STATE OF CALIFORNIA - **CALIFORNIA TRANSPORTATION COMMISSION**
CTC-0001 (NEW 07/2018)

ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT
Route 71/91 Interchange EB-NB Connector

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 *Route 71/91 Interchange EB-NB Connector*,

effective on, June 23,2021 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant,
Riverside County Transportation Commission, and the Implementing Agency,
Riverside County Transportation Commission, sometimes collectively referred to as the "Parties".

3. RECITAL

3.2 Whereas at its May 17, 2018 meeting the Commission approved the Trade Corridor Enhancement Program, and included in this program of projects the *Route 71/91 Interchange EB-NB Connector*, 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 G-20-78, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated 12/2/2020

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 Riverside County Transportation Commission agrees to secure funds for any additional costs of the project.

4.6 The Riverside County Transportation Commission 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 Riverside County Transportation Commission 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
a) 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.)

b) This project received Cycle 1 SB1 Funding. This baseline agreement does not supersede the cycle 1 baseline agreement or cycle 1 guidelines. SB1 funds are subject to the guidelines for the cycle in which they were programmed, and the baseline agreement provisions for the cycle of funding.

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Route 71/91 Interchange EB-NB Connector

Resolution TCEP-P-2021-07B

Bryce Johnston — 4/19/2021

Bryce Johnston — Date

Construction Manager

Project Applicant

Anne Mayer — 4/21/2021

Anne Mayer — Date

Executive Director

Implementing Agency

Michael D. Beauchamp — 04/27/2021

Michael D. Beauchamp — Date

District Director

California Department of Transportation

Toks Omishakin — 6.3.21

Toks Omishakin — Date

Director

California Department of Transportation

Mitchell Weiss — 07/16/21

Mitchell Weiss — Date

Executive Director

California Transportation Commission

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6054-2020-0003 v7

Amendment (Existing Project) ☐ YES ☒ NO				Date	06/02/2021 12:54:11
Programs ☐ LPP-C ☐ LPP-F ☐ SCCP ☒ TCEP STIP ☐ Other					
District	EA	Project ID	PPNO	Nominating Agency	
08	0F541	0800000137	0077G	Riverside County Transportation Commission	
County	Route	PM Back	PM Ahead	Co-Nominating Agency	
Riverside	91	R 0.900	R 2.600	Caltrans HQ	
Riverside	71	1.900	R 3.000	MPO	Element
				SCAG	Capital Outlay
Project Manager/Contact			Phone	Email Address	
Bryce Johnston			951-787-7141	bjohnston@rctc.org	

Project Title

Route 71/91 Interchange EB-NB Connector

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

Replace eastbound Rte 91 to northbound Rte 71 loop connector with a direct connector ramp. Realign the Green River Road eastbound entrance ramp to Rte 91, and construct a collector/distributor system on Rte 91 in the eastbound direction between the Green River Road and Serfas Club Drive.

Component	Implementing Agency
PA&ED	Riverside County Transportation Commission
PS&E	Riverside County Transportation Commission
Right of Way	Riverside County Transportation Commission
Construction	Riverside County Transportation Commission

Legislative Districts

Assembly:	60	Senate:	31	Congressional:	42

Project Milestone	Existing	Proposed
Project Study Report Approved		
Begin Environmental (PA&ED) Phase	01/03/2008	01/03/2008
Circulate Draft Environmental Document Document Type (ND/MND)/FONSI	11/22/2010	11/22/2010
Draft Project Report	11/23/2010	11/23/2010
End Environmental Phase (PA&ED Milestone)	08/05/2021	08/05/2021
Begin Design (PS&E) Phase	03/14/2012	03/14/2012
End Design Phase (Ready to List for Advertisement Milestone)	12/20/2021	12/20/2021
Begin Right of Way Phase	03/14/2012	03/14/2012
End Right of Way Phase (Right of Way Certification Milestone)	09/24/2021	09/24/2021
Begin Construction Phase (Contract Award Milestone)	06/30/2022	06/30/2022
End Construction Phase (Construction Contract Acceptance Milestone)	07/19/2024	07/19/2024
Begin Closeout Phase	08/19/2024	08/19/2024
End Closeout Phase (Closeout Report)	08/19/2026	08/19/2026

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6054-2020-0003 v7

Date 06/02/2021 12:54:11

Purpose and Need

Relieve congestion, improve mobility, and enhance safety on eastbound State Route 91 and northbound State Route 71 by replacing a loop connector ramp with a short weaving distance with a direct connector ramp and auxiliary lanes that will improve freight flow between the two highways and on the mainline.

NHS Improvements YES ☐ NO	Roadway Class 1	Reversible Lane Analysis ☐ YES NO

Inc. Sustainable Communities Strategy Goals ☒ YES ☐ NO Reduce Greenhouse Gas Emissions ☒ YES ☐ NO

Project Outputs

Category	Outputs	Unit	Total
Bridge / Tunnel	Modified / Improved interchanges	SQFT	200,000
Bridge / Tunnel	New local road bridge structures/tunnels	SQFT	10,000
Operational Improvement	Auxiliary lanes	Miles	0.5
Operational Improvement	Interchange modifications	EA	1
Operational Improvement	Ramp modifications	EA	1
Drainage	Culverts	LF	2,000
TMS (Traffic Management Systems)	Traffic monitoring detection stations	EA	1
TMS (Traffic Management Systems)	Freeway ramp meters	EA	1
ADA Improvements	New curb ramp installed	EA	2
Pavement (lane-miles)	Auxiliary lane constructed	Miles	1
Pavement (lane-miles)	Ramps and Connectors constructed	Miles	2.5
Rail/ Multi-Modal	Grade separations/ rail crossing improvemnets	EA	1

Date 06/02/2021 12:54:11

Additional Information

Total project budget increase is due to during the development of the final design, additional items were included due to comments on the previous submissions and through coordination with the various stakeholders. In addition, the design team updated the bid item unit costs based on recent material costs increases.

The environmental document was changed from a CE to ND/MND/FONSI due to the United States Army Corps of Engineers (USACE) would not accept the CE to obtain the 408 Outgrant permit and required the FONSI, as the project has direct impacts to the USACE property. There is no scope change in the project, the environmental document change was required to obtain the 408 permit.

Compared to the Project Report, the post miles in the PPR are the updated numbers based on changes Caltrans made to their post mile log recently. Here are the agreed to post miles which Caltrans asked us to use on all documents dated May 2020 and after:
SR 71: 1.9 to R3.0
SR 91 R0.9 to R2.6

The CEQA was completed in June 2011. Revalidation #1 was approved 11/17/2014. Revalidation #2 is scheduled to be approved May/June 2021.

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	2,158	2,158	0
	TCEP	Daily Truck Trips	# of Trips	6,109	6,109	0
	TCEP	Daily Truck Miles Traveled	Miles	8,126	8,126	0
Throughput	TCEP	Change in Truck Volume That Can Be Accommodated	# of Trucks	1,800	1,500	300
	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	5.67	5.67	0
	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	1,741	4,527	-2,786
Velocity	TCEP	Travel Time or Total Cargo Transport Time	Hours	1.2	3.2	-2
Air Quality & GHG	LPPF, LPPC, SCCP, TCEP	Particulate Matter	PM 2.5 Tons	3.7	2.4	1.3
			PM 10 Tons	3.9	2.6	1.3
	LPPF, LPPC, SCCP, TCEP	Carbon Dioxide (CO2)	Tons	265,373	276,846	-11,473
	LPPF, LPPC, SCCP, TCEP	Volatile Organic Compounds (VOC)	Tons	118.9	126.8	-7.9
	LPPF, LPPC, SCCP, TCEP	Sulphur Dioxides (SOx)	Tons	2.6	2.7	-0.1
	LPPF, LPPC, SCCP, TCEP	Carbon Monoxide (CO)	Tons	1,470	1,702	-232
	LPPF, LPPC, SCCP, TCEP	Nitrogen Oxides (NOx)	Tons	286.5	294.2	-7.7
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	6	8.8	-2.8
	LPPF, LPPC, SCCP, TCEP	Fatalities per 100 Million VMT	Number	0.009	0.013	-0.004
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries	Number	178.6	261.2	-82.6
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries per 100 Million VMT	Number	0.26	0.39	-0.13
Economic Development	LPPF, LPPC, SCCP, TCEP	Jobs Created (Direct and Indirect)	Number	1,279	0	1,279
Cost Effectiveness	LPPF, LPPC, SCCP, TCEP	Cost Benefit Ratio	Ratio	1.8	0	1.8

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID

ePPR-6054-2020-0003 v7

District	County	Route	EA	Project ID	PPNO
08	Riverside, Riverside	91, 71	0F541	0800000137	0077G

Project Title

Route 71/91 Interchange EB-NB Connector

Existing Total Project Cost ($1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Implementing Agency
E&P (PA&ED)	9,273							9,273	Riverside County Transportation Cor
PS&E	9,700		3,006					12,706	Riverside County Transportation Cor
R/W SUP (CT)									Riverside County Transportation Cor
CON SUP (CT)									Riverside County Transportation Cor
R/W	4,750		2,500					7,250	Riverside County Transportation Cor
CON			69,238	66,377				135,615	Riverside County Transportation Cor
TOTAL	23,723		74,744	66,377				164,844	
Proposed Total Project Cost ($1,000s)									Notes
E&P (PA&ED)	9,273							9,273	
PS&E	9,700		3,006					12,706	
R/W SUP (CT)									
CON SUP (CT)									
R/W	4,750		2,500					7,250	
CON			79,307	66,377				145,684	
TOTAL	23,723		84,813	66,377				174,913	

Fund #1:	RIP - National Hwy System (Committed)								Program Code
Existing Funding ($1,000s)									20.XX.075.600
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)	5,273							5,273	Riverside County Transportation Cor
PS&E									$5273 PAED voted 09/05/07. Will be utilizing AB 3090 for project. Requesting STIP Amendment at March 2021 CTC meeting and AB 3090 notice at May 2021 CTC meeting. $5273 PAED voted 09/05/07
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON				66,377				66,377	
TOTAL	5,273			66,377				71,650	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)	5,273							5,273	
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON				66,377				66,377	
TOTAL	5,273			66,377				71,650	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
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Fund #2:	Demo - Demonstration-State TEA21 (Committed)								Program Code
	Existing Funding ($1,000s)								20.30.010.680
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									Federal Highway Administration
PS&E	3,196							3,196	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	3,196							3,196	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E	3,196							3,196	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	3,196							3,196	

Fund #3:	State SB1 LPP - Local Partnership Program - Formula distribution (Committed)								Program Code
	Existing Funding ($1,000s)								20.XX.724.000
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)	2,000							2,000	
PS&E									$2000 PAED voted 05/17/18$2000 PAED voted 05/17/18
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	2,000							2,000	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)	2,000							2,000	
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	2,000							2,000	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6054-2020-0003 v7

Fund #4:	Local Funds - Local Measure (Committed)								Program Code
Existing Funding ($1,000s)									20.10.400.100
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)	2,000							2,000	Riverside County Transportation Cor
PS&E			345					345	
R/W SUP (CT)									
CON SUP (CT)									
R/W	1,225		286					1,511	
CON			1,277					1,277	
TOTAL	3,225		1,908					5,133	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)	2,000							2,000	
PS&E			345					345	
R/W SUP (CT)									
CON SUP (CT)									
R/W	1,225		286					1,511	
CON			1,277					1,277	
TOTAL	3,225		1,908					5,133	

Fund #5:	Demo - Demonstration - TEA21 (Committed)								Program Code
Existing Funding ($1,000s)									20.30.010.680
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									
PS&E	6,504							6,504	
R/W SUP (CT)									
CON SUP (CT)									
R/W	1,796							1,796	
CON									
TOTAL	8,300							8,300	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									
PS&E	6,504							6,504	
R/W SUP (CT)									
CON SUP (CT)									
R/W	1,796							1,796	
CON									
TOTAL	8,300							8,300	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6054-2020-0003 v7

Fund #6:	Federal Disc. - Exploratory Advanced Research (EAR) (Committed)								Program Code
	Existing Funding ($1,000s)								20.XX.400.300
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	990							990	
CON									
TOTAL	990							990	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W	990							990	
CON									
TOTAL	990							990	

Fund #7:	Local Funds - Local Transportation Funds - Advance Construction (Committed)								Program Code
	Existing Funding ($1,000s)								LOCAL FUNDS
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									Riverside County Transportation Cor
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W	739							739	
CON									
TOTAL	739							739	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W	739							739	
CON									
TOTAL	739							739	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6054-2020-0003 v7

Fund #8:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
Existing Funding ($1,000s)									20.XX.723.100
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			23,243					23,243	
TOTAL			23,243					23,243	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									State funds
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			23,243					23,243	
TOTAL			23,243					23,243	

Fund #9:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
Existing Funding ($1,000s)									20.XX.723.200
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			34,865					34,865	
TOTAL			34,865					34,865	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									Regional funds
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			34,865					34,865	
TOTAL			34,865					34,865	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6054-2020-0003 v7

Fund #10:	RSTP - STP Local (Committed)								Program Code
	Existing Funding ($1,000s)								20.30.010.810
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									
PS&E			2,661					2,661	
R/W SUP (CT)									
CON SUP (CT)									
R/W			2,214					2,214	
CON			9,853					9,853	
TOTAL			14,728					14,728	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E			2,661					2,661	
R/W SUP (CT)									
CON SUP (CT)									
R/W			2,214					2,214	
CON			9,853					9,853	
TOTAL			14,728					14,728	

Fund #11:	RIP - COVID Relief Funds - STIP (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)									Riverside County Transportation Cor
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			10,069					10,069	
TOTAL			10,069					10,069	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6054-2020-0003 v7

Complete this page for amendments only

Date 06/02/2021 12:54:11

District	County	Route	EA	Project ID	PPNO
08	Riverside, Riverside	91, 71	0F541	0800000137	0077G

SECTION 1 - All Projects

Project Background

Project currently programmed for CON with STIP-RIP in FY22/23 due to capacity and TCEP in FY21/22. Congress/Executive Branch passed CRRSAA providing federal funding for highway projects. RCTC is programming an additional $10 million in CON with 2021 Mid-Cycle STIP (RIP) funds in FY21/22 to get the project started on time (to the extent RTL can be achieved through Caltrans timely) and provide funding until FY22/23 STIP-RIP funds are available.

Programming Change Requested

Reason for Proposed Change

Programming new CRRSAA 2021 Mid-Cycle STIP (RIP) funds.

If proposed change will delay one or more components, clearly explain 1) reason for the delay, 2) cost increase related to the delay, and 3) how cost increase will be funded

Other Significant Information

SECTION 2 - For SB1 Project Only

Project Amendment Request (Please follow the individual SB1 program guidelines for specific criteria)

Programming new CRRSAA 2021 Mid-Cycle STIP (RIP) funds.

Approvals

I hereby certify that the above information is complete and accurate and all approvals have been obtained for the processing of this amendment request.

Name (Print or Type)	Signature	Title	Date

SECTION 3 - All Projects

Attachments

1) Concurrence from Implementing Agency and/or Regional Transportation Planning Agency
2) Project Location Map

STATE ROUTE 71/91
INTERCHANGE IMPROVEMENT PROJECT

The Riverside County Transportation Commission (RCTC) and the California Department of Transportation (Caltrans) are requesting **$58 million** in Trade Corridor Enhancement Program (TCEP) funds (State TCEP $23 million, Regional TCEP $35 million) to complete a project that provides access and connections from rural southern California communities to the Ports of Los Angeles and Long Beach. The SR 71/91 Interchange Improvement Project will connect people to jobs, cut the costs of doing business, and reduce the burden of commuting.

Project improvements will:

- Improve trade
- Improve rural connectivity
- Reduce congestion
- Support local and regional economy
- Increase travel time reliability
- Improve safety

NEEDS FUNDING

STATE ROUTE 71/91
Interchange Improvement Project

- Replaces existing single lane loop connection between eastbound SR-91 and northbound SR-71 with new two-lane direct connector ramp.
- Adds eastbound auxiliary lane south of and parallel to SR-91.
- Realigns eastbound entrance ramp from Green River Road.

Total project cost:
$124 million (YOE)

Construction:	Open to drivers:
2021	2024

FUNDED

SR-91 Corridor Operations Project

New auxiliary lane from Green River Road on-ramp on westbound SR-91 to the SR-241 direct connector.

Total project cost:
$43.3 million

COMPLETED

SR-91 Corridor Improvement Project

Extension of the 91 Express Lanes from the Riverside County/ Orange County line to I-15, providing the first tolled express lanes in Riverside County.

Total project cost:
$1.4 billion

FUNDED

I-15/SR-91 Express Lanes Connector Project

Interchange ramp links future southbound I-15 Express Lanes to westbound 91 Express Lanes, and eastbound 91 Express Lanes to future northbound I-15 Express Lanes.

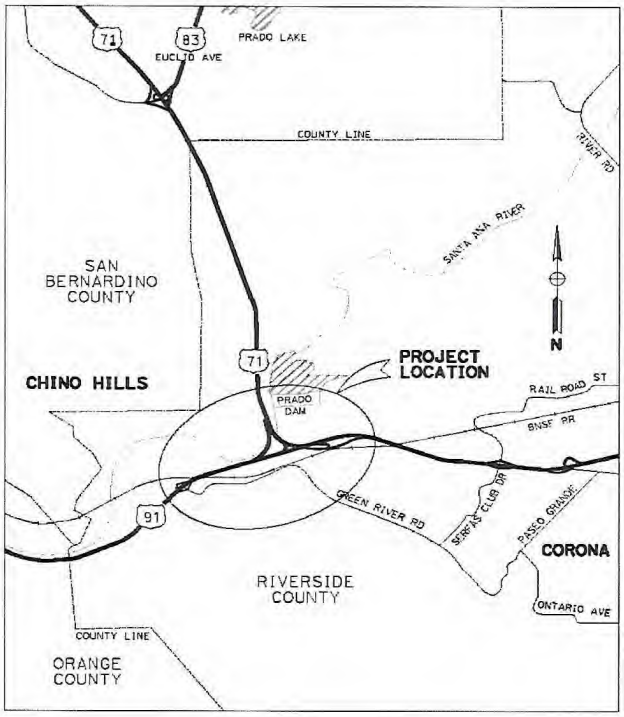
Total project cost:
$270 million

For more information visit: www.rctc.org/projects/71-91-interchange-project

08-Riv-91-PM R0.6/R2.6
08-Riv-71-PM 1.6/3.0
08-250 –EA 0F5410
0800000137
June 2011

PROJECT REPORT

State Route 91/71 Interchange Improvement Project



On Route 91 from 0.40-mile west of Green River Road to 1.6 miles east of Green River Road, and on Route 71 from Route 91 to 1.4 miles north of Route 91

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

BASEM MUALLEM, *DEPUTY DISTRICT DIRECTOR-RIGHT OF WAY*

APPROVAL RECOMMENDED: _____

DANIEL CIACCHELLA, *PROJECT MANAGER*

APPROVAL RECOMMENDED: _____

CHRISTY CONNORS, *DEPUTY DISTRICT DIRECTOR – DESIGN*

APPROVAL RECOMMENDED: _____

DAVID BRICKER,
DEPUTY DISTRICT DIRECTOR – ENVIRONMENTAL PLANNING

APPROVED: _____ 6/29/11

RAYMOND W. WOLFE, PhD *DISTRICT DIRECTOR* DATE

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

Sam Saghafi — 6/13/11

SAM SAGHAFI
REGISTERED CIVIL ENGINEER

DATE

Jon Bumps — 6/15/11

CONCURRENCE, JON BUMPS
DISTRICT OVERSIGHT CHIEF

DATE

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1. INTRODUCTION

The Riverside County Transportation Commission (RCTC), in cooperation with the California Department of Transportation (Caltrans), proposes to improve the existing State Route (SR) 91/SR 71 interchange in the City of Corona, Riverside County (see attachment A). The proposed improvements include constructing a new direct flyover connector from eastbound (EB) SR 91 to northbound (NB) SR 71 and reconfiguring the EB SR 91 ramp between Green River Road and the SR 91/71 interchange. The proposed project is anticipated to improve mobility on SR 91 and SR 71 by enhancing operations and capacity at the SR 91/71 interchange.

