/I-605 PSR-PDS			DIST- EA	07-31010K	Project Manager	Carlos Cadena					
Risk Identification									Risk Assessment					Risk Response				
Status	ID #	Type	Category	Date Risk Identified	Cost or Schedule Risk?	Title	Risk Statement	Current status/assumptions	Probability	Cost Impact	Cost Score	Time Impact	Time Score	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	22	Threat	ROW	11/26/2014	Schedule	Additional right of way needed that would result in additional community impacts	If additional right of way is needed for the proposed improvements, additional community impacts may result and will need to be addressed, which could delay the schedule.		2-Low	2 -Low	4	4 -Moderate	8	A public outreach campaign could be conducted to communicate with property owners and community members, and address community impacts.	Mitigate	Conduct early and ongoing public outreach, and ensure that compensation and relocation assistance are provided, in accordance with regulations.		
Active	23	Threat	Design	1/20/2015	Schedule	Approval of Mandatory Design Exceptions	Caltrans requires approval of Mandatory Design Exceptions from Caltrans Headquarters.		2-Low	4 -Moderate	8	8 -High	16	Determine if Mandatory Design Exception can be delegated to Caltrans District 7.	Mitigate	Engage district geometrician as early as possible in design development to obtain concurrence as exceptions are identified.		
Active	24	Threat	Design	1/20/2015	Schedule	Approval of Advisory Design Exceptions	Caltrans requires approval of Advisory Design Exceptions.		2-Low	4 -Moderate	8	4 -Moderate	8	Prepare and get Advisory Design Exceptions approved.	Mitigate	Engage district geometrician as early as possible in design development to obtain concurrence as exceptions are identified.		
Active	25	Threat	Design	1/20/2015	Cost	Changes in Design Criteria	Caltrans release of the 2015 (or subsequent) Standard Plans/Specifications during design.		3-Moderate	4 -Moderate	12	4 -Moderate	12	Update PS&E as appropriate	Accept	Coordinate with Caltrans on continual basis throughout life of project to identify any new procedural requirements as early as possible to minimize impacts to project schedule.		
Active	26	Threat	Environmental	1/20/2015	Schedule	Approval of Air Quality Conformity	2015 Regional Transportation Plan (RTP) not approved as scheduled.		3-Moderate	4 -Moderate	12	4 -Moderate	12	Track Approval of 2015 RTP.	Transfer			
Active	27	Threat	Design	1/20/2015	Schedule	Update Biological Assessment	Caltrans requires preparation and approval of Biological Assessment, including update to environmental requirements or new listing/identification of protected species.		2-Low	4 -Moderate	8	4 -Moderate	8	Prepare and approve biological assessment.	Accept	Perform environmental studies and prepare draft environmental document.		
Active	28	Threat	Design	1/20/2015	Schedule	Mainline Pavement Rehabilitation	Caltrans requires rehabilitation of the freeway mainline along the proposed widening and/or auxiliary lanes.		3-Moderate	4 -Moderate	12	4 -Moderate	12	Determine cost and benefit of the mainline rehabilitation. Determine schedule of recent pavement rehabilitation or widening projects.	Mitigate	Prepare PS&E draft package.		
Active	29	Threat	Environmental	1/20/2015	Schedule	Regulatory Permitting	RWQCB, USACOE, CA Dept. of Fish and Game Jurisdictions		2-Low	4 -Moderate	8	4 -Moderate	8	Initiate formal application process with each agency.	Accept	Involve regulatory permitting agencies.		
Active	30	Threat	Environmental	1/20/2015	Schedule	Project Funding	Funding is limited or becomes unavailable for the project.		2-Low	4 -Moderate	8	16 - Very High	32	Seek Project Funding.	Mitigate	Assist agency in securing project funding.		
Active	31	Threat	Design	1/20/2015	Schedule	Discovery of hazardous materials	Discovery of Hazardous Waste near I-65 and Valley Blvd at time of widening near Woodland Duck Farm.		3-Moderate	4 -Moderate	12	8 -High	24	Identify and implement hazardous materials removal plans.	Mitigate	Prepare and implement a hazardous materials removal plan, and adjust schedule.		
Active	32	Threat	Design	1/20/2015	Schedule	Southern California Edison (SCE) Utility Relocation	Design team is made aware of utility agency requirements during utility coordination meetings.		2-Low	4 -Moderate	8	8 -High	16	hold utility focus meeting to develop consensus on utility relocation requirements (i.e. technical design features, schedule construction window lead times.).	Mitigate	Engage SCE as early as possible to obtain relocation concurrence.		
Active	33	Threat	Design	1/20/2015	Schedule	Changes to Storm Water Requirements	Design team is made aware of updates to regulatory Storm Water requirements during coordination meetings.		2-Low	2 -Low	4	4 -Moderate	8	Track updates and update PS&E as appropriate.	Mitigate	Coordinate with regulatory agency on continual basis throughout life of project to identify any new procedural requirements as early as possible to minimize impacts to project schedule.		
Active	34	Threat	Environmental	9/8/2015	Both	Initial Site Assessment	Initial Site Assessment (ISA) will be prepared during PA/ED to identify any contaminated sites.		3-Moderate	3-Moderate	4	4 -Moderate	8	Track progress and update PA/ED as appropriate.	Accept			
Active	35	Threat	ROW	9/8/2015	Both	Right of way and Utility relocation	Right of Way, Utilities. Utility relocation cost, time for negotiation of agreements with utility companies, and cost and time for site investigations and remediation. The risk is high for delay from negotiating agreements and implementing relocation work .		3-Moderate	3-Moderate	4	8 -High	24	Plan and track in advance - hold ROW and Utility focus meetings with owners and companies.	Mitigate			

Attachment J

Storm Water Data Report (SWDR) Cover

Long Form - Storm Water Data Report



Dist-County-Route: 07-LA-605; 07-LA-60
 Post Mile Limits: PM 15.1/20.4; PM 10.2/15.6
 Project Type: Corridor Improvement Project
 Project ID (or EA): 0714000331; 07-31010K
 Program Identification: HB4N
 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: 7/11/2021

Total Disturbed Soil Area: 136.0 acres Risk Level: 2
 Estimated: Construction Start Date: 11/11/2021 Construction Completion Date: 11/11/2026
 Notice of Intent (NOI) Date to be submitted: 10/11/2021

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

[Signature]
 Dany Maloney, P.E.
 Registered Project Engineer

[Signature] 11/17/15
 I-Chung Chu
 Caltrans Designated Oversight Representative

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

[Signature] 11/18/15
 Syed Huq, Project Manager

[Signature] 11/18/15
 Glen Mellinger, Designated Maintenance Representative

[Signature] 11/19/15
 Ron Russak, Designated Landscape Architect Representative

[Signature] 11/20/15
 [Stamp Required for PS&E only] Shirley Pak, District/Regional Design SW Coordinator or Designee

Attachment K

Nonstandard Design Features Matrix

Attachment J
I-605 & SR-60 PSR/PDS
Inventory of Design Exceptions

Legend:

M = Meets Design Standard

N/A = Not Applicable

V= Violates Design Standards (Exception Needed)

