

ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT
Otay Mesa East Construct POE

Resolution TCEP-P-2021-07B
(will be completed by CTC)

1. FUNDING PROGRAM

- Active Transportation Program
- Local Partnership Program (Competitive)
- Solutions for Congested Corridors Program
- State Highway Operation and Protection Program
- Trade Corridor Enhancement Program

2. PARTIES AND DATE

- 2.1 This Project Baseline Agreement (Agreement) for the *Otay Mesa East Construct POE*, effective on, June 24, 2021 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, *San Diego Association of Governments (SANDAG) and Caltrans*, and the Implementing Agency, *SANDAG (0999C) and Caltrans (0999F)*, sometimes collectively referred to as the "Parties".

3. RECITAL

- 3.2 Whereas at its December 2, 2020 meeting the Commission approved the Trade Corridor Enhancement Program, and included in this program of projects the *Otay Mesa East Construct POE*, the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as Exhibit A and the Project Report attached hereto as Exhibit B, as the baseline for project monitoring by the Commission.
- 3.3 The undersigned Project Applicant certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

4. GENERAL PROVISIONS

The Project Applicant, Implementing Agency, and Caltrans agree to abide by the following provisions:

- 4.1 To meet the requirements of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1, Chapter 5, Statutes of 2017) which provides the first significant, stable, and on-going increase in state transportation funding in more than two decades.
- 4.2 To adhere, as applicable, to the provisions of the Commission:
- Resolution *Insert Number*, "Adoption of Program of Projects for the Active Transportation Program", dated
 - Resolution *Insert Number*, "Adoption of Program of Projects for the Local Partnership Program", dated
 - Resolution *Insert Number*, "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated
 - Resolution *Insert Number*, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated
 - Resolution TCEP G-20-77, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated December 2, 2020

- 4.3 All signatories agree to adhere to the Commission's Trade Corridor Enhancement Program, Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.
- 4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.
- 4.5 The SANDAG and Caltrans agrees to secure funds for any additional costs of the project.
- 4.6 The SANDAG and Caltrans agrees to report to Caltrans on a quarterly basis; after July 2019, reports will be on a semi-annual basis on the progress made toward the implementation of the project, including scope, cost, schedule, outcomes, and anticipated benefits.
- 4.7 Caltrans agrees to prepare program progress reports on a quarterly basis; after July 2019, reports will be on a semi-annual basis and include information appropriate to assess the current state of the overall program and the current status of each project identified in the program report.
- 4.8 The SANDAG and Caltrans agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines.
- 4.9 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits during the course of the project, and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.
- 4.10 The Transportation Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for four years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

5.1 Project Schedule and Cost

See Project Programming Request Form, attached as Exhibit A.

5.2 Project Scope

See Project Report or equivalent, attached as Exhibit B. At a minimum, the attachment shall include the cover page, evidence of approval, executive summary, and a link to or electronic copy of the full document.

5.3 Other Project Specific Provisions and Conditions

In the event of a cost overrun the state will cover a share proportionate to the state contribution of the TCEP funding identified in the Project Programming Request (PPR) submitted with this baseline agreement. (For example, if the state/regional TCEP funding share was a 40/60 ratio, the state may fund no more than 40% of the cost overrun.)

Attachments:

Exhibit A: Project Programming Request Form

Exhibit B: Project Report

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Otay Mesa East Construct POE
TCEP-P-2021-07B

Resolution _____



Hasan Ikhmeta

03/03/2021

Date

Executive Director, SANDAG

Project Applicant



Hasan Ikhmeta

03/03/2021

Date

Executive Director, SANDAG

Implementing Agency



Gustavo Dallarda

3-10-2021

Date

District Director

California Department of Transportation

Toks Omishakin

Date

Director

California Department of Transportation

Mitchell Weiss

Date

Executive Director

California Transportation Commission

Amendment (Existing Project) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					Date	01/15/2021 15:50:32	
Programs <input type="checkbox"/> LPP-C <input type="checkbox"/> LPP-F <input type="checkbox"/> SCCP <input checked="" type="checkbox"/> TCEP <input type="checkbox"/> STIP <input type="checkbox"/> Other							
District	EA	Project ID	PPNO	Nominating Agency			
11	05634	1100020521	0999C	Caltrans District 11			
County	Route	PM Back	PM Ahead	Co-Nominating Agency			
San Diego	11	2.700	2.700	San Diego Association of Governments			
				MPO	Element		
				SANDAG	Local Assistance		
Project Manager/Contact			Phone	Email Address			
Mario Orso			619-921-4230	mario.orso@dot.ca.gov			

Project Title

East Otay Mesa Land Port of Entry - Segment 3

Location (Project Limits), Description (Scope of Work)

Near San Diego on Route 11 at 1.9 miles east of Sanyo Avenue Undercrossing (Mexico border). Construct Port of Entry at the border with Mexico.

Component	Implementing Agency
PA&ED	Caltrans District 11
PS&E	San Diego Association of Governments
Right of Way	Caltrans District 11
Construction	San Diego Association of Governments

Legislative Districts

Assembly:	80	Senate:	40	Congressional:	51
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Project Milestone	Existing	Proposed
Project Study Report Approved	09/16/2000	
Begin Environmental (PA&ED) Phase		05/30/2007
Circulate Draft Environmental Document	Document Type EIR	12/11/2010
Draft Project Report		12/11/2010
End Environmental Phase (PA&ED Milestone)		04/01/2012
Begin Design (PS&E) Phase		03/01/2019
End Design Phase (Ready to List for Advertisement Milestone)		01/04/2022
Begin Right of Way Phase		04/01/2015
End Right of Way Phase (Right of Way Certification Milestone)		12/01/2021
Begin Construction Phase (Contract Award Milestone)		07/20/2022
End Construction Phase (Construction Contract Acceptance Milestone)		12/20/2024
Begin Closeout Phase		12/24/2024
End Closeout Phase (Closeout Report)		12/20/2026

Date 01/15/2021 15:50:32

Purpose and Need

The U.S. and Mexico continue to improve existing border infrastructure but increasing demands on today's border crossings in the San Diego-Baja California region are impeding mobility. Insufficient capacity at these border crossings, coupled with average wait times of two hours, costs both countries billions of dollars annually in foregone economic output.

To help solve this problem, the SR-11/OME POE will be the nation's first transformative land POE to integrate innovative technologies that will reduce border crossing wait times, traffic congestion, and vehicular emissions while enhancing cross-border travel and trade. Using variable tolls to provide a 20-minute average wait time goal, the POE will provide a new relief valve while managing traffic demand, resulting in decreased congestion and wait times at all the region's POEs. The new OME POE will improve regional security and safety, bolster the binational economy, improve mobility and efficiency, reduce greenhouse gas emissions, and foster innovative technology solutions, all while delivering a 10-to-1 return on investment for the San Diego region. Through managed operations and complete corridor integrations currently being implemented with the region's California Sustainable Freight Action Plan border pilot project, the new POE will be essential for a fully integrated regional transportation system.

NHS Improvements YES NO Roadway Class NA Reversible Lane Analysis YES NO
 Inc. Sustainable Communities Strategy Goals YES NO Reduce Greenhouse Gas Emissions YES NO

Project Outputs

Category	Outputs	Unit	Total
Other	Port Improvements	EA	1
Other	Border Crossing Improvements	EA	1

Date 01/15/2021 15:50:32

Additional Information

The Project Team is proposing to increase the budget of the existing 0999C to fund the required Bridging Document and associated studies and agreements that are integral to the completion of the Corridor Program. This comprehensive package will include the 30% design/plans, specifications and estimates for the OME POE, associated studies, and agreements that are necessary to enter into a Design-Build contract for constructing the POE and CVEF. This component (0999C) builds upon the TCEP Cycle 1 award (0999F) since the POE site preparation design informs the POE bridging document. The project team has recently finalized several procurements for the Corridor Program, and due to the complex nature of binational coordination the costs of these contracts were substantially higher than originally estimated. Although the project was recently granted Surface Transportation Block Grant Program (STBGP) funds, the recent budget assessment by the Project team suggests an increase in funding is needed. An added benefit to adding TCEP Cycle 2 funding is to Diversify the Corridor Program's funding portfolio.

Performance Indicators and Measures:

Hourly wait times, hourly volumes, reliability ratio, average vehicle occupancy
Build = 145,711,506; Future No Build = 559,561,630; Change = -413,850,124

Performance Indicators and Measures						
Measure	Required For	Indicator/Measure	Unit	Build	Future No Build	Change
Congestion Reduction	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	58,938	149,393	-90,455
	TCEP	Daily Truck Trips	# of Trips	5,251	5,251	0
	TCEP	Daily Truck Miles Traveled	Miles	0	0	0
Throughput	TCEP	Change in Truck Volume That Can Be Accommodated	# of Trucks	8,035	5,803	2,232
	TCEP	Change in Rail Volume That Can Be Accommodated	# of Trailers	0	0	0
			# of Containers	0	0	0
	TCEP	Change in Cargo Volume That Can Be Accommodated	# of Tons	0	0	0
# of Containers			0	0	0	
System Reliability	TCEP	Truck Travel Time Reliability Index	Index	0	0	0
	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	58,938	149,393	-90,455
Velocity	TCEP	Travel Time or Total Cargo Transport Time	Hours	306,475,260	776,843,470	-470,368,210
Air Quality & GHG	LPPF, LPPC, SCCP, TCEP	Particulate Matter	PM 2.5 Tons	2	7	-5
			PM 10 Tons	3	7	-4
	LPPF, LPPC, SCCP, TCEP	Carbon Dioxide (CO2)	Tons	224,257	619,854	-395,597
	LPPF, LPPC, SCCP, TCEP	Volatile Organic Compounds (VOC)	Tons	45	119	-74
	LPPF, LPPC, SCCP, TCEP	Sulphur Dioxides (SOx)	Tons	2.2	6.04	-3.84
	LPPF, LPPC, SCCP, TCEP	Carbon Monoxide (CO)	Tons	492	1,262	-770
LPPF, LPPC, SCCP, TCEP	Nitrogen Oxides (NOx)	Tons	168	692	-524	
Safety	LPPF, LPPC, SCCP, TCEP	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Number of Fatalities	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Fatalities per 100 Million VMT	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries per 100 Million VMT	Number	0	0	0
Economic Development	LPPF, LPPC, SCCP, TCEP	Jobs Created (Direct and Indirect)	Number	7,850	0	7,850
Cost Effectiveness	LPPF, LPPC, SCCP, TCEP	Cost Benefit Ratio	Ratio	10.64	0	10.64

District	County	Route	EA	Project ID	PPNO
11			05634	1100020521	0999C

Project Title
 East Otay Mesa Land Port of Entry - Segment 3

Existing Total Project Cost (\$1,000s)									Implementing Agency
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	
E&P (PA&ED)									Caltrans District 11
PS&E									San Diego Association of Governmen
R/W SUP (CT)									Caltrans District 11
CON SUP (CT)									San Diego Association of Governmen
R/W									Caltrans District 11
CON									San Diego Association of Governmen
TOTAL									

Proposed Total Project Cost (\$1,000s)									Notes
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	
E&P (PA&ED)									
PS&E	6,830	28,941						35,771	
R/W SUP (CT)	900							900	
CON SUP (CT)									
R/W	35,483							35,483	
CON				302,200				302,200	
TOTAL	43,213	28,941		302,200				374,354	

Fund #1:	Local Funds - Local Transportation Funds (Uncommitted)								Program Code
Existing Funding (\$1,000s)									Funding Agency
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	
E&P (PA&ED)									San Diego Association of Governmen
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Proposed Funding (\$1,000s)									Notes
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON				137,200				137,200	
TOTAL				137,200				137,200	

Fund #4:	Federal Disc. - Corridor Border Infrastructure (Committed)								Program Code
Existing Funding (\$1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									Federal Highway Administration (FHWA)
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									
E&P (PA&ED)									
PS&E		7,300						7,300	
R/W SUP (CT)									
CON SUP (CT)									
R/W	15,000							15,000	
CON									
TOTAL	15,000	7,300						22,300	
Proposed Funding (\$1,000s)									
E&P (PA&ED)									
PS&E		2,500						2,500	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL		2,500						2,500	

Fund #5:	RSTP - STP Local (Committed)								Program Code
Existing Funding (\$1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									Federal Highway Administration (FHWA)
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									
E&P (PA&ED)									
PS&E		2,500						2,500	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL		2,500						2,500	

Fund #6:		Federal Disc. - Corridor Border Infrastructure (Committed)							Program Code
Existing Funding (\$1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									Federal Highway Administration (FHW)
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									
E&P (PA&ED)									Utilizing Regional Obligation Authority. Toll credits used as match.
PS&E		8,446						8,446	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL		8,446						8,446	
Fund #7:		Future Need - Future Funds (Uncommitted)							
Existing Funding (\$1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON				165,000				165,000	
TOTAL				165,000				165,000	

Fund #8:	State SB1 TCEP - Trade Corridors Enhancement Account (Uncommitted)								Program Code
Existing Funding (\$1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									California Transportation Commissio
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									
E&P (PA&ED)									Proposed TCEP Cycle #2 funds from the San Diego/Border Regional Corridor Target (Regional TCEP)
PS&E		5,900						5,900	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL		5,900						5,900	
Proposed Funding (\$1,000s)									
E&P (PA&ED)									\$2.6 million match for TCEP Cycle #2 Funds
PS&E		2,600						2,600	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL		2,600						2,600	

Fund #9:	Local Funds - SBX Local Funds (Committed)								Program Code
Existing Funding (\$1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									San Diego Association of Governmen
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									
E&P (PA&ED)									\$2.6 million match for TCEP Cycle #2 Funds
PS&E		2,600						2,600	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL		2,600						2,600	

Amendment (Existing Project) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					Date	01/15/2021 15:50:24	
Programs		<input type="checkbox"/> LPP-C	<input type="checkbox"/> LPP-F	<input type="checkbox"/> SCCP	<input checked="" type="checkbox"/> TCEP	<input type="checkbox"/> STIP	<input type="checkbox"/> Other
District	EA	Project ID	PPNO	Nominating Agency			
11	05639	1117000151	0999F	Caltrans District 11			
County	Route	PM Back	PM Ahead	Co-Nominating Agency			
San Diego	11	2.700	2.700	San Diego Association of Governments			
				MPO	Element		
				SANDAG	Capital Outlay		
Project Manager/Contact			Phone	Email Address			
Mario Orso			619-921-4230	mario.orso@dot.ca.gov			

Project Title

Otay Mesa East Port of Entry - Segment 3A

Location (Project Limits), Description (Scope of Work)

Near San Diego on Route 11 at 1.9 east of Sanyo Avenue undercrossing.
 Right of Way Phase - Advanced Utility Relocation to include two gas line re-locations (24" and 30"), ancillary work to facilitate utility placement and utility connections for the future OME/POE.
 Construction Capital phase - Site preparation to include earthwork and drainage.

Component	Implementing Agency
PA&ED	Caltrans District 11
PS&E	Caltrans District 11
Right of Way	Caltrans District 11
Construction	Caltrans District 11

Legislative Districts

Assembly:	80	Senate:	40	Congressional:	51
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Project Milestone	Existing	Proposed
Project Study Report Approved	09/16/2000	
Begin Environmental (PA&ED) Phase		05/30/2007
Circulate Draft Environmental Document	Document Type EIR/EIS	12/11/2010
Draft Project Report		12/11/2010
End Environmental Phase (PA&ED Milestone)		06/27/2012
Begin Design (PS&E) Phase		08/16/2018
End Design Phase (Ready to List for Advertisement Milestone)		01/04/2022
Begin Right of Way Phase		06/24/2020
End Right of Way Phase (Right of Way Certification Milestone)		07/01/2021
Begin Construction Phase (Contract Award Milestone)		07/20/2022
End Construction Phase (Construction Contract Acceptance Milestone)		12/20/2024
Begin Closeout Phase		12/24/2024
End Closeout Phase (Closeout Report)		12/20/2026

Date 01/15/2021 15:50:24

Purpose and Need

The U.S. and Mexico continue to improve existing border infrastructure but increasing demands on today's border crossings in the San Diego-Baja California region are impeding mobility. Insufficient capacity at these border crossings, coupled with average wait times of two hours, costs both countries billions of dollars annually in foregone economic output.

To help solve this problem, the SR-11/OME POE will be the nation's first transformative land POE to integrate innovative technologies that will reduce border crossing wait times, traffic congestion, and vehicular emissions while enhancing cross-border travel and trade. Using variable tolls to provide a 20-minute average wait time goal, the POE will provide a new relief valve while managing traffic demand, resulting in decreased congestion and wait times at all the region's POEs. The new OME POE will improve regional security and safety, bolster the binational economy, improve mobility and efficiency, reduce greenhouse gas emissions, and foster innovative technology solutions, all while delivering a 10-to-1 return on investment for the San Diego region. Through managed operations and complete corridor integrations currently being implemented with the region's California Sustainable Freight Action Plan border pilot project, the new POE will be essential for a fully integrated regional transportation system.

NHS Improvements YES NO Roadway Class NA Reversible Lane Analysis YES NO
 Inc. Sustainable Communities Strategy Goals YES NO Reduce Greenhouse Gas Emissions YES NO

Project Outputs

Category	Outputs	Unit	Total
Other	Border Crossing Improvements	EA	1
Other	Port Improvements	EA	1

Date 01/15/2021 15:50:24

Additional Information

Reason For R/W Increase

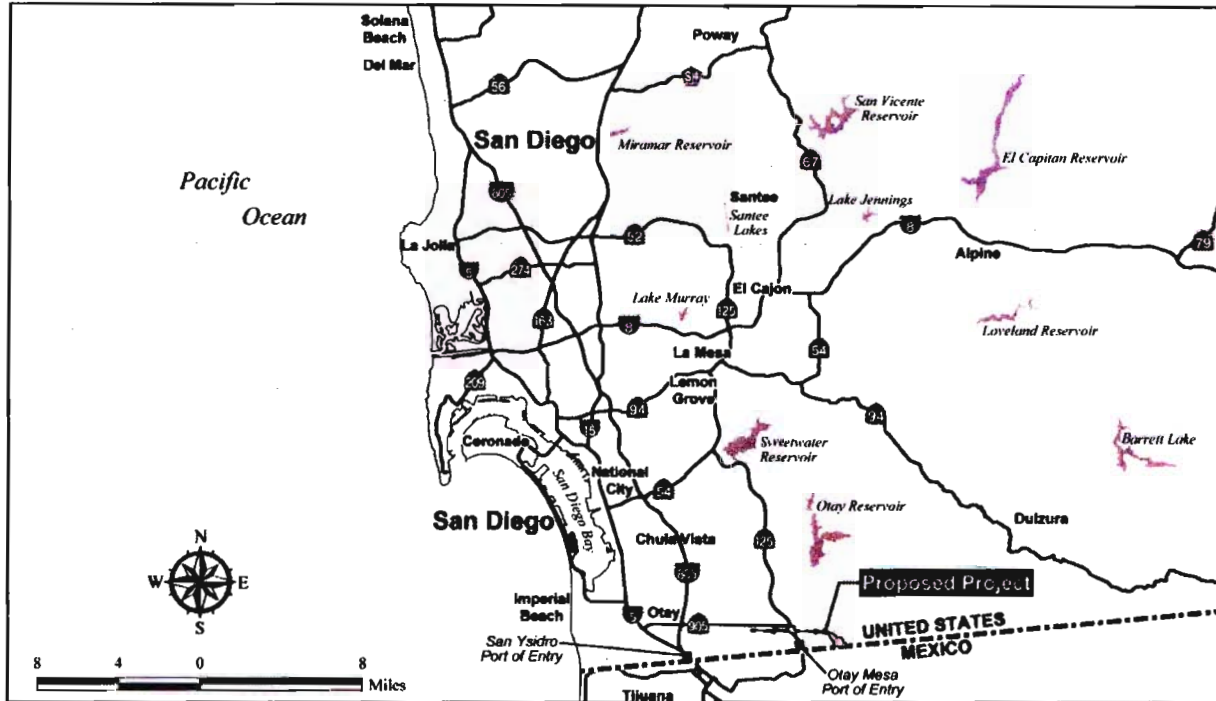
During TCEP Cycle 1 this project was separated from 0999C and was awarded funding for design and R/W (utility work). At that time, it was thought that the utility work would consist of "protect in place" the 30 inch gas line that runs parallel to the border and through the POE property. It was also thought that this work would be done with the construction of the POE. Since that time a VA study was completed, and it was decided that the best alternative moving forward was to relocate the gas line to go around the perimeter of the POE. The project team has been advised that Utility work, including utility relocation and service utilities, are generally high-risk items that could adversely impact a project's schedule and cost. This is especially true considering a design build contract. The TCEP Cycle 1 funding supported the site preparation design and the TCEP Cycle 2 funding will reduce Corridor Program risk by funding the implementation of necessary utility work.