Several alternatives were evaluated that considered traffic performance, environmental, right-of-way (ROW), and cost constraints. The uncertainty in determining the cost of environmental mitigation and the need for avoidance were the determining factors in the decision by Project Development Team (PDT) to reject the Project Study Report/Project Development Support (PSR/PDS) alternative, and other alternatives that impacted the environmentally sensitive area near and along Wardlow and Fresno Canyon Wash.

In addition to the No Build Alternative, one build alternative was identified for this project. As a result, two viable alternatives, consisting of a No Build Alternative and one Build Alternative (Freeway-to-Freeway Type F-5), were considered for the project. The main features of the improvements under the Build Alternative include replacing the existing single-lane EB SR 91 to NB SR 71 loop connector with a two-lane direct flyover connector and reconfiguring the EB Green River Road on-ramp to eliminate the traffic weave between this ramp and the proposed connector (see Attachment C). The project limits extend from approximately post mile (PM) R0.6 to PM R2.6 along SR 91 and from PM 1.6 to PM 3.0 along SR 71. Based on the determination in the final environmental document and comments received from the public hearing on December 9, 2010, the PDT decided to select the Build Alternative as the Preferred Alternative.

The preliminary cost estimate for construction of the Build Alternative is $113 million, including $93.4 million in capital construction, $2.8 million in capital ROW, and $16.8 million in support costs (see Attachment E).

RCTC anticipates using State Transportation Improvement Project (STIP)/Regional Improvement Program (RIP), local sales tax Measure "A," and Federal funds for support cost, acquisition of ROW, and construction of project programmed for delivery in fiscal year 2015.

The project has been assigned Project Development Category 4A in accordance with Part 2, Chapter 8, Section 5, of the Project Development Procedures Manual (PDPM). The Project Category was approved by the Caltrans on June 8, 2011 (see Attachment O).

2. RECOMMENDATION

It is recommended that this project be approved using the Preferred Alternative and that the project proceed to the design phase.

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

A. Project History

In September 2002, Assembly Bill (AB) 1010 authorized the Orange County Transportation Commission to purchase from California Private Transportation Company, L.P. (CPTC), the franchise agreement and development rights for toll lanes along SR 91 between SR 55 in Orange County and Interstate 15 (I-15) in Riverside County. The toll lanes in the median of SR 91 between the Orange County line and SR 55 were constructed under a public-private partnership between Caltrans and CPTC and opened in 1995, adding needed capacity to meet growing transportation demands between Riverside and Orange counties. The Caltrans-CPTC franchise agreement contained a no-compete clause that prevented Caltrans from constructing, or permitting others to construct, any capacity-enhancing improvements within the corridor during the term of the 40-year contract. While the toll lanes improved congestion in the westbound (WB) direction, they created a lane imbalance in the EB direction where the toll lanes ended and merged into the existing lanes of SR 91, resulting in heavy congestion at the Orange-Riverside County line during afternoon rush hour. The EB lane imbalance was further compounded following the opening of the SR 241 toll road in 1998. SR 241 added two more lanes of traffic to an increasingly congested EB SR 91. Purchase of the franchise agreement was seen as the easiest way to eliminate the no-compete clause, and this led to the introduction and passage of AB 1010.

Provisions in AB 1010 required Orange County Transportation Authority (OCTA), in conjunction with RCTC and Caltrans, to develop a plan and proposed completion schedule by no later than July 1, 2003, for improvements to SR 91 within the limits of the franchise agreement. The bill also requires that OCTA, in consultation with Caltrans and RCTC, provide an annual update to the plan until all improvements have been completed.

In January 2003, the agencies completed the "State Route 91 Congestion Relief Alternatives Analysis" study that identified short-, mid-, and long-term strategies to help relieve congestion along the SR 91 corridor between SR 55 in Orange County and I-15 in Riverside County. In December 2005, OCTA completed the "Riverside County-Orange County Major Investment Study" (MIS), which resulted in adoption of a Locally Preferred Strategy (LPS) by the OCTA and RCTC boards. The MIS developed capital

improvement strategies for five major corridors between the two counties, including the SR 91 corridor.

In December 2006, a Project Study Report/Project Development Support (PSR/PDS) for improvements to the SR 91/71 interchange was approved. The interchange improvements contained in the December 2006 PSR/PDS were originally included in a separate mainline widening and improvement project that had been prepared for the SR 91 corridor under Caltrans Expenditure Authorization (EA) 0F540K. Caltrans and RCTC later separated the interchange project from the larger corridor project when it was decided to nominate the interchange portion for Corridor Mobility Improvement Account (CMIA) program funding. Although the project was not selected by the California Transportation Committee (CTC) for CMIA funding, RCTC decided to continue pursuing the interchange project separately, having it ready as a substitute project if one of the selected CMIA projects failed to maintain contractual schedule requirements.

During the project development process, the PSR/PDS Alternative was identified as having major impacts to an environmentally sensitive area within Fresno Canyon/Wardlow Wash and was dropped from consideration. The Build/Preferred Alternative eliminates the need for the proposed collector/distributor road identified in the PSR/PDS alternative and reconfigures the on-ramp from Green River Road and the EB SR 91 to NB SR 71 connector to eliminate the weave between the two ramps.

A Final Environmental Document (IS/MND/CE) has been prepared, all associated technical studies have been completed and no right of way has been acquired to date.

B. Community Interaction

A Notice of Initiation of Studies (NOIS) was issued on August 11, 2008, informing stakeholders and interested parties of the project purpose and need, the viable alternatives under consideration, and the environmental factors to be studied for the Build Alternative. The notice invited interested parties to participate in the Public Open House in Corona, which was held on August 26, 2008, to introduce the project and to seek comments and input on the viable project alternatives under consideration. Attendees generally expressed support of the proposed project; there was no opposition.

After the Public Open House, RCTC placed an SR 91/71 Interchange Improvement Project information page on its public Web site and invited visitors to submit questions/ comments via e-mail. As a result, additional comments/questions and recommendations received through e-mail via the Web site were generally supportive of the project. Those submitting comments generally included recommendations for improvements that are far beyond the scope of this project. Two suggested connecting SR 241 directly to SR 71 through Chino Hills and one suggested improving the SR 91/I-15 Interchange.

Subsequently, RCTC, in cooperation with Caltrans, prepared formal responses to all comments and questions received during the comment period.

A Notice of Availability (NOA) was issued to the public upon the completion of the draft environmental document and approval from the PDT. The 30-day public comment period for the draft environmental document began on November 22, 2010 and ended on December 21, 2010. The public was notified via direct mail distribution, e-mail distribution, newspaper advertisements, press release, project website and postings. A second formal public meeting was held at the City of Corona City Hall on December 9, 2010, from 5:00 p.m. to 8:00 p.m. inviting interested parties to participate in the environmental process by providing written comments or suggestions concerning the findings of the draft environmental document. A total of 13 comments were received from the public and resource agencies during the 30-day review period. Comments received regarding the draft environmental document generally inquired about mitigation measures for biological resources, accessibility of large trucks along SR 91, inclusion in the notification list, emergency services, traffic circulation, noise, coordination with other transportation projects within the area, hazardous waste procedures, and construction within State Parks ROW. Responses were provided for each public comment and included in the final environmental document.

C. Existing Facility

1) Existing State Route 91

SR 91 begins at its junction with Pacific Coast Highway (CA 1) in Hermosa Beach and continues easterly through Los Angeles, Orange, and Riverside counties to its eastern terminus at its junction with SR 60 and I-215 in the City of Riverside. SR 91 is the only significant corridor connecting Riverside and Orange counties and serves as an important commuter route linking residents of Riverside and San Bernardino Counties with job centers in Los Angeles and Orange Counties. The route also serves as a major goods movement corridor. Listed as a route on the Surface Transportation Assistance Act (STAA) National Network and included as part of the National Highway System, SR 91 provides access between the ports of Los Angeles and Long Beach to logistics centers in the Inland Empire.

Within the limits of this project, SR 91 consists of six lanes in each direction, including four to five mixed-flow, or general purpose lanes, and one or two high-occupancy vehicle (HOV) lanes with existing ROW width of approximately 500 to 700 feet. Opposing directions of traffic are separated by a 2-foot (ft)-wide median concrete barrier. Generally, existing mixed-flow and HOV lane widths are 11 ft or 12 ft. A 4-ft-wide buffer separates the HOV and mixed-flow lanes. Existing inside shoulder widths are 2 ft in some locations, with outside shoulders of 10 ft in width. Existing structural section include 0.85-ft Portland Concrete Cement (PCC), 0.45-ft Cement Treated Base (CTB) and 0.60-ft Aggregate Base (AB) which is in good condition with no sign of distress.

Caltrans, in cooperation with OCTA, recently completed the SR 91 Eastbound Lane Addition project, which consists of the construction of an additional mixed-flow lane on the EB SR 91 from SR 241 to SR 71. The project has also widened the EB roadbed to provide minimum standard lane and shoulder widths throughout the length of the project. The Eastbound Lane Addition Project and the proposed first phase of SR 91 Corridor Improvement Project (CIP) provide the "existing conditions" that were considered in the design of the SR 91/71 Interchange Improvement Project.

Currently, SR 91 operates at Level of Service (LOS) D during PM peak within project limits, however with the completion of Eastbound Lane Addition it is projected that the LOS will be improved to LOS C during PM peak in 2015.

2) Existing State Route 71

SR 71 begins at its junction with Interstate 10 (I-10) near Pomona, and traverses in a southeasterly direction to its southern terminus at the SR 91 junction in Corona. Listed as an STAA terminal route and included as part of the National Highway System, SR 71 provides goods movement access for local distribution centers in Riverside and San Bernardino counties. North of SR 91 to the San Bernardino County line, existing SR 71 is generally a four-lane divided highway, with two 12-ft-wide lanes, and a 5-ft-wide inside and 8-ft-wide outside shoulder in each direction with approximate ROW width of 200 to 600 feet. Opposing directions of traffic are separated by a 2-ft-wide concrete median barrier. Within the project limits, there is an existing at-grade intersection that provides access to properties adjacent to SR 71. The existing structural section include 0.85-ft PCC, 0.35-ft Asphalt Treated Permeable Base (ATPB), 0.35-ft AB and 0.35-ft Aggregate Sub-base (AS) which is in excellent condition with no sign of distress.

Currently, SB SR 71 operates at LOS D during PM peak and NB SR 71 within project limits operates at LOS C. It is projected that SB SR 71 and NB SR 71 would operate at LOS E and LOS D respectively by year 2015.

Based on the Southern California Association of Governments (SCAG) 2008 Regional Transportation Plans (RTP), SR 71 widening is included in the RCTC model as a future improvement to this corridor.

3) Existing SR 91/SR 71 Interchange

Currently classified as a freeway-to-freeway interchange Type F-6, the existing EB SR 91 to NB SR 71 connector consists of a single-lane, tight loop ramp that passes under the 91/71 separation bridge to join the WB SR 91 to NB SR 71 connector. In addition, the southbound (SB) SR 71 to EB SR 91 connector passes under the 91/71 separation bridge as a single-lane ramp, paralleling the EB SR 91 to NB SR 71 connector beyond the existing loop

and opening to two lanes to provide storage for connector ramp metering prior to merging into an existing auxiliary lane along EB SR 91.

The existing WB SR 91 to NB SR 71 connector diverges from SR 91 as a two-lane ramp and merges to a single lane prior to joining the single-lane EB SR 91 to NB SR 71 connector, thereby forming the two-lane NB SR 71. NB SR 71 then crosses the Santa Ana River on an existing four-lane structure shared by the two-lane SB SR 71. The existing SB SR 71 to WB SR 91 connector diverges from SR 71 as a single lane and opens to two lanes to provide storage for ramp metering prior to merging onto WB SR 91 as an auxiliary lane between SR 71 and the WB Green River Road off-ramp.

4) Existing Structures

The following are the existing structures within the project limits:

- Santa Ana River Bridge (Br. No. 56-379), a 5-span steel beam bridge with composite concrete deck over the Santa Ana River. This bridge was constructed in 1950, and widened in 1970 and 2003.
- West Prado Overhead (Br. No. 56-364), a multi-span concrete box girder carrying SR-91 over the BNSF railroad tracks. This bridge was constructed in 1961, widened in 1988 and has since been widened with the "EB Lane Addition" project.
- E91-N71 Connector Undercrossing (Br. No. 56-365), a single span concrete box girder bridge built in 1970, widened in 1992 and has since been widened with the "EB Lane Addition" project. This structure will be further widened as part of this project.

4. PURPOSE AND NEED

A. Problem, Deficiencies, Justification

SR 91 is currently the only major route between Riverside and Orange counties, and while traffic demand has continued to increase, capacity-increasing improvements within the project limits have been limited to the toll lanes between SR 55 and the Orange/ Riverside County Line. The toll lanes, while providing some level of congestion relief in the WB direction, have resulted in lane imbalances along the EB side of SR 91 where the toll lanes end and merge into the existing lanes of SR 91, resulting in heavy congestion at the Orange-Riverside County line during the afternoon rush hour. In addition, the SR 241 merge lanes converging into a congested facility have contributed to the recurring congestion.

Within the project limits, traffic on the EB SR 91 to NB SR 71 connector loop ramp with existing LOS F during PM peak-hour backs up onto the outside lane of EB SR 91,

causing congestion and delay (LOS D) on the mainline during PM peak-hour between Green River On-Ramp and NB SR 71 Off-Ramp as EB through traffic is forced to merge into the interior lanes of SR 91. Traffic from the EB Green River Road on-ramp to SR 91 is also forced to merge and weave with the NB SR 71 connector traffic, adding to the congestion. The bottleneck caused by the tight radius loop of the EB SR 91 to NB SR 71 on-ramp and the close proximity of the Green River Road on-ramp to NB SR 71 connector are the major contributors to the recurring congestion in this segment of the corridor which is projected to worsen by year 2015 with volumes (2080 vehicles in the PM peak-hour) that would exceed the capacity of existing single lane loop on-ramp to NB SR 71. Accident rates are also increasing in this segment of SR 91 [1.23 accidents per million vehicle miles (a/mvm) as compared to the statewide average of 1.18 a/mvm] as motorists attempt lane change maneuvers under stop-and-go conditions.

SR 91 provides a vital link for goods movement between Orange, Riverside, and San Bernardino counties. Recurring congestion within the corridor decreases mobility and slows goods movement leading to increases in costs for businesses and consumers due to delays.

The purpose of the SR 91/71 Interchange Improvement Project is to accomplish the following:

- Improve the operational efficiency of the EB SR 91 to NB SR 71 connector.
- Minimize future congestion and delay in the EB direction of SR 91 between Green River Road and the SR 91/71 interchange.
- Improve accessibility to SR 71 from eastbound SR 91 at Green River Road.
- Improve access and reduce congestion associated with weaving from Green River Road to EB SR 91.

A traffic study has been prepared to evaluate current (2007) traffic conditions and forecasted traffic for the project opening year (2015) and the project design horizon year (2035). The traffic study report results indicate an increase in traffic volumes between the present year, the project opening year, and the project design horizon, resulting in further future operational deficiencies at the EB SR 91 to the SR 71 NB connector. Traffic analyses have been performed to the level of detail required to show that the Build Alternative meets the purpose and need of the project (See Traffic section for details).

B. Regional and System Planning

Identify Systems

The proposed improvements are located on SR 91 from PM 0.6 to PM 2.6 and on SR 71 from PM 1.6 to PM 3.0. SR 91 serves as a major east-west freeway facility that links Orange and Riverside counties. SR 71 is a major north-south four-lane divided highway linking the counties of San Bernardino and Riverside. SR 91 is listed on the Federal

STAA designated route for oversized trucks, as well as an eligible scenic highway within District 8 from Riverside/Orange County Line to Route 15 near Corona. SR 71 within the project limit is included in the State Highway Terminal Access Routes System.

State Planning

A Route Concept Report (RCR) for SR 91 was approved by Caltrans on October 25, 1989. In the report, the ultimate SR 91 corridor is designated as a 10-lane freeway, with 4 mixed-flow and 2 HOV lanes in each direction. The existing SR 91 corridor within the project limits meets or exceeds the ultimate concept facility. Caltrans is currently preparing an update to the October 1989 RCR that will meet the new guidelines for preparation of Transportation Concept Reports; however, it is not known how soon the new study will be available.

In June 2008, OCTA issued the "2008 State Route 91 Implementation Plan" as the latest annual update to the "State Route 91 Congestion Relief Alternatives Analysis" study following passage of AB 1010, as previously described in the Project History section of this report. The 2008 update identifies projects that were part of the 2005 Riverside County-Orange County MIS. The proposed SR 91/71 Interchange Improvement Project is consistent with the recommendations contained in each of the studies.

Regional Planning

The proposed project is consistent with the 2008 RTP. The SCAG serves as the Metropolitan Planning Organization (MPO) for six counties, including Riverside County, in southern California. SCAG's RTP is a federally mandated, long-range planning document that provides the policy and financial framework for the transportation system in the region. The RTP identifies and assists in the prioritization of regional highway system additions and improvements. Projects listed in the RTP have the intention of meeting the following goals:

- To maximize mobility and accessibility for people and goods in the region.
- To ensure travel safety and reliability for all people and goods in the region.
- To protect the environment, improve air quality, and promote energy efficiency.
- To maximize the productivity of our transportation system.

The SR 91/71 Interchange Improvement Project is listed in SCAG's Adopted 2011 Federal Transportation Improvement Program (FTIP) (Project ID RIV070308). Implementation of the proposed project would be consistent with the goals identified in the 2008 RTP.

Local Planning

The Build Alternative improves traffic conditions on SR 71 and SR 91. It is expected that the project would have a beneficial effect on all surrounding communities and their

respective General Plans as it improves mobility and reduces congestion. The Build Alternative is also consistent with City of Corona and County of Riverside General Plans.

Transit Operator Planning

It is anticipated that the project would enhance the existing transit services by providing improved operations and connectivity at EB SR 91 to NB SR 71 connector.

C. Traffic

A Traffic Study has been prepared for the proposed project, and a summary of that report is provided in this section. The traffic study area consists of EB SR 91 between the Green River Road and SR 71 interchanges, and SR 71 immediately north of the SR 91/71 interchange.

Existing and Forecast Traffic Volumes

Year 2007 existing daily and peak-hour traffic volumes on the mainline and ramps of SR 91 within the study area were obtained from the Performance Monitoring System (PeMS) Web site, Caltrans annual traffic volumes, City of Corona traffic count database, and actual ground counts performed during the morning and evening peak periods at ramp intersections. Existing peak-hour and daily traffic counts represent fall 2007 conditions. Intersection turning movement and freeway mainline volumes were obtained from the *State Route 91 CIP Traffic Volumes Report* prepared for RCTC by Parsons Brinckerhoff (PB) in May 2008, revised in July 2008 and approved in March 2009.

The year 2015 represents traffic conditions at the opening year of the proposed project. The long-range forecast represents traffic conditions 20+ years after project opening. The long-range traffic volume forecasts for this project are derived from the RCTC Model.

The RCTC Model is a regional transportation forecasting tool that combines components of the SCAG, RTP 2004 model and the Orange County Transportation Analysis Model (OCTAM) 3.2 model. The RCTC model maintains consistency with SCAG model and can be used to evaluate toll impacts on Riverside County corridors.

Future truck volumes are based on the SCAG truck model. The SCAG truck model forecasts future truck activity based on truck generation and distribution parameters identified by SCAG and incorporated into the SCAG truck model. The existing and future truck traffic percentages are projected to be 7 percent on EB SR 91 and 8 percent on both NB and SB SR 71 during AM and PM peak hours.

Based on the SCAG 2008 RTP, the following improvements are included in the RCTC model for the future improvements:

- SR 91 Eastbound Lane Addition;

- SR 91 Corridor Improvement Project (91 CIP) – Alternative 2;
- SR 71 Widening; and
- Corridor A.

Corridor A is a 4-lane toll facility parallel to SR 91 between SR 241 and I-15 and is forecast to serve between 50,000 and 60,000 daily trips in year 2035 which would otherwise be on SR 91 or another parallel facility. A specific alignment of Corridor A has not been identified.