HDM Index	HDM Index Heading	Mandatory or Advisory	Design Standard	Probability of Approval	Location Description	Alternative 1 No Build	Alternative 2	Alternative 3	Alternative 4 Option A	Alternative 4 Option B
201.1	Stopping Sight Distance Standards	Mandatory	Table 201.1 shows the minimum standards for stopping sight distance related to design speed for motorists.	Low	I-605/SR 60 Connectors NB605/WB60	V	V	M	M	M
					I-605/SR 60 Connectors EB60//NB605	V	V	V	V	V
					WB SR-60 to SB I-605 Connector	V	V	V	V	V
					EB SR-60 to SB I-605 Connector	V	V	V	V	V
					I-605: Beverly Blvd to Rose Hills Rd SB	V	M	V	V	V
					I-605: Beverly Blvd to Rose Hills Rd NB	V	M	V	V	V
					I-605: Beverly Blvd to Rose Hills Rd NB	V	M	V	V	V
					I-605: SR-60 to Valley Blvd SB	V	M	M	V	V
					I-605: SR-60 to Valley Blvd NB	V	M	M	V	V
					I-605 NB at PECK Rd Off Ramp NB	V	V	V	V	V
					I-605 SB at PECK Rd Off Ramp NB	V	N/A	N/A	V	N/A
					I-605 SB at PECK Rd On Ramp SB	V	N/A	N/A	V	N/A
					I-605 NB at Valley Blvd Off Ramp NB	V	TBD	TBD	TBD	TBD
					I-605 NB at Valley Blvd Loop On Ramp NB	V	V	V	V	V
					I-605 NB at Valley Blvd Slip On Ramp NB	V	N/A	N/A	V	V
					I-605: Beverly Blvd to Rose Hills Rd NB Outside Lane	V	M	V	V	V
					I-605: SR-60 to Valley Blvd NB Outside Lane	V	M	M	V	V
					I-605: SR-60 to Valley Blvd SB Outside Lane	V	M	M	V	V
					I-605: Valley Blvd to I-10 NB	V	V	V	V	V
					I-605: Valley Blvd to I-10 SB	V	V	V	V	V
					I-10: I-605 to Durfee Ave EB	V	V	V	V	V
					I-10 Durfee Ave to I-605	V	V	V	V	V
					SR-60 WB at 7th St Off-Ramp	V	N/A	N/A	V	V
					I-605 NB Peck Rd On-Ramp	V	M	M	V	V
					I-605 NB Peck Rd On-Ramp	V	V	V	V	V
					SR-60 WB at Peck Rd Off-Ramp	V	V	V	V	V
					SR-60 WB: Peck Rd to I-605	V	V	V	V	M
					SR-60 WB: Peck Rd to I-606	V	V	V	V	V
					I-605 SB To SR-60 WB Connector	V	N/A	V	V	N/A
					SR-60 WB at Crossroads Pkwy On-Ramp	V	N/A	V	V	V
					SR-60 WB at Crossroads Pkwy Off-Ramp	V	N/A	V	V	V
					I-10 EB To I-605 SB Connector	V	V	V	V	V
					EB SR-60 to NB I-605 Connector	V	V	V	V	V
NB I-605 to WB SR-60 Connector	V	V	V	V	V					
WB SR-60 to SB I-605 Connector	V	V	V	V	V					
WB SR-60 to NB I-605 Connector	V	V	V	V	V					
EB SR-60 to SB I-605 Connector	V	V	V	V	V					
SB I-605 to EB SR-60 Connector	V	V	V	V	V					
NB I-605 to EB SR-60 Connector	V	M	M	V	V					
SB I-605 to WB SR-60 Connector	V	V	M	M	V					
I-605: Beverly Blvd to Rose Hills Rd	V	M	V	V	V					
I-605 NB at Rose Hills Rd Off Ramp	V	N/A	N/A	V	V					
I-605 SB at Rose Hills Rd Off Ramp	V	V	V	V	V					
I-605 SB at Rose Hills Rd Off Ramp	V	M	V	V	V					
I-605 SB at Rose Hills Rd On Ramp	V	V	V	V	V					
I-605 NB at PECK Rd Off Ramp	V	V	V	V	V					
I-605 NB at PECK Rd On Ramp	V	M	V	V	V					
I-605 SB at PECK Rd Off Ramp	V	N/A	N/A	V	N/A					
I-605 SB at PECK Rd On Ramp	V	N/A	N/A	V	N/A					
I-605 NB at Valley Blvd Off Ramp	V	V	V	V	V					
I-605 NB at Valley Blvd Off Ramp	V	M	M	V	V					
I-605 NB at Valley Blvd Slip On Ramp	V	N/A	N/A	V	V					
I-605 SB at Valley Blvd Off Ramp Loop Ramp	V	V	V	V	V					
I-605 SB at SB Valley Blvd On Ramp	V	M	M	V	V					
I-605 SB at SB Valley Blvd On Ramp	V	V	V	V	V					
SR-60 WB at Peck Rd Off Ramp	V	V	V	V	V					
SR-60 WB at Crossroads Pkwy Off Ramp	V	N/A	N/A	V	V					
SR-60 WB at Crossroads Pkwy On Ramp	V	V	V	V	V					
SR-60 WB at 7th St Off Ramp	V	N/A	N/A	V	V					
I-10 EB To I-605 SB Connector	V	V	V	V	V					
SR-60 EB at Peck Rd On-Ramp	V	V	V	V	V					
SR-60 WB at Peck Rd On-Ramp	V	V	V	V	V					
SR-60 WB at Peck Rd Off-Ramp	V	V	V	V	V					
I-605 SB Tol-10 WB Connector	V	M	M	V	V					
203.5	Compound Curves	Advisory	Where compound curves are necessary, the shorter radius should be at least two-thirds the longer radius when the shorter radius is 1,00ft or less. On one-way roads, the larger radius should follow the smaller radius.	High	I-605 SB at PECK Rd Slip On Ramp	V	N/A	N/A	V	N/A
203.6	Reversing Curves	Advisory	When horizontal curves reverse direction the connecting tangents should be long enough to accommodate the standard superelevation runoffs given on Figure 202.5. If this is not possible the 6 percent per 100 feet rate of change should govern (see Index 202.5(3))	Medium	SR-60 WB at Peck Rd Off Ramp	V	V	V	V	V

Attachment J
I-605 & SR-60 PSR/PDS
Inventory of Design Exceptions

Legend:

M = Meets Design Standard

V= Violates Design Standards (Exception Needed)

N/A = Not Applicable

HDM Index	HDM Index Heading	Mandatory or Advisory	Design Standard	Probability of Approval	Location Description	Alternative 1 No Build	Alternative 2	Alternative 3	Alternative 4 Option A	Alternative 4 Option B
301.1	Lane Width	Mandatory	The minimum lane width on two-lane and multilane highways, ramps, collector roads, and other appurtenant roadways shall be 12 feet, except as follows: For conventional State highways with posted speeds less than or equal to 40 miles per hour and AADTT (truck volume) less than 250 per lane that are in urban, city or town centers (rural main streets), the minimum lane width shall be 11 feet. Where a 2-lane conventional State highway connects to a freeway within an interchange, the	Medium	I-605: Rose Hills Rd to Peck Rd	V	M	M	V	V
					I-605: Peck Rd to SR-60	V	M	M	V	V
					I-605: SR-60 to Valley Blvd	V	M	M	V	V
					I-605 SB at PECK Rd Slip On Ramp	V	N/A	N/A	M	N/A
					SR-60 at Peck Rd On-Ramp	V	M	M	M	M
					SR-60 at Peck Rd On-Ramp	V	M	M	M	M
					SR-60 WB at Peck Rd Off-Ramp	V	N/A	N/A	NA	N/A
					Valley Blvd	V	V	V	V	V
					I-605: Valley Blvd to I-10	V	M	M	V	V
					I-605: Beverly Blvd to Rose Hills Rd	V	M	V	V	V
302.1	Shoulder Width	Mandatory	The shoulder widths given in Table 302.1 shall be the minimum continuous usable width of paved shoulder on highways.	Low	I-605: Rose Hills Rd to Peck Rd	V	M	M	V	V
					I-605: Peck Rd to SR-60	V	M	M	V	V
					I-605: Valley Blvd to I-10	V	M	V	V	V
					SR-60: 7th Ave to I-605	V	V	V	V	V
					I-605 SB at PECK Rd Off Ramp	V	M	M	V	M
					I-605 SB at PECK Rd Off-Ramp	V	N/A	N/A	V	N/A
					I-605 SB Rose Hills On-Ramp	N/A	N/A	N/A	NA	V
					I-605: Beverly Blvd to Rose Hills Rd	V	M	V	V	V
					I-605: Peck Rd to SR-60	V	M	M	V	V
					I-605: Valley Blvd to I-10	V	V	V	V	V
305.1 (3) (a)	Width (Facilities under Restrictive Conditions) (Freeways and Expressways)	Mandatory	In areas where restrictive conditions prevail the minimum median width shall be 22 feet.	Low	I-605: Beverly Blvd to Rose Hills Rd	V	M	V	V	V
					I-605: Peck Rd to SR-60	V	M	M	V	V
					I-605: Valley Blvd to I-10	V	V	V	V	V
309.1 (3)(b)	Minimum Clearances	Mandatory	The minimum horizontal clearance to walls, such as abutment walls, retaining walls in cut locations, and noise barriers on all facilities, including auxiliary lanes, ramps and collector/distributor roads, shall not be less than 10 feet per Table 302.1	High	I-605 Median at Rose Hills Rd	V	V	V	V	V
					I-605 Median at Peck Rd	V	V	V	V	V
					I-605 Median at SR-60	V	V	V	V	V
					WB Valley Blvd adjacent to bridge column	M	V	V	V	V
					WB Valley Blvd adjacent to bridge column	M	V	V	V	V
405.1(2)(a)	Intersection Sight Distance	Mandatory	Set back for the driver of the vehicle on the crossroad shall be a minimum of 10 feet plus the shoulder width of the major road but not less than 15 feet	Low	SB Off to WB Valley	M	V	V	V	V
501.3	Interchange Spacing	Mandatory	The minimum interchange spacing shall be one mile in urban areas, two miles in rural areas, and two miles between freeway-to-freeway interchanges and other interchanges. The minimum interchange spacing on Interstates outside of a Transportation Management Area shall be three miles.	High	I-605: Peck Rd to SR-60	V	V	V	V	V
					I-10: I-605 to Durfee Ave	V	V	V	V	V
					SR-60: 7th Ave to I-606	V	V	V	V	V
					SR-60: I-606 to Peck Rd	V	V	V	V	V
					I-605: Valley Blvd to I-10	V	V	V	V	V
					SR-60: Peck Rd to Santa Anita Ave	V	V	V	V	V
201.7 & 504.2(4)(a)	Decision Sight Distance & Freeway Entrances and Exits Decision Speed Consideration Freeway Entrances and Exits (Design Speed Considerations - Freeway Exit)	Advisory	On freeways and expressways the decision sight distance values in Table 201.7 should be used at lane drops and at off-ramp noses to interchanges, branch connections, roadside rests, vista points, and inspection stations. Decision sight distance given in Table 201.7 should be provided at freeway exits and branch connectors. At secondary exits on collector-distributor roads, a minimum	Medium	I-605 NB at Peck Off-Ramp	V	V	M	M	M
					SB I-605 Off Ramp at EB I-60/WB I-10 Convergence	V	V	V	V	V
					I-10: I-605 to Durfee Ave	V	V	V	V	V
					I-605 SB at PECK Rd Off Ramp	V	V	V	V	V
504.4(6)	Freeway Entrances and Exits (Standard Designs)	Advisory	Design of freeway entrances and exits should conform to the standard design illustrated in Figure 504.2A-B (single lane) and Figure 504.3L (two-lane entrances and exits) and/or Figure 504.4 (diverging branch connections), as appropriate.	Medium	EB SR-60 to SB I-605 Convergence	V	V	V	V	V
					I-10 WB Durfee Ave Off-Ramp	M	V	V	M	V
504.4(6)	Freeway Entrances and Exits (Standard Designs)	Advisory	Design of freeway entrances and exits should conform to the standard design illustrated in Figure 504.2A-B (single lane) and Figure 504.3L (two-lane entrances and exits) and/or Figure 504.4 (diverging branch connections), as appropriate.	Medium	SB I-605 EB/WB SR-60 Divergence	V	V	V	V	V
					SB I-605 EB/WB SR-60 Divergence	V	V	V	M	M
504.2(2)	Freeway Entrances and Exits Standard Designs	Mandatory	The minimum deceleration length shown on Figure 504.2B shall be provided prior to the first curve beyond the exit nose to assure adequate distance for vehicles to decelerate before entering the curve.	Medium	I-605 NB at PECK Rd Off Ramp	V	M	M	V	V
					I-605 SB at PECK Rd Off Ramp	V	M	M	V	M