Performance Indicators and Measures:

Hourly wait times, hourly volumes, reliability ratio, average vehicle occupancy
Build = 145,711,506; Future No Build = 559,561,630; Change = -413,850,124

Performance Indicators and Measures						
Measure	Required For	Indicator/Measure	Unit	Build	Future No Build	Change
Congestion Reduction	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	58,938	149,393	-90,455
	TCEP	Daily Truck Trips	# of Trips	5,251	5,251	0
	TCEP	Daily Truck Miles Traveled	Miles	0	0	0
Throughput	TCEP	Change in Truck Volume That Can Be Accommodated	# of Trucks	8,035	5,903	2,132
	TCEP	Change in Rail Volume That Can Be Accommodated	# of Trailers	0	0	0
			# of Containers	0	0	0
	TCEP	Change in Cargo Volume That Can Be Accommodated	# of Tons	0	0	0
# of Containers			0	0	0	
System Reliability	TCEP	Truck Travel Time Reliability Index	Index	0	0	0
	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	58,938	149,393	-90,455
Velocity	TCEP	Travel Time or Total Cargo Transport Time	Hours	306,475,260	776,843,470	-470,368,210
Air Quality & GHG	LPPF, LPPC, SCCP, TCEP	Particulate Matter	PM 2.5 Tons	2	7	-5
			PM 10 Tons	3	7	-4
	LPPF, LPPC, SCCP, TCEP	Carbon Dioxide (CO2)	Tons	224,257	619,854	-395,597
	LPPF, LPPC, SCCP, TCEP	Volatile Organic Compounds (VOC)	Tons	45	119	-74
	LPPF, LPPC, SCCP, TCEP	Sulphur Dioxides (SOx)	Tons	2.2	6.04	-3.84
	LPPF, LPPC, SCCP, TCEP	Carbon Monoxide (CO)	Tons	492	1,262	-770
LPPF, LPPC, SCCP, TCEP	Nitrogen Oxides (NOx)	Tons	168	692	-524	
Safety	LPPF, LPPC, SCCP, TCEP	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Number of Fatalities	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Fatalities per 100 Million VMT	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries per 100 Million VMT	Number	0	0	0
Economic Development	LPPF, LPPC, SCCP, TCEP	Jobs Created (Direct and Indirect)	Number	7,850	0	7,850
Cost Effectiveness	LPPF, LPPC, SCCP, TCEP	Cost Benefit Ratio	Ratio	10.64	0	10.64

ROUTE 11 PROJECT REPORT



CONSTRUCTION OF A NEW STATE ROUTE AND PORT OF ENTRY
IN SAN DIEGO COUNTY IN AND NEAR SAN DIEGO ON ROUTE 11 FROM ROUTE 905/11
SEPARATION TO MEXICO, AND ON ROUTE 125 FROM 0.8 MILES NORTH OF ROUTE 905/11
SEPARATION TO ROUTE 905/11 SEPARATION, AND ON ROUTE 905 FROM 0.1 MILE WEST OF
BRITANNIA BOULEVARD OVERCROSSING TO ROUTE 905/11 SEPARATION.

I have reviewed the right-of-way information contained in this Project Report and the Right-of-Way Data Sheets attached hereto, and find the data to be complete, current and accurate:


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SR-11 PROJECT REPORT
 STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

List of Acronyms

ac	acre	NADR	Noise Abatement Decision Report
BMPs	Best Management Practices	NAFTA	North American Free Trade Agreement
BRCA	Biological Resource Core Area	NHS	National Highway System
BSA	Biological Study Area	NPDES	National Pollution Discharge Elimination System
CAA	Clean Air Act	O&M	Operations and Maintenance
Caltrans	California Department of Transportation	OE/AAA	Obstruction Evaluation/Airport Airspace Analysis
CAPM	Capital Preventive Maintenance	PA&ED	Project Approval and Environmental Document Phase
CBIP	Coordinated Border Infrastructure Program	PCR	Program Change Request
CBP	Customs and Border Protection	PDS	Program Development Study
CDFG	California Department of Fish and Game	PDT	Project Development Team
CHP	California Highway Patrol	PEIR/PEIS	Program Environmental Impact Report/Phase I Environmental Impact Statement
CIA	Community Impact Assessment	POE	Port of Entry
COBRO	Committee on Binational Regional Opportunities	PS&E	Plans, Specifications, and Estimate
COOP	cooperative agreements	PSR	Project Study Report
CRWQCB	California Regional Water Quality Control Board	R/W	Right-of-Way
CTC	California Transportation Commission	ROD	Record of Decision
CVEF	Commercial Vehicle Enforcement Facility	RTIP	Regional Transportation Improvement Program
CWA	Clean Water Act	RTP	Regional Transportation Plan
DEMO	Demonstration	RWQCB	San Diego Regional Water Quality Control Board
DOS	U.S. Department of State	SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
EIR/EIS	Environmental Impact Report/Environmental Impact Statement	SANDAG	San Diego Association of Governments
EO	Executive Order	SB	Senate Bill
EOMSP	East Otay Mesa Specific Plan	SDAB	San Diego Air Basin
ESA	Endangered Species Act	SIP	State Implementation Plan
FAA	Federal Aviation Administration	SR	State Route
FHWA	Federal Highway Administration	SSP	Standard Special Provisions
FRTIP	Federal Regional Transportation Improvement Plan	STAA	Surface Transportation Assistance Act
FT	Foot	SWDR	Storm Water Data Report
GSA	General Services Administration	SWMP	Caltrans Storm Water Management Plan
HDM	Caltrans Highway Design Manual	SWPPP	Storm Water Pollution Prevention Plan
HMA	Hot Mix Asphalt	SWRCB	State Water Resource Control Board
HOV	High Occupancy Vehicle	T&RS	Traffic and Revenue Study
HPP	High Priority Projects	TCIF	Trade Corridor Improvement Fund
I-5	Interstate 5	TMC	Transportation Management Center
I-805	Interstate 805	TMP	Transportation Management Plan
IBWC	International Boundary and Water Commission	TSM/TDM	Transportation Systems Management/Transportation Demand Management
ISA	Initial Site Assessment	U.S.	United States
ITS	Intelligent Transportation Systems	USACE	United States Army Corps of Engineers
JPCP	Jointed Plain Concrete Pavement	USFWS	United States Fish and Wildlife Service
kV	Kilovolt	VA	Value Analysis
LCCA	Life Cycle Cost Analysis	VIA	Visual Impact Assessment
MEP	Maximum Extent Practicable	WIM	Weigh-in-motion
MHPA	Multi-Habitat Planning Area	YR	Year
MOU/MOA	memorandums of understanding/memorandums of agreement		
MPO	metropolitan planning organization		
MSCP	Multiple Species Conservation Program		

1. INTRODUCTION

The project presented in this document (referred to herein as the “proposed project” or “project”) includes the following major elements: State Route (SR-) 11, a United States (U.S.) Federal Port of Entry (POE), and a State of California Commercial Vehicle Enforcement Facility (CVEF). The proposed project is located in southwestern San Diego County. It is proposed to construct a new four-lane toll highway, SR-11, that would extend from the future SR-905/SR-125 Interchange approximately 2.7 miles east to the proposed Otay Mesa East POE in the City of San Diego’s Otay Mesa area and in the County of San Diego’s East Otay Mesa area. This project will reduce border wait times and border traffic congestion, and create a link between the U.S. regional highway system and the Mexico free and toll road systems. The estimated total cost for this project is \$754.5 Million (2011 dollars).

The project is proposed to be funded from a combination of sources including the Trade Corridor Improvement Fund (TCIF) and Local Transportation Funds generated from the sale of bonds for the toll facility. This project has been assigned the Project Development Processing Category 1 because it requires access control, new right-of-way, adoption of a route location by the California Transportation Commission (CTC), and Freeway Agreements. Construction is proposed to begin in the fall of 2013.

The California Department of Transportation (Caltrans), in partnership with the San Diego Association of Governments (SANDAG), the toll authority, is responsible for project development and construction, including securing applicable funding. SANDAG would work in cooperation with the U.S. General Services Administration (GSA) and U.S. Customs and Border Protection (CBP) to develop and construct the POE. Caltrans and SANDAG would also coordinate with California Highway Patrol (CHP) to develop and construct the CVEF. Coordination with federal and state resource agencies will be sought by the Federal Highway Administration (FHWA) and Caltrans for environmental approval.

2. RECOMMENDATION

It is recommended that the project be approved using the Preferred Alternative and proceed to the Design Phase.

All affected local agencies have been consulted with respect to the recommended plan, their views have been considered, and they are in general accord with the plan as presented.

3. BACKGROUND

3.1 Project History

As population, traffic, and trade have generally shown a steady rate of growth in the San Diego-Tijuana border region, State and local transportation and land use agencies in California and Baja California have identified the need for additional access and transportation facilities to connect the regions of San Diego and Tijuana. The existing border crossings in the region are located in San Ysidro and Otay Mesa. The San Ysidro

POE provides a non-commercial crossing to approximately 33.3 million people annually using various modes of travel¹, while the Otay Mesa POE provides both commercial and non-commercial crossing to approximately 1.5 million commercial trucks and 6 million non-commercial vehicles annually.² These POEs frequently experience long delays for both commercial and non-commercial vehicles. Ultimate capacities are being reached and although some improvements are planned, limited available right-of-way, rugged terrain and surrounding development constrain further expansion. Improvements to the existing Otay Mesa transportation corridor (U.S. and Mexico) are constrained by adjacent residential, commercial, and industrial development. Tijuana land use agencies have indicated that the residential, commercial and industrial urbanization, along with the difficult terrain adjacent to the U.S.-Mexico border between the Pacific Ocean and the San Ysidro Mountains, have severely limited the number of remaining options for a future border crossing between San Diego and Tijuana.³ Currently, a limited and decreasing number of sites are available in the Otay Mesa area.

The international component of a border crossing requires the coordination between the U.S. and Mexico. A Letter of Intent entitled “Binational Corridor Preservation for State Route 11 – Tijuana/Rosarito 2000 and Site Designation for the East Otay Mesa-Mesa de Otay II Port of Entry”, referred to as the SR-11 Letter of Intent, included support for the creation of a new international border crossing facility designated as East Otay Mesa - Otay II. Coordination is critical to the success of delivering the U.S. and Mexico projects on similar schedules. The U.S. POE and Mexico POE, as well as a CVEF and connecting roadways on each side of the border must all be operational prior to utilization of the new crossing. The SR-11 Letter of Intent was signed in 1998 by the following agencies:

- Caltrans District 11
- County of San Diego
- City of San Diego
- SANDAG
- Municipality of Tijuana
- Municipality of Playas de Rosarito
- Secretariat of Human Systems and Public Works of the State of Baja California Human Settlements

The SR-11 and Otay Mesa East POE facilities have been studied under a two-tier process: a first tier, “Phase I”, programmatic level study, and a second tier, “Tier II”, project level study. The two-tier process was selected because it would allow for critical milestones to be achieved earlier in the project. The milestone of an Approved Presidential Permit allowing for a crossing at the international border required environmental documentation of the proposed program. A POE would not be approved for operation without this. With a Phase I Record of Decision (ROD) dated October 3, 2008, a corridor for SR-11 was preserved, allowing San Diego County to proceed with adjacent development.

¹ SANDAG, San Ysidro Port of Entry Reconfiguration Mobility Study, January 2010

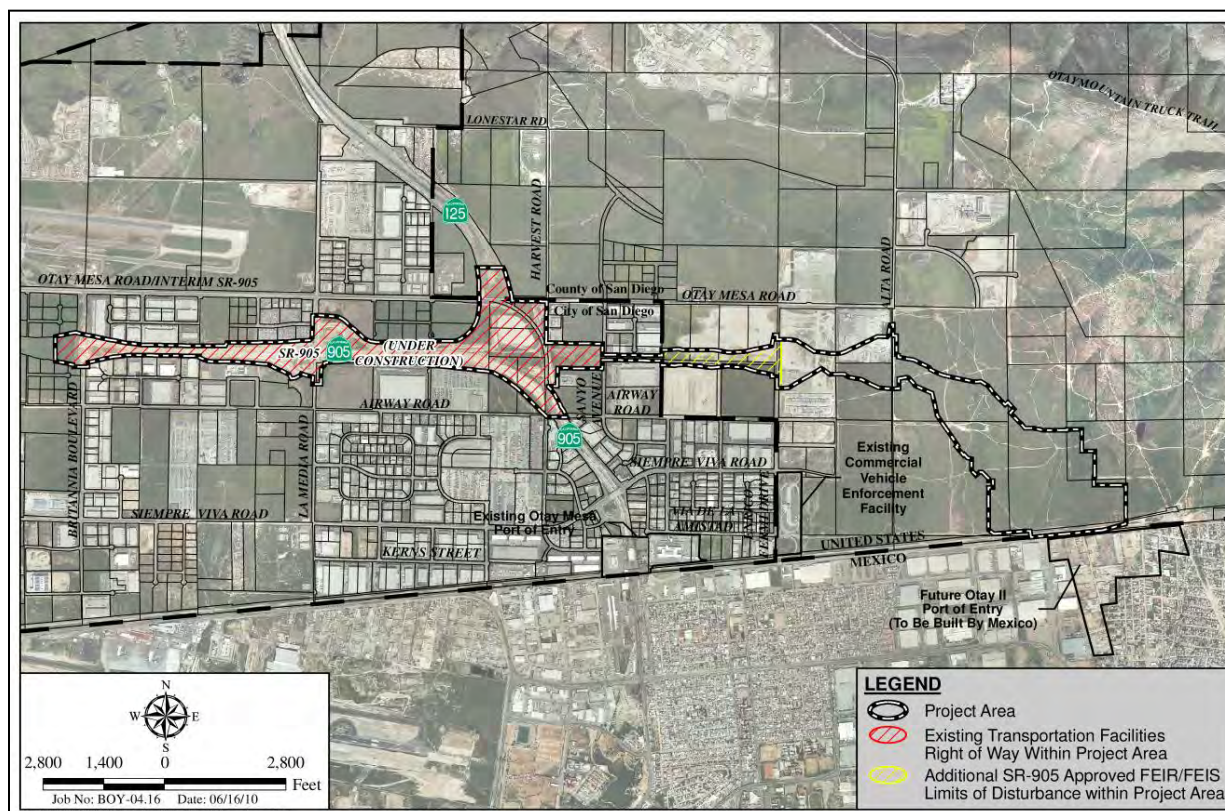
² CALTRANS, SR905/125 Interchange at Otay Mesa Port of Entry TBCR Program Application

³ SANDAG, 2007 Regional Transportation Plan White Paper: Crossborder Transportation, December 2006

In Phase I, a Programmatic Environmental Impact Report/Phase I Environmental Impact Statement (PEIR/PEIS) was prepared and certified to evaluate SR-11 and the POE at a programmatic level. The purpose of Phase I was to identify the preferred SR-11 corridor and POE site, and allow for the following:

- Consideration and approval of a Presidential Permit for the location of an International Border Crossing by the U.S. Department of State (DOS)
- Facilitation of land use and circulation planning in the East Otay Mesa Specific Plan (EOMSP) area by local agencies
- Support of international cooperation efforts to pursue the development of a new Otay Mesa East POE
- Future designation of right-of-way for each facility in cooperation with local and regional jurisdictions to ensure the right-of-way is shown conceptually on planning documents

The Tier II EIR/EIS, supported by this Project Report, is scheduled to be completed Spring 2012. The study area was based on the preferred corridor identified in Phase I and modifications to the approved SR-905 project required to construct the project (see Figure 1). The Tier II Draft EIR/EIS was published on November 24, 2010 and circulated for comment.



Source: Helix Environmental, Draft Tier II Community Impact Assessment for State Route 11 and Otay Mesa East Port of Entry, July 2010

Figure 1 - Tier II Study Area

The history of the project can be summarized as follows:

- **1994** SR-11 legislated into the state highway system
- **1998** SR-11 Letter of Intent signed
- **1999** SR-11 added to the California freeway and expressway system
- **1999** SR-11 amended to the Circulation Element of the County of San Diego General Plan
- **2000** SR-11 Project Study Report (PSR) approved by Caltrans District 11
- **2005** SR-11 identified as an area of opportunity to create an effective binational planning partnership by SANDAG Borders Committee
- **2005** SR-11 included on SAFETEA-LU List of High Priority Projects in San Diego
- **2007** SR-11 included in SANDAG's 2030 Revenue Constrained Regional Transportation Plan (RTP)
- **2007** SR-11 amended into the County Specific Plan
- **2007** The Otay Mesa East-Mesa de Otay Binational Corridor Strategic Plan was approved by the SANDAG Board of Directors, the SANDAG Borders Committee on Binational Regional Opportunities (COBRO) and the Tijuana City Council
- **2008** SR-11 Phase I Project Report approved by Caltrans District 11
- **2008** ROD granted to the SR-11 Phase I EIS
- **2008** SR-11 included in the Regional Transportation Improvement Program (RTIP)
- **2008** Senate Bill (SB) 1486 approved, granting authority to SANDAG to operate a toll facility on SR-11
- **2008** Conditional Presidential Permit was granted by DOS for the "piercing of the border"

The SR-11 PSR, completed in 2000, identified three alternative alignment locations, a no build alternative, and a local road alternative. The Phase I Project Report for SR-11, completed in 2008, identified a preferred corridor, the Western Alternative, to be studied further in the Tier II process. The Tier II Draft Project Report, published in November 2010, studied multiple alternatives with several variations, with analysis resulting in the recommendation of the project described in this Project Report.

Planned project funding involves the collection of a toll or user fee for the use of SR-11. The revenue generating capability outlined in SB 1486 authorizes the project to be financed in a non-traditional way, through a public-public partnership. SANDAG will serve as the Toll Authority per SB 1486. This type of financing strategy is a mechanism whereby capital infrastructure projects are funded and built through a partnership of only public agencies through the sale of bonds. A Traffic and Revenue Study (T&RS) is currently being jointly prepared by SANDAG and Caltrans to study the revenue generating capability of the project through tolling.

3.2 Community Interaction

Due to the widespread financial and social effects of an international POE on the surrounding communities and region, efforts have been made to involve a variety of stakeholders in the project development process. The Project Development Team (PDT) for the Project includes representatives from FHWA, GSA, CBP, SANDAG, County of San Diego, and City of San Diego, as well as Caltrans. It has also included participants representing Sempra Energy/SDG&E, Regional Water Quality Control Board (RWQCB),

U.S. Border Patrol, CHP and financial institutions. The PDT was formed to facilitate and coordinate delivery of the project. The first PDT meeting was held on March 20, 2007 and continues to meet regularly.

Presentations describing the project features and planned schedule have been given to various groups and committees including but not limited to the SANDAG Borders Committee on March 23, 2007, with an updated presentation on February 25, 2011. Multiple meetings with property owners, Otay Mesa Chamber of Commerce, Otay Mesa Property Owners Association, and several organizations in Mexico have been held to maintain the flow of information to and from project stakeholders.