The horizon year for the long-range forecasts of the proposed project is year 2035. To develop year 2035 traffic volumes, a 2 percent growth factor (total, not annual) is applied to the year 2030 model volumes. This growth factor was determined by evaluating the demographic growth trends for Orange and Riverside counties. Based on the evaluation, the 2 percent growth factor is a conservative estimate of potential growth during this timeframe and considers the higher rate of demographic growth in Riverside County.

Table 4-1 presents the existing and forecast roadway segment traffic volumes in the study area.

Table 4-1 Existing and Forecast Traffic Volumes

Freeway Segment Traffic Volumes																
Freeway Segment Location		**Year 2007**			**Year 2015 No Build**			**Year 2015 Build**			**Year 2035 No Build**			**Year 2035 Build**		
		AM	**PM**	**ADT**	**AM**	**PM**	**ADT**	**AM**	**PM**	**ADT**	**AM**	**PM**	**ADT**	**AM**	**PM**	**ADT**
Eastbound SR 91																
Under Green River Road Overcrossing	HOV	800	1,750	14,800												
	Toll				1,500	4,200	34,800	1,545	4,667	37,887	1,650	3,420	38,071	1,700	3,800	41,300
	GP	5,560	8,580	113,200	5,060	8,570	110,800	7,724	9,976	116,124	5,307	11,190	113,486	6,230	11,690	121,100
Between Green River Road On-Ramp and SR 71 NB Off-Ramp	HOV	800	1,750	14,800												
	Toll				1,500	4,200	34,800				1,650	3,420	38,071			
	GP	5,810	8,780	116,800	5,500	8,830	114,800				5,785	11,580	118,265			
Between SR 71 NB Off-Ramp and Green River Road On-Ramp	HOV															
	Toll							1,545	4,667	37,887				1,700	3,800	41,300
	GP							6,434	8,269	94,338				5,105	10,254	104,265
Upstream of On-Ramp from SR 71 SB	HOV	800	1,750	14,800												
	Toll				1,500	4,200	34,800	1,545	4,667	37,887	1,650	3,420	38,071	1,700	3,800	41,300
	GP	4,900	7,300	103,050	4,300	7,450	93,900	6,470	8,279	94,764	4,711	10,230	103,115	5,150	10,280	105,200
Northbound SR 71																
North of SR 91 WB On-Ramp	GP	2,170	2,430	28,900	2,950	2,790	51,900	3,548	3,431	60,542	3,000	2,890	45,300	3,400	3,400	48,600
Southbound SR 71																
North of SR 91 WB Off-Ramp	GP	2,080	2,730	28,900	2,970	3,580	54,600	3,010	3,610	53,531	2,430	2,950	46,200	2,560	3,300	48,600

Freeway Ramp Traffic Volumes													
Freeway Ramp Location	**Year 2007**			**Year 2015 No Build**			**Year 2015 Build**			**Year 2035 No Build**			**Year 2035 Build**		
	AM	**PM**	**ADT**	**AM**	**PM**	**ADT**	**AM**	**PM**	**ADT**	**AM**	**PM**	**ADT**	**AM**	**PM**	**ADT**
EB SR 91 Off-Ramp to Green River Road	180	1,330	12,000	440	2,330	16,000	428	2,269	16,835	470	2,190	16,874	470	2,310	18,300
EB SR 91 On-Ramp from Green River Road	250	200	3,600	440	260	4,000				478	390	4,779			
EB SR 91 On-Ramp and NB SR 71 On-Ramp from Green River Road							459	259	4,738				560	520	8,500
EB SR 91 Off-Ramp to NB SR 71	910	1,480	13,750	1,200	1,380	20,900	1,290	1,707	21,786	1,074	1,350	15,150	1,125	1,436	16,835
WB SR 91 Off-Ramp to NB SR 71 On-Ramp	1,260	950	15,150	1,750	1,410	31,000	1,821	1,441	34,444	1,691	1,439	21,780	1,760	1,470	24,200
WB SR 91 Off-Ramp to Green River Road	200	440	3,900	230	810	7,600	232	824	11,615	320	670	6,700	400	800	7,900
WB SR 91 On-Ramp from Green River Road	1,270	330	12,000	2,720	790	16,500	2,718	841	17,008	2,611	834	18,132	2,750	880	18,400

Local Roadway Segment Traffic Volumes											
Roadway Segment Location	**Year 2007**		**Year 2015 No Build**		**Year 2015 Build**		**Year 2035 No Build**		**Year 2035 Build**		
	AM	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	
Green River Road											
North of the SR 91 WB Ramps	695	704	868	787	868	835	800	770	871	822	
Between the SR 91 WB Ramps and EB Ramps	1,440	1,021	2,946	1,896	2,966	1,896	2,915	1,834	3,099	2,006	
South of the SR 91 EB Ramps	1,366	1,902	3,088	3,728	3,093	3,656	2,905	3,146	3,047	3,509	

Note: Empty cells represent situations that do not exist at the specified location under the identified condition.

Traffic Analysis

The traffic study evaluates existing (year 2007) and expected LOS in years 2015 (expected open-to-traffic year) and year 2035 (the design year, 20+ years after open-to-traffic year). LOS is a term that denotes any of an infinite number of combinations of traffic operating conditions that may occur on a given travel lane or at a given intersection when it is subjected to various traffic volumes. LOS is a measure of the "quality of flow." As shown in Table 4-2, there are six levels of service, A through F, which relate to traffic congestion from best to worst, respectively. In general, Level A represents free-flow conditions with no congestion. Conversely, Level F represents severe congestion with stop-and-go conditions. Levels E and F typically are considered to be unsatisfactory.

Table 4-2 Level of Service Criteria for Freeway Mainline and Merge/Diverge Areas

Freeway Highway Level of Service (LOS)	Traffic Density (passenger cars/mile/lane)
A	0 to 11
B	> 11 and ≤ 18
C	> 18 and ≤ 26
D	> 26 and ≤ 35
E	> 35 and ≤ 45
F	>45
Ramps Merge/Diverge Level of Service (LOS)	**Traffic Density (passenger cars/mile/lane)**
A	0 to 10
B	> 10 and ≤ 20
C	> 20 and ≤ 28
D	> 28 and ≤ 35
E	> 35
F	Demand exceeds capacity

Table 4-3 shows LOS definitions for stop sign-controlled intersections. Table 4-4 shows LOS definitions for signalized intersections. Corresponding to each intersection LOS shown in the tables is an average vehicular delay that is estimated by the Highway Capacity Manual (HCM) methodology. This value indicates the average delay, expressed in seconds, which a motorist is expected to experience at an intersection.

Table 4-3 Stop-Controlled Intersection LOS Definitions

LOS	Description	Average Delay (seconds)
A	Little or no conflicting traffic.	0.0-10.0
B	Approach traffic begins to notice absence of available gap.	10.1-15.0
C	Approach traffic begins experiencing delay due to reduction in available gaps.	15.1-25.0
D	Approach traffic experiences queuing due to reduction in available gaps.	25.1-35.0
E	Extensive queuing due to insufficient gaps.	35.1-50.0
F	Insufficient gaps of suitable size to allow traffic demand to cross safely through a major traffic stream.	>50.0

Source: Transportation Research Board, Highway Capacity Manual, 2000

Table 4-4 Signalized Intersection LOS Definitions

LOS	Description	Average Delay (seconds)
A	Uncongested operations; all vehicles clear in a single cycle.	0.0-10.0
B	Uncongested operations; all vehicles clear in a single cycle.	10.1-20.0
C	Light congestion; occasional backups on critical approaches.	20.1-35.0
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	35.1-55.0
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.	55.1-80.0
F	Total breakdown with stop-and-go operations.	>80.0

Source: Transportation Research Board, Highway Capacity Manual, 2000.

There are two intersections for which LOS analysis was completed. These intersections are:

- Green River Road at SR 91 WB ramps; and
- Green River Road at SR 91 EB ramps.

In addition to the above intersections, other study locations include the EB SR 91 freeway mainline between the Green River Road and SR 71 interchanges and the NB SR 71 mainline north of SR 91. Other study locations also include the following merge and diverge areas along SR 91:

- Green River Road on-ramp to EB SR 91;
- Green River Road on-ramp to the proposed connector from EB SR 91 to NB SR 71 (future build condition only);
- SR 91 EB off-ramp to NB SR 71; and
- SR 71 on-ramp from WB SR 91 (year 2015 build condition only).

Table 4-5 summarizes the intersection delay and LOS for the study intersections based on year 2007 existing traffic conditions. The table shows that the Green River Road/SR 91 WB ramp intersection operates under the existing condition at LOS F during the morning peak hour and LOS B during the evening peak hour. The Green River Road/SR 91 EB ramp intersection operates under the existing condition at LOS E during the morning peak hour and LOS F during the evening peak hour.

Table 4-5 Existing Conditions Intersection Peak-Hour Level of Service

Intersection	Control	Delay		LOS	
		AM	PM	AM	PM
Green River Road/SR 91 WB Ramps	All-Way-Stop	54.4	14.2	F	B
Green River Road/SR 91 EB Ramps	All-Way-Stop	48.9	51.6	E	F

As summarized in Table 4-6, the merge study location at the merge of Green River Road and EB SR 91 operates under the existing condition at LOS C or better during the peak hours. The diverge from EB SR 91 to SR 71 operates under the existing condition at LOS F during the evening peak hour.

Table 4-6 Existing Conditions
Freeway Merge/Diverge Peak-Hour Level of Service

Direction	Ramp Location	Density		LOS	
		AM	PM	AM	PM
SR 91 EB	On-Ramp from Green River Road (Merge)	17.6	23.6	B	C
	SR 71 NB Off-Ramp (Diverge)	26.5	37.7	C	F

The mainline freeway study locations operate under the existing condition at LOS D or better during the peak hours. Table 4-7 summarizes the density and LOS for the mainline freeway study locations.

Table 4-7 Year 2007 Existing Conditions Freeway Mainline Peak-Hour Level of Service

Direction	Mainline Segment	Density		LOS	
		AM	PM	AM	PM
SR 91 EB	Between On-Ramp from Green River Road and Off-Ramp to SR 71 NB	19.7	30.9	C	D
SR 71 SB	North of SR 91	20.5	26.9	C	D
SR 71 NB	North of SR 91	21.4	24.0	C	C

Under year 2015 no-build traffic conditions, the WB SR 91 ramp intersection with Green River Road is projected to operate at LOS C during the morning and

evening peak hours. The EB SR 91 ramp intersection is also expected to operate at LOS C during the morning and evening peak hours. The improved LOS as compared to year 2007 for the no-build condition is due to the improvement by the Eastbound Lane Addition and the proposed 91 CIP project, which includes an additional mixed flow lane and an auxiliary lane between Green River EB on-ramp and EB SR 91 to NB SR 71 connector expected to be implemented by year 2015. Table 4-8 summarizes the LOS results for the study intersections.

Table 4-8 Year 2015 No Build Conditions
Intersection Peak-Hour Level of Service

Intersection	Control	Delay		LOS	
		AM	PM	AM	PM
Green River Road/ SR 91 WB Ramps	Signal	42.1	28.9	D	C
Green River Road/ SR 91 EB Ramps	Signal	28.2	112.3	C	F

Table 4-9 indicates that the merge location from Green River Road to EB SR 91 is expected to operate at LOS C or better during the peak hours. The diverge LOS to NB SR 71 is not included due to proposed auxiliary lane between Green River EB on-ramp and EB SR 91 to NB SR 71 connector expected to be constructed with the 91 CIP project by year 2015.

Table 4-9 Year 2015 No Build Conditions
Freeway Merge and Diverge Peak-Hour Level of Service

Direction	Ramp Location	Density		LOS	
		AM	PM	AM	PM
SR 91 EB	On-Ramp from Green River Road (Merge)	17.1	23.6	B	C

The mainline freeway study locations are expected to operate at LOS D or better during the peak hours except for the SR 71 SB segment north of SR 91. This segment is expected to operate at LOS E during the evening peak hour. Table 4-10 summarizes the density and LOS for the mainline freeway study locations.

Table 4-10 Year 2015 No Build Conditions
Freeway Mainline Peak-Hour Level of Service

Direction	Mainline Segment	Density		LOS	
		AM	PM	AM	PM
SR 91 EB	Between On-Ramp from Green River Road and Off-Ramp to SR 71 NB	18.6	31.1	C	D
SR 71 SB	North of SR 91	29.3	35.7	D	E
SR 71 NB	North of SR 91	29.1	27.5	D	D

Under year 2015 build traffic conditions, the WB SR 91 ramp intersection with Green River Road is projected to operate at LOS D or better during the peak hours. The EB SR 91 ramp intersection with Green River Road is expected to operate at LOS F or better during the peak hours. Although, the LOS does not improve under the year 2015 build condition, the delays are reduced during evening peak hour. Table 4-11 summarizes the LOS results for the study intersections.

Table 4-11 Year 2015 Build Conditions
Intersection Peak-Hour Level of Service

Intersection	Control	Delay		LOS	
		AM	PM	AM	PM
Green River Road/SR 91 WB Ramps	Signal	42.0	27.9	D	C
Green River Road/SR 91 EB Ramps	Signal	29.1	103.2	C	F

LOS for the merge and diverge study locations is summarized in Table 4-12 for year 2015 build conditions. Due to the proposed project, two additional merge locations are analyzed for build traffic conditions. The additional merge locations are from Green River Road onto the proposed connector from EB SR 91 to NB SR 71 and from the SR 91 WB ramp to SR 71 NB. The ramp from WB SR 91 is proposed to join the SR 71 NB mainline on the right side as an on-ramp with a 1,390-ft auxiliary lane. As shown in Table 4-12, all of the merge and diverge study locations are expected to operate at LOS D or better during the peak hours.

Table 4-12 Year 2015 Build Conditions
Freeway Merge and Diverge Peak-Hour Level of Service

Direction	Ramp Location	Density		LOS	
		AM	PM	AM	PM
SR 91 EB	Off-Ramp to SR 71 NB (Diverge)	16.5	23.3	B	C
	On-Ramp from Green River Road (Merge)	24.4	29.9	C	D
SR 71 NB	On-Ramp from Green River Road (Merge)	17.8	20.2	B	C
	On-Ramp from SR 91 WB (Merge)	27.1	26.1	C	C

The mainline freeway study locations along EB SR 91 are expected to operate at LOS D during am peak and LOS E during the pm peak hours under year 2015 build conditions. The SB segment along SR 71 just north of SR 91 is expected to operate at LOS E during the evening peak hour. The NB segment along SR 71 just north of SR 91 is expected to operate at LOS E during the morning peak hour. Table 4-13 summarizes the density and LOS for the mainline freeway study locations.

Table 4-13 Year 2015 Build Conditions
Freeway Mainline Peak-Hour Level of Service

Direction	Mainline Segment	Density		LOS	
		AM	PM	AM	PM
SR 91 EB	Between Off-Ramp to Green River Road and Off-Ramp to SR 71 NB	26.9	39.1	D	E
	Between Off-Ramp to SR 71 NB and On-Ramp from Green River Road	28.9	43.3	D	E
	Between On-Ramp from Green River Road and On-Ramp from SR 71 SB	29.1	43.4	D	E
SR 71 SB	North of SR 91	29.7	36.1	D	E
SR 71 NB	North of SR 91	35.3	34.0	E	D

Under year 2035 no-build traffic conditions, the WB SR 91 ramp intersection with Green River Road is projected to operate at LOS D and C during the morning and evening peak hours, respectively. The EB SR 91 ramp intersection with Green River Road is projected to operate at LOS C during both the morning and evening peak hours. Table 4-14 summarizes the LOS results for the study intersections.

Table 4-14 Year 2035 No Build Conditions
Intersection Peak-Hour Level of Service

Intersection	Control	Delay		LOS	
		AM	PM	AM	PM
Green River Road/SR 91 WB Ramps	Signal	42.9	27.1	D	C
Green River Road/SR 91 EB Ramps	Signal	31.9	34.3	C	C

Table 4-15 indicates that the merge location from Green River Road to EB SR 91 is expected to operate at LOS C or better during the peak hours. The diverge LOS to NB SR 71 is not included due to proposed auxiliary lane between Green River EB on-ramp and EB SR 91 to NB SR 71 connector expected to be constructed with the 91 CIP project by year 2015.

Table 4-15 Year 2035 No Build Conditions Freeway
Merge and Diverge Peak-Hour Level of Service

Direction	Ramp Location	Density		LOS	
		AM	PM	AM	PM
SR 91 EB	On-Ramp from Green River Road (Merge)	16.1	25.8	B	C

The mainline freeway study locations are expected to operate at LOS B or better during the peak hours, except for the EB segment along SR 91 between the Green

River Road on-ramp and the SR 71 off-ramp. This segment is expected to operate at LOS E during the evening peak hour. Table 4-16 summarizes the density and LOS for the mainline freeway study locations. The LOS for SR 71 NB and SB assumes a six-lane freeway, and the LOS is for the segment between SR 91 and the planned Corridor A, which is a planned new toll facility parallel to and just north of SR 91.

Table 4-16 Year 2035 No Build Conditions Freeway Mainline Peak-Hour Level of Service

Direction	Mainline Segment	Density		LOS	
		AM	PM	AM	PM
SR 91 EB	Between On-Ramp from Green River Road and Off-Ramp to SR-71 NB	16.3	36.5	B	E
SR 71 SB	North of SR 91	13.2	16.1	B	B
SR 71 NB	North of SR 91	16.3	15.7	B	B

Under year 2035 build traffic conditions, the WB ramp intersection with Green River Road is projected to operate at LOS E and C during the morning and evening peak hours, respectively. The EB ramp intersection with Green River Road is expected to operate at LOS D during both peak hours. Table 4-17 summarizes the LOS results for the study intersections.

Table 4-17 Year 2035 Build Conditions Intersection Peak-Hour Level of Service

Intersection	Control	Delay		LOS	
		AM	PM	AM	PM
Green River Road/SR 91 WB Ramps	Signal	61.8	30.6	E	C
Green River Road/SR 91 EB Ramps	Signal	38.8	46.2	D	D

Except for the merge of the ramps from EB and WB SR 91 to form the NB SR 71 mainline, LOS for the merge and diverge study locations is summarized in Table 4-18 for year 2035 build conditions. The table shows that the merge and diverge study locations are expected to operate at LOS D or better during the peak hours.

Table 4-18 Year 2035 Build Conditions Freeway Merge and Diverge Peak-Hour Level of Service

Direction	Ramp Location	Density		LOS	
		AM	PM	AM	PM
SR 91 EB	Off-Ramp to SR 71 NB (Diverge)	10.7	20.6	B	C
	On-Ramp from Green River Road (Merge)	15.8	29.1	B	D
SR 71 NB	On-Ramp from Green River Road (Merge)	17.1	19.7	B	B

The EB mainline freeway study segments along SR 91 are expected to operate at LOS E during the evening peak hour under the year 2035 build conditions. The NB and SB segments along SR 71 are expected to operate at LOS C or better during the peak hours. The LOS for SR 71 NB and SB assumes a six-lane freeway, and the LOS is for the segment between SR 91 and the planned Corridor A, which is a new toll facility parallel to and just north of SR 91. Table 4-19 summarizes the density and LOS for the mainline freeway study locations.

Table 4-19 Year 2035 Build Conditions
Freeway Mainline Peak-Hour Level of Service

Direction	Mainline Segment	Density		LOS	
		AM	PM	AM	PM
SR 91 EB	Between Off-Ramp to Green River Road and Off-Ramp to SR 71 NB	17.6	37.2	B	E
	Between Off-Ramp to SR 71 NB and On-Ramp from Green River Road	17.3	41.7	B	E
	Between On-Ramp from Green River Road and On-Ramp from SR 71 SB	17.4	42.0	B	E
SR 71 SB	North of SR 91	13.9	18.0	B	B
SR 71 NB	North of SR 91	18.5	18.5	C	C

In conclusion, the proposed project is anticipated to provide operational benefit by providing a two-lane connector ramp from SR 91 EB to SR 71 NB that would improve diverge level of service. In year 2015, the two-lane ramp is expected to carry 1,966 vehicles in the evening peak hour – a volume that would exceed the capacity of the existing single-lane loop ramp and result in a backup on the SR 91 EB mainline if not improved.