Attachment J
I-605 & SR-60 PSR/PDS
Inventory of Design Exceptions

Legend:
M = Meets Design Standard
V= Violates Design Standards (Exception Needed)
N/A = Not Applicable

HDM Index	HDM Index Heading	Mandatory or Advisory	Design Standard	Probability of Approval	Location Description	Alternative 1 No Build	Alternative 2	Alternative 3	Alternative 4 Option A	Alternative 4 Option B
504.2(2)	Freeway Entrances and Exits Standard Designs	Mandatory	The minimum deceleration length shown on Figure 504.2B shall be provided prior to the first curve beyond the exit nose to assure adequate distance for vehicles to	Medium	SR-60 WB at 7th Ave Off-Ramp	V	N/A	N/A	V	V
504.2(3)	Freeway Entrances and Exits	Advisory	When an exit must be located where physical restrictions to visibility cannot be corrected by cut widening or object removal, an auxiliary lane in advance of the exit should be a minimum of 600 feet, 1000 feet preferred.	Medium	I-605 SB at Rose Hills Off-Ramp	V	V	M	M	M
					I-605 NB at Peck Rd Off-Ramp	V	V	M	M	M
504.3(1)(b)	Ramp General Lane Width	Mandatory	Width--Ramp lanes shall be a minimum of 12 feet in width. Where ramps have curve radii of 300 feet or less, measured along the outside edge of traveled way for single lane ramps or along the outside lane line for multilane ramps, with a central angle greater than 60 degrees, the single ramp lane, or the lane furthest to the right if the ramp is multilane, shall be widened in accordance with Table 504.3 in order to accommodate large truck wheel paths.	Low	I-605 NB at Valley Blvd Loop On Ramp	V	M	M	V	V
504.3(3)	Ramps (Location and Design of Ramp Intersections on the Crossroads)	Mandatory	The minimum distance (curb return to curb return) between ramp intersections and local road intersections shall be 400 feet.	Medium	I-605 NB at Rose Hills Rd Off Ramp	V	N/A	N/A	V	V
					I-605 SB at PECK Rd On Ramp	V	N/A	N/A	V	N/A
					I-605 NB at Valley Blvd Loop On Ramp	V	M	M	V	V
					I-605 NB at Valley Blvd Slip On Ramp	V	M	M	V	V
					SR-60 EB at Peck Rd On Ramp	V	V	V	V	V
					SR-60 WB at Peck Rd	V	V	V	V	V
					Peck Rd from SB I-605 On Ramp to Rooks Rd	M	V	V	V	V
					Peck Rd from SB I-605 Off Ramp to Rooks Rd	M	V	V	V	V
					WB Peck Rd from SR-60 Off to Farndon St.	V	V	V	V	V
					Durfee Ave from Peck Rd to EB on Ramp	V	V	V	V	V
WB SR-60 7th St Off Ramp	V	V	V	V	V					
504.3(5)	Ramps (Single-lane Ramps)	Advisory	If the length of a single lane ramp exceeds 1,000 feet, an additional lane should be provided on the ramp to permit passing maneuvers.	High	I-605 NB at Rose Hills Rd On Ramp	V	N/A	V	V	V
					SR-60 WB Peck Off-Ramp	M	V	V	V	V
					SR-60 EB Peck On-Ramp	M	V	V	V	V
					I-10 WB Connector Durfee Off-Ramp	N/A	V	V	N/A	V
					EB SR-60 Peck Rd Off Ramp Connector	N/A	V	V	V	V
					I-605 NB at Valley Blvd Slip On Ramp	V	N/A	N/A	V	N/A
					I-605 SB Rose Hills Off-Ramp	V	V	V	V	M
504.4 (6)	Freeway-to-Freeway Connections (Branch Connections)	Advisory	At a branch merge, a 2,500-foot length of auxiliary lane should be provided beyond the merge of one lane of the inlet, except where it does not appear that capacity on the freeway will be reached until five or more years after the 20 year design period. In this case the length of auxiliary lane should be a minimum of 1,000 feet.	Medium	I-605: Peck Rd to SR-60	V	V	M	V	M
504.6	Mainline Reduction at Interchange	Advisory	The number of mainline lanes should not be dropped through a local service interchange.	High	NB 605 EB/WB SR-60 Divergence	V	V	V	V	V
					I-605 NB Valley Off-Ramp	V	V	V	V	N/A
					NB I-605 Valley Blvd Off Ramp Divergence	V	N/A	N/A	N/A	V
					NB I-605 to I-10 Divergence	V	V	V	V	N/A
504.7	Weaving Sections	Mandatory	The minimum weaving length, measured as shown on Figures 504.2A and 504.2B shall be 2,000 feet in urban areas, 5,000 feet in rural areas, and 5,000 feet between freeway-to freeway interchanges and other interchanges.	Medium	I-605: Peck Rd to SR-60	V	V	V	V	V
504.8	Access Control	Mandatory	Access rights shall be acquired along interchange ramps to their junction with the nearest public road. Access control shall extend at least 50 feet beyond the end of the curb return, ramp radius, or taper. For new construction or major reconstruction, access rights shall be acquired on the opposite side of the local road from ramp terminals to preclude the construction of future driveways or local roads within the ramp intersection.	Medium	I-605 NB at Rose Hills Rd Off Ramp	V	M	M	V	V
					I-605 NB at PECK Rd Off Ramp	N/A	V	V	V	V
					I-605 NB at PECK Rd On Ramp	V	M	M	V	V
					I-605 SB at PECK Rd Off Ramp	V	M	M	V	M
					I-605 SB at PECK Rd On Ramp	V	M	M	V	M
					I-605 NB at Valley Blvd Off Ramp	V	M	M	V	V
					SR-60 EB at Peck Rd Off Ramp	V	V	V	V	V
SR-60 EB at Peck Rd On Ramp	V	V	V	V	V					

Attachment L

Preliminary Stage Construction Concept for the I-605/SR-60 Improvements
(bound separately)

Attachment M

I-605/I-10 and I-605/SR-60 HOV to HOV Direct Connector Technical Memorandum

DRAFT Technical Memorandum

To: Carlos Cadena, Michael Hynes, WKE **From:** Gary Hamrick, Chris Devlin, Iteris, Inc.
Date: December 10, 2014 **Job Number:** 17J14-1769
Re: HOV to HOV Direct Connector Assessment

Introduction

As part of the transportation analyses for the SR-60/I-605 PSR-PDS project, an evaluation of the projected volumes on potential direct HOV to HOV Direct Connectors has been completed using available model data and information. During the course of the SR-91/I-605/I-405 Congestion Hot Spots Feasibility Study conducted for Metro, a series of travel demand model runs were conducted. That travel demand model was used for detailed analysis, including the area contained in this PSR-PDS project. Those model runs were used to assess different levels of infrastructure investment, HOV direct connector ramps, toll scenarios, multi-modal improvements, freight corridors, and various combinations and permutations of these items. In addition to utilizing those modeling results, we have reviewed SCAG Regional Transportation Plan model HOV forecasts and other documents to make the assessments contained within this memo.