Public scoping meetings were held on June 6, 2007 and December 4, 2008 at Ocean View Hills Elementary School in Otay Mesa with invitations extended to government officials and resource agencies in the U.S. and Mexico, as well as to members of the local chamber of commerce, residents, and area land owners. The meetings were advertised in the San Diego Union Tribune, and two Spanish language newspapers circulated in the San Diego region. Both public scoping meetings were an open house format. The first of which included several exhibits showing the corridor alternatives being studied and various features of the project area such as land use, vegetation, wildlife, and biological resources. The second meeting included exhibits showing the alignment, footprint, and biological resources associated with the Draft Project Report Two Interchange, One Interchange and No Interchange alternatives, along with the associated variations.

Public hearings were held on February 20, 2008 and January 19, 2011 at Ocean View Hills Elementary School in Otay Mesa following release of the Phase I Draft PEIR/PEIS and Tier II Draft EIR/EIS, respectively. Exhibits depicting the alternatives and variations were displayed for discussion, and the Draft environmental documents with technical studies were available for review. Attendees generally consisted of local residents and property owners within the project vicinity. Several written comments were received at the Phase I Draft PEIR/PEIS public hearing and no written comments were received at the Tier II Draft EIR/EIS public hearing. Several follow-up presentations were given to stakeholders after the Tier II Draft EIR/EIS and Draft Project Report were published.

3.3 Existing Facilities

SR-11 is a new highway proposed in an area that is largely undeveloped and consists mainly of gently rolling natural grasslands.

The San Diego-Tijuana metropolitan border area includes two POEs, one in San Ysidro and one in Otay Mesa. The San Ysidro POE is served by I-5 and I-805, with southbound vehicles merging to six lanes prior to crossing the border. Otay Mesa is served by SR-905 and SR-125. Commercial traffic in the San Diego-Tijuana metropolitan area is restricted to the Otay Mesa POE where wait times typically exceed two hours.⁴ The only current alternative commercial crossing is accessed from SR-94. SR-94 is a principle east-west route that serves outlying rural communities located in the southeastern portion of San Diego County and traverses the cities and communities of San Diego, Lemon Grove, La

⁴ SANDAG, Economic Impacts of Wait Times in the San Diego-Baja California Border Region Fact Sheet, September 2007

Mesa, Spring Valley, Casa De Oro, Rancho San Diego, Jamul, Dulzura, Potrero, Campo, and Boulevard to the east. It provides access to SR-188 which provides access to the International Border at Tecate, Mexico. Vehicles in excess of 30 feet in length are restricted from utilizing this crossing due to the rugged terrain and turning movements needed to reach the POE via SR-94.

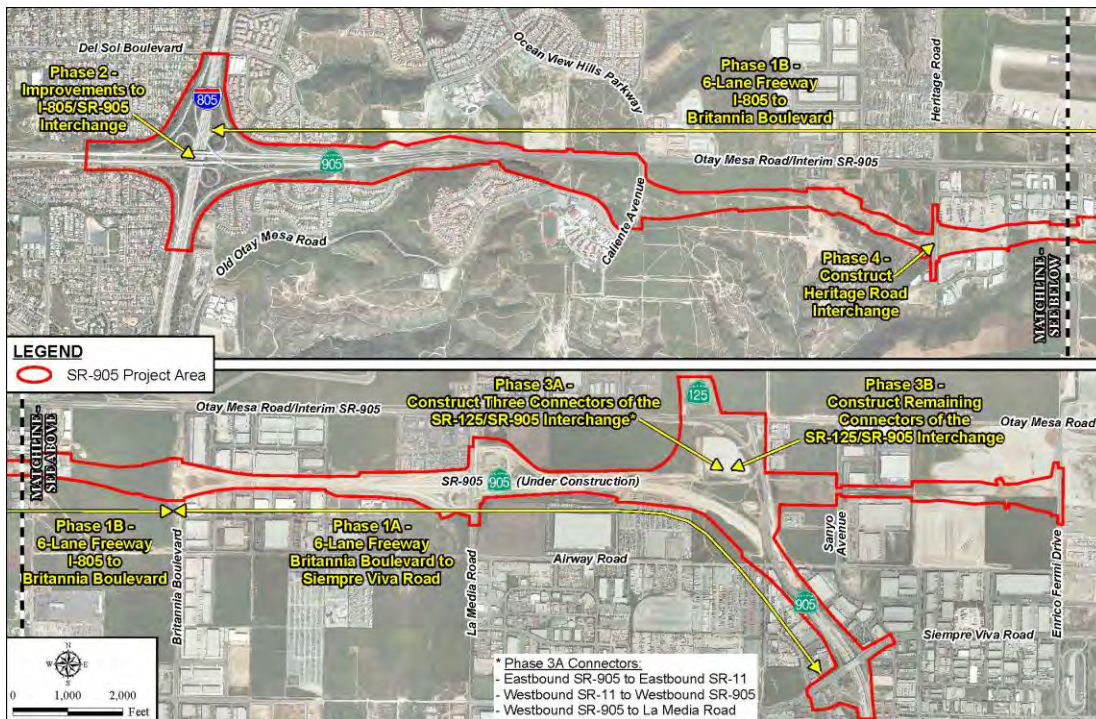
An existing CVEF located on the eastern side of Enrico Fermi Drive between Siempre Viva Road and Via de la Amistad currently serves the existing Otay Mesa POE as a CHP inspection point for northbound commercial vehicles entering the U.S.

SR-125 is a south-north four to eight lane facility from Otay Mesa Road to SR-52 that traverses the cities of San Diego, Chula Vista, La Mesa, El Cajon, Santee, and the unincorporated communities of Bonita and Spring Valley. The southern portion of SR-125 from Otay Mesa Road to SR-54 is tolled as the "South Bay Expressway".

SR-905 is a principle east-west, six lane, twelve mile route which provides access between the developing Otay Mesa area and other destinations north via I-5 and I-805. It extends from the International Boundary near Border Field Park, 2.8 miles west of I-5, to the International Border Crossing at Otay Mesa. The SR-905 approved project environmental documents⁵ include local access ramps between SR-905 and Enrico Fermi Drive. These ramps were intended for local road connection with SR-905 prior to construction of SR-11. The proposed project will replace these local access ramps with direct connectors between SR-905 and SR-11.

The SR-905 ROD (FHWA-EIS-CA-01-03-F/July 23, 2004) approved the construction of SR-905 from I-805 to the Otay Mesa POE. This project is being constructed in the following phases as shown in Figure 2.

⁵ Caltrans, Route 905 Final Environmental Impact Statement/Report, July 2004



Source: Final Tier II Environmental Impact Report/Environmental Impact Statement

Figure 2 - SR-905 Construction Phases

Phase 1A: Includes construction of a new freeway from 0.6 kilometers (km) east of Cactus Road to 0.3 km west of the Mexico Border. Construction of this phase was completed in 2011.

Phase 1B: Includes construction of a new freeway from 1.2 km east of the I-805/SR-905 separation to 0.8 km east of the Britannia Boulevard overcrossing. Construction of this phase has started, and is scheduled for completion in 2012.

Phase 2: Includes improvements to the I-805/SR-905 interchange. The westbound SR-905 to northbound I-805 connector would be widened to two lanes. An auxiliary lane along northbound I-805, between SR-905 and Palm Avenue, would be constructed that would include widening of the Del Sol Boulevard undercrossing. Construction of this phase began in Spring 2011 and was completed in January 2012.

Phase 3: Includes construction of the SR-905/SR-125 interchange (see Figure 3). This phase would construct a two lane local access ramp connecting SR-905 east of La Media Road to an intersection at Enrico Fermi Drive. It also includes an undercrossing at Sanyo Avenue, freeway-to-freeway connectors between SR-905 and SR-125, and a local access ramp to Siempre Viva Road from eastbound SR-905.

Phase 4: During this phase, the Heritage Road interchange would be constructed. Should the local streets not receive all the necessary future approvals, this interchange may not be needed or constructed. Phase 4 is anticipated to be under construction no sooner than Fall 2016.

Since construction of proposed SR-11 will require modifications to Phase 3 of SR-905, it is proposed to incorporate part of this phase into the SR-11 project. The local access ramps at Enrico Fermi Drive would be replaced by the western portion of SR-11, including the connectors between SR-11 and SR-905. To this end, Phase 3 of the SR-905 project has been separated into two phases, 3A and 3B, through a Program Change Request (PCR). The PCR was approved by Caltrans Headquarters in September 2011 and by the CTC in January 2012.

Phase 3A includes three connectors; eastbound SR-905 to eastbound SR-11, westbound SR-11 to westbound SR-905 and a westbound SR-905 exit ramp to La Media Road. (An interim exit ramp from westbound SR-905 to La Media Road was included in the construction of SR-905 Phase 1A.)

Phase 3B includes the remaining connectors associated with the original SR-905 Phase 3; connectors between SR-125 and SR-905, eastbound SR-905 and westbound SR-11 connectors to northbound SR-125, and the eastbound SR-905 to Siempre Viva Road exit ramp. This part of phase 3 will remain unfunded. There is no set construction start date for this phase.

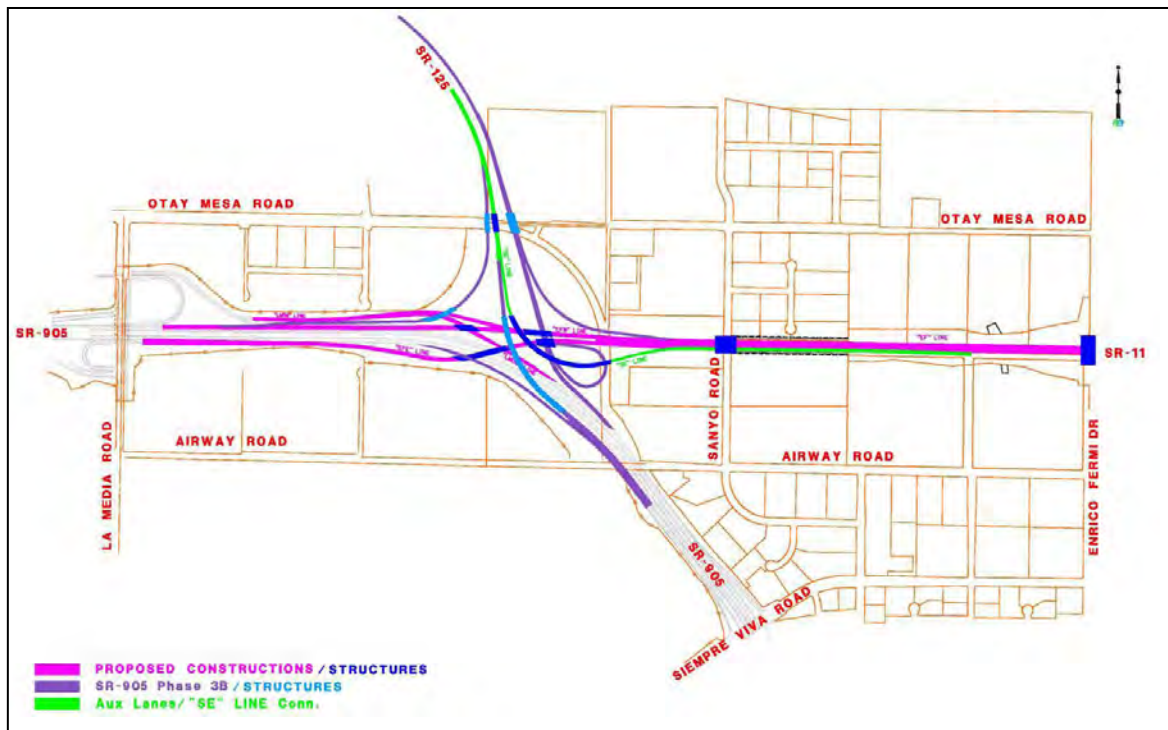


Figure 3 - SR-905/SR-125/SR-11 Interchange

An interim exit ramp from westbound SR-905 to La Media Road was included in the construction of SR-905 Phase 1A. The SR-11 project requires removing this interim ramp and placing a permanent ramp to accommodate construction of the westbound SR-11 to westbound SR-905 connector.

4. PURPOSE AND NEED

4.1 Problem, Deficiencies, Justification

To reduce congestion and facilitate increased trade and personal travel across the U.S.-Mexico border, in the San Diego-Tijuana area, there is a need for SR-11, the CVEF, and the POE.

Capacities of the existing POEs in the region are being exceeded, causing delays for commercial and non-commercial vehicles crossing the border; delays are expected to increase as trade and travel in this area grow. The long-term need for a third regional crossing has been identified by both transportation and land use planning agencies on both sides of the border.

With construction of the Otay Mesa East POE, SR-11 becomes a critical facility to connect U.S. and Mexico POEs with the regional highway system north of the border. In the absence of SR-11, the planned County Roads would not be adequate to carry the commercial and non-commercial vehicle traffic expected to flow through the new POE.

In order to insure regulatory and safety compliance all commercial vehicles entering California from Mexico are required to be weighed and inspected at a CVEF after passing through a POE and prior to travel on U.S. roadways.

A January 2006 joint SANDAG/Caltrans study, *Economic Impacts of Wait Times at the San Diego – Baja California Border*, reported that a 45-minute wait yields an annual \$2.8 billion loss to the U.S. economy. Under the existing conditions, the delays at the Otay Mesa POE for commercial freight crossings generated an estimated loss for the San Diego economy that ranged from a low of \$212 million in output (direct, indirect, and induced) to a high of nearly \$1.2 billion in 2008. The median estimated impact was \$468 million for 2008. The estimated loss in employment (direct, indirect, and induced) for the San Diego economy ranged from a low of 1,127 jobs to a high of 6,301 jobs, with the median estimate of 2,525 total jobs lost. In 2008, the delays at the San Diego County POEs for commercial truck crossings generated an estimated loss in total U.S. output that ranged from \$584 million to as high as \$3.2 billion. Furthermore, the estimated loss in U.S. employment ranged from 3,512 jobs to a high of 19,580 jobs in 2008.⁶ Traffic delays would increase and the economic losses incurred by the regional and national economies would more than double in the next ten years unless significant improvements in border crossing and transportation infrastructure and management take place.⁷

The proposed POE, SR-11, and the CVEF are interdependent parts of the project; one cannot be constructed without the other. The Preferred Alternative includes the POE, SR-11, and the CVEF.

⁶ HELIX Environmental, Final Tier II Community Impact Assessment for State Route 11 and Otay Mesa East Port of Entry, November 2010

⁷ SANDAG/Caltrans, Economic Impacts of Wait Times At The San Diego – Baja California Border, January 2006

4.2 Regional and System Planning

4.2.1 Identify Systems

SR-11 was added to the State Highway System in 1994 and the California freeway and expressway system in 1999. All of proposed SR-11 could be included in the National Highway System since it would connect major population centers and international border crossings, and serve interstate and interregional travel. It is expected that proposed SR-11 would be designated as a State Terminal Access Route connecting to the National Network for Surface Transportation Assistance Act (STAA) for trucks.

The California Department of Transportation and the Federal Highway Administration (FHWA), in 1984, signed an agreement designating SR-905 as a future part of the Interstate System. Such designation will be implemented when SR-905 is constructed to Interstate standards. Until then, SR-905, from Interstate (I-) 5 to the International Border is classified as part of the National Highway System. According to 1996 statutes, it is part of the Freeway and Expressway System. From I-5 to the Otay Mesa POE, SR-905 is designated as part of the Oversize Load Highway System.

SR-125 was added to the California freeway and expressway system in 1959 and the National Highway System in 1995.

4.2.2 State Planning

Transportation and land use planning agencies on both sides of the border have identified the need for an additional border transportation corridor in the San Diego-Baja California area. Local, regional and binational land use studies have identified East Otay Mesa as the preferred general location for the new transportation corridor.

Plans to accommodate higher volumes of people and vehicles at the San Ysidro POE and Otay Mesa POE have been undertaken by GSA. Upgrades to and expansion of pedestrian and vehicular inspection facilities through a three-phase plan at the San Ysidro POE are intended to address projected increased demand. The Otay Mesa POE, located on the eastern edge of the City of San Diego, is planned to be modernized but has limited room for further expansion within existing right-of-way boundaries in the U.S. and Mexico.

The project is of statewide significance due to the international commercial traffic having local, state, national, and international (other than U.S. and Mexico) origins and destinations. SR-11 would provide access to the Tijuana-Tecate toll road, established transfer and distribution centers in San Diego and other South Bay communities, and to the State highway system.

4.2.3 Regional Planning

The Metropolitan Planning Organization (MPO) responsible for the preparation of RTPs and RTIPs in the project area is SANDAG. The applicable transportation plan and program for the proposed project are the SANDAG 2050 Revenue Constrained Highway Network of the Regional Transportation Plan (SANDAG 2011); and the 2010 Regional Transportation Improvement Program (RTIP) as amended (SANDAG 2011). The U.S. Department of

Transportation (U.S. DOT) made a finding of conformity for the 2010 RTIP and a conformity redetermination for the 2030 RTP on December 14, 2010 (U.S. DOT 2010).

The RTIP was approved by federal agencies and the U.S. DOT adopted a Clean Air Act (CAA) conformity determination for the RTIP on December 14, 2010. The proposed project is included in the 2010 RTIP on Page 3 of Amendment 2, as MPO ID CAL66 and RTIP # 10-02 (State Route 11 from Border of Mexico east of SR-905/Otay Mesa Border Crossing to Future SR-125/SR-905 junction) (SANDAG 2010). The project Capacity Status is “CI” (Capacity Increasing).

The Preferred Alternative is compatible with the design concept and scope described in the 2030 RTP and conforms to the SIP for air quality. The following table shows that the project is consistent with the regional land use plans.

Table 1 - Summary of Regional Land Use Planning

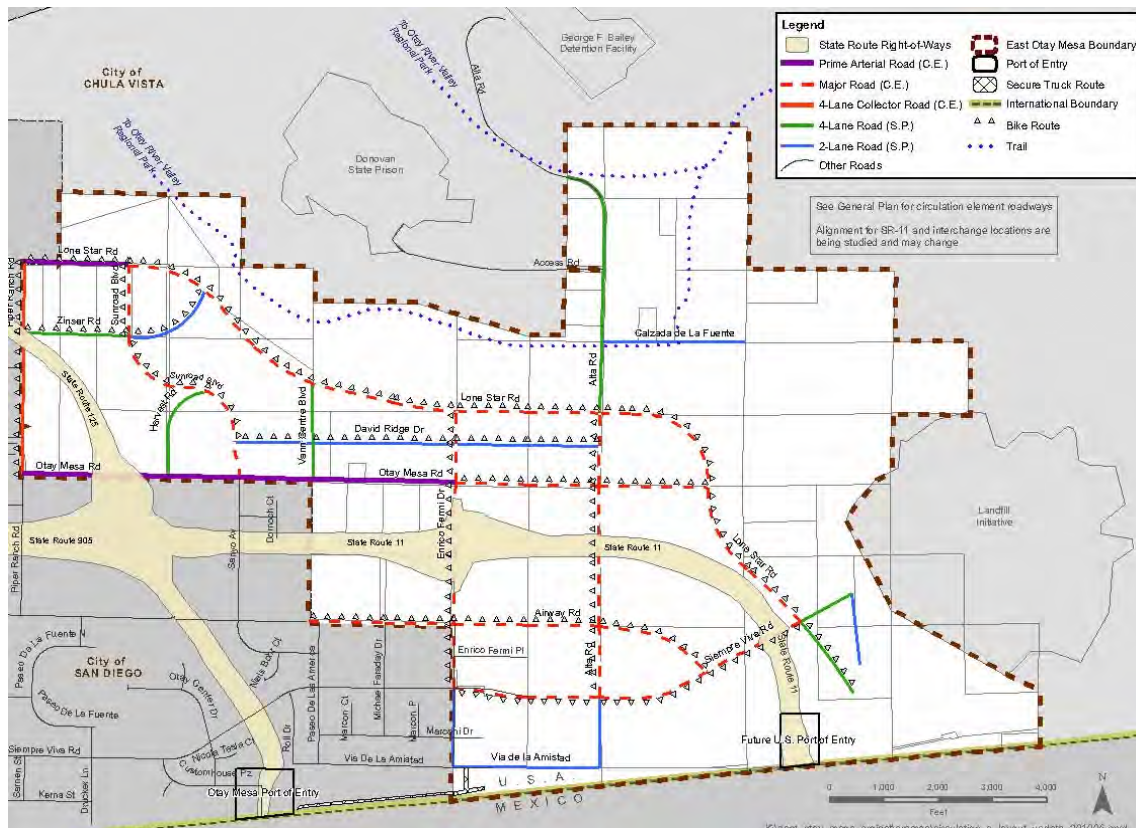
CONSISTENCY OF PROJECT WITH REGIONAL PLANS		
Planning Document	Description	Proposed Project
Regional Comprehensive Plan	The strategic planning framework for the San Diego region. Addresses the major elements of planning for the region, including urban form, transportation, housing, healthy environment, economic prosperity, public facilities, and border issues.	Consistent
Regional Transportation Plan	The adopted long-range transportation planning document for the San Diego region. Addresses new and improved connections to more efficiently move people and goods throughout the region by providing more convenient, fast and safe travel choices for public transit, ridesharing, walking, biking, private vehicles, and freight.	Consistent
Regional Transportation Improvement Program	A five-year capital improvement program for transportation projects that is updated by SANDAG every two years and reflects the region’s priorities for short-range transportation system improvements.	Consistent *

* Based on inclusion of proposed modifications of the SR-905 project in the 2010 RTIP, which is currently in process, prior to project approval.