No significant traffic impact was identified at the WB and EB SR 91 ramp intersections with Green River Road and no unacceptable LOS is expected on SR 71 or SR 91 within the study area.

D. Accident Analysis

Traffic Accident Surveillance and Analysis Systems (TASAS) – Transportation System Network (TSN) data for the project area is summarized below and shown in Table 4-20. The accident data for the recent 3-year period (April 1, 2005, to March 31, 2008) were compared to the statewide average accident rates for similar facilities. The TSN data will also be revisited during Plans, Specifications and Estimate (PS&E) phase of the project to assure no significant changes have occurred.

SR 91 Mainline

There were 392 accidents in the eastbound direction and 232 accidents in the westbound direction between post mile (PM) R0.5 and R2.7. As shown in Table 4-20, the actual accident rates were 1.23 accident per million vehicle miles (a/mvm) in the

eastbound direction and 0.73 a/mvm in the westbound direction, compared to the statewide average of 1.18 a/mvm. The statistics reveal that the eastbound direction has a higher accident rate than the statewide average. The higher rate of accidents, especially high percentage of rear end (69.4) and sideswipe (18.1) type accidents may be linked to the traffic congestion in this section of the freeway due to the merging and weaving between Green River Road on-ramp and eastbound SR 91 to northbound SR 71 connector. The proposed two-lane connector is expected to increase the capacity of the interchange and improve traffic operations, thereby reducing the potential for rear-end accidents that are common under existing stop-and-go operating conditions along eastbound SR 91. The reconfigured Green River Road on-ramp would merge on to eastbound SR 91 after the proposed flyover connector diverge point and effectively eliminates the existing merge and weave in this section of freeway. It is anticipated that the improved geometric alignment of the eastbound SR 91 to northbound SR 71 connector along with reconfiguration of Green River Road on-ramp would reduce the occurrence of accidents.

SR 71 Mainline

There were 5 accidents in the southbound direction and 1 accident in the northbound direction between PM R2.942 and R3.030. As shown in Table 4-20, the actual total accident rates were 0.37 a/mvm in the northbound direction and 1.84 a/mvm in the southbound direction, compared to the statewide average of 0.90 a/mvm. The statistics indicate that the total accident rate in the southbound direction is approximately twice that of statewide average. Approximately 70 percent of recorded accidents occurring in the southbound direction involved rear-end type collisions that may have been related to congestion and backup on the existing single lane on-ramp to eastbound SR 91 before the ramp meter. The proposed project would remove the concrete barrier in this section and restripe the existing pavement to three lanes to provide additional storage capacity before the ramp meter and thereby reduce accident rates.

Table 4-20 Mainline Accident Rates

Location	Accident Rate (A/MVM)					
	Actual Rate			Average Rate		
	FAT	F+I	Total	FAT	F+I	Total
EB SR 91 (PM R0.5 to R2.7)	0.000	0.33	**1.23**	0.007	0.39	1.18
WB SR 91 (PM R0.5 to R2.7)	0.009	0.19	0.73	0.007	0.39	1.18
NB SR 71 (PM 1.5 to R3.030)	0.000	0.00	0.37	0.050	0.43	0.90
SB SR 71 (PM 1.5 to R3.030)	0.000	1.10	**1.84**	0.050	0.43	0.90

FAT = Fatal Accidents
F+I = Fatal and Injury Accidents
Total=All Accidents, Fatal, Injury and Property Damage
A/MVM=Accidents per million vehicle miles

Freeway Ramps

Table 4-21 summarizes the actual accident rate for vehicles traversing the existing connector ramps and provides a comparison with the statewide average accident rate for similar facilities. The actual accident rate for the eastbound SR 91 to northbound SR 71 is 0.22 a/mvm, which is considerably lower than the statewide average accident rate of 0.90 a/mvm. The recorded accidents occurring at this location involved sideswipe, hit object, and rear-end type collisions. The existing loop ramp with a tight curve radius and low capacity (1- lane wide) that would backup onto the mainline may have been a contributing factor for these accidents. The proposed two-lane connector is expected to increase the capacity of the connector and improve traffic operations, thereby reducing potential for accidents.

The actual accident rate for the westbound SR 91 to northbound SR 71 ramp is 0.41 a/mvm, which is slightly lower than the statewide average accident rate of 0.45 a/mvm. The recorded accidents occurring within this ramp involved sideswipe, hit object, and rear-end type collisions. The existing ramp merges from a two- to a one-lane section prior to the Santa Ana River Bridge which may be a contributing factor for these accidents. The proposed project would restripe the existing pavement to provide a two-lane section past Santa Ana River Bridge, and a standard merge taper of 50:1 prior to joining the northbound SR 71 lanes with a 1390-ft-long auxiliary lane. The proposed design is anticipated to improve operations and further reduce potential for accidents at this location.

Finally, the actual accident rate for the eastbound on-ramp from Green River Road is considerably lower than the statewide average accident rate of 0.80 a/mvm for a similar facility. The recorded accidents occurring within the ramp involved hit object and rear-end type collisions which may have been related to the existing congestion on the mainline between the eastbound Green River Road on-ramp and eastbound SR 91 to northbound SR 71 connector. The proposed new geometric alignment of the flyover connector and eastbound Green River Road on-ramp would improve operations by reducing the merge and weave within this section of freeway that contributes to above average accident rates.

Table 4-21 Ramp Accident Rates

Location	Accident Rate (A/MVM)					
	Actual Rate			Average Rate		
	FAT	F+I	TOT	FAT	F+I	TOT
91EB off to NB 71(PM R2.22)	0.000	0.00	0.22	0.004	0.26	0.90
91 WB off to NB 71(PM R2.236)	0.058	0.17	0.41	0.004	0.15	0.45
91 EB on from Green River (PM R1.167)	0.000	0.50	0.50	0.002	0.32	0.80

5. ALTERNATIVES

A. Viable Alternatives

Build Alternative: Type F-5 Freeway Terminal Junction (Preferred Alternative)

The Build Alternative proposes converting the existing Type F-6 Freeway Terminal Junction to a Type F-5 Freeway Terminal Junction as defined in Topic 502.3(3)(d), Freeway-to-Freeway Interchanges in Highway Design Manual (HDM). The Build Alternative would also realign the Green River Road on-ramp to enter EB SR 91 downstream of the connector off-ramp to SR 71. Reconfiguring the ramps eliminates the traffic weaving and merging problems associated with the existing condition where the downstream SR 71 connector off-ramp closely follows the upstream Green River Road on-ramp along SR 91. The Build Alternative would also realign a segment of the SB lanes of SR 71, north of the Santa Ana River Bridge, to allow the EB-to-NB flyover connector to align to the inside of the existing WB SR 91 to NB SR 71 connector ramp. In addition, the Build Alternative would restripe WB SR 91 to NB SR 71connector from one to two-lane and also include restriping of SB SR 71 to EB SR 91 from one to three-lanes to provide storage before the existing ramp meter.

The total estimated cost for the Build Alternative is $113 million, including $93.4 million for capital construction costs, $2.8 million for capital ROW acquisitions, and $16.8 million for project support costs.

Based on the determination in the final environmental document and comments collected from public hearing on December 9, 2010, the PDT decided to select the Build Alternative as the **Preferred Alternative**.

- **Proposed Engineering Features**

  The proposed EB SR 91 to NB SR 71 connector ramp is a high-speed, two-lane direct flyover connector on a 1,275-ft radius curve. Standard superelevation and superelevation transitions are provided for the horizontal curve. A slip ramp from the Green River Road on-ramp would provide access to SR 71 from Green River Road. The slip ramp would add a third lane as a 1,000-ft-long auxiliary lane on the connector before merging back to a two-lane section. 12-ft-wide travel lanes are provided along the entire length of the connector, and adequate sight distance for the 50 mile-per-hour (mph) design speed along the structure is provided by adding a 12-ft-wide inside shoulder. The outside shoulder, however, transitions from 10 ft wide to 5 ft wide along the length of connector. The profile has also been designed to limit grades along the connector to 4 percent and provide the required sight distance.

  The Green River Road on-ramp is a proposed two-lane ramp with 12-ft-wide lanes, a 4-ft-wide inside shoulder, and an 8-ft-wide outside shoulder. The left

lane would slip onto the SR 71 connector, while the right lane would diverge from the slip ramp alignment and continue as the EB SR 91 on-ramp. The profile of the Green River Road on-ramp has been designed to provide standard clearances over the existing Burlington Northern Santa Fe (BNSF) railroad and Prado Road, as well as to conform to the proposed connector.

The SB lanes of SR 71 would be realigned to provide clearance for the EB SR 91 to NB SR 71 connector merging to the inside of the NB SR 71 lanes. The realigned portion of the SB lanes would be 24 ft wide with 10-ft-wide outside shoulders and 5-ft-wide inside shoulders. The profile generally matches the existing 4 percent downgrade. The minimum sight distance for a 65-mph design speed has been provided for the proposed 1,600-ft radius horizontal curve along the realigned section of pavement. The intersection of United States Army Corps of Engineers (USACE) main access and Sukut property access along SR 71 would also be relocated approximately 1,400 ft north on SR 71. A 16-ft-wide right shoulder, as well as a two-way left-turn lane would be provided to facilitate turning movement into and out of this facility.

The proposed pavement structural sections of the Build Alternative are provided in Attachment B of this report. The pavement sections along the EB SR 91 to NB SR 71 connector, SB SR 71 lanes, and the EB Green River on-ramps were chosen based on the Preliminary Materials Report recommendations, existing adjacent pavement type and pavement Life Cycle Cost Analysis (LCCA) (see Attachment K).

- **Nonstandard Mandatory and Advisory Design Features**

  The Mandatory and Advisory Design Exceptions required for the Build Alternative include the following:

Mandatory

1. *Interchange Spacing*:
   The proposed EB SR 91 to NB SR 71 flyover connector would reduce interchange spacing between the SR 91/Green River Road local street interchange and the SR 91/71 freeway-to-freeway interchange from approximately 1-mile to approximately 0.75-mile.

2. *Shoulder Widths:*
   A nonstandard outside shoulder width varying between 5 ft and 10 ft within a 600-ft-long transition and a nonstandard outside shoulder width of 5 ft along 1,200 ft of the two-lane section of the EB SR 91 to NB SR 71 flyover connector structure are proposed with this project.

   Fact Sheet Exception to Mandatory Design Standards was approved on July 1, 2010.

Advisory

1. *Merging Branch Connection:*
   It is proposed to have a nonstandard branch merge (1,350 ft of auxiliary lane) where the WB SR 91 to NB SR 71 branch connector merges with the NB lanes of SR 71.

2. *Single Lane Ramp:*
   It is proposed to have a 2,200-ft-long single-lane on-ramp from Green River Road to EB SR 91. A passing lane would not be provided.

3. *Superelevation Transition Runoff:*
   A nonstandard superelevation transition runoff on the realigned portion of the SR 71 SB lanes near the existing Santa Ana River Bridge is proposed to avoid extending transition onto the existing bridge and thereby requiring replacement of structure. In addition, a nonstandard superelevation runoff is proposed between the two reversing curves along the Green River Road EB on-ramp to SR 91.

4. *Decision Sight Distance:*
   A nonstandard decision sight distance at the nose of the branch connector from SR 91 to SR 71 is proposed due to the geometric restriction at this location. Moving the connector farther east would result in further encroachment into the environmental sensitive area to the south of Fresno Canyon Wash.

   Fact Sheet Exception to Advisory Design Standards was approved on July 1, 2010.

   Design Exception Fact Sheets for the following nonstandard design features have been approved for the Build Alternative:

   - Interchange Spacing ..... HDM Index 501.3
   - Shoulder Width ..... HDM Index 302.1
   - Merging Branch Connection ..... HDM Index 504.4(6)
   - Single Lane ramp ..... HDM Index 504.3(5)
   - Superelevation Transition Runoff ..... HDM Index 202.5(2)
   - Decision Sight Distance ..... HDM Index 201.7

- **Interim Features**

  No interim improvements are planned on SR 91 or SR 71 with the proposed project.

- **High Occupancy Vehicle (HOV) Lanes**

  The project does not include the construction of HOV lanes along SR 91, SR 71, or on the proposed EB-to-NB connector. This is because ramp metering is not being considered for the Green River Road on-ramp. There is no

proposed HOV bypass lane along this ramp. RCTC is currently developing a separate 91 CIP that proposes to add high-occupancy toll (HOT) lanes to the EB and WB lanes of SR 91. The interchange improvement project is compatible with the proposed 91 CIP project and would not preclude the addition of HOT lanes.

- **Ramp Metering/CHP Enforcement Areas**

  Although the existing SR 91 corridor has the infrastructure in place for the operation of a corridor-wide ramp metering system, the project does not propose ramp metering or a California Highway Patrol (CHP) enforcement area for the Green River Road on-ramp to EB SR 91. The low projected ramp volumes for year 2035 do not warrant metering of this ramp.

  Caltrans Operations has also confirmed that the EB SR 91 to NB SR 71 and WB SR 91 to NB SR 71 connectors would not be metered in the future because the interchange is a terminal junction and there is no upstream traffic on SR 71. The capacity of each connector ramp would limit the amount of traffic entering NB SR 71.

- **Park-and-Ride Facilities**

  New park-and-ride facilities are not proposed as part of this project. There are several existing park-and-ride facilities within a few miles of the project site. Along SR 91, there is an existing park-and-ride lot at the Main Street interchange in the City of Corona, approximately 5 miles east of the proposed project site. Along SR 71, there is an existing park-and-ride lot on Chino Avenue in the City of Chino Hills, approximately 10 miles north of the proposed project site and since the proposed project would enhance operations and is not a capacity increasing project, the existing facilities are deemed adequate for the current demand.

- **Utility and Other Owner Involvement**

  Based on available utility mapping and preliminary utility conflict identification, several existing utilities crossing SR 91 within Prado Road and two others crossing SR 71 near the existing driveway entrance at Prado Dam would have to be relocated to accommodate the new construction. Existing facilities to be relocated include:

  – Overhead Cable television (Time Warner)
  – Overhead Electric (SCE)
  – Underground Fiber Optic (Sprint)
  – 16-inch Water Main (City of Corona)
  – 30-inch” HP Gas Main and appurtenances (Southern California Gas)

  Based on the preliminary investigation of prior rights, it has been determined that approximately 89 percent of the utility relocation costs will be paid by the project, and the remaining 11 percent will be paid by the utility owners.

Refer to the ROW data sheet in Attachment F for estimated costs of utility relocations.

- **Railroad Involvement**

  The project proposes to construct a new grade-separated crossing over existing BNSF railroad tracks that run parallel and to the west of Prado Road. The new structure would carry traffic along the realignment of the Green River Road on-ramp. Based on a meeting held with BNSF representatives on March 16, 2009, a construction and maintenance agreement with the railroad, and California Public Utilities Commission (CPUC) General Order 26-D requirements will be met.

- **Highway Planting**

  The project includes landscape replacement with the original construction consistent with the 215/91 Corridor Master Plan Concept. The disturbed areas of cut and fill within the project limits will be replanted with native plants associated with Coastal Sage Scrub and Southern Cottonwood Riparian forest. Ornamental plants will be placed near the interchange at Green River Road. Infrastructure for irrigation as well as maintenance safety items such as hardscape on the gore areas will also be included with the project. Design elements on structures, retaining walls, and hardscape will also be developed consistent with the 215/91 Corridor Master Plan Concept.

- **Erosion Control**

  This project is located adjacent to the Santa Ana River and two tributaries: Wardlow Wash and Fresno Canyon Wash. These waterways are located in the Santa Ana River Hydrologic Area and fall within the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB).

  A Storm Water Pollution Prevention Plan (SWPPP) would be required prior to construction. The SWPPP should include selection of the most effective Best Management Practices (BMPs) to reduce erosion and protect water quality.

  According to the preliminary Geotechnical/Materials Report and Caltrans Design Guidelines, all fill slopes within Caltrans' ROW would be constructed at 4:1. All cut slopes would be constructed at 2:1 or flatter. All slopes steeper than 4:1 would be stabilized as described in the SWDR. Erosion control blankets, use of temporary fiber rolls, silt fence, and other construction BMPs will be implemented to further reduce erosion potential.

- **Noise Barriers**

  A site investigation was conducted in early 2009 to monitor ambient noise levels, identify noise-sensitive areas, and examine possible soundwall locations. In April 2009, two long-term measurements and six short-term measurements were conducted at selected locations near the project site. One

long-term measurement (24 hours) was conducted along each side of the freeway. Short-term (20-minute interval) measurements were conducted at two locations along the north side of SR 91 and at four locations along the south side.

Land uses surrounding the project area include residential, recreational, commercial, retail, and industrial.

Future traffic and train noise levels were modeled for all receptor sites, except for one, which was determined to be located too far from the railroad to have a significant train noise impact. Only the noise impact of traffic is required for abatement; however, abated noise levels include the effects of train noise, as well as traffic noise. For purposes of determining noise impacts, the worst-case traffic noise occurs when traffic is operating under LOS D/E conditions.

Future project build noise levels at some of the noise-sensitive receptors were found to approach the Federal Highway Administration (FHWA) Noise Abatement Criteria (NAC). A Noise Abatement Decision Report (NADR) was prepared. Based on the analysis in the NADR, noise abatements constructed of masonry are feasible at four new locations, which will provide noise abatement for 32 single-family residences. However, Hillside Residential Landscape Units would have their current views blocked by the masonry sound walls resulting in a potentially significant impact. This impact could be minimized in the form of clear panel soundwalls. Based on the evaluation in the NADR, it was determined it is not reasonable to construct clear panel sound walls in the hillside area because the cost exceeded the reasonableness allowance for soundwalls.

The proposed masonry soundwalls are located on private property and required input from affected property owners. A Sound Barrier Survey was mailed to affected property owners requesting for their consent whether they agree to the construction of the masonry soundwall on their property. The property owners were also given the opportunity to attend and express their concerns during the public meeting on December 9, 2010. According to Caltrans' Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects (2006), "Noise abatement will not be provided on private property unless 100 percent of the owners of the property on which the abatement will be located want it." Implementation of the sound barrier requires that all of the property owners of the residences located along the proposed contiguous soundwall all agree to such an action.

After reviewing the completed Sound Barrier Surveys from the affected property owners, it was determined that the proposed soundwalls at S63, S98, S110 and S114 will not be constructed because the Sound Barrier Survey results did not show the required 100 percent consensus for the soundwalls.

- **Nonmotorized and Pedestrian Features**

  Based on the City of Corona Bicycle Master Plan, there is an existing Class II Bike Lane along Green River Road starting from SR 91 and terminating at Paseo Grande. There is also an existing pedestrian facility along the west side of Green River Road overcrossing with existing curb ramps and crosswalks. The existing nonmotorized/pedestrian features along Green River Road are currently adequate and would be maintained, no new facilities are proposed with the proposed project improvements. The project is also consistent with the Regional Bike Path Plans.

- **Needed Roadway Rehabilitation and Upgrading**

  The proposed interchange project does not widen the existing pavement except for the addition of a 10-ft wide shoulder on the eastbound SR 91 between Green River Road and the proposed EB 91 to NB 71 connector. Based on the field review performed, the existing concrete pavement within project limits on SR 91 is in good condition and no sign of distress was observed. Therefore, no rehabilitation is proposed for the existing pavement on SR 91.

  The existing SR 71 concrete pavement within the project limits is in excellent condition and does not require rehabilitation. However, the SB SR 71 to EB SR 91 connector south of Santa Ana River Bridge exhibits signs of minor structural damage resulting in a poor ride. The proposed interchange project would repair structural damage, mill and overlay the asphalt concrete within this connector.

- **Needed Structure Rehabilitation and Upgrading**

  The existing structures located within the project limits include West Prado OH (Br. No. 56-364), the current structure sufficiency rating is 84 and is categorized as “not deficient” by the Federal Structure Inventory and Appraisal form. The project limits also include the Santa Ana River (Br. No. 56-379). The current structure sufficiency rating for this structure is 84 and is categorized as “not deficient” by the Federal Structure Inventory and Appraisal form. Finally, the existing EB 91 to NB 71 Connector UC (Br. No. 56-365), which would be widened with the proposed project, with a sufficiency rating of 84 is also categorized as “not deficient” by Federal Structure Inventory. The attached Advance Planning Study (APS) details the proposed structural modifications. Since the project does not directly impact the bridges 56-364 and 56-379 no rehabilitation or upgrade is proposed beyond typical maintenance recommendations.