Unadjusted Model 2035 Volumes

Cambridge Systematics has run the Gateway Cities model to provide HOV forecasts for this analysis. The figures below show the unadjusted model volumes from Cambridge Systematics' model run (using the Gateway Cities model) that tested four HOV-HOV connector pairs in one combined model scenario:

- Between I-605 and I-10 (NB to WB & EB to SB)
- Between I-605 and I-10 (NB to EB & WB to SB)
- Between I-605 and SR-60 (NB to EB & WB to SB)
- Between I-605 and SR-60 (WB to NB & SB to EB)

Unadjusted model volumes are often "post-processed" in order to account for difference between model volumes and observed counts, however this effort did not include post processing. Thus these unadjusted volume forecasts should be used with caution and considered to be preliminary and based on the best available information. However, for purposes of comparing between alternative scenarios these volumes should be sufficient to form a view of the relative attractiveness of the four HOV to HOV direct connector pairs.

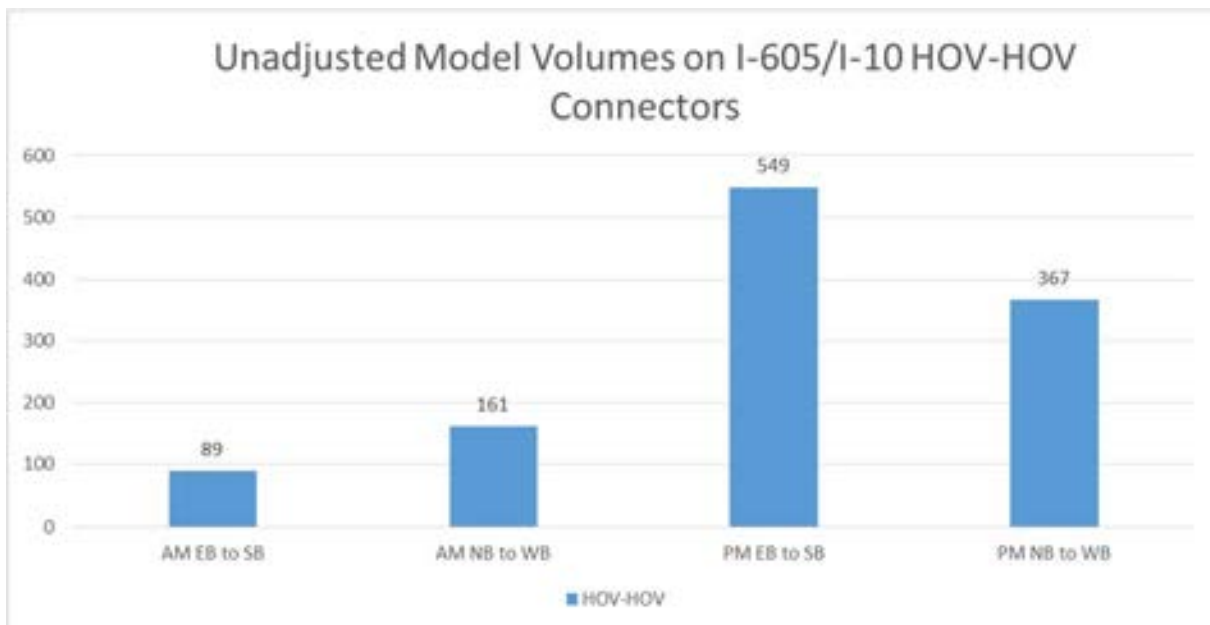
The model and scenario used as a starting point is the Gateway Cities Strategic Transportation Plan (STP) No Build model and that model includes the I-10 toll lanes between Downtown Los Angeles and I-605 as a modeling assumption. Note that since all four connector pairs are coded in the same network it is not possible to fully isolate the effects of each individual connector pair individually with and without the potential connectors.

Potential I-605/I-10 Direct HOV Connectors

At the I-605/SR-60 interchange there are two HOV-HOV connector pairs coded into the HOV-HOV model runs.

For the potential direct connector pair Eastbound to Southbound & Northbound to Westbound the Year 2035 model volumes shown below estimate relatively low forecast volumes as compared to the potential theoretical capacity of a connector ramp. While there is no stated capacity for HOV connector ramps nationwide or in California, Caltrans does state that for an HOV lane itself “to ensure that HOV lanes continue to offer a time-savings incentive to carpool, the California Air Resources Board (CARB) and Caltrans have set 1,650 vehicles per hour (vph) as the maximum capacity of HOV lanes” (75 percent of the maximum capacity of mixed-flow lanes). Thus, even when an HOV lane has reached its operating capacity, it would always appear to have room for additional vehicles as compared to the adjacent mixed-flow lanes. The HOV lanes that carry more than 1,650 vph are eligible for operational changes” (“HOV Lanes in California, are they Achieving their Goals?” January, 2000, Caltrans). As opposed to HOV lanes, the HOV connector may have a somewhat lower volume due to vertical and horizontal curves associated with the ramp itself, which would slow the speed of vehicles, thus an approximate capacity for a one lane connector of 1,500 vph can be assumed.

Since I-10 has a HOT lane west of I-605 (HOV3+ free, HOV2 pays toll) there is little incentive for HOV2 vehicles to use the mainline HOT lanes or this HOV connector pair, particularly in uncongested conditions. The EB to SB movement in the AM Peak for example is likely not that congested so it may not be unrealistic for these volumes to be very low. If tolling policy were changed to allow HOV2 to use the HOT lanes for free then forecast connector volumes would likely increase.



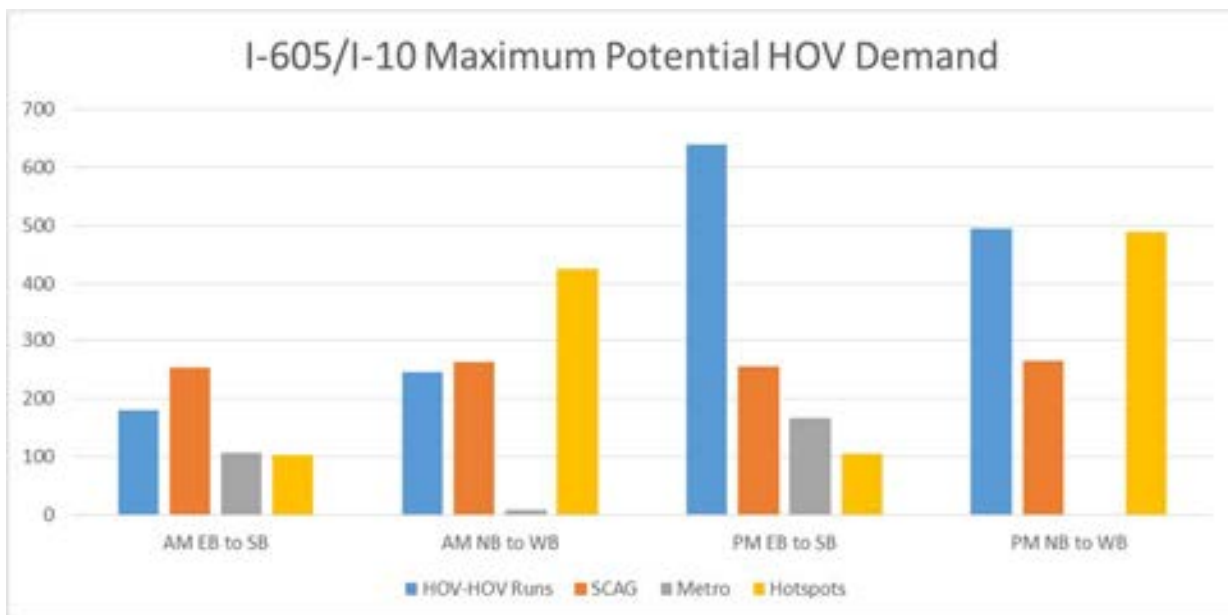
Source: Gateway Cities Travel Demand Model

The model used for these forecasts is based on the SCAG RTP model which uses a diversion curve to allocate HOV trips between the mainline and HOV lanes so the forecasts above do not represent the full potential HOV flows on

the connector since the model explicitly excludes some HOV trips from using the HOV connectors in order to better represent real world conditions. Also depending on the model network coding (such as where HOV entry and exit points to the mainline are coded) as well as levels of congestion in the model, a number of HOV trips which are permitted to use HOV facilities will choose to remain in the general purpose ramps instead of using the HOV connectors.