Source: State Route 11 and Otay Mesa East Port of Entry - Tier II Draft EIR/EIS, November 2010

4.2.4 Local Planning

The project is located in the City of San Diego as well as unincorporated areas of the County of San Diego. The City limit crosses the project alignment approximately 2,000 feet east of Sanyo Avenue. The portion of the project area east of the City limit is located within the EOMSP area of unincorporated San Diego County. The EOMSP area encompasses approximately 3,013 acres of mostly undeveloped land just north of the international border. The area is bounded on the west by the City of San Diego, and on the north and east by two natural landforms, the Otay River Valley and the San Ysidro Mountains, respectively. Development of East Otay Mesa is guided by a Specific Plan (SP 93-004) that was adopted by the San Diego County Board of Supervisors on July 24, 1994. A Specific Plan Amendment (SPA 10-001) was adopted in 2010 (see Figure 4). This plan allocates 2,110 acres for high-intensity commercial and industrial use, 552 acres for low-intensity use (residential, conservation/limited use), and 351 acres for circulation corridors.



Source: East Otay Mesa Specific Plan Amendment, September 2010
Figure 4 - County EOMSP Circulation Element

The project area west of the City limit, within the City of San Diego, includes existing and planned industrial and commercial uses. The Otay Mesa Community planning area is a developing area of the City of San Diego. The area is bounded by the Otay River Valley and the City of Chula Vista on the north, the international border on the south, I-805 on the west, and the County of San Diego on the east. The planned land use of Otay Mesa includes various means of providing commercial, retail, service, and industrial employment. Residential land use is planned with the intent to accommodate a population of 32,000 residents. Presently, the Otay Mesa Community Plan, adopted in 1981, is being updated to establish a framework for future development.

Existing local access to the East Otay Mesa area is limited to four roads within the EOMSP Area: Otay Mesa Road, Airway Road, Alta Road, and Siempre Viva Road. Regional access from the north and west is provided by SR-125 and SR-905, while access from the south is limited to Boulevard Garita de Otay in Tijuana, leading to the Otay Mesa POE. As part of the future traffic circulation system, a more extensive system of roadways would be constructed both within, and adjacent to, the EOMSP area. For the purposes of this report, all adopted circulation elements in the County of San Diego are considered built. Among these are expanded Otay Mesa Road, Alta Road, Airway Road, Siempre Viva Road, and Lone Star Road. Other planned and existing roads both within, and adjacent to, the EOMSP area are shown in Figure 5, which shows the County of San Diego Specific Plan Amendment circulation element as adopted by the County Board of Supervisors in 2007. The following table shows the project is consistent with the local land use plans.

Table 2 - Summary of Local Land Use Planning

CONSISTENCY OF PROJECT WITH LOCAL PLANS		
Planning Document	Description	Proposed Project
County General Plan	Designates planned land uses that are considered appropriate for each portion of the County. Applicable elements include the Open Space, Regional Land Use, Circulation, Seismic Safety, Conservation, Public Facility, Public Safety, Scenic Highway and Noise elements.	Consistent
Otay Subregional Plan	Designates planned land uses in the Otay subregional area.	Consistent
East Otay Mesa Specific Plan	Establishes standards for development, environmental conservation, and public facilities to implement objectives of the County Diego General Plan and Otay Mesa Subregional Plan.	Consistent
City General Plan	Represents the comprehensive long-term plan for the City's physical development. Applicable elements include the Mobility Element, intended to attain a balanced, multi-modal transportation network that will accommodate forecast capacity needs and foster economic growth, and the Economic Prosperity Element, intended to support a diverse, innovative, competitive, entrepreneurial, and sustainable local economy.	Consistent
Otay Mesa Community Plan	Designates land uses and includes goals for future development, including industrial and commercial activity and international cooperation.	Consistent

Source: State Route 11 and Otay Mesa East Port of Entry - Tier II Draft EIR/EIS, November 2010

4.2.5 Transit Operator Planning

An objective of the project is to allow bicycle and transit access to the POE, including the provision of sufficient space within the overall POE footprint for possible future development of a transit center (to be designed and constructed by others), thereby preserving the opportunity to implement transit service to the POE and reduce local and cross-border personal vehicle trips.

SANDAG prepared a conceptual transit center proposal in 2008 to serve the Otay Mesa East POE. The proposal, *Service Alternatives for Otay Mesa East Port of Entry, South Bay Bus Rapid Transit Project, April 2008*, evaluated the potential extension of Bus Rapid Transit (BRT) or other alternative transit services to the Otay Mesa East POE. Options considered include a variety of alternatives services including extensions of existing or planned bus/BRT service and shuttle service to and from the existing Otay Mesa POE. Routing options considered utilizing SR-11 and Siempre Viva Road to gain access to the POE vicinity.

This project anticipates two to five acres of land would be environmentally cleared within the 100-acre POE footprint for a future transit center site. This transit center is not part of the project and further planning and environmental clearance would be needed.

4.3 Traffic

Traffic volumes and associated freeway operations discussed below are based on the detailed *Tier II Traffic Technical Report State Route 11/Otay Mesa East Land Port of Entry, October 2010* which analyzes conditions for street segments, peak hour intersections, and freeway segments for the Current (2009), Opening Year (2015) and Horizon Year (2035). The traffic volumes shown in the Report are based on the SANDAG regional transportation model Series 11, 2030-year forecast. Since the model's horizon year is 2030 and the horizon year for this project is 2035, a growth factor of 1% per year was used as is typical in the San Diego region.

The results and conclusions for the project are based primarily on roadway and intersection operations, expressed in terms of level of service (LOS). Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each LOS represents a range of operating conditions as illustrated in the table below.

Table 3 – Level of Service

Level of Service (LOS)	General Description	Signalized Intersection Description
A	Primarily free-flow operations. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream.	< 10 Second Delay
B	Vehicles operations are reasonably unimpeded. There is only a slight restriction on the ability to maneuver within the traffic stream.	> 10 and < 20 Second Delay
C	Stable operation is provided, but flows approaching the range at which an increase in volume immediately results in a deterioration of service. Drivers are definitely restricted in making maneuvers such as lane changes.	> 20 and < 35 Second Delay
D	Operation is approaching unstable flow. Motorists are severely restricted in carrying out maneuvers such as lane changes.	> 35 and < 55 Second Delay
E	Flow at this level is unstable. Maneuvers such as lane change or merging of traffic from entrance ramps will result in a disturbance of the traffic stream.	> 55 and < 80 Second Delay
F	Operation under this level of service is under forced or breakdown conditions and uniform moving flow cannot be maintained. The flow conditions are such that the number of vehicles that can pass a point is less than the number of vehicles arriving at the point.	> 80 Second Delay

Volumes of traffic are presented as average daily traffic (ADT). ADT is the number of vehicles passing a specific point in a 24-hr period, normally measured throughout a year. The average annual daily traffic (AADT) is the standard measurement for vehicle traffic load on a section of road, and the basis for most decisions in the transportation planning process.

Traffic forecasts for the Preferred Alternative would vary only slightly from the traffic forecasts prepared for the Two Interchange Alternative with the SR-125 Connector Variation except the Preferred Alternative allows for northbound commercial vehicles to cross the international border and proceed directly from the CVEF to Siempre Viva Road

without entering SR-11. The Preferred Alternative would add approximately 1,200 daily truck trips, 119 AM peak hour truck trips, and 108 PM peak hour truck trips to Siempre Viva Road. Analysis determined that the traffic impacts would be the same as those for the Two Interchange Alternative with the SR-125 Connector Variation as reported in the Tier II Traffic Technical Report.

The Preferred Alternative would likely subtract truck trips from other locations, primarily Enrico Fermi Drive, in comparison with the Two Interchange Alternative with the SR-125 Connector Variation due to the Preferred Alternative providing northbound commercial vehicles access to Siempre Viva Road directly from the CVEF.

4.3.1 Current and Forecasted Traffic

4.3.1.1 Current Traffic

The Current conditions analysis is based on traffic counts conducted by VRPA Technologies in early 2009. At the time existing roadways and intersections were analyzed and traffic counts attained, the study area was experiencing substantial roadway construction activity. Conditions are expected to continue to change as SR-905 construction progresses. Results from this study indicated level of service E or F at the following locations:

Table 4 – 2009 Level of Service

Location	Peak LOS
Otay Mesa Road from SR-125 to Sanyo Avenue	E
Otay Mesa Road/Sanyo Avenue intersection*	E
Otay Mesa Road/ Alta Road intersection*	E
Airway Road/La Media Road intersection	E
Siempre Viva Road/Paseo De Las Americas intersection	F

*Unsignalized two-way stop controlled intersection. Level of service is shown for worst movement only.

4.3.1.2 Opening Year 2015

Based on the traffic study, Opening Year (2015) conditions assume the construction of SR-905 (Phases 1 through 3), SR-125, and three freeway-to-freeway connector ramps (southbound SR-125 to westbound SR-905, eastbound SR-905 to northbound SR-125, and westbound local access ramp from Enrico Fermi Drive to northbound SR-125). It also assumes a number of local roadways are built and development of land as indicated in the SANDAG regional transportation model.

Data in the following table summarizes highway segments on SR-11.

Table 5 – 2015 Traffic Volumes

Location	ADT	Peak Hour (veh/hr)		LOS	
		AM	PM	AM	PM

Eastbound SR-11					
SR-905/SR-125 Interchange to Enrico Fermi Drive	10,800	925	1,131	A	A
Enrico Fermi Drive to Siempre Viva Road	12,000	990	1,299	A	A
East of Siempre Viva Road (Commercial Only)	1,300	105	94	A	A
East of Siempre Viva Road (Passenger Only)	9,700	786	1,115	A	A
Westbound SR-11					
East of Siempre Viva Road (Commercial Only)	1,400	139	137	A	A
East of Siempre Viva Road (Passenger Only)	13,400	1,330	1,206	B	A
Siempre Viva Road to Enrico Fermi Drive	15,800	1,550	1,453	B	B
Enrico Fermi Drive to SR-905/SR-125 Interchange	14,600	1,399	1,381	B	B

SR-11 would be expected to carry 27,800 total vehicles per day at its most heavily traveled point between Enrico Fermi Drive and Siempre Viva Road interchanges. Roadway segments and intersections that were reported to operate at levels of service E and F for current conditions in 2009 are expected to improve to level of service D or better by 2015. No roadway segments or intersections are expected to experience traffic congestion. Roadway improvements planned in the study area between 2009 and 2015 are expected to meet or exceed the need from traffic increases.

All freeway segments on other routes, with the exception of I-805 north of SR-905, will operate at LOS D or better in 2015. I-805 north of SR-905 is forecasted to operate at a LOS F.

4.3.1.3 Horizon Year 2035

Horizon Year (2035) conditions are based on completion of Opening Year (2015) improvements and a number of local roadways, as well as development of land as indicated in the SANDAG regional transportation model (Series 11).

Data in the following table summarizes highway segments on SR-11.

Table 6 – 2035 Traffic Volumes

Location	ADT	Peak Hour (veh/hr)		LOS	
		AM	PM	AM	PM
Eastbound SR-11					
SR-905/SR-125 Interchange to Enrico Fermi Drive	30,000	2,805	2,884	B	C
Enrico Fermi Drive to Siempre Viva Road	26,700	2,293	2,793	B	C
East of Siempre Viva Road (Commercial Only)	2,300	186	167	A	A
East of Siempre Viva Road (Passenger Only)	17,200	1,394	1,978	B	B
Westbound SR-11					
East of Siempre Viva Road (Commercial Only)	2,500	248	225	A	A
East of Siempre Viva Road (Passenger Only)	23,600	2,342	2,124	C	C
Siempre Viva Road to Enrico Fermi Drive	33,300	3,173	3,141	C	C
Enrico Fermi Drive to SR-905/SR-125 Interchange	36,600	3,255	3,710	C	C

SR-11 would be expected to carry 66,600 total vehicles per day at its most heavily traveled point between Enrico Fermi Drive and SR-905/SR-125 interchanges. The project would generally reduce traffic or have no effect on intersection operations in the study area. Exceptions resulting in increased traffic occur at the intersections of Otay Mesa Road/La Media Road, Otay Mesa Road/Enrico Fermi Drive, and the SR-905 westbound off ramp at La Media Road.

Six freeway segments on other routes are forecasted to operate at LOS F in 2035. These segments are located on routes SR-125, SR-905, I-5 and I-805.

5. Alternatives

5.1 Viable Alternatives

Three build and one “no-build” alternative, along with several variations were proposed in the Draft Project Report: the build alternatives were identified as the Two Interchange, One Interchange and the No Interchange. The design variations included the SR-905/SR-125/SR-11 Full Interchange, the SR-125 Connector, and the Siempre Viva Road Full Interchange.

A Preferred Alternative was identified following the preparation and review of a Draft Project Report. The Preferred Alternative includes the Two Interchange Alternative with the SR-125 Connector Variation, along with an additional ramp providing a connection for northbound commercial vehicles to access Siempre Viva Road directly from the CVEF.

The Preferred Alternative includes two interchanges that would be constructed along SR-11 at Enrico Fermi Drive and Siempre Viva Road, as well as an undercrossing at Sanyo Avenue and an overcrossing at Alta Road (see Figure 5). Overcrossings would also be constructed at the Enrico Fermi Drive and Siempre Viva Road interchanges. The proposed interchange at Enrico Fermi Drive, located approximately one mile east of the future SR-905/SR-125/SR-11 Interchange, would be a full interchange and have on- and off-ramps to and from both eastbound and westbound SR-11. The proposed interchanges at Enrico Fermi Drive and Siempre Viva Road would be located approximately one mile apart. The Siempre Viva Road interchange would be a half interchange providing eastbound off-ramp and westbound on-ramp access for both commercial and non-commercial vehicles. No access is provided between Siempre Viva Road and the POE for non-commercial vehicles, and only northbound commercial vehicles exiting the CVEF will have access to Siempre Viva Road.

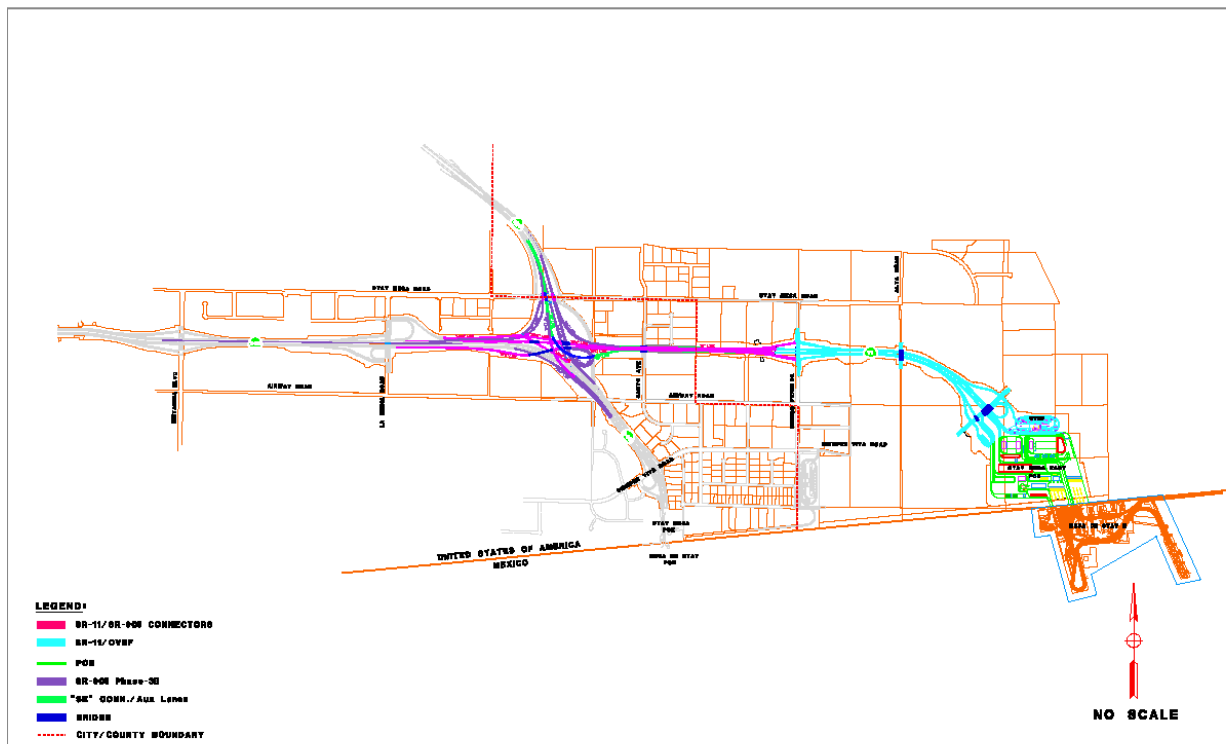


Figure 5 - Preferred Alternative Layout

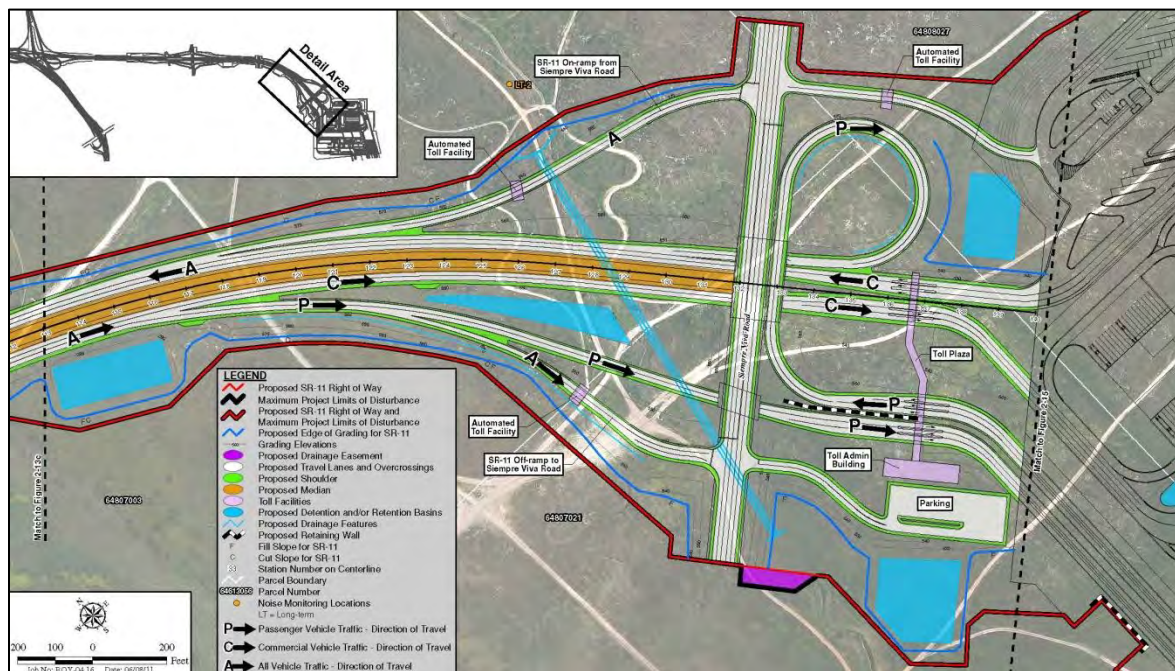
The SR-125 Connector proposes construction of the southbound SR-125 to eastbound SR-11 connector ramp. This connector is identified as part of the Preferred Alternative because southbound SR-125 users seeking access to the new POE could access SR-11 directly instead of exiting to local roads and navigating through several local intersections to access SR-11. The local access connector from Enrico Fermi Drive to northbound SR-125 connector ramp was approved as part of the SR-905 project and this connector would serve as the complementary connection between SR-11 and SR-125 (see Attachment B).