- **Structures Advance Planning Study (APS)**

  The APS prepared for the Build Alternative was approved by Caltrans Division of Engineering Services – Office of Special Funded Projects (OSFP) on February 23, 2010. The construction costs of the three proposed structures

under the Build Alternative are estimated to be $56.3 million, including mobilization and contingencies (see Attachments E & D).

- **Cost Estimates**

  A detailed cost estimate for the Build Alternative is provided in Attachment E. The roadway and structure construction costs, including ROW costs, are summarized below:

Construction Cost	Build Alternative
Roadway	$37,040,000
Structures	$56,360,000
Right of way	$2,800,000
Support Cost	
Design	$9,600,000
Construction Management	$7,200,000
Total Project Cost	**$113,000,000**

- **Right of Way Data**

  The right of way cost estimate for the Build Alternative including, the utility relocation cost are reported on the ROW data sheet (Attachment F).

- **Effect of Project Funded by Others on State Highway**

  The proposed interchange project would enhance operations and safety along the EB SR 91 to NB SR 71 connector as well as the SR 91 and SR 71 mainlines by reducing existing and future projected congestion during peak hours. See Traffic section of this report for details.

B. Rejected Alternatives

No Build Alternative

Consideration was given to the No Build Alternative. If no modification to the existing SR 91/71 interchange occurs, other than those expected to be implemented by other projects in the study area, the purpose and need of the project to increase capacity and improve operational characteristics of the SR 91/71 interchange would not be met. While the No Build Alternative avoids the costs and impacts associated with the Build Alternative, it does not address the purpose and need of the project. With or without the project, traffic volumes are expected to continue to increase. The existing SR 91/71 interchange does not have adequate capacity to accommodate forecasted traffic volumes for year 2015 through 2035, and is expected to operate at an unacceptable LOS F in the future as the capacity is increased. It is also anticipated that the mainline operation will

be negatively impacted if the interchange improvements are not implemented, even with other improvements in the study area, including the following projects:

- SR 91 Eastbound Lane Addition Project
- SR 71 Widening Project
- SR 91 Corridor Improvement Project

PSR/PDS Alternative

The PSR/PDS Alternative developed during the project initiation proposed replacing the existing EB-to-NB loop connector with a direct fly-over connector, and constructing a Collector-Distributor (C-D) road and auxiliary lanes at the SR 91/71 interchange. Preliminary analysis during early alternative development identified Environmentally Sensitive Areas (ESA) within and along Wardlow Wash and Fresno Canyon Wash. The PSR/PDS Alternative would have constructed roadway embankment, retaining walls, and a bridge within a significant portion of the ESA. The uncertainty in determining the cost of environmental mitigation, as well as the need for avoidance, was the determining factor in the decision to the reject PSR/PDS Alternative.

Screening and selection of the alternatives during project development process considered several design and environmental-related criteria that included overall cost, traffic operations, constructability, ability to meet minimum design standards, compatibility with other planned projects, compatibility with USACE facilities, and minimization of impacts to sensitive habitat within Fresno Canyon/Wardlow Wash. The PDT cited the environmental impacts, schedule risks related to USACE approvals, low compatibility with planned improvements of SR 91 Eastbound Lane Addition Project, and cost impacts as reasons for eliminating this alternative from further consideration.

6. CONSIDERATIONS REQUIRING DISCUSSION

A. Hazardous Waste

A Hazardous Waste Initial Site Assessment (ISA) for the project area was prepared for the project (April 2010). Based on the results of the ISA, the potential presence of hazardous materials within the project site is limited to the following:

- Two historic Emergency Response Notification System (ERNS) events related to spills were identified within the project limits. The spills were cleaned and required no further remedial action.
- Pole top electrical transformers may be present within the project.
- Asbestos-containing material (ACM) was confirmed in three bridge locations within the project.

- Lane striping may contain lead-based paint (LBP) or other hazardous materials.
- Aerially deposited lead (ADL) has been identified in sampling performed for other projects in and near the project limits.

B. Value Analysis (VA)

A VA workshop for the proposed project was held September 16 through 18, 2008, and a Preliminary VA Report was issued on October 10, 2008, to document the findings and recommendations of the VA Study Team.

During the workshop, the VA Team developed four alternatives for consideration by the PDT and other project stakeholders as follows:

- VA Alternative 1—Use of Mechanically Stabilized Earth (MSE) walls instead of Type 1 (retaining) walls for fill areas would result in $1.2 million cost savings and improve project performance metrics by 5 percent.
- VA Alternative 2—Use of Soil Nail walls instead of Type 1 (retaining) walls for cut areas would result in $1.2 million cost savings and improve project performance metrics by 5 percent.
- VA Alternative 3—Reduction of Green River Road (on-ramp) from two lanes to one would result in $2.7 million cost savings, decreasing project performance metrics by only 2 percent.
- VA Alternative 4—Merging EB SR 91 to NB SR 71 on the east side of SR 71 would result in $7.6 million cost savings and improve project performance metrics by 6 percent.

Following analysis of the VA Alternatives by the PDT, a VA Study implementation meeting was held on February 10, 2009, with key project stakeholders (RCTC and Caltrans) and members of the PDT to formally discuss whether to accept or reject individual VA Team recommendations.

VA Alternatives 1 and 2 were conditionally accepted by the stakeholders for incorporation in the final design of the project, pending further geotechnical analysis that supports selection and implementation of the alternative structure types.

VA Alternative 3 would have required a design exception to approve a single-lane ramp in excess of 1,000 ft in length. This recommendation was investigated and discussed with Caltrans. Concerns with justifying the design exception based solely on construction cost savings were expressed. There were no other known benefits or constraints that would help support justification of a single-lane ramp. The risk of uncertainty in securing a design exception was cause for the PDT to recommend that VA Alternative 3 be rejected. The stakeholders agreed with the PDT and formally rejected this alternative. Later in the project development process it was determined that due to low traffic volumes on this ramp it would be prudent to pursue an exception and provide a single-lane ramp.

VA Alternative 4 was intended to save construction costs by eliminating realignment of the SB lanes of SR 71 to the west, reducing new pavement construction along SR 71, reducing roadway excavation, and reducing the area of the new bridge deck that an inside alignment of the EB-to-NB connector would require. Because of the potential for significant cost savings, this alternative was discussed in detail with Caltrans. Alignment of the EB SR 91 to NB SR 71 on the east side of SR 71 was problematic because of several constraints that needed to be avoided, namely excessive span lengths over the EB lanes of SR 91; column placement in the Santa Ana River; and bridge-over-bridge alignment (at the existing E91/N71 Connector UC and Santa Ana River Bridge) that would make column placement and falsework construction more complicated and costly. A broken back curve alignment along the flyover connector was investigated that could have avoided these constraints; however, projected truck traffic volumes for the connector ramps ultimately dictated that the outside alignment of the EB-to-NB connector would result in poor operating conditions because the heavier projected truck volumes were on the WB-to-NB connector. Placing trucks on the inside lanes of SR 71 would require weaving and merging with faster-moving traffic entering from the right. For this reason, the PDT recommended that VA Alternative 4 be rejected. The executive stakeholders agreed with the PDT and formally rejected this alternative.

A final VA Study Report was issued on March 16, 2009, to document the VA Study and decisions made by the PDT and the executive stakeholders.

C. Resource Conservation

The existing Green River Road EB on-ramp, the existing EB-to-NB loop connector ramp, a portion of existing SR 71, and a portion of the EB91/NB71 Connector UC Bridge would be removed under the Build Alternative. As a resource conservation measure, the existing structural section materials and existing concrete structures to be removed could be recycled and incorporated into the new construction as embankment fill or aggregate base material. Though not required by the project specifications to recycle construction materials, the construction contractor's own economic incentives will determine the extent that recycled materials are incorporated into the project. The existing sign, lighting and other fixtures would be reused or salvaged.

D. Right-of-Way Issues

Right-of-Way Required

The project would require acquisition of new ROW to accommodate the proposed realignment of the Green River Road on-ramp and the SB lanes of SR 71. RCTC would conduct acquisition of ROW needed for the project, including temporary and permanent easements necessary for construction of the proposed improvements. Newly acquired fee ROW by RCTC would be relinquished to Caltrans following project construction.

A review of existing parcel information indicates that 10 parcels would be affected by the project with partial ROW take, and temporary and permanent easements. See ROW Data Sheet (Attachment F) for more detailed information.

Relocation Impact Studies

The project is located in a fairly undeveloped area. The project would not displace any homes or businesses, and relocation is not required.

Airspace Lease Areas

The proposed project is not located in an area of high land values; therefore, the project geometric plan is not necessary to accommodate airspace leases.

E. Environmental Issues

Caltrans is the California Environmental Quality Act (CEQA) Lead Agency and the National Environmental Policy Act (NEPA) Lead Agency for this project.

As owner-operator of the State Highway System (SHS), the Department is the CEQA Lead Agency for all improvement projects on the SHS. Effective June 7, 2007, the Department has been assigned environmental review and consultation responsibilities under NEPA pursuant to 23 U.S.C. 326. The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 326. Accordingly, Caltrans is the lead agency under both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

In compliance with CEQA, an Initial Study (IS) has been prepared resulting in a Mitigated Negative Declaration (MND). The IS/MND was approved on June 29, 2011. In compliance with NEPA, this project has been determined to be eligible for a Section 6005 Categorical Exclusion under Section 6005 of 23 U.S.C. 327.

The Department's Categorical Exclusion Determination Form was utilized to document compliance with NEPA requirements. The Determination Form for this project was signature approved on June 29, 2011.

F. Air Quality Conformity

An Air Quality Technical Study was approved in August 2010 to provide assessment of the potential impacts to local and regional air quality that are related to the proposed SR 91/71 Interchange Improvement Project. The proposed project is located in Riverside County near the City of Corona, and the project area is within the South Coast Air Basin (SCAB), under the jurisdiction of South Coast Air Quality Management District (SCAQMD). All analyses were conducted to comply with the requirements of CEQA; the Clean Air Act (CAA), as

amended, of 1990; and the California Clean Air Act (CCAA) of 1988. The project is included in SCAG 2008 RTP and the 2011 FTIP.

Based on the results of the technical study, temporary construction-related dust and vehicle emissions would occur during site preparation and project construction. With implementation of mitigation measures that would minimize emissions, the emissions would be reduced to less than significant levels. Construction emissions are not predicted to exceed SCAQMD thresholds, resulting in a less than significant impact. Project construction would not expose sensitive receptors to significant levels of toxic air contaminants (TACs), or objectionable odors.

Project operation would conform to regional and local conformity requirements of the CAA's Transportation Conformity Rule. The project area, SCAB, is currently designated as a nonattainment area for ozone (O_3), and particulate matter (PM_{10} and $PM_{2.5}$). Areas designated as nonattainment are required to develop attainment/maintenance plans, and a State Implementation Plan (SIP) to meet State and Federal goals for air quality. The 2011 FTIP and the 2008 RTP, prepared by SCAG, rely on the emission budgets established by the SIP or attainment plans that are initially developed and adopted by SCAQMD, and subsequently by the California Air Resources Board (CARB); therefore, projects that are listed in the current transportation plans (i.e., FTIP and RTP) are considered consistent with the SIP and meet CAA conformity requirements.

The scope of the project has slightly changed and the revised description which is consistent with the current project scope, cost and schedule, is included in 2011 FTIP, with the following description:

Route 91 PM: *0.6/2.6*;
Description: *At SR91/71 JCT: Replace EB 91 to NB 71 Connector W/ Direct Flyover Connector, and Re-Construct the Green River Road EB on-ramp (EA: 0F541).*

The design concept and scope of the proposed project is consistent with revised project description. The currently adopted 2011 FTIP was approved by the SCAG Regional Council on September 2, 2010 and was federally approved by FHWA and Federal Transit Administration (FTA) on December 14, 2010. As such, the project is considered to meet the CAA requirements and is in conformity with the SIP.

During the 30-day public review period for the Draft IS/MND for the proposed project from November 22, 2010, to December 21, 2010, no comments regarding air quality conformity were received. An Air Quality Conformity Analysis for the proposed project was completed and forwarded to FHWA on April 18, 2011. The Air Quality Conformity Analysis contains the information that is required by FHWA to make a project-level air quality conformity determination for the SR 91/71 Interchange Improvement Project pursuant to Section 6005 of Safe,

Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU). The project area is subject to regional conformity analysis requirements. The results of the analysis indicate that the project has attained project-level conformity for CO. The proposed project is also listed in the conforming SCAG 2008 RTP and the 2011 FTIP; therefore, it meets regional conformity requirements. FHWA issued the conformity determination letter on May 10, 2011 indicating that the "SR 91/71 Interchange Improvement Project conforms to the State Implementation Plan (SIP) in accordance with 40 C.F.R. Part 93."

G. Title VI Considerations

This project is consistent with the Civil Rights Act of 1964, Title VI (42 United States Code [U.S.C.] 2000d-1) and the President's Executive Order on Environmental Justice (EO 12898). This project does not discriminate on the basis of race, color, and national origin, nor does it have any disproportionate impacts to low-income and minority populations.

7. OTHER CONSIDERATIONS AS APPROPRIATE

A. Public Hearing Process

A Public Open House meeting was held on August 26, 2008, in the Multi-Purpose Room at Corona City Hall, to introduce the project to stakeholders and other interested parties and to seek comments and input on the viable project alternatives under consideration.

After the completion of the draft environmental document, a public meeting was held to discuss the findings of the draft environmental document and to solicit comments from the public and resource agencies. The public meeting was held on December 9, 2010 at Corona City Hall from 5:00 p.m. to 8:00 p.m.

B. Route Matters

1) Freeway Agreements

No modification to the existing freeway agreement between Caltrans and the City of Corona is required for this project because the proposed interchange modifications do not affect existing local street access. Relocation of driveways along SR 71 does not require CTC approval because these are private driveways rather than public road connections.

2) Modified Access Report (MAR)

A MAR would not be required for this project because neither SR 91 nor SR 71 are part of the Interstate system, and there are no current plans to incorporate either route into the Interstate system.

C. Permits

Specific regulatory requirements have been identified through a review of environmental laws and regulations, existing guidance, and correspondence with certain agencies. Table 8-1 lists, by resource agency, the permits that are anticipated for approval to construct the proposed improvements.

Table 8-1 Permits and Regulatory Approvals Required

Agency	Permit[1]/Approval	Status
California Department of Fish and Game (CDFG)	Streambed Alteration Permit (Section 1602)	An application for this permit will be submitted at the plans, specifications, and estimate (PS&E) phase of the project.
Western Riverside County Regional Conservation Authority (RCA)	Multiple Species Habitat Conservation Plan (MSHCP) Consistency Determination	The Joint Project Review (JPR) Process is completed and the project is determined to be consistent with the MSHCP.
RCA	Determination of Biological Equivalent or Superior Preservation (DBESP)	The JPR Process is completed and the project is determined to be consistent with the MSHCP.
USFWS	Section 7 Consultation	USFWS has reviewed the JPR and determined that the project is consistent with the MSHCP. A Biological Opinion was issued on June 2011.
SWRCB	National Pollutant Discharge Elimination System (NPDES) Order No. 2009-0009-DWQ, NPDES permit No. CAS00002	A notification for this permit will be submitted at the PS&E phase of the project.
SWRCB	NPDES Oder No. 99-06-DWQ, NPDES permit No. CAS000003	A notification for coverage under NPDES Permit No. CAS000002 will be submitted at the PS&E phase of the project.
Caltrans	Standard Encroachment Permit	An application for this permit will be submitted following completion of the PS&E phase of the project.
City of Corona	General Encroachment Permit	An application for this permit will be submitted at the PS&E phase of the project.
California Public Utilities Commission	Authority to Construct	An application for this permit will be submitted at the PS&E phase of the project.
Chino Hills State Park (CHSP)	Encroachment Permit	An application for this permit will be submitted at the PS&E phase of the project.
Orange County Flood Control District (OCFCD)	Encroachment Permit	If the project elects to conduct habitat restoration within Green River Golf Course, the project will apply for this permit during the PS&E phase of the project.
Riverside County Flood Control & Water Conservation District	Encroachment Permit	An application for this permit will be submitted at the PS&E phase of the project.
Regional Water Quality Control Board (RWQCB) (Region 8)	Dewatering Permit	An application for this permit will be submitted at the PS&E phase of the project.
Federal Highway Administration (FHWA)	Air Quality Conformity Determination	A Project-Level Conformity Determination has been issued by FHWA on May 10, 2011.
RWQCB (Region 8)	Water Quality Certification (Section 401)	An application for this permit will be submitted at the PS&E phase of the project.
U.S. Army Corps of Engineers (USACE)	Encroachment Permit	An application for this permit will be submitted at the PS&E phase of the project.
USACE	Clean Water Act (CWA) Nationwide Permit (Section 404)	An application for this permit will be submitted at the PS&E phase of the project.

[1] A final list of permits required prior to construction will be confirmed during the PS&E phase of the project.

D. Cooperative Agreements

A Design Cooperative Agreement was executed by RCTC and Caltrans on July 17, 2008. The Design Cooperative Agreement outlines the roles and responsibilities of RCTC and the State in developing the project through the PS&E phase (see Attachment I). It is recommended that, prior to completion of PS&E, RCTC and Caltrans execute a separate Cooperative Agreement to outlines the roles and responsibilities of each party during the construction phase of the project.

E. Other Agreements

It is anticipated that a Maintenance Agreement will be needed between Caltrans and the City of Corona to outline the roles and responsibilities of each party in maintaining the Green River Road on-ramp overhead (OH) structure over existing City-owned ROW along Prado Road. In addition, a separate Maintenance Agreement between BNSF railroad and Caltrans would be required for the same structure over the railroad ROW. It is recommended that these agreements be executed prior to completion of PS&E.

F. Involvement with a Navigable Waterway

The proposed project does not have any involvement with navigable waterway.

G. Transportation Management Plan

A Transportation Management Plan (TMP) data sheet has been prepared to identify traffic mitigation measures to be implemented during construction of the project improvements. The primary objective of the TMP data sheet is to develop the scope of and cost estimates for potential strategies to be used to maintain safe traffic movement through construction zone, as well as minimize traffic delays throughout the duration of project construction. The TMP data sheet is included as Attachment G to this Project Report.

A detailed TMP will be prepared during the final PS&E phase. The TMP will include, but not be limited to, the following three major elements:

- Traffic Control
- Construction Zone Enhanced Enforcement Program (COZEEP)
- Public Awareness Campaign (PAC)

H. Stage Construction

Stage construction will be required to maintain traffic flow during construction. Preliminary staging concepts were developed, and it was determined that the construction staging for this project could be divided into three major stages.

Stage 1 work could be constructed with minimum traffic control using temporary K-rail to separate traffic from the construction work areas. The work to be completed in Stage 1 includes:

- Construct footings and columns for the Green River Road on-ramp OH bridge (Stage 1A).
- Construct footings and columns for EB-to-NB flyover structure (Stage 1A).
- Relocate the existing driveway intersection along SR 71 (Stage 1A).
- Construct realignment and widening of SB lanes of SR 71 (Stage 1B).
- Stockpile excavated material along south side of SR 91 for embankment construction in Stage 2.

Stage 2 work also could be constructed with minimum traffic control. The work to be completed in Stage 2 includes:

- Construct embankment and retaining walls for the Green River Road on-ramp.
- Construct embankment and retaining walls for the EB-to-NB connector ramp at SR 91 and at SR 71.
- Construct embankment and retaining walls for the Green River Road slip ramp to NB SR 71.
- Widen the E91/N71 Connector UC (No. 56-0635R).