People travelling as carpools have the option to either use the HOV direct connector, or to use the regular connector ramps for other traffic as part of the general purpose mainline flow. The figure below shows all HOV volumes for the selected movements whether or not they use the HOV connectors (which represents the maximum potential HOV demand in the model). In reality this level of demand on the connectors will never be attained since there will always be HOV trips using the general purpose facilities. However, this figure represents a potential demand ceiling for the connector ramps. Potential demand was also extracted from three other traffic models for comparison purposes. The three models are:

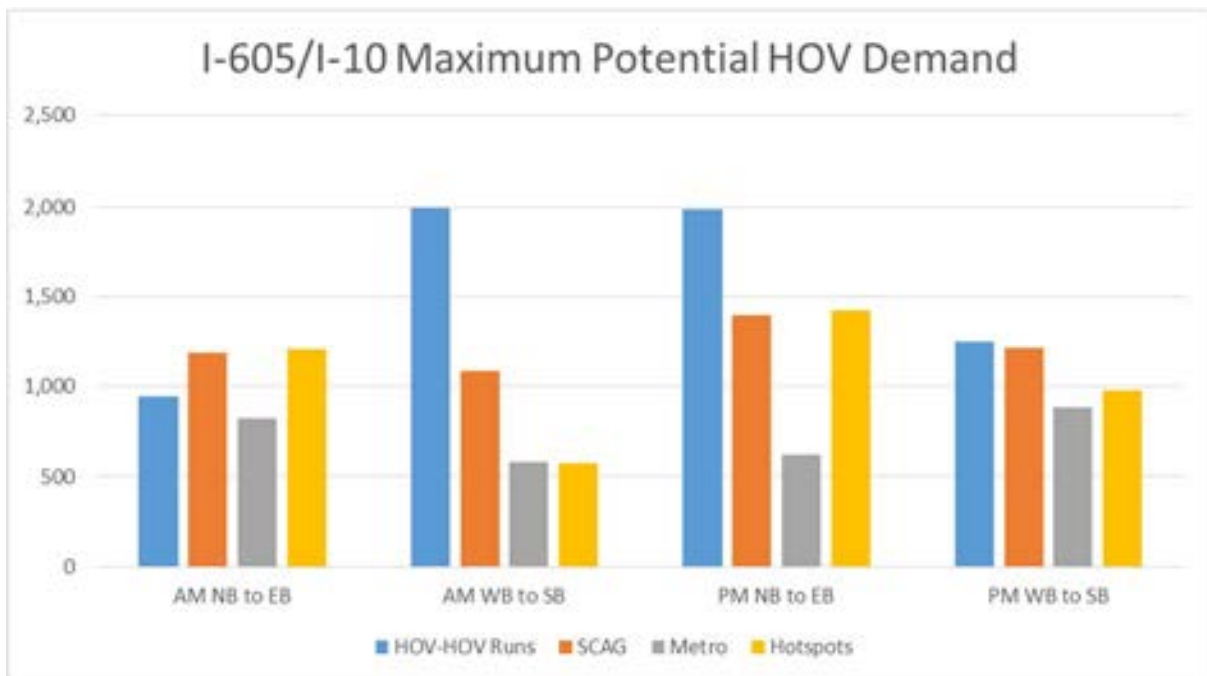
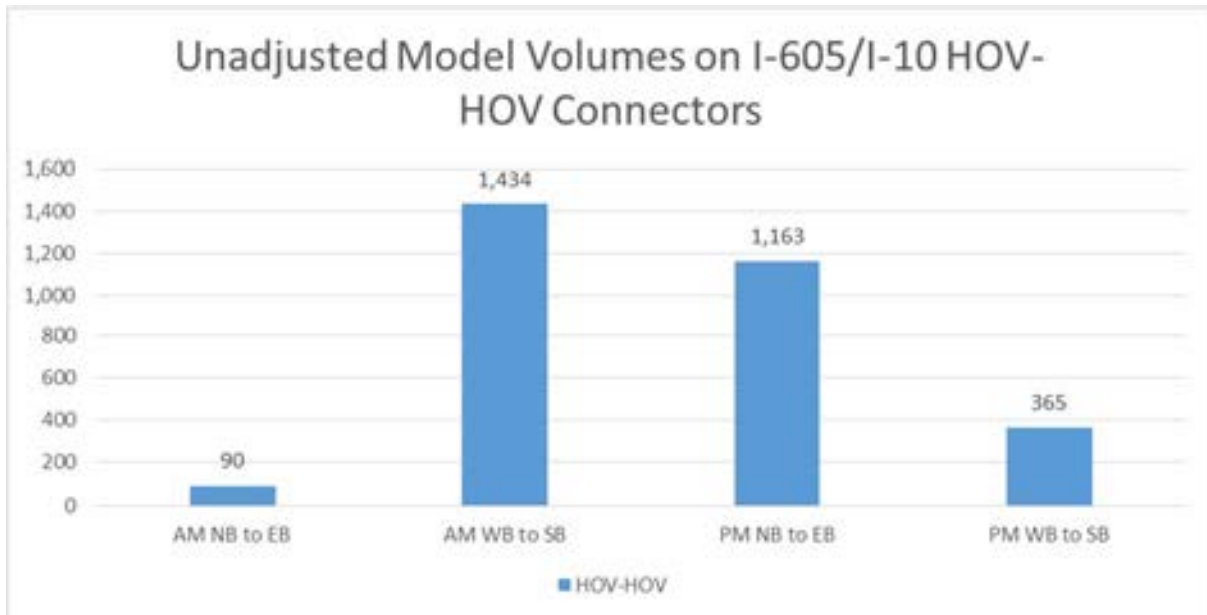
- 2012 SCAG RTP Model Year 2035 Baseline
- Metro Travel Demand Model Year 2024 and
- I-605 Congestion Hotspots model Year 2035 No-Build



A direct model to model comparison is not really possible since the HOV-HOV connectors are not specifically coded in the other models (for those models the HOV volumes are in the mainline only). It is possible that the coding of all four connector pairs in the Gateway Cities model is sufficient to change the model trip distribution and assignment attracting more HOV trips to the area. However, the comparison does provide a reasonableness check on the overall potential HOV connector demand at the interchange. In most cases, it is not expected that the presence of the HOV connector would greatly influence the total carpool trips in the interchange, so the general comparison is valid.

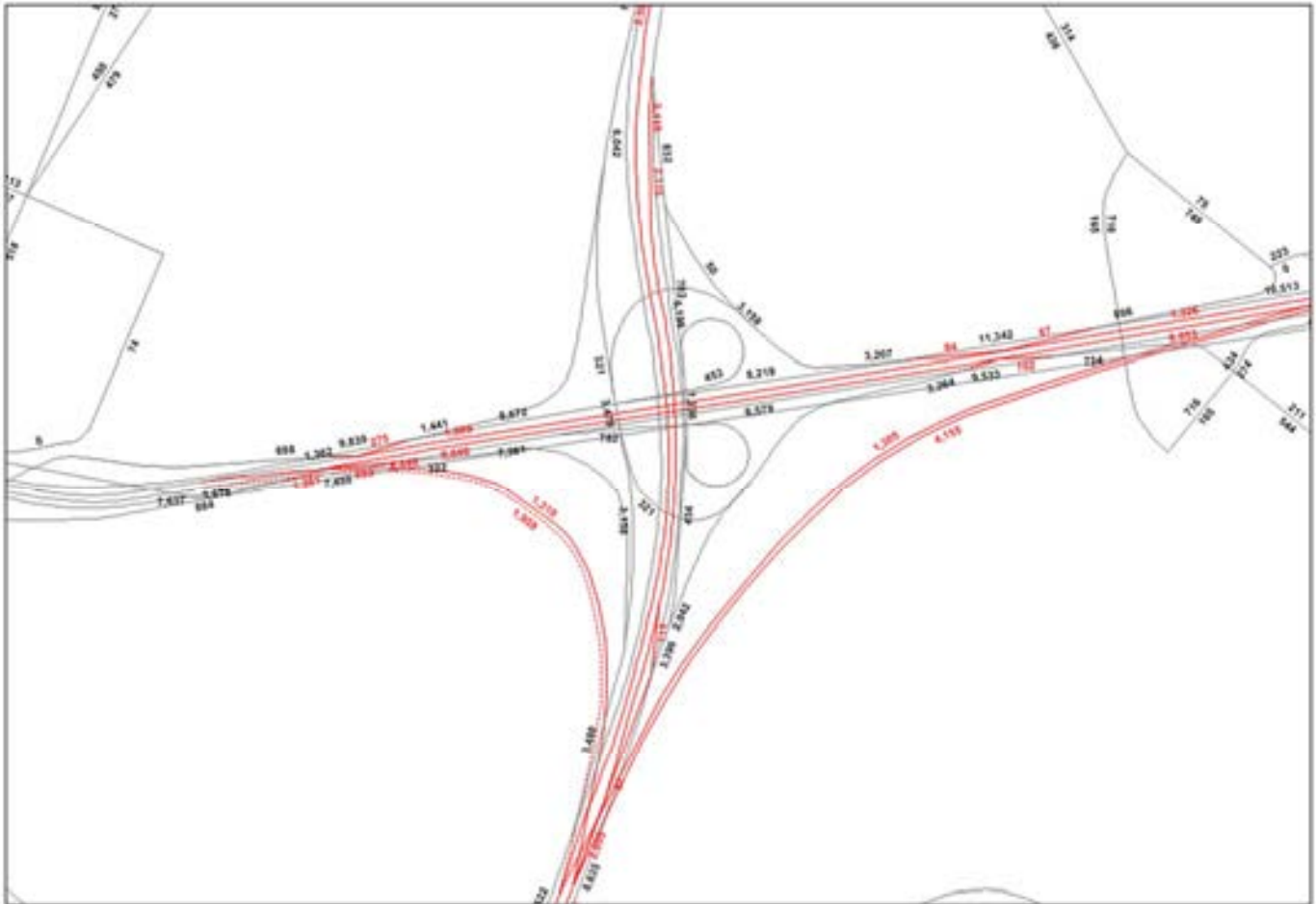
Even when maximum potential demand is considered it appears that demand is generally well below the capacity of the NB to WB & EB to SB connector pair.