The eastern portion of SR-905 was originally approved to include ramps from SR-905, just west of the SR-905/SR-125 Interchange, to Enrico Fermi Drive along the approximate alignment of the proposed SR-11 and the SR-11/SR-905 Connectors. With implementation of SR-11, certain modifications to the approved SR-905 design would be required, and are identified as part of the Preferred Alternative. The SR-905 modifications would extend approximately 1.4 miles west of the terminus of SR-11 at PM 0.0 and would be entirely within existing SR-905 right-of-way. The connectors within the SR-905/SR-125 Interchange would operate as they were approved under the SR-905 and SR-125 projects. The local access ramps connecting SR-905 to Enrico Fermi Drive would be replaced by the SR-11/SR-905 Connectors.

The proposed easements on the developed property east of Sanyo Avenue would be wider on both sides of SR-11 for the Preferred Alternative than those identified for the Two Interchange Alternative. The Preferred Alternative includes auxiliary lanes between Enrico Fermi Drive and the SR-125 connectors. An auxiliary lane along a highway connects successive ramps, with the entrance ramp or acceleration lane from one interchange

leading to the exit ramp or deceleration lane of the next. Auxiliary lanes are also included on SR-11 between the Enrico Fermi Drive interchange and Siempre Viva Road interchange to facilitate the weaving and merging vehicles to and from the POE.

As SR-11 approaches the Otay Mesa East POE, separation of commercial vehicles from non-commercial vehicles is required prior to entering the POE.



Source: State Route 11 and Otay Mesa East Port of Entry - Tier II EIR/EIS 2011

Figure 6 - Separation of Commercial and Non-Commercial Vehicles at the POE

Figure 6 shows the highway layout near the POE. The commercial vehicle traffic flow into and out of the POE is located on the main lanes of the highway. Non-commercial vehicles diverge from the highway main lanes as they approach the POE. In the westbound direction non-commercial vehicles cross over the main lanes on a structure to a loop ramp, and then merge with the highway as they proceed westerly.

Eastbound commercial vehicles, comprised mostly of semi-trucks will need to travel in the left lanes as they approach the POE. Trucks are not typically allowed to travel in the left lanes of a highway, but this highway segment is not typical as the highway is terminating and vehicles need to slow down to enter the POE. Advance regulatory and guide signing and special pavement delineation would be included to advise commercial and non-commercial vehicles of the appropriate lane choice.

The eastern boundary of the POE was altered from the draft project report to avoid impacts to sensitive vegetation and steep slopes in the southeastern portion of the project. The POE footprint has been established in order to avoid or minimize environmental impacts and allow it to be approved as a feature of the project. A preliminary POE layout has been developed to show the feasibility of connecting to the Mexico POE, the SR-11 facility, and the CVEF (see Attachment D). Further study of the POE was conducted in the Program Development Study (PDS) completed in July 2011. The Otay Mesa East POE will

operate along with a POE on the Mexico side of the international border. The layout of the Mexico POE, Otay II, has a footprint constrained by surrounding development. The layout of Otay II dictates the location of commercial processing and inspection to be on the easterly side of the facility. In order to match this constraint on the U.S. side of the international border, the layout of the proposed Otay Mesa East POE will separate commercial vehicles into the left lanes on the eastbound approach to Mexico. In the westbound direction to the U.S., this proposed layout will allow non-commercial vehicles to merge with commercial vehicles when exiting westbound from the POE. The POE is identified with the Preferred Alternative due to its interdependent relationship with SR-11, however, it will be built by others.

After receiving clearance to enter the U.S. at the POE, westbound commercial vehicles would be routed into the CVEF facility for weight and safety inspections conducted by the CHP prior to being released onto the regional roadway system. A preliminary design for the CVEF has not been completed, however it is anticipated it will be similar to the existing CVEF at the Otay Mesa POE. The proposed CVEF site would be located east of SR-11 along the northern POE boundary and cover approximately 20 acres. The proposed site would include an administration building with associated CHP, staff, visitor and short term commercial vehicle parking facility, commercial vehicle scales with associated access lanes, commercial vehicle inspection bays with associated inspection lanes, smog inspection area, and long-term and load adjustment commercial vehicle parking. The conceptual layout for the CVEF can be found in Attachment D of this report. A *Commercial Vehicle Enforcement Facility (CVEF) Alternatives Analysis Report*, completed October 2009 (Attachment J), describes the features and composition of a CVEF facility in greater detail.

Operational Advantages. The Preferred Alternative provides an important operational advantage over the One Interchange Alternative studied as part of the Draft Project Report by maximizing the distance and weaving length for vehicles approaching the POE from the west. Commercial and non-commercial vehicles entering eastbound SR-11 at Enrico Fermi Drive with the Preferred Alternative will have approximately 1,400 feet of additional distance and weaving length compared to commercial and non-commercial vehicles entering eastbound SR-11 at Alta Road under the One Interchange Alternative. The additional length is advantageous as eastbound vehicles approach the POE. Passenger vehicles are required to separate from commercial vehicles, and commercial vehicles also may be required to merge to an appropriate specific lane depending on the type of load they are carrying.

The destinations for eastbound vehicles approaching the POE include POE commercial vehicles access, POE non-commercial vehicles access, and access to Siempre Viva Road.

'Last U.S. Exit Designation'. The Preferred Alternative provides the best option for vehicles travelling eastbound on SR-11 to safely and conveniently navigate away from the POE if they do not intend to cross the border to Mexico. Vehicles on Siempre Viva Road will not be provided an opportunity to access the POE and therefore the interchange at Siempre Viva Road will operate effectively as the „Last U.S. Exit“.

Maximizing Local Access. One purpose of the project is to accommodate commercial goods movement and cross-border travel to and from the Otay Mesa East POE. The

Preferred Alternative has been identified as the best alternative to support commercial goods movement by providing maximum local access. Further, the Preferred Alternative provides a greater accommodation to goods movement over the Two Interchange Alternative by providing access to Siempre Viva Road for commercial vehicles from Mexico exiting the CVEF.

Minimizing Environmental Impacts. The POE boundary studied as part of the Draft Project Report was proposed to be identical for all alternatives. This boundary has been modified as part of the Preferred Alternative in order to minimize environmental impacts.

The proposed footprint for the POE has been decreased by excluding the previously proposed south-east corner of the POE for the Preferred Alternative. The result is that potential impacts to sensitive species have been minimized, including reduced impacts to Burrowing Owl habitat, Quino Checkerspot Butterfly habitat, and other critical habitat.

5.1.1 Proposed Engineering Features

SR-11 would be constructed as a four-lane toll highway. The proposed typical cross section includes four standard width 12-foot main lanes, 10-foot left and right shoulders, and a median varying in width between 22" to 62" (see Attachment A.) The highway width is most constrained east of the proposed Sanyo Avenue undercrossing, where existing buildings are near the proposed right-of-way in order to minimize impacts to nearby buildings. The proposed 62-foot median width in the eastern portion of SR-11 is intended to make SR-11 adaptable for potential safety and security needs, and to provide the flexibility to construct additional lanes on approach to the POE, if these are found to be necessary to meet future vehicle inspection requirements. This additional right-of-way would help ensure access to the new POE by emergency responders, facilitate evacuation of the POE if necessary, or allow southbound traffic to be turned around if the POE had to be closed for emergency security concerns.

The SR-11 corridor would be located approximately midway between Otay Mesa Road and Airway Road for most of its length, and would cross four local existing and planned surface streets: Sanyo Avenue, Enrico Fermi Drive, Alta Road, and Siempre Viva Road. The highway would extend east from the vicinity of Harvest Road, at the future SR-905/SR-125 Interchange, for approximately 1.4 miles before curving to the southeast near Alta Road and continuing on to connect with the proposed POE. The total highway length would be approximately 2.8 miles. East of Sanyo Avenue, SR-11 would be supported on each side by retaining walls in order to minimize impact to adjacent developed parcels. These walls vary in height between 15 and 30 feet. The proposed retaining walls are similar to those originally approved with the SR-905 project but would be located to accommodate the cross-section for SR-11 as part of the Preferred Alternative. Concrete barrier (type 736) would be placed at the top of the retaining walls along each side of the roadway in the Sanyo Avenue area, and an additional concrete barrier would extend along the median (type 60).

Proposed limits of grading and rights-of-way are expected to be up to 500 feet wide, with the exception of the interchange locations, which require additional area. These limits would include all required cut/fill slopes, new concrete and asphalt pavement, as well as project-related drainage facilities, lighting, signage, pavement delineation, fencing, utilities, and landscaping. Chain link fence and access gates will be placed at applicable locations

along the right-of-way. Existing slopes are generally flat (less than 10%) and the surface primarily consists of short nonnative grasslands. Five cross culverts will be needed within the SR-11 Corridor and CVEF footprint. Ten watersheds will be impacted by the project.

Three watersheds drain to the west of Enrico Fermi Drive through a series of existing natural channels and cross culverts beneath La Media Road, Airway Road, and Siempre Viva Road, ultimately discharging through a large existing culvert at the International Border, one mile west of La Media Road.

An existing concrete lined detention basin that resides within the proposed SR-11 footprint just east of Sanyo Avenue will be removed and replaced to the north of SR-11 and to the west of Sanyo Avenue. This existing concrete lined detention basin serves commercial developments along Sanyo Avenue and Dornach Court. Flows from these commercial developments that currently drain to the existing concrete lined detention basin will be directed to the new concrete lined basin by means of a separate drainage system. No additional flows will be introduced by SR-11 to the relocated concrete lined basin.

Seven watersheds drain to the east of Enrico Fermi Drive and cross the International Border fence at various locations. One of these larger watersheds will require a double 8"x4" box culvert that will cross beneath SR-11 and the future Siempre Viva Road ultimately draining into an existing natural channel which has been designated as a USACE jurisdictional area (non-wetland Waters of the U.S.).

There are two primary watersheds that will be impacted by the POE. Two cross culverts will be needed within the POE footprint. All flows from these watersheds flow south and across the US-Mexico International border and ultimately drain to the Tijuana River.

Preliminary on-site drainage calculations were conducted to determine drainage facility requirements. Generally, on-site flow generated from the SR-11 Corridor and the CVEF will be captured, treated, retained and/or detained prior to being released into the watercourse or the proposed drainage facilities under the POE (in the case of the CVEF). No additional flows from SR-11 will be conveyed to existing SR-905 detention basins.

Drainage easements may be needed near the inlets and outlets of proposed cross culverts. Future commercial developments planned within the SR-11 footprint will also need to coordinate with Caltrans to prevent potential conflicts with cross culvert locations along the SR-11 roadway.

Preliminary basin sizes and locations provided within the Hydrology and Hydraulics Report assume that all jurisdictional criteria could be met but that final basin designs will be based on the feasibility and reasonability of meeting regulatory standards (including local agency standards). Where post-developed flows and runoff volumes are increased from pre-developed conditions, retention basins are proposed to eliminate excess runoff. Where post-developed peak flow rates are increased from pre-developed conditions, detention basins are required to reduce flow rates. The preliminary basin locations provided within the Hydrology and Hydraulics Report were used to determine preliminary right-of-way limits. Basin locations may require subsurface soil treatments to facilitate infiltration, and portions may be paved to facilitate maintenance. Culvert and pipe design for the POE is to be consistent with CBP's "Security Policy & Procedure Handbook".

SR-11 would operate as a toll road under the authority of SANDAG, as granted by the Otay Mesa East Toll Facility Act, SB 1486. A toll plaza, toll administration building and parking lot would be located on the northern periphery of the POE site. It is anticipated that Electronic Toll Collection (ETC) technology and cash collection would be used to collect tolls from commercial and non-commercial vehicles traveling both westbound and eastbound on SR-11. Equipment could include overhead gantries and antennae to read transponders, changeable message signs to display the tolls, loop or laser detectors to measure traffic volume and speed to help determine toll rates, and cameras to view traffic on the facility. Tolling stations on eastbound off-ramps and westbound on-ramps from/to SR-11 would collect tolls from local users not accessing the toll plaza.

Intelligent Transportation Systems (ITS) are features that use technology to improve the function of highway and transit facilities. The ITS would be developed as part of the tolling and traffic management strategies. In addition to variable pricing, the system will include other strategies such as electronic toll collection systems, regional border wait time monitoring systems, and advanced traveler information systems. Enhanced border security features may also be included with the systems.

A concept paper entitled *Intelligent Transportation Systems (ITS) Technology Pre-Deployment Proposal for Otay Mesa East Port of Entry* is provided in Appendix C. Dynamic pricing would be utilized and obtained through an algorithm that computes the time saved and then generates the toll rate with respect to local wages and fuel consumption.

FHWA issued a grant to study border wait times and toll collection strategies for this project; once the study has been concluded, a final determination would be made regarding hardware types and locations of all toll facilities. SANDAG is in the process of developing an ITS pre-deployment study which will evaluate ITS technologies to facilitate a binational ITS concept of operations. The study will identify and evaluate technology options to enable variable toll rates, advanced traveler information, state-of-the-art toll collection technologies, enhanced border operations, and new institutional relationships to accelerate and optimize ITS deployment and operations.

After leaving the POE, commercial vehicles would enter the CVEF at the southeastern portion of the site, and would proceed to one of the two scale lanes. After being weighed, vehicles would either be cleared by CHP personnel to exit west to the westbound SR-11 access lanes or to Siempre Viva Road, or they would be routed to one of the four vehicle inspection bays for additional safety inspection. After completing the vehicle inspection, commercial vehicles would either be cleared to exit (and routed to SR-11 or to the Siempre Viva Road exit) or directed to park their vehicles for subsequent repairs.

Transportation System Management/Transportation Demand Management (TSM/TDM) measures considered for this project include: ramp metering, closed circuit television cameras (CCTV), traffic monitoring stations, inductive loop detectors, Transportation Management Center (TMC) connections, provisions for multimodal uses associated with the POE (i.e. bicycle lockers/racks, dedicated bus lanes and staging areas, access to Bus Rapid Transit service), implementation of variable congestion toll pricing, dedicated commercial and non-commercial traffic lanes, and extended hours of operation for the POE. Some features, such as changeable message signs, designed to communicate with

travelers on the Mexico side of the border, will require coordination with Mexican agencies and local authorities due to the operations and maintenance of the system in Mexico.

5.1.2 Non-Standard Mandatory and Advisory Design Features

A preliminary design was completed to identify design restrictions and potential design exceptions for this project. To minimize impacts to existing and proposed development and meet the needs of the project, mandatory and advisory design exceptions were requested.

Detailed explanations for requesting these nonstandard features are further described in the Fact Sheet Exceptions to Mandatory Design Standards and Fact Sheet Exceptions to Advisory Design Standards. The Mandatory Design Exception Fact Sheet and the Advisory Design Exception Fact Sheet for this project were approved on September 7, 2011 as shown in Attachment I.

Exceptions to Mandatory Design Standards

Listed below are the nonstandard features being requested for this project, as well as the corresponding mandatory design standards.

This project proposes less than standard interchange spacing at the following locations:

Description of Interchange Limits			Standard Interchange Spacing (miles)	Proposed Interchange Spacing (miles)
SR-905/SR-125/SR-11	to	La Media Road	2.0	1.0
SR-905/SR-125/SR-11	to	Otay Mesa Road	2.0	0.2
SR-905/SR-125/SR-11	to	Enrico Fermi Drive	2.0	1.0

The Department's *Highway Design Manual*, Index 501.3 Spacing, sets forth the following standard: The minimum interchange spacing shall be one mile in urban areas, two miles between freeway-to-freeway interchanges and local street interchanges.

This project proposes the westbound SR-11 exit ramp to La Media Road to have the following nonstandard superelevation rate.

Curve Radii	Standard Superelevation Rate	Proposed Superelevation Rate
2,100'	6%	9%

The Department's *Highway Design Manual*, Index 202.2 Standards for Superelevation, sets forth the following standard: Based on an e_{max} selected by the designer for one of the conditions, superelevation rates shall be used within the given range of curve radii.

Exceptions to Advisory Design Standards

Listed below are the nonstandard features requested for this project, as well as the corresponding advisory design standards.

This project proposes that the westbound branch connector merge from SR-11 to SR-905 have a 1,000 foot length auxiliary lane. The Department's *Highway Design Manual*, Index 504.4(6) Freeway-to-Freeway Connections (Branch Connections), sets forth the following standard: Merging branch connections should be designed as shown in Figure 504.3L of the Highway Design Manual. Figure 504.3L shows a 2,500 foot length auxiliary lane at a branch connection merge.

This project proposes the diverge from eastbound SR-905 to eastbound SR-11 provide for a minimum 1,300 foot length auxiliary lane in advance of the exit. The Department's *Highway Design Manual*, Index 504.4(6) Freeway-to-Freeway Connections (Branch Connections), sets forth the following standard: Diverging branch connections should be designed as shown in Figure 504.4 of the Highway Design Manual. Figure 504.4 shows a 2,500 foot length auxiliary lane in advance of the branch connection.

This project proposes a partial interchange at Siempre Viva Road and to maintain the partial interchange at Otay Mesa Road. The Department's *Highway Design Manual*, Index 502.2 Local Street Interchanges, sets forth the following standard: The use of isolated off ramps or partial interchanges should be avoided because of the potential for wrong-way movements and added driver confusion.

This project proposes limited access control at the Siempre Viva Road interchange. The Department's *Highway Design Manual*, Index 504.8 Access Control, sets forth the following standard: For new construction or major reconstruction, access rights should 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. Accesses to the CVEF and toll facility are planned across from this partial interchange.

This project proposes a less than standard median width (22 feet to 46 feet) to be constructed from the beginning of SR-11 to the east for approximately 3,900 feet. The *Highway Design Manual*, Index 305.1 Width, sets forth the following standard: Minimum median widths for the design year should be used in order to accommodate the ultimate highway facility (type and number of lanes) and The *Highway Design Manual*, Index 305.1(1a) Width (Freeways and Expressways), sets forth the following standard: Where physical and economic limitations are such that a 46-foot median cannot be provided at reasonable cost, the minimum median width for freeways and expressways in urban areas should be 36 feet.

This project proposes no passing lane provided at the following locations:

Ramp Location	Ramp Length prior to lane addition
La Media Road exit ramp from westbound SR-905	1,586 Feet
La Media Road exit ramp from westbound SR-11	1,719 Feet

The *Highway Design Manual*, Index 504.3(5) Ramps (Single-lane Ramps), sets forth the following standard: 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.