Stage 3 work would require extensive traffic controls to erect and remove falsework over SR 91, SR 71, and Prado Road. The work to be completed in Stage 3 includes:

- Construct abutments, girders, and deck for Green River Road on-ramp OH bridge.
- Pave and stripe the Green River Road on-ramp.
- Construct abutments, girders, and deck for the EB-to-NB flyover-connector-bridge.
- Pave and stripe the EB-to-NB connector.
- Pave and stripe the Green River Road slip on-ramp to SR 71.
- Pave and stripe the Green River Road on-ramp to EB SR 91.
- Remove the existing Green River Road on-ramp to EB SR 91.

A complete set of preliminary stage construction plans depicting the anticipated scope of work for each stage of construction are included as Attachment L.

I. Accommodation of Oversize Loads

The entire length of SR 91 and SR 71 within the counties of Orange, Riverside and San Bernardino are Listed on the STAA National Network and are included as part of the National Highway System route for oversized trucks. The proposed project accommodates the requirements of routes within STAA network.

J. Graffiti Control

To prevent graffiti, the following measures will be implemented in final design, where feasible:

- Minimization of vertical surfaces
- Use of planting to cover vertical surfaces, if possible
- Use of anti-graffiti treatment on retaining walls as directed by Caltrans District Landscape Architect
- Restricting access to bridge and overhead sign structures by using fencing and barbed wire

8. PROGRAMMING

A. Programming

A PSR/PDS was prepared by and approved by Caltrans in December 2006. The PSR/PDS programmed the Engineering and Environmental Support costs for the PA/ED phase of the project.

B. Funding

The preliminary cost estimate for construction of the Preferred Alternative is $113 million, including $93.4 million in capital construction, $2.8 million in capital ROW, and $16.8 million in support costs (see Attachment E). According to the Adopted 2011 FTIP, RCTC anticipates funding the project support costs with State STIP/RIP and Federal funds. Construction and ROW costs are programmed entirely with sales tax Measure "A" and local funds.

9. REVIEWS

Geometric Approval Drawings have been reviewed by HQ Geometrician during project development and approved by Caltrans on June 30, 2010.

Traffic Study Report for the project has been reviewed by the HQ Traffic Liaison.

10. PROJECT PERSONNEL

Caltrans – Project Manager	Daniel Ciacchella	(951) 452-6169
Caltrans – Design Oversight Engineer	Jon Bumps	(909) 383-4616
Caltrans – Design Oversight	Quyen Sy	(909) 388-7307
Caltrans – Environmental Oversight	Aaron Burton	(909) 383-2841
Caltrans – Right-of-Way Coordinator	Betty Bobosik	(909) 383-4696

RCTC – Project Manager	Khalid Bazmi	(951) 787-7993
RCTC – Project Coordinator	John Curtis	(951) 787-7909
Parsons – Project Manager	David Speirs	(949) 333-4535
Parsons – Project Engineer	Sam Saghafi	(909) 218-3587
Parsons – Environmental	Stephanie Blanco	(909) 218-3551

11. LIST OF ATTACHMENTS

Attachment A – Project Location Map

Attachment B – Typical Sections (Preferred Alternative)

Attachment C – Layouts & Profiles (Preferred Alternative)

Attachment D – Advance Planning Study (Preferred Alternative)

Attachment E – Preliminary Cost Estimate (Preferred Alternative)

Attachment F – Right-of-Way Data Sheet (Preferred Alternative)

Attachment G – Transportation Management Plan

Attachment H – Final Environmental Document

Attachment I – Cooperative Agreement

Attachment J – Approved PSR/PDS

Attachment K – Pavement Life Cycle Cost Analysis Results

Attachment L – Considered Sound Barrier Location

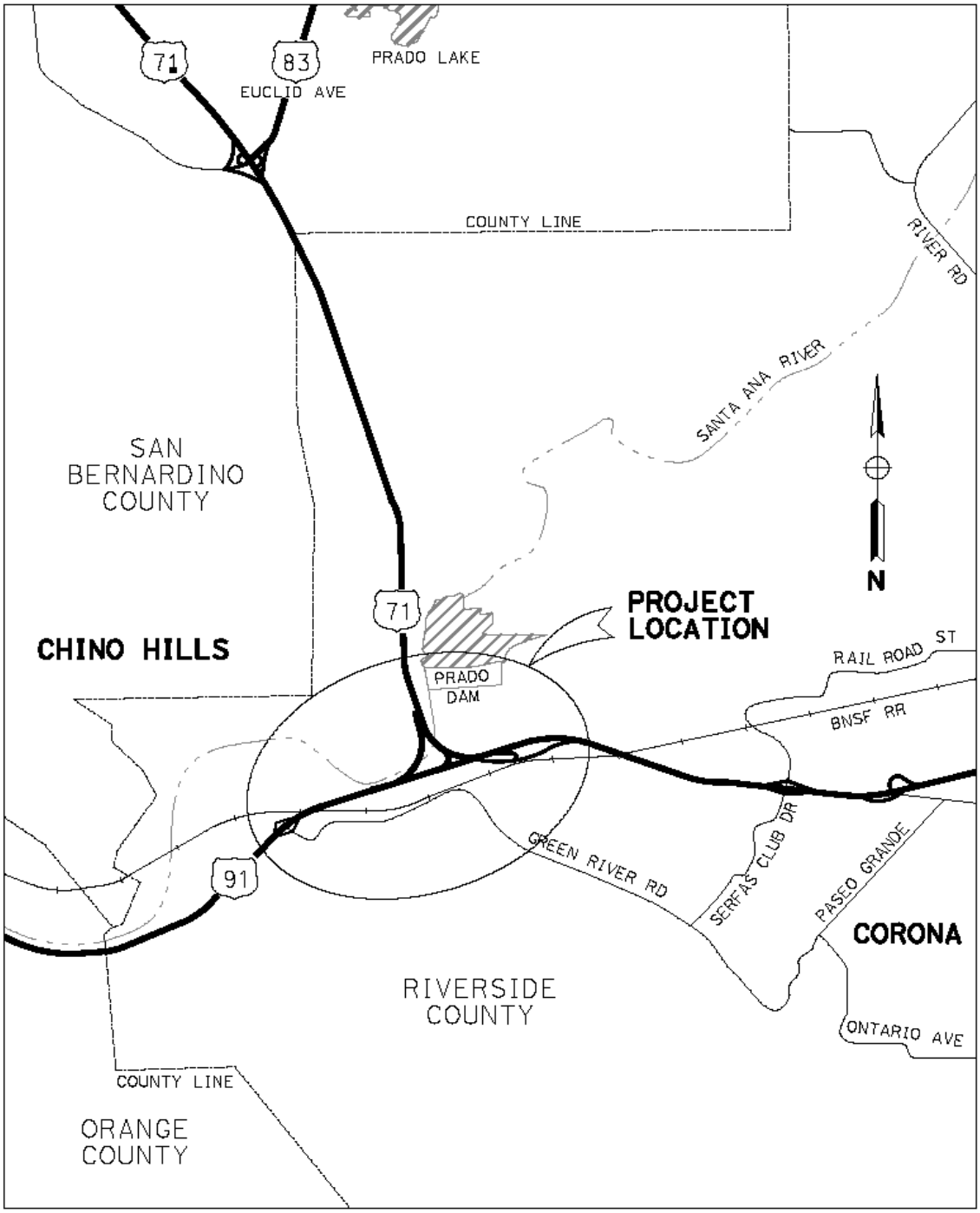
Attachment M – Preliminary Stage Construction

Attachment N – Storm Water Data Report

Attachment O – Project Category Determination

Attachment A

Project Location Map


71
83
EUCLID AVE
PRADO LAKE
COUNTY LINE
RIVER RD
SANTA ANA RIVER
SAN
BERNARDINO
COUNTY
N
71
PROJECT
LOCATION
CHINO HILLS
RAIL ROAD ST
PRADO
DAM
BNSF RR
91
GREEN RIVER RD
SERFAS CLUB DR
PASEO GRANDE
CORONA
RIVERSIDE
COUNTY
ONTARIO AVE
COUNTY LINE
ORANGE
COUNTY

Attachment B

Typical Sections (Preferred Alternative)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	1	5

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TYPICAL STRUCTURAL SECTIONS

(1) Exist Pvmt Route 91
1.05′ Conc Pvmt
0.50′ LCB
0.70′ AS CL 2

(2) Exist Pvmt Route 71
0.85′ PCC
0.35′ ATPB
0.35′ AB CL2
0.35′ AS CL2

[3] 1.05′ JPCP
0.10′ HMA-BB
0.50′ LCB
0.70′ AS

[4] 0.95′ JPCP
0.10′ HMA-BB
0.40′ LCB
0.60′ AS

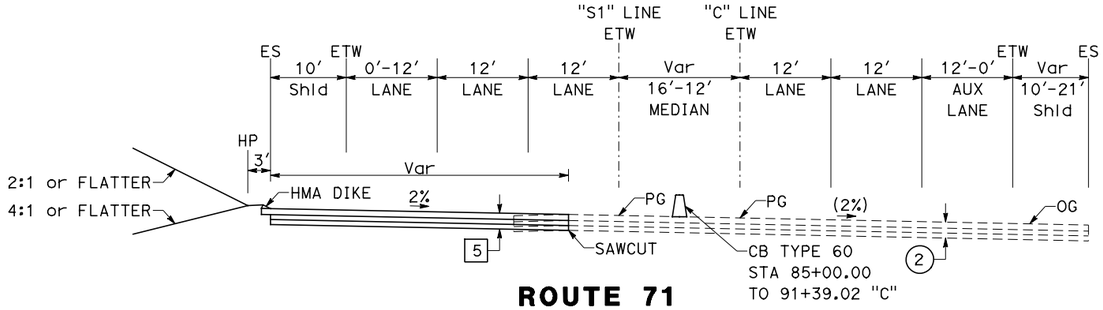
[5] 1.15′ JPCP
0.10′ HMA-BB
0.50′ LCB
0.70′ AS

NOTES:
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATION.

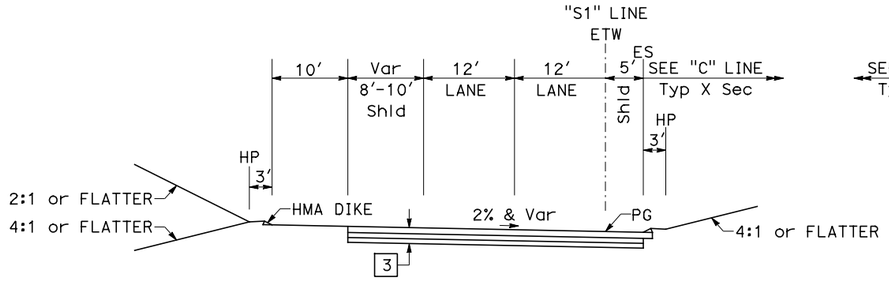
2. SUPERELEVATION AS SHOWN ON THE SUPERELEVATION DIAGRAMS.

DESIGN DESIGNATION (ROUTE 91):
2007 ADT = 263,200 D = 50%
2035 ADT = 324,800 T = 7%
DHV = 30,980 V = 75 MPH

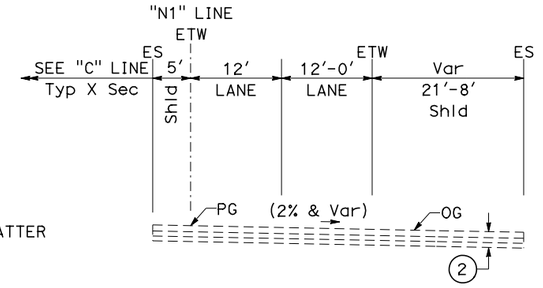
DESIGN DESIGNATION (ROUTE 71):
2007 ADT = 57,800 D = 50%
2035 ADT = 97,200 T = 8%
DHV = 6,700 V = 70 MPH



ROUTE 71
"C" STA 68+00.00 TO 91+39.02
"S1" STA 31+86.87 TO 55+63.15



SB ROUTE 71 TO WB ROUTE 91
"S1" STA 10+00.00 TO 31+86.87



WB ROUTE 91 TO NB ROUTE 71
"N1" STA 10+00.00 TO 31+34.17

TYPICAL CROSS SECTION

NO SCALE **X-1**

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EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	2	5

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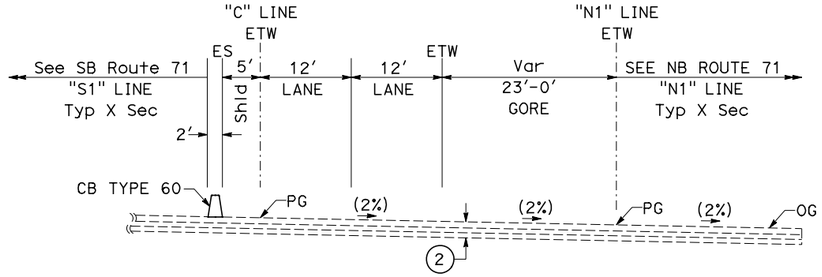
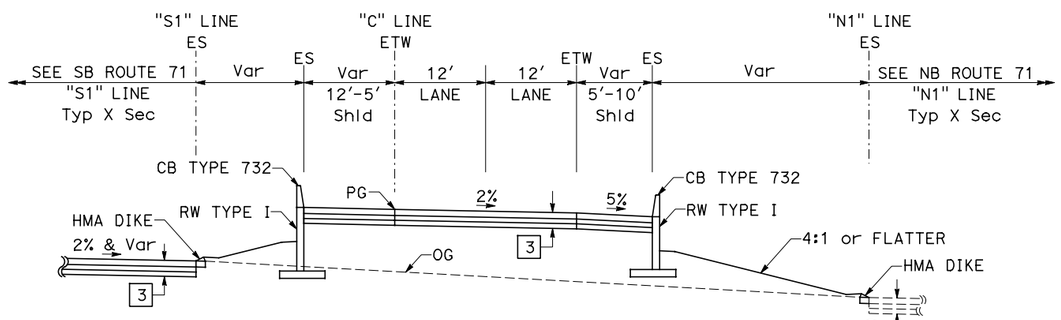


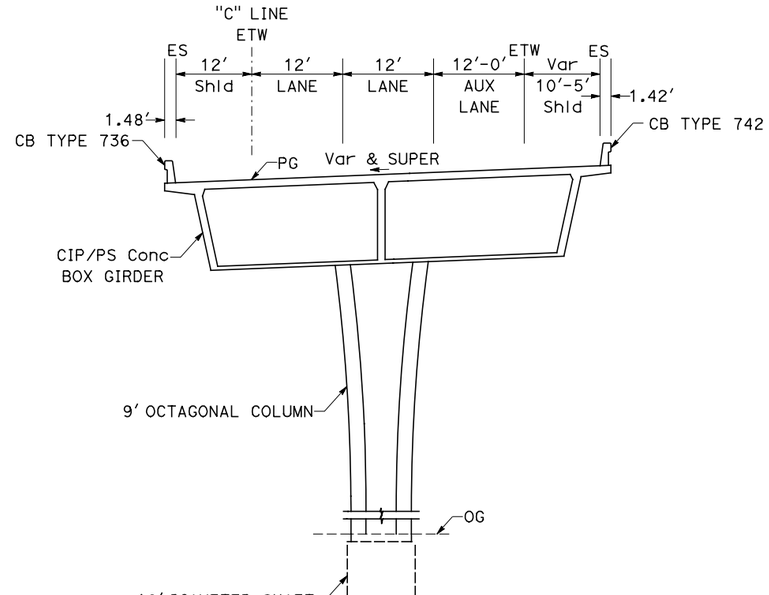
EB ROUTE 91 TO NB ROUTE 71

"C" STA 59+50.00 TO 68+00.00



EB ROUTE 91 TO NB ROUTE 71

"C" STA 52+30.00 TO 59+50.00



EB ROUTE 91 TO NB ROUTE 71

"C" STA 26+25.00 TO 52+30.00

TYPICAL CROSS SECTION

NO SCALE **X-2**

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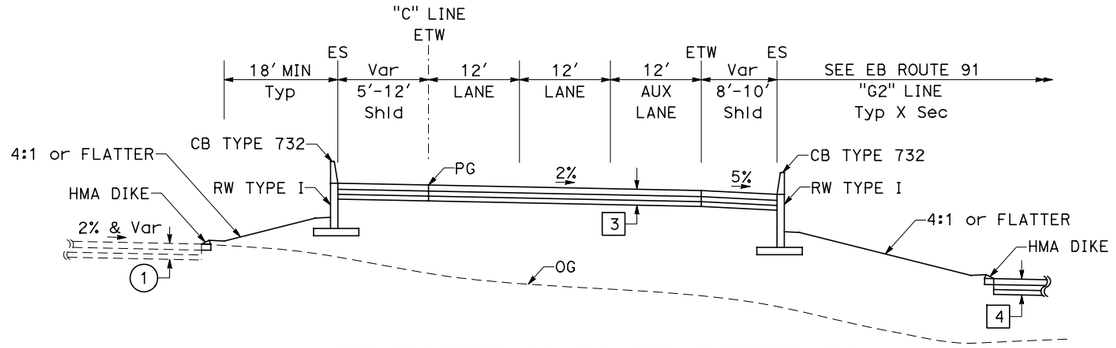
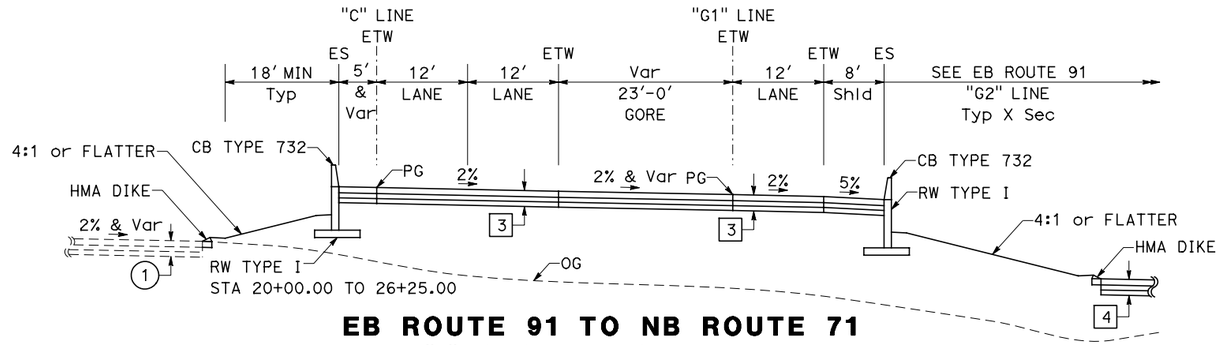
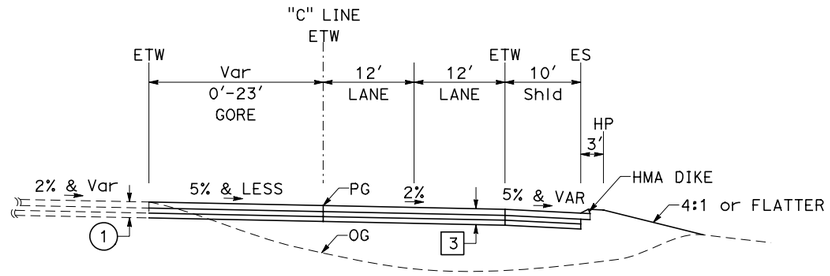