Estimated Year 2035 volumes for the other connector pair at the I-605/I-10 interchange (Northbound to Eastbound and Westbound to Southbound) are shown below.



For the NB to EB and WB to SB connector pair the unadjusted model volume projections on the HOV connectors are much higher than the EB to SB and NB to WB connector pair. The highest volume occurring WB to SB in the AM peak hour followed by the reverse movement in the PM peak hour.

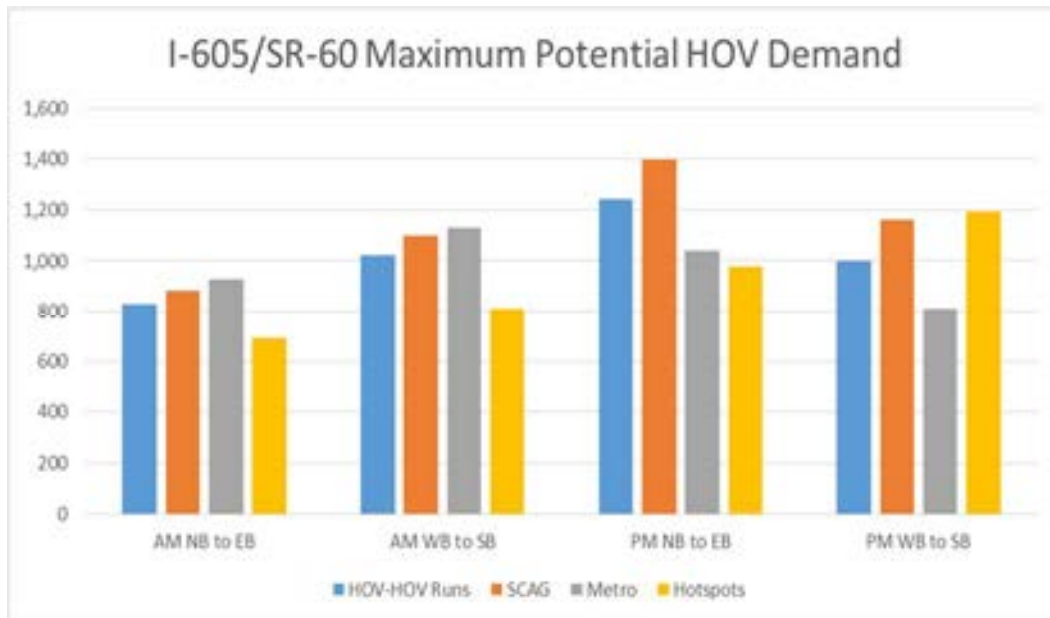
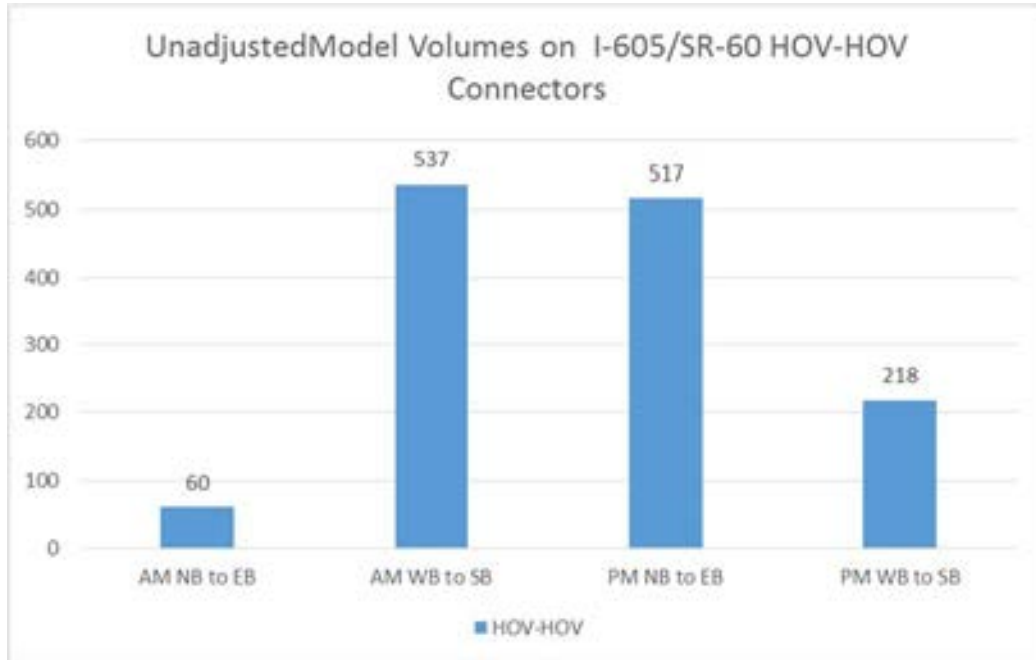
There is clearly a fair amount of potential HOV demand for the movements which is reflected in the other model volumes as well. One contributing factor maybe that the I-10 express lanes are only modeled between Downtown Los Angeles and I-605 so HOV trips wanting to use I-10 but unwilling to pay the tolls may divert to/from I-605 at the interchange. The following plots show the HOV forecasts around the I-605/I-10 interchange for peak periods (AM peak period is 6am-9am and PM peak period is 3pm to 7pm). Red labels show HOV trips on HOV facilities, black labels show HOV trip on general purpose facilities. Note the significant number of HOV trips that are forecast to use the general purpose ramp connectors not the HOV-HOV connector ramps.



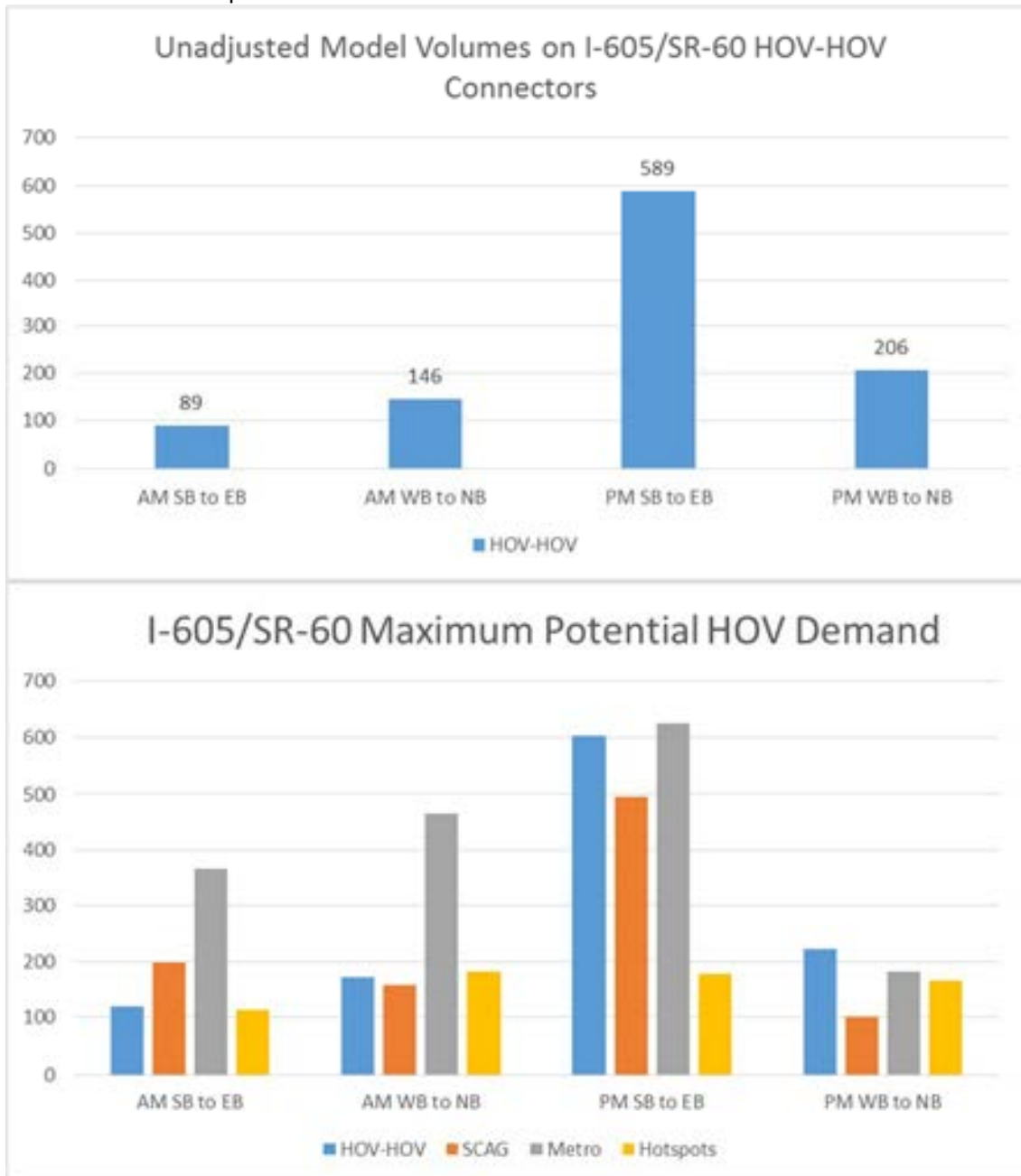
**2035 HOV Flows PM Peak Period (3PM to 7PM)
With I-605/I-10 HOV-HOV Connectors**