This project proposes the construction of embankment slopes steeper than 4:1 (H:V) in the following locations:

Location	Alignment	Description of Limits			Proposed Side Slope
1	“EFE” Line	633+00	to	635+00	2:1 or Flatter
2	“EFE” Line	641+40	to	642+00	2:1 or Flatter
3	“EFW” Line	633+00	to	635+00	2:1 or Flatter
4	“EFW” Line	637+50	to	640+00	2:1 or Flatter
5	“SEDC” Line	029+00	to	033+00	2:1 or Flatter

The *Highway Design Manual*, Index 304.1 Side Slope Standards, sets forth the following standard: For new construction, widening, or where slopes are otherwise being modified, embankment (fill) slopes should be 4:1 or flatter.

5.1.3 High Occupancy Vehicle (HOV) (Bus and Carpool) Lanes

High Occupancy Vehicle (HOV) lanes are not proposed for SR-11 per the 2050 RTP.

5.1.4 Ramp Metering

Ramp meters have been considered in the SR-11 design. Where toll collection facilities are not placed, costs for ramp metering equipment and installation have been accounted for. The location is assumed to be on the SR-11 eastbound on-ramp of the Enrico Fermi Drive Interchange.

5.1.5 California Highway Patrol (CHP) Enforcement Areas

In addition to the CVEF, standard CHP enforcement areas would be incorporated into the highway and ramp design of SR-11. These areas would be located adjacent to toll collection sites and other areas as needed. The CHP would have the authority to enforce tolls and lawful use of the facility. Costs associated with enforcement operations are not included in this report.

5.1.6 Park and Ride Facilities

This project does not propose or impact any Park and Ride facilities.

5.1.7 Utility and Other Owner Involvement

Utilities requirements for SR-11 would include water, electricity and communication services. These utilities services would be extended underground within existing or planned roadways, as well as the proposed SR-11 right of way, from existing service lines located to the west and south.

The POE and CVEF would require utility services to include potable water, wastewater conveyance, electricity, natural gas, and communications. As adjacent private development plans progress in East Otay Mesa, and the County circulation roadways are constructed, it is anticipated that utility distribution facilities will be available for connection to the POE and CVEF sites.

If POE and CVEF implementation preceded the development of utility distribution facilities, then extending utility infrastructure to the east from existing locations may be necessary. Extending utilities to the POE and CVEF site in the absence of County circulation roadways could consist of developing a utility corridor within the SR-11 project footprint, or extending utilities along the proposed alignment of local roads. Current environmental planning and project cost estimates assume that utility distribution facilities will be available within County circulation roadways constructed prior to or concurrent with the project. It may be necessary for one or more utility owners to obtain a longitudinal encroachment permit in order to fully develop utilities in the East Otay Mesa area.

Utility coordination meetings between Caltrans and utility owners have been, and continue to be held to resolve utility conflicts. Delivery of the utility service to the POE has been analyzed and multiple solutions have been drafted.

A variety of existing utilities, including natural gas, telephone, water, sewer, and both overhead and underground electric are in the project area. Several utility conflicts have been identified and relocation is proposed where possible. The estimated relocation cost is included in the Right-of-Way Data Sheets, shown in Attachment G. Utility conflicts have been identified and are presented in the following table:

Table 7 – Utility Conflicts

Utility	Owner	Conflict Location
24-inch gas line	Calpine	Crossing the proposed CVEF and Otay Mesa East POE sites
12-inch sewer line	City of San Diego	Utility corridor east of Sanyo Avenue
10-inch sewer line	City of San Diego	Utility corridor east of Dornoch Court
10-inch water line	Otay Water District	Utility corridor east of Sanyo Avenue
18-inch water line	Otay Water District	Crossing the SR-11 right-of-way from north to south, located east of Sanyo Ave and west of Enrico Fermi Drive
8-inch and 12-inch water lines	Otay Water District	Enrico Fermi Drive
16-inch and 24-inch water lines	Otay Water District	Alta Road

12-inch water line	Otay Water District	Crossing the SR-11 right-of-way near the proposed extension of Siempre Viva Road
2-inch gas line	San Diego Gas and Electric Company	Utility corridor east of Sanyo Avenue
12 kV underground electric lines	San Diego Gas and Electric Company	Utility corridor east of Sanyo Avenue
12 kV underground electric lines	San Diego Gas and Electric Company	Crossing the SR-11 right-of-way 750 feet east of Enrico Fermi Drive
30-inch gas line	San Diego Gas and Electric Company	Adjacent to the U.S.-Mexico international border and crossing the proposed Otay Mesa East POE site
30-inch gas line	San Diego Gas and Electric Company	Sanyo Avenue
69kV overhead power lines	San Diego Gas and Electric Company	West of Sanyo Avenue
8-inch and 6-inch private sewer lines	Private	East of Enrico Fermi Drive

5.1.8 Railroad Involvement

According to SANDAGs Airport Multimodal Accessibility Plan, scheduled to be finalized later this year, a high speed rail extension is proposed to operate along the I-5 corridor from downtown San Diego, turn east at San Ysidro and terminate at the existing Otay Mesa POE. This project does not involve railroad and will not affect these plans.

No light rail is proposed within the project limits.

5.1.9 Highway Planting

Highway planting will concur with the appropriate mitigation measures identified in the final environmental document for this project. For detailed impacts and mitigation measures please refer to section 6.6.1, Visual Impacts and Landform Alterations, in this report and/or the State Route 11 and the Otay Mesa East Port of Entry Final Tier II Environmental Impact Report/Environmental Impact Statement.

The landscape palette and aesthetic treatment of structures (overcrossings, undercrossings, etc.) would be compatible with that developed for SR-905 and SR-125 (south portion) and coincide with the guidelines provided in the EOMSP.

Highway planting will be accomplished by a separate project after the highway construction is completed.

5.1.10 Erosion Control

On July 15, 1999 State Water Resources Control Board (SWRCB) adopted Order 99-06 DWQ, National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from Caltrans properties, facilities, and activities. This project will be designed in conformance with the NPDES Permit requirements and Caltrans Project Planning and Design Guide (PPDG).

The Construction General Permit (Order No. 2009-0009-DWQ) requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP) for projects disturbing one acre or

greater of soil. The SWPPP identifies avoidance and/or minimization measures that have to be implemented by the contractor to effectively eliminate or reduce potential water quality impacts during construction.

Potential water quality impacts from construction operations related to erosion and the discharge of other pollutants will effectively be avoided or minimized through the implementation of sediment control, soil stabilization, waste management, tracking control, and wind control best management practices (BMPs) as outlined in Caltrans Construction BMP Manual. This includes BMPs such as temporary construction entrances, drainage inlet protection, street sweeping, temporary fiber rolls and temporary concrete washouts.

The Storm Water Data Report (SWDR) has been completed for this phase of the project. Energy dissipation devices such as rock slope protection will be designated at culverts that discharge into unlined channels to prevent scour. Flared end sections will be incorporated where possible. Slope and disturbed surface protection on this project will include slope rounding, and benches. The concentrated flow will propagate through concrete lined channels, ditches, dikes, biofiltration swales and detention basins. The report documents Construction Site BMPs, Design Pollution Prevention BMPs, and Treatment BMPs that will be considered for incorporation into the project (see Attachment L).

Highway planting for erosion control purposes will be included in the project design. The project will include a variety of ground covers and plantings for permanent erosion control, such as native and drought tolerant species, as well as a variety of rock mulch to provide soil stability and reduce runoff. Erosion control measures include implementation of sediment control BMPs after the completion of construction until vegetation is established.

5.1.11 Noise Barriers

According to the Noise Study Report (NSR), noise impacts at the Southwestern College Higher Education Facility will exceed the Noise Abatement Criteria (NAC) and noise barriers are the only form of abatement considered feasible. The NSR states a noise control barrier of 10 feet in height approximately 591 feet in length would fulfill the criteria of providing a minimum 5-dBA reduction in noise at this location. Implementation of this noise barrier, while technically feasible, would not be reasonable from a cost perspective, and is not included in the Preferred Alternative. Therefore, this mitigation measure will not be implemented.

For additional information, see the *Noise Abatement Decision Report* (NADR), completed in August of 2010 (Attachment M).

5.1.12 Non-motorized and Pedestrian Features

Pedestrians, bicyclists, and public transit riders are considered throughout the design process with respect to the POE and local interchanges. Pedestrian facilities are included on Sanyo Avenue, Enrico Fermi Drive, Alta Road, and Siempre Viva Road.

According to the *County of San Diego Bicycle Transportation Plan*, October 2008, there are various existing bikeways in the project vicinity. There are Class II bicycle lanes on Otoy Mesa Road west of SR-905, on Siempre Viva Road between La Media Road and

Enrico Fermi Drive, on Airway Road between SR-905 and Heinrich Hertz Drive, on Heinrich Hertz Drive between Airway Road and Paseo de Las Americas, and along Paseo de Las Americas south of Heinrich Hertz Drive. Additionally, there are several planned bikeways for the project area: east of the East Otay Mesa boundary, Airway Road, Siempre Viva Road, Lone Star Road, and Otay Mesa Road are planned to include Class II bicycle lanes. Enrico Fermi Drive and Alta Road are also planned to include Class II bicycle lanes between Lone Star Road and Siempre Viva Road.

Pedestrians and bicyclists require easy access to and from the proposed POE and the public transit system. Bicyclists will require public transit buses to be equipped with bicycle racks, and a facility outside the scope of this project could provide bicycle lockers, racks, or other storage facilities for these types of users. Pedestrians and bicyclists also will require access to and from non-commercial vehicles and the proposed POE.

Siempre Viva Road is expected to be the closest location to the new POE on the local street system. The PDS for the POE has conceptually identified a site for future pick-up and drop-off of pedestrian border crossers that is within the POE development footprint, but separated physically and operationally from the Otay Mesa East POE. Although this area for mass transit and privately owned vehicle passenger loading would provide pedestrians and bus travelers potential connections to Otay Mesa and San Diego, future study of traffic and revenue projections may not justify the expense associated with bus and pedestrian processing facilities for the POE on opening day. The PDS studied the POE in terms of Opening Day and Full Build Phases. The Opening Day Phase for the POE may restrict traffic to commercial and non-commercial vehicles only. Bus, bicycle and pedestrian users may not have access to the POE for the Opening Day Phase, but will have access in the Full Build Phase.

It is expected that ADA-compliant pedestrian walkways would be provided between the POE and Siempre Viva Road, including the identified pedestrian drop off/loading location, and that ADA-compliant sidewalks would be provided along Siempre Viva Road to convey pedestrians between the POE and local destinations.

5.1.13 Needed Roadway Rehabilitation and Upgrading

Rehabilitation of the existing roadway is not needed in conjunction with the proposed project. Project improvements will construct new pavement for SR-11, POE, and CVEF facilities. Roadway improvements will join existing pavement for ramp connections to SR-905 and SR-125. The existing paved surfaces of SR-905 and SR-125 are less than five years old, and rehabilitation of existing paved surfaces is not expected.

5.1.14 Needed Structure Rehabilitation and Upgrading

No structure rehabilitation or upgrading is considered applicable to the project.

5.1.15 Cost Estimates

The roadway, structure construction, and right of way costs were developed for the project and included in an eleven-page cost estimate (see Attachment E). The cost breakdown can be seen in the following Table.

Table 8 – Estimated Project Costs

	Construction	Support	R/W	Total
SR-11 & CVEF	\$249,100,000	\$82,600,000	\$81,500,000	\$413,200,000
POE	\$253,000,000	\$48,500,000	\$39,800,000	\$341,300,000
TOTAL PROJECT COST				\$754,500,000

5.1.16 Right of Way Data

Right of way acquisitions are required for this project. Estimated costs for these Right of Way acquisitions are shown on the Right of Way Data sheet (see Attachment G). Appropriate permits to enter will be obtained as necessary.

5.2 Rejected Alternatives

The rejected alternatives presented in this Project Report are for the highway only. CVEF alternatives have been analyzed independently (see Attachment J), and POE alternatives have been developed in a separate document, the PDS, completed in July 2011 by GSA.

5.2.1 Alternatives Previously Considered and Rejected

5.2.1.1 Central Alternative

The Central Alternative would have extended further east than the selected Western Alternative, requiring more earthwork and the commitment of nearly 25 acres more right of way from currently undeveloped land to transportation related uses than the Western Alternative. Due to the anticipated additional impacts related to sensitive biological resources and grading requirements with associated higher costs, the Central Alternative was eliminated from further consideration at the conclusion of the Phase I PEIR/PEIS.

5.2.1.2 Eastern Alternative

The Eastern Alternative would have extended farther east than either the Central Alternative or the selected Western Alternative. Based on the potential for greater impacts to biological and cultural resources, greater right-of-way and construction costs, as well as potential complications associated with impacting an existing Sempra Energy utility easement, the Eastern Alternative was eliminated from further consideration in Phase I during the scoping of the PEIR/PEIS.

5.2.1.3 One Interchange Alternative

The One Interchange Alternative included a single interchange at Alta Road, approximately 1.4 miles east of the SR-905/SR-125/SR-11 Interchange. An undercrossing at Sanyo Avenue, and overcrossings at Alta Road, Enrico Fermi Drive and Siempre Viva

Road would be constructed. Siempre Viva Road at SR-11 would be constructed with no access to or from SR-11, but ramps would be provided to connect the POE with the highway. The One Interchange alternative was not identified as preferred based on the operational issues resulting from a shortened distance between the Alta Road interchange and the POE.

5.2.1.4 No Interchange Alternative

The No Interchange Alternative included no interchanges along the proposed alignment of SR-11. Overcrossings would be built at Enrico Fermi Drive, Alta Road, and Siempre Viva Road and an undercrossing at Sanyo Avenue. There would be no local road access to or from SR-11 under this alternative. SR-11 would connect the POE with SR-905. The No Interchange Alternative was not identified as preferred based on non-compatibility with the community plan which includes local access from SR-11.

5.2.1.5 No Build Alternative

The No Build Alternative would have resulted in not building SR-11, the CVEF, or the POE. Instead, a future phase of the SR-905 project would proceed as approved per the SR-905 EIR/EIS. The No Build alternative was not identified as preferred due to the lack of conformance to the project need and purpose of reducing border crossing wait time and decreasing congestion.

5.2.1.6 Local Road Alternative

The Local Road Alternative would have provided for a limited-access and non-controlled-access facility, expanding and extending an existing road to access the POE site. Three variations of this alternative were identified in the SR-11 PSR that involved the extension of Otay Mesa Road, Airway Road or Siempre Viva Road (Caltrans 2000). The PSR determined that since local roadways and intersections were not designed to accommodate the anticipated high volume of commercial traffic, the Local Road Alternative would have disrupted local traffic circulation and access, and resulted in higher vehicle emissions. This failing condition is observed at existing POEs where queues effectively bisect the community and block access for long periods. The Local Road Alternative was eliminated from further consideration in Phase I during the scoping of the PEIR/PEIS.

5.2.1.7 TSM/TDM Only Alternative

The TSM/TDM Only Alternative involved the use of TSM/TDM measures as a “stand alone” alternative to the proposed SR-11, POE and CVEF facilities, and would have either constructed a new POE with TSM/TDM measures without SR-11, or incorporated TSM/TDM measures at existing regional POEs only. The TSM/TDM Only Alternative was evaluated, and based on the rejection of the Local Road Alternative and anticipated increase in cross-border traffic volumes, it was determined that the TSM/TDM Only Alternative would not meet the project need and purpose. The TSM/TDM Only Alternative was not considered to be a viable option and was not carried forward for impact analysis in the Tier II Draft EIR/EIS.

5.2.1.8 CVEF Alternatives

As part of the CVEF feature of this project, several alternatives to provide CHP with the facilities to inspect commercial vehicles were considered. Each alternative was developed for the purpose of providing the CHP with the means of performing inspection of commercial vehicles prior to travel on the State highway system including access to a weigh-in-motion (WIM) scale and garage bays to perform detailed inspection of trucks as needed. The recommended alternative for further study according to the *CVEF Alternatives Analysis Report* is a new CVEF immediately adjacent the proposed POE. The *CVEF Alternatives Analysis Report* can be found in Attachment J.

5.2.2 Variations to Preferred Alternative Previously Considered and Rejected

In addition to the recommended SR-125 Connector Variation, four design variations that augment the project were considered: Siempre Viva Road Full Interchange, SR-905/SR-125/SR-11 Full Interchange, 46-foot Expanded Median, and No Toll. The Siempre Viva Road Full Interchange, was applicable to the Two Interchange alternative only. All other variations were considered applicable to any of the build alternatives.

5.2.2.1 Siempre Viva Road Full Interchange

The Siempre Viva Road Full Interchange variation proposed a full interchange on SR-11 at Siempre Viva Road including westbound on- and off-ramps, and eastbound on- and off-ramps. Full access would have been provided between Siempre Viva Road, SR-11, and the Otay Mesa East POE/CVEF for non-commercial and commercial vehicles under this variation.

This variation was not recommended due to multiple issues. The Siempre Viva Road Full Interchange variation would have more environmental impacts than half an interchange at Siempre Viva Road due to the increased right-of-way required, the additional impact to streambeds in the California Department of Fish and Game (CDFG) jurisdiction, burrowing owl habitat and non-native grassland. Implementation would also affect local traffic. The lack of queue storage capacity would create conflicts as the users merge to access the POE and need to cross multiple lanes in a short distance as they leave the POE. A major shortfall of this variation is that no mitigation measures can be implemented to address these traffic issues due to project physical constraints.

The additional requirement of separating the commercial and non-commercial vehicles complicates intersection geometry; which in this case cannot accommodate anticipated demand within design constraints including the close proximity of a local street intersection at Siempre Viva Road and Airway Road.

5.2.2.2 SR-905/SR-125/SR-11 Full Interchange

The SR-905/SR-125/SR-11 Full Interchange variation would have added the following freeway-to-freeway connector ramps: southbound SR-125 to eastbound SR-11, westbound SR-11 to eastbound SR-905, and westbound SR-905 to eastbound SR-11. The addition of these three connectors would complete the planned SR-905/SR-125/SR-

11 Interchange, and provide full connectivity between the three highways. The SR-905/SR-125/SR-11 Full Interchange variation was not recommended due to cost and low forecasted traffic volumes.

5.2.2.3 46-foot Expanded Median

The 46-foot Expanded Median variation, in lieu of the 22-foot median section, proposes a standard width median in the vicinity of Sanyo Avenue. This variation requires more right-of-way to be purchased as well as additional cost associated with earthwork. It would place earth retaining structures closer to adjacent buildings. It is not identified as part of the preferred alternative due to the increased impact to the adjacent parcels.

5.2.2.4 No Toll

The No Toll variation had assumed that SR-11 would not operate as a tollway, and would instead operate as a traditional freeway. The principal design difference under this variation was the lack of toll-related structures, such as toll administration and FasTrak tolling facilities. Although state legislation has approved SANDAG as the tolling agency for future SR-11, this variation was included to evaluate the potential for toll-related impacts, especially with respect to Environmental Justice populations, per EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*.

The No Toll variation was not recommended since it would eliminate the source of revenue to fund the project. The elimination of the funding source results in not delivering the project. SR-11 as a non-tolled facility would be inconsistent with regional planning documents

6. CONSIDERATIONS REQUIRING DISCUSSION

6.1 Hazardous Waste

Two Initial Site Assessments (ISAs) (Ninyo & Moore 2009, 2007b), and two soil sampling reports (Ninyo & Moore 2010a, Ninyo & Moore 2010b) were prepared for the project. The western portion of the proposed project area (west of the SR-905/SR-125 Interchange) was evaluated as part of the ISA conducted for the previously approved SR-905 project (Ninyo & Moore 1999b). An area of approximately 6.0 acres located south of the POE site and within U.S. Border Patrol jurisdiction is within the project impact footprint for the Preferred Alternative. Because this area was not available for access during project investigation, it was not included in the ISA. Portions of the described area have also been previously developed for construction of a border fence, and may therefore have been subject to associated hazardous materials investigation and (if applicable) remediation.