EB ROUTE 91 TO NB ROUTE 71
"C" STA 23+55.00 TO 26+25.00



EB ROUTE 91 TO NB ROUTE 71
"C" STA 17+89.88 TO 23+55.00

NB ROUTE 71 ON-RAMP
"G1" STA 31+07.63 TO 31+73.03



EB ROUTE 91 TO NB ROUTE 71
"C" STA 12+40.30 TO 17+89.88

TYPICAL CROSS SECTION

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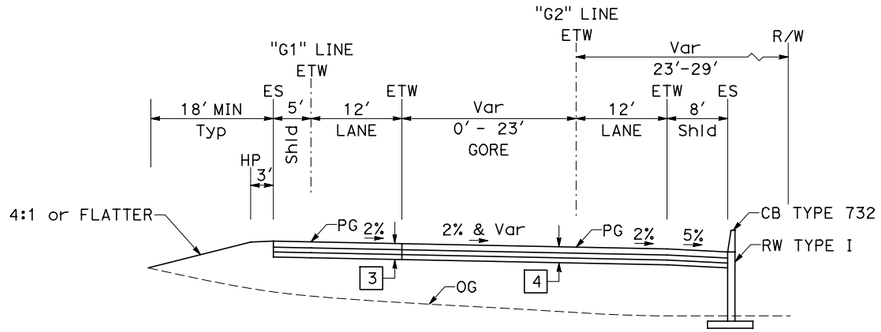
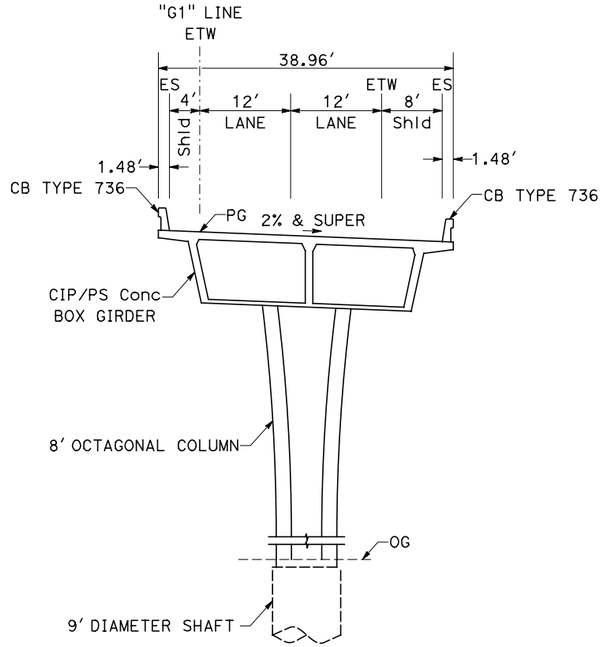
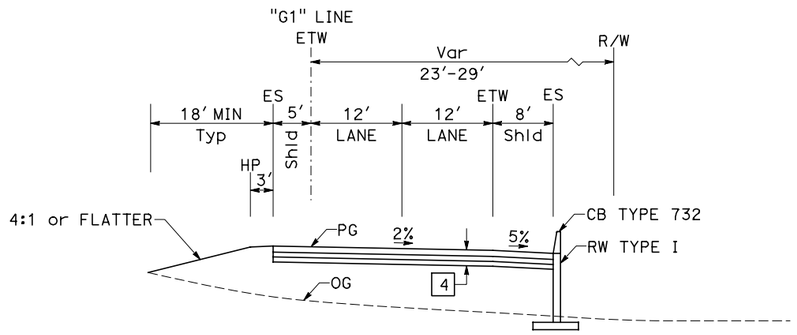


NB ROUTE 71 ON-RAMP
"G1" STA 28+40.00 TO 31+07.63

EB ROUTE 91 ON-RAMP
"G2" STA 10+00.00 TO 12+70.98



GREEN RIVER ROAD ON-RAMP
"G1" STA 15+75.89 TO 25+39.89



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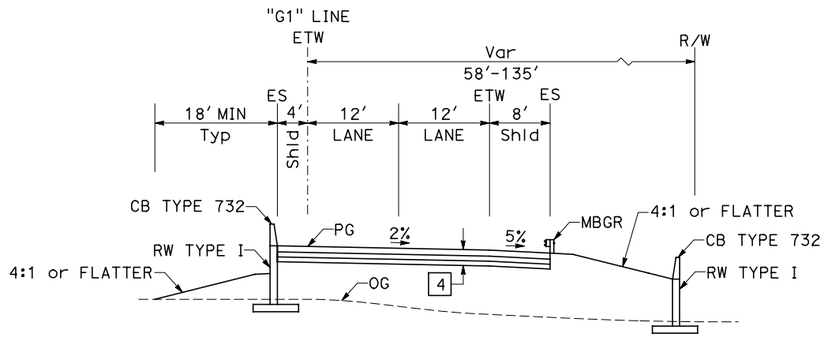

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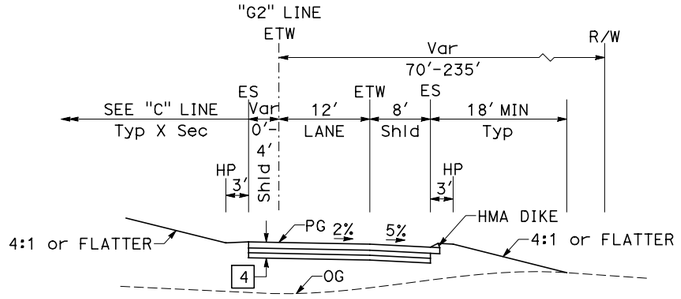

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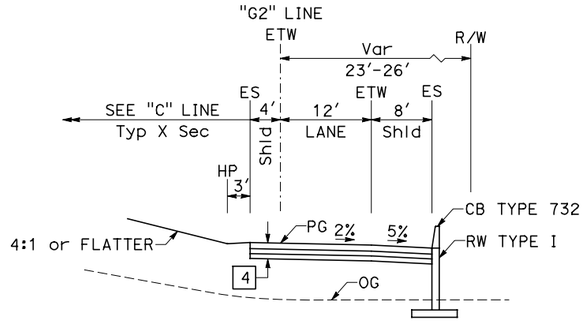

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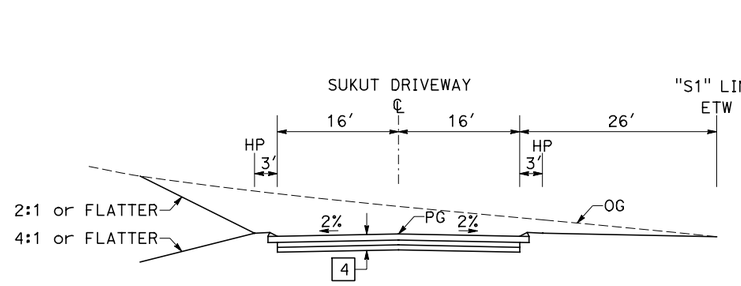
"G2" STA 12+70.89 TO 20+00.00



SUKUT DRIVEWAY
TYP SECTION

TYPICAL CROSS SECTION

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Attachment C

Layouts & Profiles (Preferred Alternative)

NOTE: FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

ABBREVIATIONS:
MVP MAINTENANCE VEHICLE PULLOUT
TCE TEMPORARY CONSTRUCTION EASEMENT

LEGEND:
(#) CURVE NUMBER
------ TOE OF SLOPE/TOP OF CUT

CURVE DATA				
No.	R	Δ	T	L
①	1150.00′	26°49′39"	274.26′	538.46′
⑫	538.06′	71°14′16"	385.48′	668.99′
⑬	4000.00′	30°07′43"	1076.61′	2103.38′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	1	10

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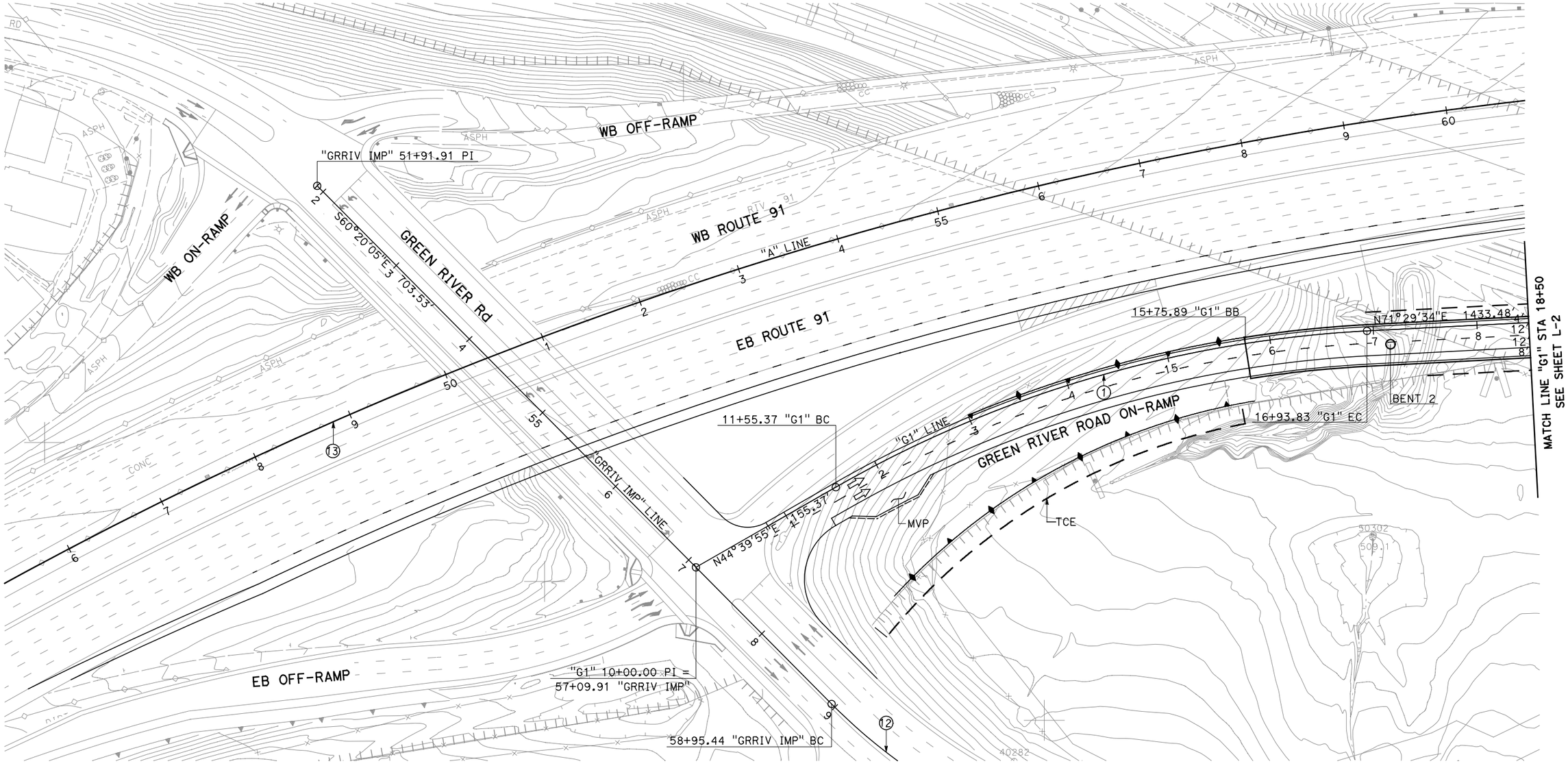

LAYOUT

SCALE: 1" = 50′ **L-1**

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⑬	4000.00′	30°07′43"	1076.61′	2103.38′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	2	10

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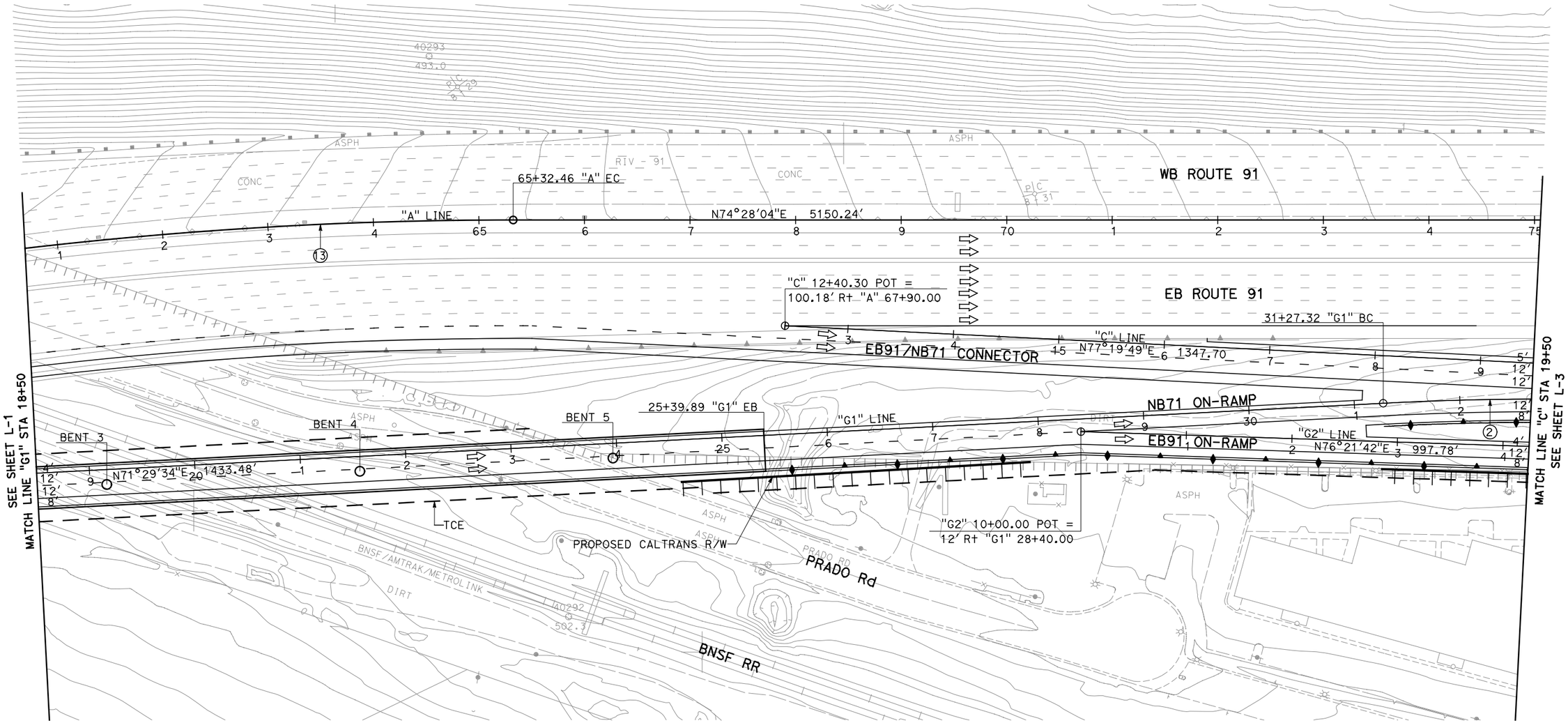

LAYOUT

SCALE: 1" = 50′ **L-2**

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	3	10

REGISTERED CIVIL ENGINEER DATE

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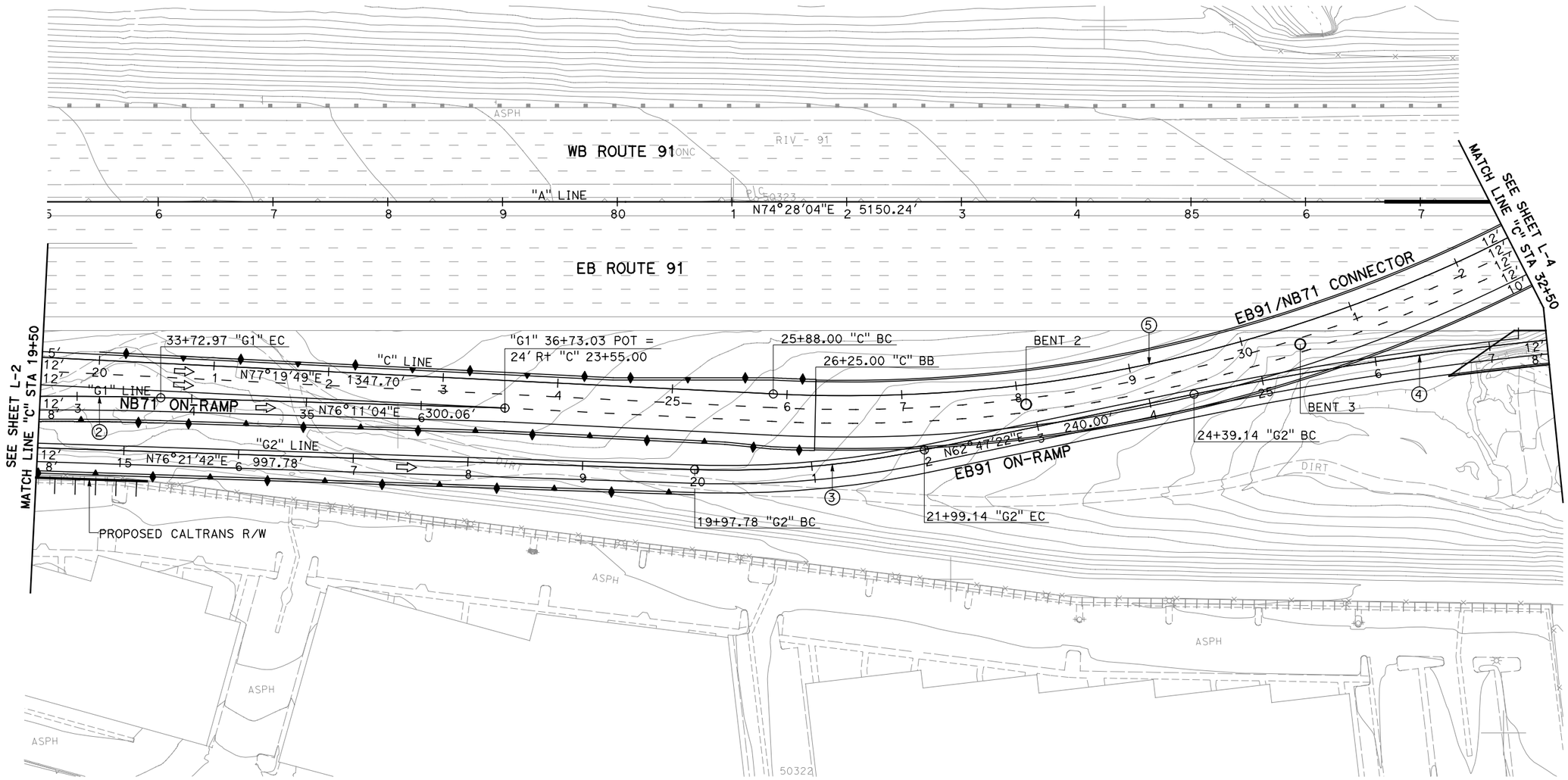
4080 LEMON STREET
RIVERSIDE, CALIFORNIA 92502

CURVE DATA				
No.	R	Δ	T	L
②	3000.00′	04°41′30"	122.89′	245.65′
③	850.00′	13°34′21"	101.15′	201.35′
④	3000.00′	10°31′58"	276.52′	551.49′
⑤	1275.00′	91°55′04"	1318.41′	2045.44′