Potential I-605/SR-60 Direct HOV Connectors

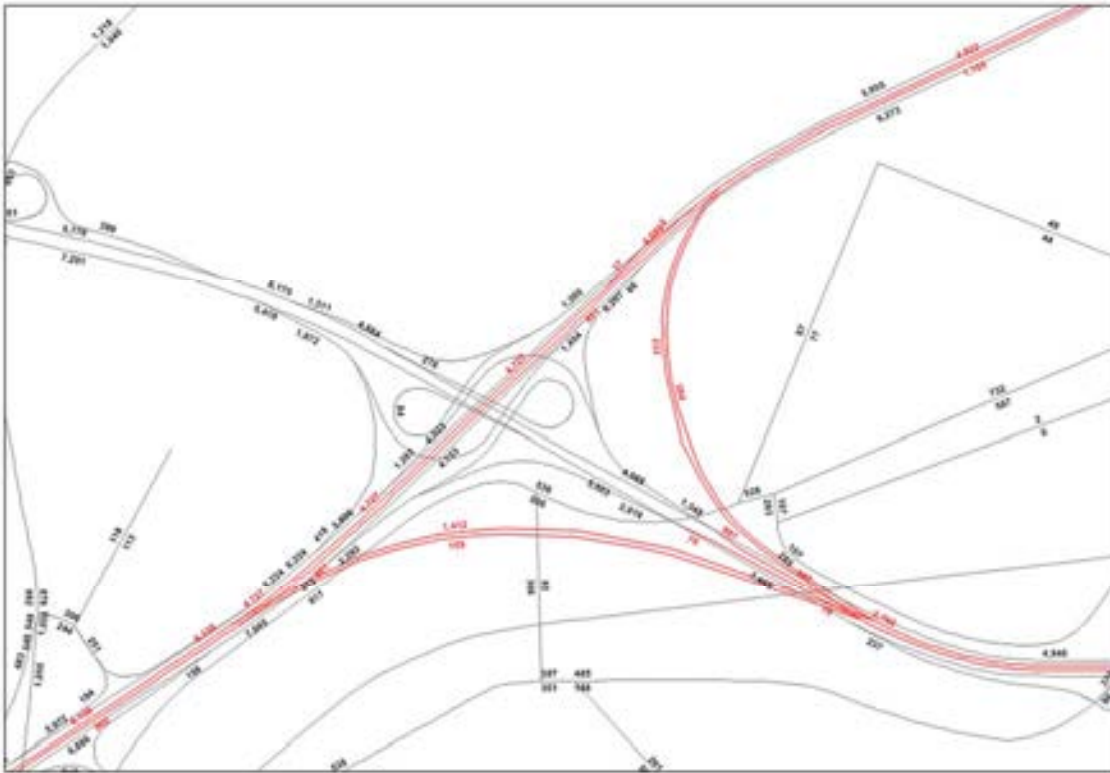
At the I-605/SR-60 interchange there are also two connector HOV-HOV connector pairs coded into the HOV-HOV model runs. The unadjusted Year 2035 model volumes for the Northbound to Eastbound/Westbound to Southbound connector pair show solid but not heavy volumes for the WB to SB movement in the AM peak hour and the reverse movement in the PM peak hour. There does appear to be a reasonable amount of overall HOV demand for these movements which is evident in the volumes from the other models as well, particularly the SCAG 2012 RTP model.



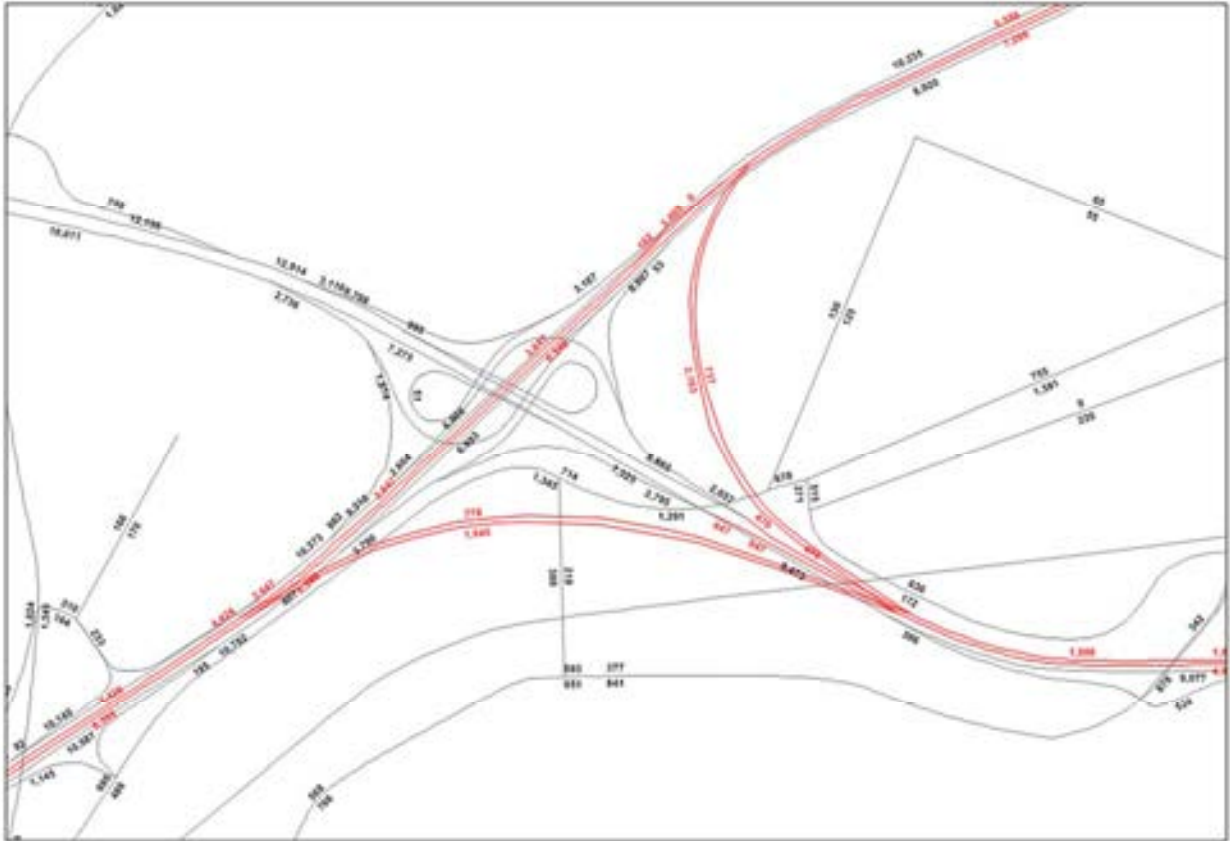
For the other connector pair at this interchange (Westbound to Northbound & Southbound to Eastbound) there are very low forecast 2035 model volumes except for SE to EB in the PM peak hour. In this case the reverse movement in the AM peak hour is low so this high PM volume could be an anomaly in the model. Looking at potential demand for this movement almost all of the potential demand is for SB to EB is allocated to the HOV connector which could imply severe congestion on the mainline connectors in the HOV model run. However, when we look at the other models the relatively high PM peak hour potential demand is also observed in the SCAG RTP model and in the Metro model. In the Metro model the reverse movement demand the AM peak hour shows at least some moderate potential demand.



The plots below show the HOV forecasts around the I-605/SR-60 interchange for peak periods (AM peak period is 6am-9am and PM peak period is 3pm to 7pm). Red is HOV trips on HOV facilities, black is HOV trip on GP facilities.