Commonly encountered conditions/materials that may represent environmental concerns within the study area include the presence of (1) treated wood that may contain chemical preservatives; (2) asbestos containing materials such as insulation for subsurface pipelines and buildings; (3) lead based paint on facilities such as curbs, poles and roadway striping; and (4) mercury-containing switches/fluorescent lights, and polychlorinated biphenols (PCB)-containing lights and associated ballasts. Based on the information presented in the referenced investigations, which included visual site

reconnaissance and owner/operator interviews as well as regulatory agency file and database review, the following existing conditions related to hazardous wastes/materials were observed within the study area:

- The majority of the study area had previously been used for agricultural operations. Contaminated soils could potentially be present in the association with previous activities such as pesticide storage, mixing and/or disposal, and vehicle/equipment fueling and maintenance.
- A number of industrial properties are present in the study area, including an industrial storage lot, a power plant, and numerous manufacturing/business park facilities. Based on the nature of these sites, such locations may represent hazardous or non-hazardous waste related concerns.
- Several truck/freight parking and/or storage sites are present in the study area, generally near SR-905 south of Airway Road, that encompass petroleum staining on unpaved areas and/or distressed (e.g., cracked) pavement surfaces that may be associated with vehicle fueling operations (potentially including underground storage tanks).
- A vehicle auction yard is present in the eastern study area on Parcel No. 648-070-13. Soils impacted with petroleum hydrocarbons and containing low concentrations of metals were identified during the hazardous waste investigation, and represent non-hazardous wastes.
- Several sites with no recorded unauthorized release in the study area are identified as potential hazardous waste concerns due to on-site use/storage of hazardous materials and the lack of access during field investigation.

An Initial Site Assessment (ISA) Checklist was prepared for the project to evaluate whether it could be affected by any recorded or visible hazardous waste problems. The ISA was completed in accordance with Caltrans ISA guidance within the limitations of existing permit-to-enter agreements, and availability of individual representatives of privately-owned properties to schedule interviews. The ISA stated the following potential environmental concerns within the project area:

- There is potential for the presence of pesticides, herbicides, fertilizer and biosolids due to agriculturally-related constituents in the project area.
- Agricultural staging areas may correspond to features of potential environmental concern, such as fueling areas and/or pesticide mixing areas.
- Several industrial use properties are associated with the use and storage of hazardous materials/wastes located within the project area.
- There is potential for the presence of petroleum hydrocarbons in shallow soil due to storage and auto salvage uses in the project area.

It was recommended that in the event discolored soil or other potential environmental issues are encountered during subsurface disturbance activities in the future, further assessment should be performed at the site. References regarding the potential to encounter contaminated soil should be included in the construction specifications. A soil management plan and community health and safety plan should be prepared prior to initiation of soil disturbance to manage potential health and safety hazards to workers and the public. Further details of the soil sampling can be found in the *SR-11 Initial Site Assessment Report*, September 2, 2010.

6.2 Value Analysis

A Value Analysis (VA) Study was performed on November 12, 13, and 17 through 20, 2008 for the project at the Caltrans District 11 offices in San Diego, California. The VA participants included representatives from various Caltrans functional groups, GSA, FHWA, SANDAG, the County of San Diego, and the City of San Diego.

The VA study was successful in refining the features to increase performance and determine which user needs were at a higher priority to be addressed. This resulted in identifying the following objectives:

- Separate the eastbound non-commercial vehicles and the commercial trucks further to the west to prevent longer queuing that would block access to the POE.
- Eliminate access to Siempre Viva Road from the POE and from Siempre Viva Road to the POE to avoid congestion of the local streets in the vicinity of the POE.
- Provide a direct connection for the westbound non-commercial traffic from the POE to SR-11, and eliminate the necessity of using Siempre Viva Road for highway access.
- Create the opportunity to develop a consolidated toll plaza for efficient collection of tolls by capturing all traffic to and from the POE at a single location.

6.3 Constructability Review

A constructability review was completed during the Draft Project Report phase of the project (August 8, 2010.) Minimal comments were received. Those resulting comments have been addressed and any applicable changes incorporated.

6.4 Resource Conservation

If applicable, features affecting energy requirement and energy use efficiencies for the various stages of construction, operation, and maintenance will be used to reduce wasteful, inefficient, and unnecessary consumption of energy and nonrenewable resources. Some project conservation features may include:

- Construction Best Management Practices: installation of construction fencing, and monitoring construction limits to limit soil erosion and avoid additional impacts to adjacent environmentally sensitive areas outside the proposed project right-of-way
- Mitigation to expand impacted natural preserves in other areas so equivalent levels of conservation are provided
- Use of reclaimed water for landscape irrigation purposes
- Planting native vegetation to reduce water use
- Reduction of the amount of import and export by balancing cut and fill volumes, to the extent possible
- Allowance of concrete and base material preparation at on-site batch plants to reduce haul distances
- Minimization of lighting by placing it only where needed for safety or security reasons
- Maximize use of local disposal sites

- Possible reduction of emissions of construction equipment through contract specifications

6.5 Right-of-Way Issues

6.5.1 Right of Way Required

Right-of-way acquisition estimated to be necessary for the project is listed in the following table. For more information see Attachment G, Right-of-Way Data Sheets.

Table 9 - Right-of-Way Acquisition

Use	Area (Acres)
SR-11 & CVEF	136
POE	100
Temporary Construction Easements	1
Utility/Drainage/Retaining Wall Easements	3
Total	240

6.5.2 Relocation Impact Studies

Relocation impact studies are not required for this project as there will be no impacts to residential or business structures that will result in relocation of any kind.

6.5.3 Airspace Lease Areas

Airspace lease areas are not required for this project.

Due to the proximity of the project to Brown Field Airport, an Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) is required by the Federal Aviation Administration (FAA). Any construction or alteration within 20,000 feet of a public use or military use airport exceeding a 100:1 surface from any point on the runway requires the FAA be notified of the project. This coordination typically occurs in the PS&E phase of a project, as project details are not defined in earlier phases. General features of the project have been identified and submitted in February of 2010 to the FAA via their web site.

<http://oeaaa.faa.gov/oeaaa/external/portal.jsp>

6.6 Environmental Issues

6.6.1 Visual Impacts and Landform Alterations

A Visual Impact Assessment (VIA) has been prepared for the project. Per the VIA, the proposed project impacts to visual character and quality can be summarized by stating

that the semi-rural character of the project site and surrounding area would become noticeably more urban. The currently undeveloped open space comprised of a few unpaved roads at the foot of the San Ysidro Mountains will have a new highway and associated interchanges, walls, grading (cut/fill slopes), and buildings after construction begins.

Caltrans recommends a qualitative aesthetic approach be taken to mitigate for negative visual quality impacts in the project area. Consequently, mitigation for adverse project visual impacts will consist of adhering to design requirements developed in consultation with the Caltrans District 11 Landscape Architect. All visual mitigation project features will be designed and implemented with the concurrence of the Caltrans Landscape Architect. Implementation of mitigation measures will reduce negative impacts of the project to an acceptable level. Depending on the particular view, mitigation measures will vary. Such measures include: various highway planting concepts, treatments for retaining walls or different types of aesthetically pleasing walls, architectural enhancements for structures, various types of median and edge barriers, manufactured slopes to allow for planting or non-living landscaping, various types of lighting and signage, unobtrusive access control fences, and water quality facilities.

6.6.2 Socioeconomic Impacts

A Community Impact Assessment (CIA) has been prepared for the project. Per the CIA, socioeconomic issues were analyzed. Socioeconomic issues include land use, residential or business impacts, community access impacts, and expenditure impacts. There are direct industrial, commercial, and land use impacts, as well as indirect impacts on planned and approved industrial developments. These impacts and their required mitigation are detailed in the Tier II EIR/EIS (see <http://www.dot.ca.gov/dist11/envir.htm>).

6.6.2.1 Benefit to Local Community

The construction costs for the Preferred Alternative, net of right-of-way acquisition costs and the cost of furniture, fixtures, and equipment, are considered to contribute to the local economic structure by creating jobs and providing local consumption of building materials. The local community might be expected to benefit marginally from these employment opportunities generated by the proposed project.

6.6.2.2 Land Use

Land uses surrounding the proposed SR-11, CVEF, and POE are dominated by undeveloped land and industrial uses, along with several vehicle storage lots. To date, existing and proposed development in the land use study area consists of industrial and transborder support uses, many of which were established with the expectation that facilities provided by the proposed project will be developed.

6.6.3 Biological Concerns

The Project will impact the natural communities in the Biological Study Area (BSA). Biology impacts and planned mitigation include:

- Measures that would avoid, mitigate or reduce potentially significant environmental impacts to below a level of significance.
- Impacts will be mitigated in accordance with the Mitigation Plan for this project (see Tier II EIR/EIS document at <http://www.dot.ca.gov/dist11/envir.htm>). The mitigation plan will be developed in coordination with CDFG, the United States Fish and Wildlife Service (USFWS), the United States Army Corps of Engineers (USACE), and California Regional Water Quality Control Board (CRWQCB).
- Impacts to state listed species will require a permit for incidental take from the CDFG under Sections 2081(b) and (c) of the California ESA.
- For all impacts to federally listed endangered or threatened species and their habitats (see Tier II EIR/EIS document at <http://www.dot.ca.gov/dist11/envir.htm>), an informal Section 7 consultation with USFWS has been completed (as of November 23, 2011) with mitigation measures finalized in the Biological Opinion.
- Salvage and transplantation of sensitive plant species, including small-flowered morning glory, San Diego barrel cactus, and planting of seed or container stock of decumbent goldenbush at the Lonestar Ridge West parcel would be conducted to the maximum extent practicable.
- No avoidance or minimization efforts were determined feasible for USACE and/or CDFG jurisdictional areas because of the locations of these features that are entirely within, or traverse through, the necessary right-of-way. Unavoidable impacts will be mitigated by preservation, restoration and enhancement of habitat as described in the Natural Environment Study (NES) and Jurisdictional Delineation Report for SR-11 and the Otay Mesa East POE.
- No further avoidance or minimization efforts were determined feasible for small-flowered morning glory, San Diego barrel cactus, decumbent goldenbush, and San Diego marsh-elder because of their location within the necessary right-of-way. Unavoidable impacts will be mitigated by preservation, creation, restoration and enhancement of habitat as described in the Natural Environment Study (NES) and Jurisdictional Delineation Report for SR-11 and the Otay Mesa East POE.
- No avoidance or minimization efforts were determined feasible for mule fat scrub-disturbed, native grassland, non-native grassland, and grassland restoration habitats because of the location of these communities within the necessary right-of-way. Unavoidable impacts will be mitigated by preservation, creation, restoration and enhancement of habitat as described in the Natural Environment Study (NES) and Jurisdictional Delineation Report for SR-11 and the Otay Mesa East POE.
- No avoidance or minimization efforts were determined feasible for San Diego fairy shrimp critical habitat because of its location within the necessary right-of-way. The final mitigation for critical habitat impacts has been negotiated during the Section 7 consultation with the USFWS.
- No avoidance or minimization efforts were determined feasible for the Quino checkerspot butterfly because of its locations (i.e., observations prior to 2006 but none in 2006 or 2009). The final mitigation for critical habitat impacts will be negotiated during the Section 7 consultation with the USFWS.
- No avoidance or minimization efforts were determined feasible for the burrowing owl because of its locations (i.e., observations prior to 2006 and 2009 identified 9

locations of burrowing owl within the Preferred Alternative). The final mitigation for impacts will be negotiated with the CDFG.

- No avoidance or minimization efforts were determined feasible for non-listed, special status species, with the exception of special status birds, since they occur throughout the eastern portion of the necessary right-of-way. Avoidance and minimization measures for special status birds are proposed as described in the NES.
- All sensitive habitats outside the impact areas will be designated as environmentally sensitive areas. Such areas will be temporarily fenced with orange plastic exclusionary fencing and no personnel, debris, or equipment are allowed in the environmentally sensitive areas. These areas will be monitored during construction activities.

6.6.4 Multiple Species Conservation Program (MSCP)

Mitigation for the loss of natural communities of special concern is proposed to occur on the Lonestar parcels to be acquired by Caltrans in Otay Mesa. A portion of the parcels lie within the City of San Diego Multi-Habitat Planning Area (MHPA), and some of it is also designated as Multiple Species Conservation Program (MSCP) Biological Resource Core Area (BRCA).

Potential impacts will be offset by the preservation, creation, restoration, and enhancement of vernal pools on the Lonestar parcels, as well as through the preservation of San Diego fairy shrimp critical habitat, which overlaps with proposed critical habitat for spreading navarretia, on these parcels. The final mitigation for critical habitat impacts has been negotiated during the Section 7 consultation with the USFWS.

Mitigation for impacts to other special status plant and animal species will be mitigated via preservation or creation, restoration, and enhancement of habitat and/or the translocation/planting of affected plant species. Impacts to the burrowing owl are proposed to be mitigated through the preservation of non-native grassland, and to ensure suitable burrow opportunities are present. Artificial burrows will be created at a 5:1 ratio for each burrow impacted. Impacts to burrowing owls during construction will be minimized by avoiding disturbance near burrows during the breeding season (September 1 through January 3) and by not impacting active burrows outside the breeding season.

Impacts to USACE and CDFG jurisdictional areas require permitting and mitigation. Proposed compensatory mitigation is via the restoration and preservation of USACE non-wetland WUS/CDFG streambed at Johnson Canyon, a drainage that extends onto one of the Lonestar parcels and supports jurisdictional features.

6.6.5 Water Quality

Water quality standards within the project limits are set by the State Water Resource Control Board (SWRCB), specifically the San Diego Regional Water Quality Control Board (RWQCB). Existing surface water quality varies depending on the pollutant loading to the various streams within the hydrologic unit, originating mainly from rainfall and irrigation.

The proposed project will have potential short-term impacts to storm water runoff quality (during construction) due to the type of construction activities that have the potential to contribute pollutants and the type of construction materials that will be used. Examples of construction activities include clearing and grubbing, grading, utility excavations, and landscaping operations. Vehicle fluids, such as oil, grease and petroleum, concrete curing compounds, asphaltic emulsions associated with asphalt concrete paving operations, paints, solvents and thinners, and base and sub base materials are examples of construction materials that have the potential to contribute pollutants to storm water discharges, if not contained properly.

The project will also have potential long-term impacts (post construction) on the receiving water body's quality due to the contribution of pollutants from the operation of project facilities, such as total suspended solids, nutrients, pesticides, metals and litter. Bioswales will be provided where feasible for treatment of runoff. On-site and off-site waters will be kept separate whenever feasible and reasonable.

Although discharges from the project will not directly reach water quality sensitive areas, the Project will ultimately discharge to the Tijuana River in Mexico. The Tijuana River is classified as a 303(d) listed water body where it re-enters the U.S., west of the project limits. According to the 2006 303(d) list, pollutants of concern for the Tijuana River impaired segment (911.11) include eutrophic, indicator bacteria, low dissolved oxygen, sediment (TSS/Turbidity), pesticides, solids, trash, trace elements, and synthetic organics. There are no listed pollutants of concern for the unnamed intermittent streams located in HSA 911.12.

The short-term potential impacts will be avoided/minimized during the construction phase by deploying temporary Best Management Practices (BMPs), while implementing permanent BMPs (Design Pollution Prevention and Treatment BMPs) to the Maximum Extent Practicable (MEP) to minimize the long-term potential impacts. Maintenance BMPs will also be implemented by Caltrans maintenance forces during their operations. Once these measures (temporary and permanent BMPs) are adequately implemented, this project will not have significant impacts to water quality.

A Water Quality Technical Report has been completed and is an attachment to the EIR/EIS. A Storm Water Data Report has also been completed for the project (see Attachment L).

6.7 Air Quality Conformity

An Air Quality Technical Report, dated June 2010, was prepared for the project and indicates that implementation of the project will not adversely impact existing air quality at representative sensitive receptors within the project area. The project will not violate any state or federal carbon monoxide (CO) standards and as such, no mitigation measures are needed. Furthermore, the project fully conforms to the State Implementation Plan's (SIP) purpose of attaining and maintaining national ambient air quality standards, and meets all criteria for a finding of conformity with the SIP. A project level conformity determination was submitted and approved by FHWA in May 2011.

6.8 Title VI Considerations

The proposed project includes elements for accessibility of pedestrian and other non-motorized traffic in compliance with Title VI of the Civil Rights Act of 1964 and related statutes. Caltrans ensures that no person in the State of California shall be denied the benefits of, or subject to discrimination under any program or activity because of race, color, religion, national origin, gender, age, or handicap.

The project design will incorporate the standards of the Americans with Disabilities Act and the State Building Code for accessibility for persons with disabilities. Design guidelines to encourage the development of transit and pedestrian friendly communities, such as minor concrete sidewalks, curb ramps and gutters, will be included in the design and installed during project construction. Though SR-11 will be a tolled facility, low-income populations will not be precluded from crossing the border because there are two nearby facilities that are not tolled.

6.9 Life Cycle Cost Analysis (LCCA)

6.9.1 Methodology

FHWA encourages the use of LCCA for the evaluation of all major investment decisions in order to increase the effectiveness of those decisions. It is Caltrans' policy that the cost impacts of a project's life-cycle are fully taken into account when making project-level decisions for pavements. *RealCost*, a macro inside EXCEL, developed by FHWA, was chosen by Caltrans as the official software for evaluating the cost effectiveness of alternative pavement designs for new roadways and existing roadways requiring Capital Preventive Maintenance (CAPM), rehabilitation, or reconstruction. The *RealCost* data and LCCA form have been completed for SR-11 pavement structural section selection and included in Attachment F.

The analysis period of 55 years was used for the comparison of differing pavement design lives of different pavement materials. Construction costs, maintenance costs, and cost to the user due to loss of utility during maintenance operations were included in this analysis. Traffic Data utilized in the LCCA assumed 85% cars and 15% trucks, with an annual growth rate for traffic as 1.3%.

The proposed structural section (see Attachment A) was determined using the Life Cycle Cost Analysis (LCCA). LCCA is an analytical technique that uses economic principles to evaluate long-term alternative investment options. The LCCA form (see Attachment F) shows hot mix asphalt (HMA) to be less expensive for initial construction, but maintenance cost is greater than that of Jointed Plain Concrete Pavement (JPCP). Therefore, JPCP has been identified to be used on this project.

6.9.2 Section Alternative Description

Two alternatives for pavement were included: (1) Jointed Plain Concrete Pavement (JPCP) Structural Section for new four-lane highway (40-year Pavement Design Life), (2) Hot Mix Asphalt (HMA) Structural Section for new four-lane highway (20-year Pavement Design Life). JPCP is a common type of rigid pavement engineered with longitudinal and

transverse joints to control where cracking occurs in the slabs. It does not contain steel reinforcement beyond tie bars and dowels between slabs for load transfer. HMA consists of a mixture of asphalt binder and a graded aggregate ranging from coarse to very fine particles.

Two rehabilitation cycles are expected for the JPCP alternative, and five are expected for the HMA alternative. All costs are entered as base-year amounts in today's dollars; the LCCA method escalates all amounts to their future year of occurrence and discounts them back to the base date to convert them to present values. The LCCA also uses the time sensitive nature of cost to calculate an Equivalent Uniform Annual Cost. The table below provides a cost comparison.

Table 10 - Comparative Cost Results of LCCA over 55-Year Period

Total Cost	Alternative 1: JPCP - 40 YR design life		Alternative 2: HMA – 20 YR design life	
	Agency Cost (\$1000)	User Cost (\$1000)	Agency Cost (\$1000)	User Cost (\$1000)
Undiscounted Sum	\$50,777	\$253	\$59,759	\$1,009
Present Value	\$49,133	\$43	\$51,224	\$276
Equivalent Uniform Annual Cost	\$2,222	\$2	\$2,317	\$13

The results show JPCP to have a lower annualized cost to both the user and the agency. Agency cost is primarily comprised of material, labor, and maintenance. User cost considers cost associated with delay. Speed reduction, idling, and stopping due to construction of repairs and maintenance would differ depending on the material chosen. HMA has over six times the cost to the user due to the frequency of maintenance required.

7. OTHER CONSIDERATIONS AS APPROPRIATE

7.1 Public Hearing Process

During the public circulation of the Tier II Draft EIR/EIS, a public hearing was held on January 19, 2011, at Ocean View Hills Elementary in Otay Mesa. No oral or written comments were received at the meeting. During the public review, 28 comment letters were received from individuals and agencies. These public and agency comment letters have formal responses included in the Final Environmental Document.

7.2 Route Matters

7.2.1 Freeway Agreements

Freeway agreements between the State of California and the City of San Diego, and between the State of California and the County of San Diego, to document the planned traffic circulation features, are required. These agreements will address access to the proposed facilities.

7.2.2 Route Adoption

The alignment of SR-11 is eligible for adoption by the CTC upon approval of the Tier II environmental document.

7.2.3 Relinquishments

There are no known relinquishments required for this project.

7.3 Permits

The following permits and/or approvals were acquired during or immediately following the completion of Phase I studies.

- U.S. Department of State-Conditional Presidential Permit for the POE, November 2008
- U.S. General Services Administration-Approval of POE site, following the Phase I PEIR/PEIS ROD

The following permits and/or approvals from the following State and Federal Agencies will be required to construct this project. Efforts to secure the permits will begin pending receipt of the Tier II ROD and must be in place prior to beginning construction.

- U.S. Department of State-Presidential Permit for the POE
- United States Army Corps of Engineers (USACE) – 404 Nationwide Permit for filling waters of the U.S.
- United States Fish and Wildlife Service (USFWS) – Endangered Species Act Section 7 Consultation Ended with the receipt of the Biological Opinion (BO) on November 23, 2011.
- California Regional Water Quality Control Board – 401 Water Quality Certification and conformance with NPDES Caltrans Statewide Permit
- California Department of Fish and Game (CDFG) – Code 1602 Agreement for Streambed Alteration and Section 2080.1 Agreement for threatened and endangered species
- State Water Resources Control Board – Conformance with statewide Caltrans NPDES Permit and NPDES General Construction Permit

7.4 Cooperative Agreements and Contribution Agreements

The anticipated cooperative agreements (COOP) and contribution agreements by project phase are shown in the following table, although additional agreements are expected.

Table 11 – Cooperative and Contribution Agreements by Project Phase

Phase	Agency	Agreement Description
PA&ED	SANDAG, Caltrans	HPP Fund Transfer, 2008

Phase	Agency	Agreement Description
PA&ED, PS&E	CBP, GSA, Caltrans, SANDAG	Project Development Costs
PA&ED	SANDAG, Caltrans	Toll Financial Strategy, \$200,000 to SANDAG, 2009
PA&ED	GSA, Caltrans	Transfer Funds, \$300,000, to GSA for guidance and oversight of LPOE PDS, 2009
PS&E, R/W	CBP, GSA, Caltrans, SANDAG	POE Design and R/W - Fund Transfer
PS&E, R/W	Caltrans, SANDAG	SR-11 Design and R/W - Fund Transfer
PS&E, R/W	CHP, Caltrans, SANDAG	CVEF Design and R/W - Fund Transfer
Construct	CBP/GSA, Caltrans, SANDAG	POE Construction - Fund Transfer
Construct	Caltrans, SANDAG	SR-11 Construction - Fund Transfer
Construct	CHP, Caltrans, SANDAG	CVEF Construction - Fund Transfer

Legend

PA&ED: Project Approval and Environmental Document
 PS&E: Plans, Specifications, and Estimate
 R/W: Right-of-Way Acquisition
 Construct: Construction
 HPP: High Priority Projects
 CBIP: Coordinated Border Infrastructure Program
 DEMO: Demonstration

7.5 Memorandum of Understanding/Memorandum of Agreements (MOU/MOA)

The anticipated memorandums of understanding/ memorandums of agreement (MOU/MOA), by project phase are shown in the following table, although additional agreements are expected.

Table 12 – MOU/MOA Agreements by Project Phase

Phase	Agency	Description
PA&ED, PS&E	CBP, GSA, SANDAG, FHWA	General MOU-SR11 and LPOE 05631, 2009
O&M	CBP, GSA, CHP, SANDAG	POE O&M
O&M	Caltrans, SANDAG	SR-11 O&M
O&M	CHP, Caltrans, SANDAG	CVEF O&M

Legend

PA&ED: Project Approval and Environmental Document
 PS&E: Plans, Specifications, and Estimate
 O&M: Operations and Maintenance

7.6 Cost Sharing Agreements

Portions of the SR-905/SR-125/SR-11 Interchange have previously been considered during the development of SR-905 and SR-125. Costs of delivering several of the freeway connector ramps are covered by the *Toll Road/SR-905 Interchange Cost Sharing Agreement by and between San Diego Expressway Limited Partnership and State of California, Department of Transportation regarding State Route 125 South Toll Road*. This cost sharing agreement was effective May 22, 2003 and included the following connector ramps:

- Southbound SR-125 to eastbound SR-905 (“S” Line per the agreement)
- Westbound SR-905 to northbound SR-125 (“N” Line per the agreement)
- Eastbound SR-905 to northbound SR-125 (“EN” Line per the agreement)
- Westbound access to northbound SR-125 from Enrico Fermi Drive (“WN” Line per the agreement)

On December 21, 2011, SANDAG acquired SR-125. The current cost sharing agreement is being updated to reflect SANDAG as the new operator of SR-125. Maintenance Agreements, as well as any other necessary agreements, will be prepared and executed as required by the project.

7.7 Miscellaneous Agreements

Miscellaneous agreements by project phase are shown in the following table.

Table 13 – Miscellaneous Agreements by Project Phase

Phase	Agency	Description
PA&ED	SANDAG, Caltrans	Feasibility Study, 2009
PA&ED, PS&E	Caltrans	General Cooperative Agreement Report (CAR)

Legend

PA&ED: Project Approval and Environmental Document
 PS&E: Plans, Specifications, and Estimate

7.8 Involvement with a Navigable Waterway

There is no involvement with a Navigable waterway for this project.

7.9 Transportation Management Plan for Use During Construction

Temporary closures of SR-905, Enrico Fermi Drive and Alta Road will be required to construct SR-11. Therefore, temporary detours will be necessary. Sanyo Avenue will serve as the main detour when Enrico Fermi Drive and Alta Road are closed. During construction of the project, falsework will be constructed over Sanyo Avenue, thereby closing the Sanyo Avenue detour for approximately two weeks that will include one lane

closure with a flagman during the day and complete closure at night. During this intermittent closure of Sanyo Avenue, traffic will be redirected along Airway Road, La Media Road, and Otay Mesa Road. It is assumed that the detour utilizing Sanyo Avenue will be required throughout the majority of the project's construction period. Enrico Fermi Drive will need complete closure for five days and a new at-grade detour will be built adjacent to the new bridge site that will remain open for six months.

Falsework will also be constructed over SR-905 for the eastbound SR-905 connector to SR-11 and will require a temporary detour for approximately four nights to construct and remove falsework. When this closure occurs, both the eastbound and westbound SR-905 will be detoured along Siempre Viva Road and La Media Road where there are SR-905 interchanges at both local roads.

As part of the Preferred Alternative the southbound SR-125 to eastbound SR-11 connector will require a temporary closure of Otay Mesa Road for three nights to construct and remove falsework. When this occurs, the detour will be along Harvest Road, Airway Road and La Media Road.

Reasonable access to businesses along the detours should be maintained throughout the duration of the Project's construction. The Project expects the main detour to be operational throughout the duration of construction and assumes no modifications are necessary to any streets.

In order to plan for minimizing motorist delays while implementing projects on the State highway system, a *Preliminary Transportation Management Plan* (TMP) has been developed in conjunction with this Project Report (Attachment K). The TMP addresses closures and other requirements to complete the project in a cost effective and timely manner with minimal interference with the traveling public. Specific objectives of the TMP are:

- Reduce traffic delay or time spent in the queue to less than 15 minutes above normal recurring traffic delay.
- Maintain traffic flow throughout the SR-905 corridor and the surrounding areas.
- Provide a safe environment for the work force and motoring public.

The TMP recommends that the following elements be implemented to meet the aforementioned objectives:

- A public awareness campaign to educate the public about potential construction plans and scheduling.
- Motorist Information Strategies such as Portable Changeable Message signs, ground mounted signs, and information on the Caltrans Highway Information Network (CHIN), a 24-hour information hotline and website, to divert traffic volume from the construction site.
- Incident Management including a Construction Zone Enhanced Enforcement Program (COZEEP), Freeway Service Patrol, and a Traffic Management Team that would station CHP Officers and Traffic Management Team units at construction sites to facilitate safer construction and traffic conditions and respond quickly to incidents.

- Construction Strategies of selectively closing freeway main lanes, ramps, and connectors to coordinate potential conflicts with other projects and special events without creating substantial delays to motorists, and A+B Bidding.
- Contingency Plans for instances in which the timely opening of lanes is deemed unachievable.
- Alternate Route Strategies that would temporarily detour traffic, mainly utilizing Sanyo Avenue, to allow construction activities while maintaining reasonable access to businesses.

7.10 Stage Construction

Construction of the project is expected to begin in 2013 and last approximately two to three years. During that time, construction staging is necessary to maintain traffic circulation. Construction is assumed to occur in one phase, with SR-11 and the POE/CVEF being constructed simultaneously, although multiple phases may be required based on funding constraints. The staging of construction will be closely coordinated with the TMP.

7.11 Accommodation of Oversize Loads

The proposed structure improvements for the project would not reduce the existing permanent vertical clearances along the SR-905 and SR-125 corridors. The minimum vertical clearance to any major structure is 16.5 ft over the roadbed of the state facility. The minimum vertical clearance would be provided for new structures constructed as part of the project.

7.12 Graffiti Control

The project vicinity has been identified as a graffiti-prone area. Adequate access restrictions shall be established to limit the potential for graffiti. Measures to reduce graffiti will be incorporated into the project and may include:

- Densely spaced vine planting sufficient to cover retaining walls to act as a graffiti deterrent
- Graffiti guards on bridge mounted signs
- Anti-climb measures on pole-mounted signs

7.13 U.S. International Boundary and Water Commission Requirements (IBWC)

The IBWC is a bi-national organization that oversees projects along the U.S. - Mexico Border with the potential to generate impacts involving political, economic, and environmental or infrastructure issues. With respect to water quality, IBWC guidelines identify requirements including prevention of pollution; and meeting applicable environmental laws, regulations and other pertinent requirements. For the proposed project, this would entail designing the storm drain system to ensure that there is no net increase in post-development flows from the project site, as well as conforming with appropriate elements of the federal Clean Water Act (CWA) and related requirements.

The IBWC jurisdiction extends 60 feet north from the international border, with the principal mission of the agency to provide solutions for issues related to the application of U.S.-Mexico treaties, including hydrology and flood control. Portions of the proposed POE facilities extend into the IBWC jurisdictional area and are subject to associated regulatory oversight. While none of the proposed SR-11 and CVEF facilities are located within the noted 60-foot zone, treated and detained runoff from the project area would be discharged into watersheds that eventually enter IBWC jurisdiction. The IBWC guidelines identify a number of hydrologic and hydraulic requirements for projects within or potentially affecting their jurisdiction, including assessment of applicable soil characteristics (e.g., infiltration rates), drainage conditions, flow regulation, and drainage facility maintenance. Final design of the POE will require the continued development of strategies and the identification of specific storm water control devices to satisfy the IBWC guidelines.

7.14 Hydraulics and Hydrology

Preliminary hydrology and hydraulics studies have been prepared for the project. The *Preliminary Hydrology and Hydraulics Report State Route 11 Corridor and Commercial Vehicle Enforcement Facility* was completed March of 2010 with a separate study completed for the POE in February of 2010. An August 2010 addendum to the report analyzed a Siempre Viva Road Full Interchange Variation.

7.15 Project Phasing

A PCR has been approved to split this project into four separate phases for design and construction. These phases will include (A) SR-905, (B) SR-11, (C) POE and (D) SR-125 Connector. The SR-905 phase will include all work west of Enrico Fermi Drive as described in the preferred alternative with the exception of the southbound SR-125 to eastbound SR-11 connector. The SR-11 phase will include the remainder of the highway work as described in the preferred alternative along with the CVEF. The POE will be constructed with a separate contract which is anticipated to be administered by SANDAG. The SR-125 phase will include the southbound SR-125 to eastbound SR-11 connector. The CTC approved this change in January 2012.

Senate Bill 1486 includes provisions for the entire project to utilize non-traditional delivery methods. The highway phases are anticipated to be delivered by method of Design-Sequencing, The POE will be delivered by method of Design-Build to deliver it simultaneously with the highway. This split is scheduled to take place at the onset of the "Begin Design" milestone as shown in the table below. The goal of this split is to facilitate the project delivery to attain the scheduled "Begin Construction" milestone set for September 1, 2013. As the SR 905/SR-11 connectors were environmentally cleared under the SR-905 project, EA 11-093160, there was opportunity to begin design of these connectors immediately. Therefore, design on the SR-905 phase began in the summer of 2011.

8. PROGRAMMING

8.1 Programming

This project is included in the SANDAG 2010 RTIP. It is funded in part by the State Transportation Improvement and Interregional Improvement Program (STIP-IIP), federal funds from the Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and the Coordinated Border Infrastructure Program (CBIP), the Trade Corridors Improvement Fund (TCIF - 20.20.723.000), which is a portion of State Proposition 1B passed by California voters in 2006, and local funds made up of bond revenue secured with future tolls. It should be noted that additional funds from local, regional, state, federal and private resources will also be pursued. Existing and proposed programmed amounts are shown in the following tables by fund type and phase:

Table 14 – Programmed Funding (in thousands of \$)

FUNDING SOURCE	TOTAL	PA&ED	PS&E	R/W	CON
CBIP	\$4,900	\$4,900			
Federal – HPP (SAFETEA-LU)	\$800	\$800			
Local Funds	\$626,420		\$42,690	\$80,380	\$503,350
STIP-IIP NHS	\$6,882	\$6,882			
STIP-IIP Prior State Cash	\$5,200	\$5,200			
STIP-IIP State Cash	\$919	\$919			
State – TCIF	\$75,000				\$75,000
TOTAL	\$720,121	\$18,701	\$42,690	\$80,380	\$578,350

Table 15 – Proposed Funding to be Programmed (in thousands of \$)

FUNDING SOURCE	TOTAL	PA&ED	PS&E	R/W	CON
CBIP	\$50,400	\$4,900	\$39,200	\$6,300	
Federal – HPP (SAFETEA-LU)	\$800	\$800			
Local Funds	\$615,000		2,600	\$121,300	\$491,400
STIP-IIP NHS	\$6,882	\$6,882			
STIP-IIP Prior State Cash	\$5,200	\$5,200			
STIP-IIP State Cash	\$919	\$919			
State – TCIF	\$75,000				\$75,000
TOTAL	\$754,201	\$18,701	\$41,800	\$127,600	\$566,400

8.2 Funding

To determine the financial feasibility of constructing and operating SR-11 and the Otay Mesa East POE as a toll- or fee-based facility, a financial feasibility study was completed for the SR-11 Toll Road and Otay Mesa East POE project in 2006. The study indicated that the project was viable and that the projected revenues were sufficient to limit debt-

service coverage risk to only a few initial years. Traffic, revenue, cost, and financial risk models were developed for this analysis. Key findings of the study concluded that the toll facility was potentially a good investment and that public participation will be necessary to attract sufficient bond capital and to finance construction of the Project. The financial feasibility study further concluded that further financial analyses will be needed to explore the potential of non-toll revenues, such as development fees and interest earnings on operating reserves, to make up potential revenue shortfalls. A financial team has been assembled by SANDAG to assess the marketability of selling revenue bonds for the project. A Traffic and Revenue Study (T&RS) is currently being pursued by SANDAG and Caltrans. This study will include an assessment of economic costs and benefits of the project based on revenue generated from tolling commercial and non-commercial vehicles. This study will complement a similar analysis that is currently underway in Mexico for the proposed Otay II POE and connecting roads in Tijuana.

8.3 Schedule

This project is following an accelerated schedule due to the constraints of the TCIF funding. According to the funding requirements per the CTC, construction of the project must begin by the end of 2013 or risk losing the TCIF funding. The following is a list of project milestones:

The following is the proposed delivery schedule for each phase:

Table 16 – Proposed Delivery Schedule by Phase

	(A) SR-905	(B) SR-11	(C) POE	(D) SR-125 Connector
Project Study Report Approved				
Begin Environmental (PA&ED) Phase		05/30/07	05/30/07	05/30/07
Circulate Draft Environmental Document		12/11/10	12/11/10	12/11/10
Draft Project Report	07/27/01	12/11/10	12/11/10	12/11/10
End Environmental Phase (PA&ED Milestone)	09/23/04	10/31/11	10/31/11	10/31/11
Begin Design (PS&E) Phase	07/01/11	11/01/11	11/01/11	11/01/13
End Design Phase (RTL)	04/01/13	07/01/13	07/01/13	07/01/15
Begin Right of Way Phase	11/01/11	11/01/11	11/01/11	11/01/13
End Right of Way Phase (Right of Way Certification Milestone)	04/01/13	07/01/13	07/01/13	07/01/15
Begin Construction Phase (Contract Award Milestone)	07/15/13	10/01/13	09/01/13	09/01/15
End Construction Phase (Construction Contract Acceptance Milestone)	03/31/16	06/20/16	03/30/16	03/30/18
Begin Closeout Phase	04/01/16	10/30/16	04/30/16	04/30/18
End Closeout Phase (Closeout Report)	04/01/18	10/30/18	04/30/18	04/30/20

9. REVIEWS

Manuel Sanchez, FHWA, reviewed project on October 21, 2011.

Luis Betancourt, Caltrans Headquarters Geometric Reviewer, reviewed project on October 26, 2011.

This Project Report was reviewed by the following:

Mario Orso	Caltrans District 11, TCIF Corridor Director
Jacqueline Appleton-Deane	Caltrans District 11, Project Manager
Nicola Bernard	Caltrans District 11, Design Manager
Michael Webster	Caltrans District 11, Design Manager
Sandra Lavender	Caltrans District 11, Environmental Planning

10. PROJECT PERSONNEL

Caltrans District 11

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Andrea Thomas, Consultant Project Engineer

VRPA Technology, Inc.

Erik Ruehr, Consultant Traffic Engineer

LIST OF ATTACHMENTS

Attachment A – Preferred Alternative Cover Sheet and Typical Sections

Attachment B – Preferred Alternative Layout Sheets

Attachment C – Preferred Alternative Profile Sheets

Attachment D – Preliminary Otay Mesa East POE with CVEF Layout

Attachment E – Cost Estimates

Attachment F – LCCA Data Sheets

Attachment G – Right-of-Way Data Sheets

Attachment H– Structures Advanced Planning Studies

Attachment I – Fact Sheet Exceptions

Attachment J – Commercial Vehicle Enforcement Facility (CVEF) Alternatives Analysis Report

Attachment K – Transportation Management Plan

Attachment L - Storm Water Data Report (SWDR)

Attachment M – Noise Abatement Decision Report (NADR)

12. LIST OF APPENDICES

Appendix A. Senate Bill 1486 Otay Mesa East Toll Facility Act, Senator Ducheny, February 2008

Appendix B. Economic Impacts of Wait Times at the San Diego-Baja California Border, SANDAG, Caltrans District 11, January 19, 2006

Appendix C. Technology Pre-Deployment Proposal for Otay Mesa East Port of Entry: A Clean, Green, and Smart Border, SANDAG, 2009