**2035 HOV Flows AM Peak Period (6AM to 9AM)
With I-605/SR60 HOV-HOV Connectors**



**2035 HOV Flows PM Peak Period (3PM to 7PM)
With I-605/SR-60 HOV-HOV Connectors**

Summary and Conclusions

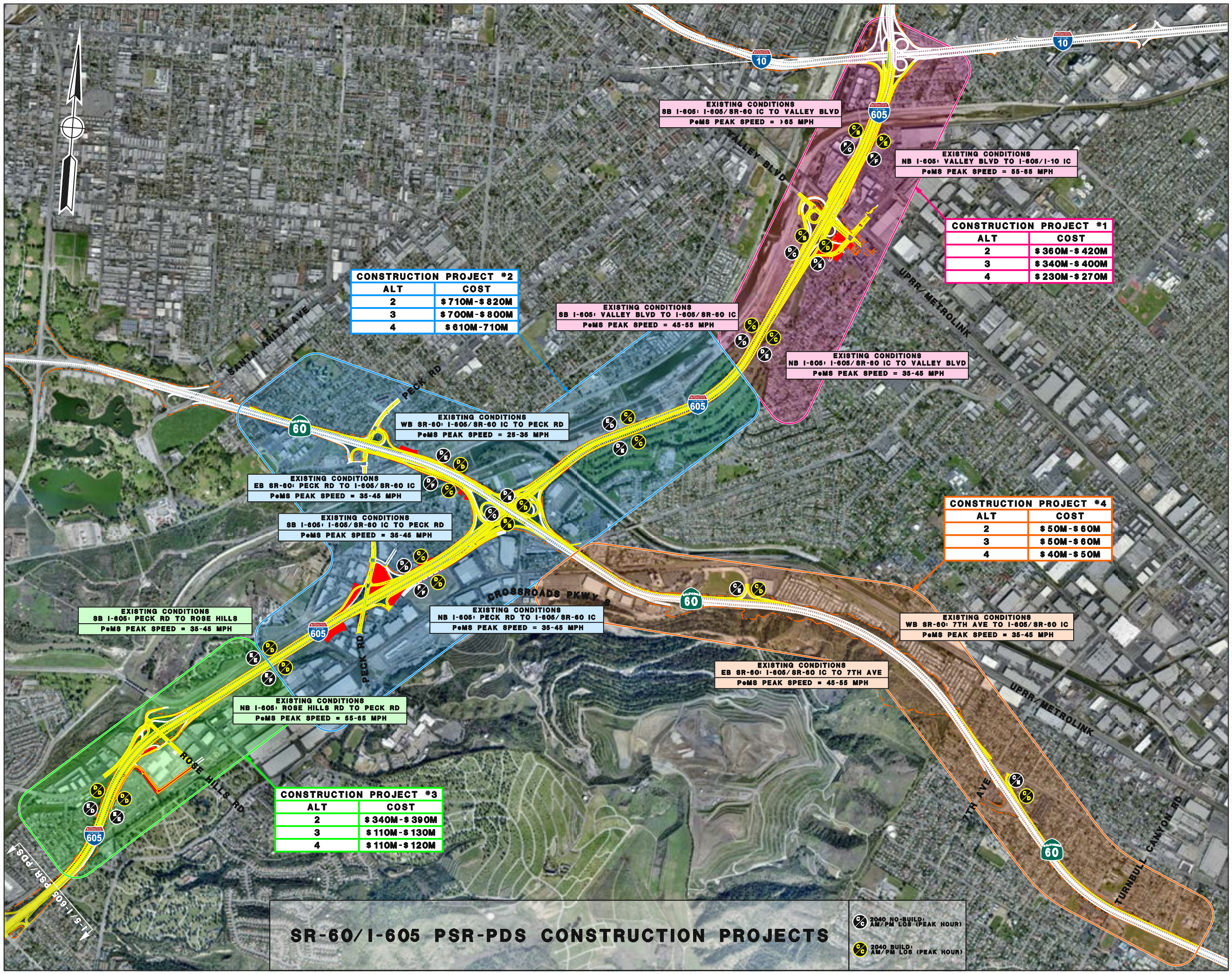
Using the available modeling resources including the Gateway Cities travel model and other regional traffic models, the team has investigated the possible demand for future HOV to HOV connectors for the I-605/I-10 and I-605/SR-60 interchanges. In order to provide a comparison between the four potential HOV connector pairs unadjusted (raw) model volumes were used. Based on this comparison it is possible to rank the connector pairs in order of anticipated traffic volumes.

1. Between I-605 and I-10 (NB to EB & WB to SB) – Projected Very High Demand
2. Between I-605 and SR-60 (NB to EB & WB to SB) - Projected Moderate to High Demand
3. Between I-605 and SR-60 (WB to NB & SB to EB) – Projected Low to Moderate demand
4. Between I-605 and I-10 (NB to WB & EB to SB) - Projected Low Demand

The models were used as available, and there was no additional effort to validate or adjust the models for purposes of HOV forecasting for this task. It is therefore recommended that the next phase study as part of PA/ED process conduct more detailed and focused/customized analysis, possibly utilizing the SCAG 2012 model and the Gateway Cities Mesoscopic model being developed using the Aimsun platform, for further review of the possible HOV direct connector volumes.

Attachment N

Construction Phasing/Project Phasing Concept



EXISTING CONDITIONS
SB I-605: I-605/SR-60 IC TO VALLEY BLVD
PoMS PEAK SPEED = 75 MPH

EXISTING CONDITIONS
NB I-605: VALLEY BLVD TO I-605/I-10 IC
PoMS PEAK SPEED = 55-65 MPH

CONSTRUCTION PROJECT #2

ALT	COST
2	\$ 710M-\$ 820M
3	\$ 700M-\$ 800M
4	\$ 610M-\$ 710M

CONSTRUCTION PROJECT #1

ALT	COST
2	\$ 360M-\$ 420M
3	\$ 340M-\$ 400M
4	\$ 230M-\$ 270M

EXISTING CONDITIONS
SB I-605: VALLEY BLVD TO I-605/SR-60 IC
PoMS PEAK SPEED = 45-55 MPH

EXISTING CONDITIONS
NB I-605: I-605/SR-60 IC TO VALLEY BLVD
PoMS PEAK SPEED = 35-45 MPH

EXISTING CONDITIONS
WB SR-60: I-605/SR-60 IC TO PECK RD
PoMS PEAK SPEED = 25-35 MPH

EXISTING CONDITIONS
EB SR-60: PECK RD TO I-605/SR-60 IC
PoMS PEAK SPEED = 35-45 MPH

EXISTING CONDITIONS
SB I-605: I-605/SR-60 IC TO PECK RD
PoMS PEAK SPEED = 35-45 MPH

CONSTRUCTION PROJECT #4

ALT	COST
2	\$ 50M-\$ 60M
3	\$ 50M-\$ 60M
4	\$ 40M-\$ 50M

EXISTING CONDITIONS
SB I-605: PECK RD TO ROSE HILLS
PoMS PEAK SPEED = 35-45 MPH

EXISTING CONDITIONS
NB I-605: PECK RD TO I-605/SR-60 IC
PoMS PEAK SPEED = 35-45 MPH

EXISTING CONDITIONS
WB SR-60: 7TH AVE TO I-605/SR-60 IC
PoMS PEAK SPEED = 35-45 MPH

EXISTING CONDITIONS
EB SR-60: I-605/SR-60 IC TO 7TH AVE
PoMS PEAK SPEED = 45-55 MPH

EXISTING CONDITIONS
NB I-605: ROSE HILLS RD TO PECK RD
PoMS PEAK SPEED = 55-65 MPH

CONSTRUCTION PROJECT #3

ALT	COST
2	\$ 340M-\$ 390M
3	\$ 110M-\$ 130M
4	\$ 110M-\$ 120M

SR-60/I-605 PSR-PDS CONSTRUCTION PROJECTS

2040 NO-BUILD: AM/PM LOS (PEAK HOUR)
 2040 BUILD: AM/PM LOS (PEAK HOUR)

Attachment O

PSR-PDS Survey Needs Questionnaire

ARTICLE 8

PSR-PDS SURVEY NEEDS QUESTIONNAIRE

General Guidance:

The project datums, vertical and horizontal, need to be established as soon as possible in the schedule, and all other mapping adjusted to the project datums. Obsolete datums such as NAD27 and NGVD29 should not be used for new projects.

What Survey Control Datums will be used for project design and mapping?

Vertical Control

- NAVD 1988 (Preferred)
- NGVD 1929 (Alternative)
- Other (Must consult with Caltrans Surveys)

Horizontal Control

California Coordinate System of 1983

- Epoch 1991.35
- Other than CCS83 (Must consult with Caltrans Surveys)

Will the project need a Sea Level Rise Risk Assessment? No

Does the project adjoin the ocean or tidal waterways? No

Is the existing highway protected by levees, sea walls, or rip-rap? No

Will existing as-builts, centerlines, or base mapping require any datum or unit conversions? No

Are the right of way record maps current? Yes

Is there any need to accelerate design accuracy surveys for this project? No