LAYOUT

SCALE: 1" = 50′ **L-3**

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	4	10

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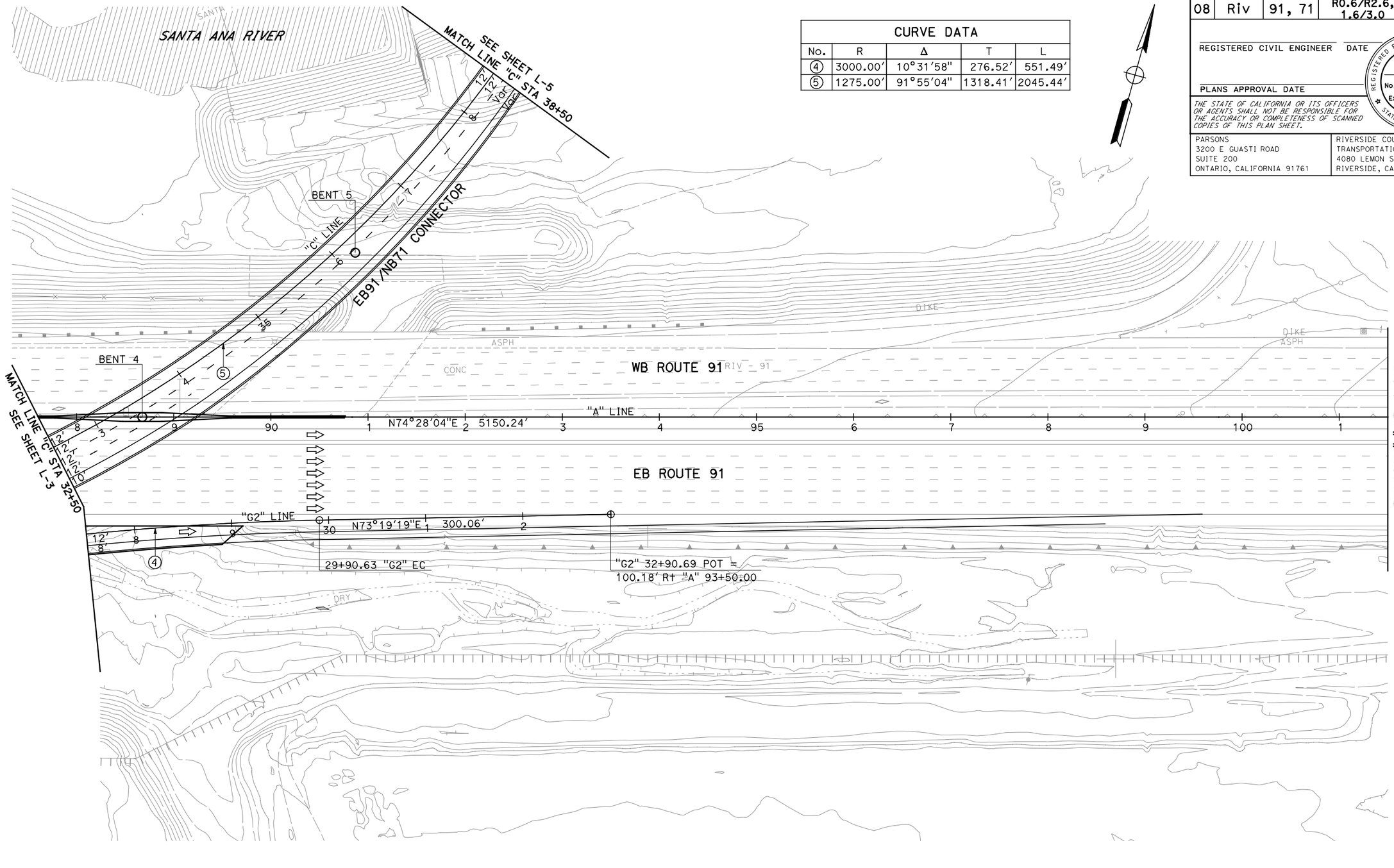
4080 LEMON STREET
RIVERSIDE, CALIFORNIA 92502

CURVE DATA				
No.	R	Δ	T	L
④	3000.00′	10°31′58"	276.52′	551.49′
⑤	1275.00′	91°55′04"	1318.41′	2045.44′



LAYOUT

SCALE: 1′ = 50′ **L-4**

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BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972ea004.dgn

CU 00000

EA 0F5410

CURVE DATA				
No.	R	Δ	T	L
⑤	1275.00′	91°55′04"	1318.41′	2045.44′
⑦	1953.46′	18°18′07"	314.68′	623.99′
⑱	1522.31′	19°59′10"	268.23′	531.02′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	5	10

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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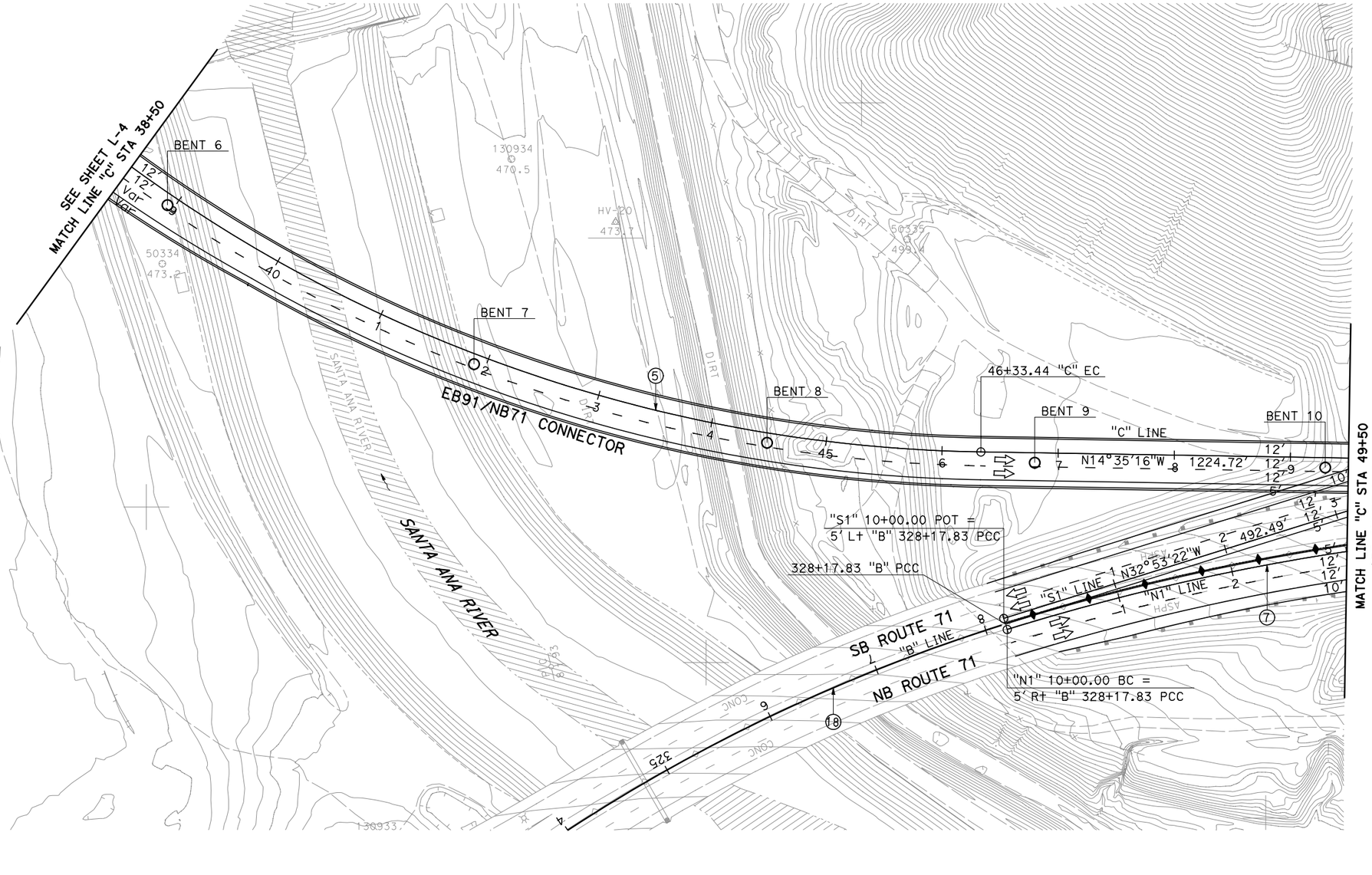

LAYOUT

SCALE: 1" = 50′ **L-5**

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CONSULTANT FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

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DATE PLOTTED => 12/10/2009
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USERNAME => p0042923
DGN FILE => 646972ea005.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	6	10

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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RIVERSIDE COUNTY
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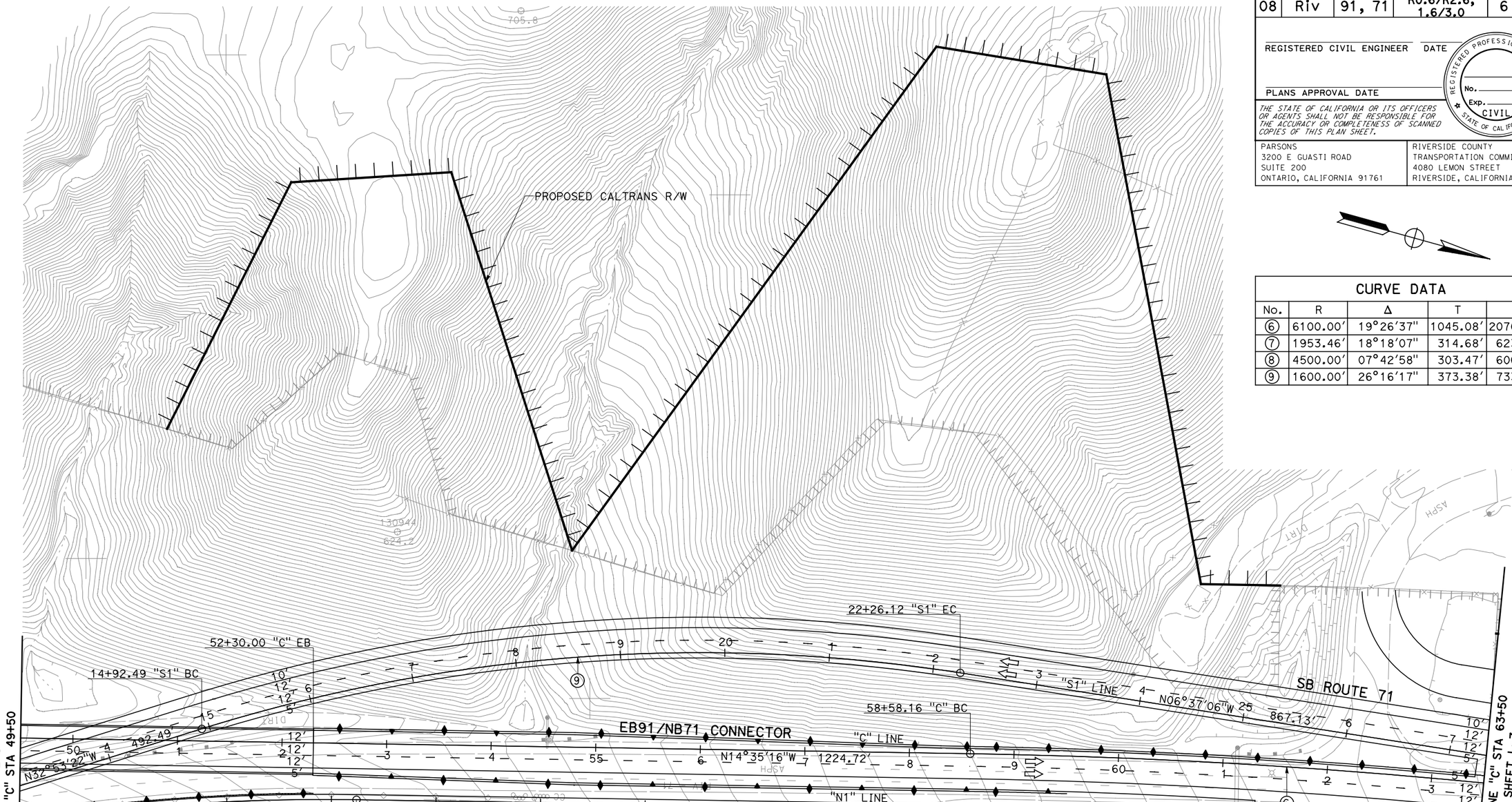

CURVE DATA

No.	R	Δ	T	L
⑥	6100.00′	19°26′37"	1045.08′	2070.06′
⑦	1953.46′	18°18′07"	314.68′	623.99′
⑧	4500.00′	07°42′58"	303.47′	606.02′
⑨	1600.00′	26°16′17"	373.38′	733.63′

LAYOUT

SCALE: 1" = 50′ **L-6**

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TIME PLOTTED => 10:48:23 AM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972ea006.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	7	10

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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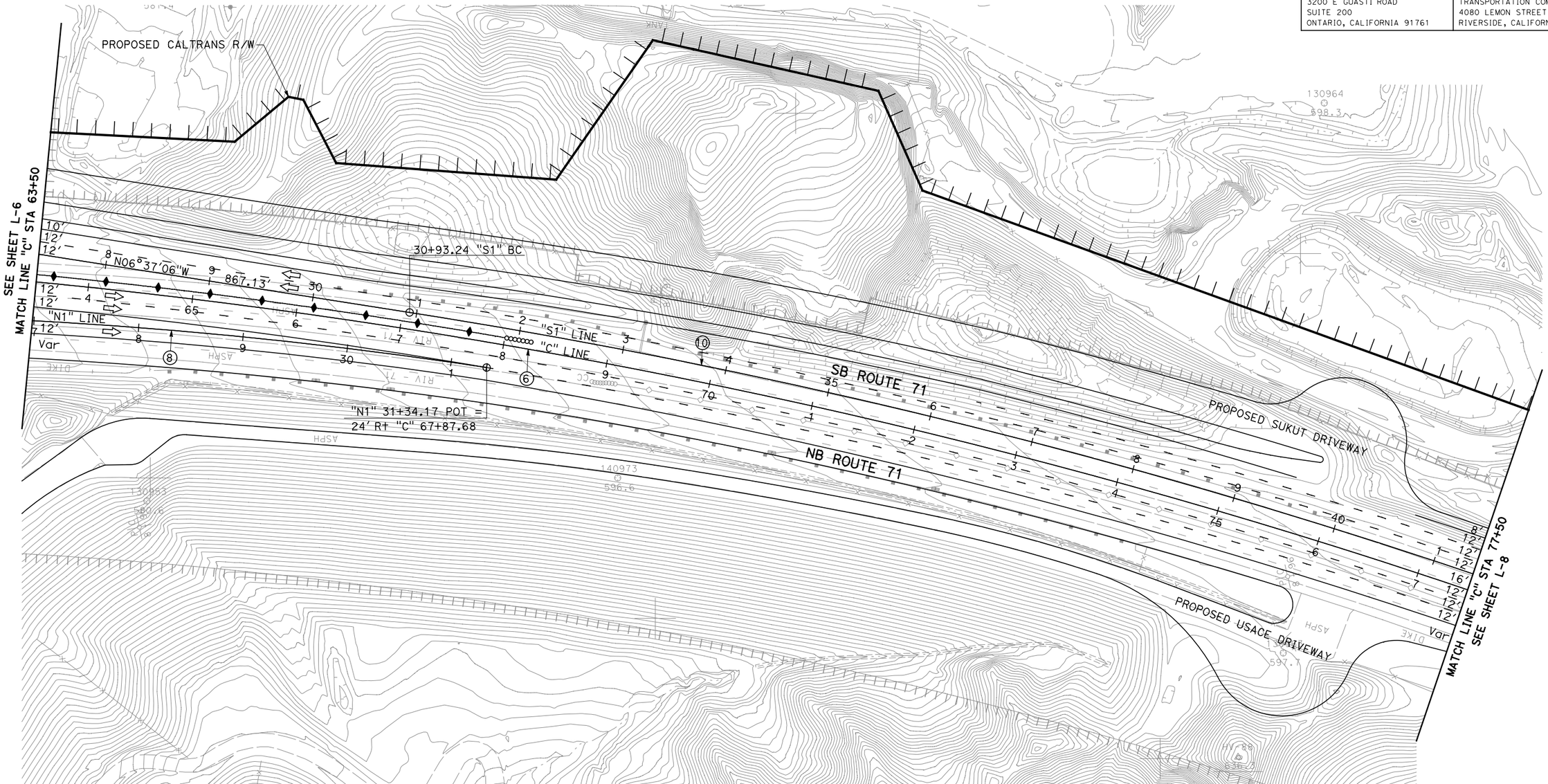
CURVE DATA				
No.	R	Δ	T	L
⑥	6100.00′	19°26′37"	1045.08′	2070.06′
⑧	4500.00′	07°42′58"	303.47′	606.02′
⑩	6116.00′	11°39′59"	624.82′	1245.33′



LAYOUT

SCALE: 1" = 50′ **L-7**

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972ea007.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	8	10

REGISTERED CIVIL ENGINEER DATE

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CURVE DATA				
No.	R	Δ	T	L
⑥	6100.00′	19°26′37"	1045.08′	2070.06′
⑩	6116.00′	11°39′59"	624.82′	1245.33′
⑪	4976.05′	00°35′14"	25.50′	51.00′

LAYOUT

SCALE: 1" = 50′ **L-8**

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972ea008.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	9	10

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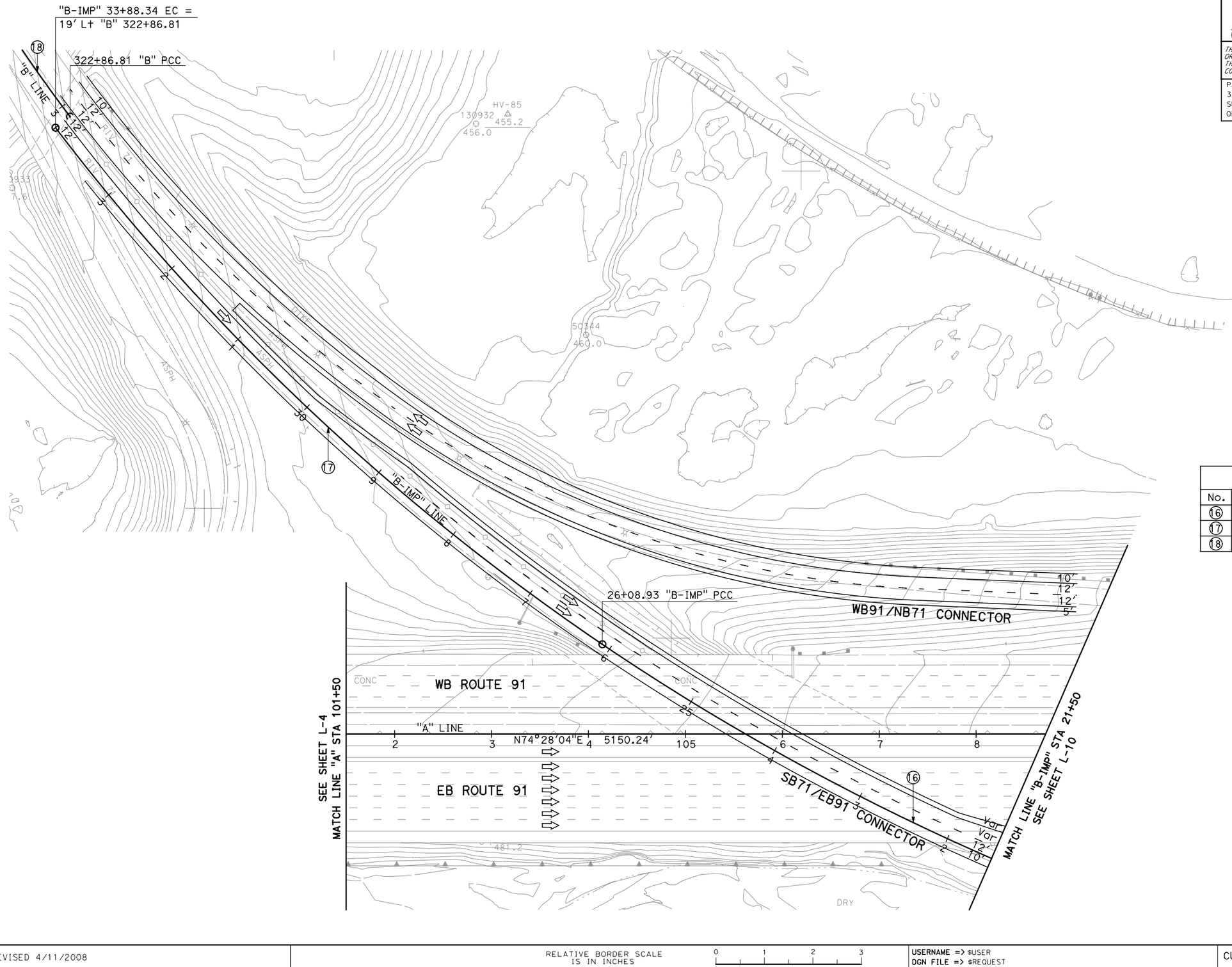

CURVE DATA				
No.	R	Δ	T	L
⑯	2500.00′	23°39′18"	523.53′	1032.15′
⑰	2403.00′	18°35′01"	393.15′	779.40′
⑱	1522.31′	19°59′10"	268.23′	531.02′

LAYOUT

SCALE: 1′ = 50′ **L-9**

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DATE PLOTTED => $DATE

TIME PLOTTED => $TIME

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU 00000

EA 0F5410

CURVE DATA				
No.	R	Δ	T	L
⑭	4000.00′	38°25′35"	1393.98′	2682.67′
⑮	2600.00′	11°57′49"	272.43′	542.89′
⑯	2500.00′	23°39′18"	523.53′	1032.15′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	10	10

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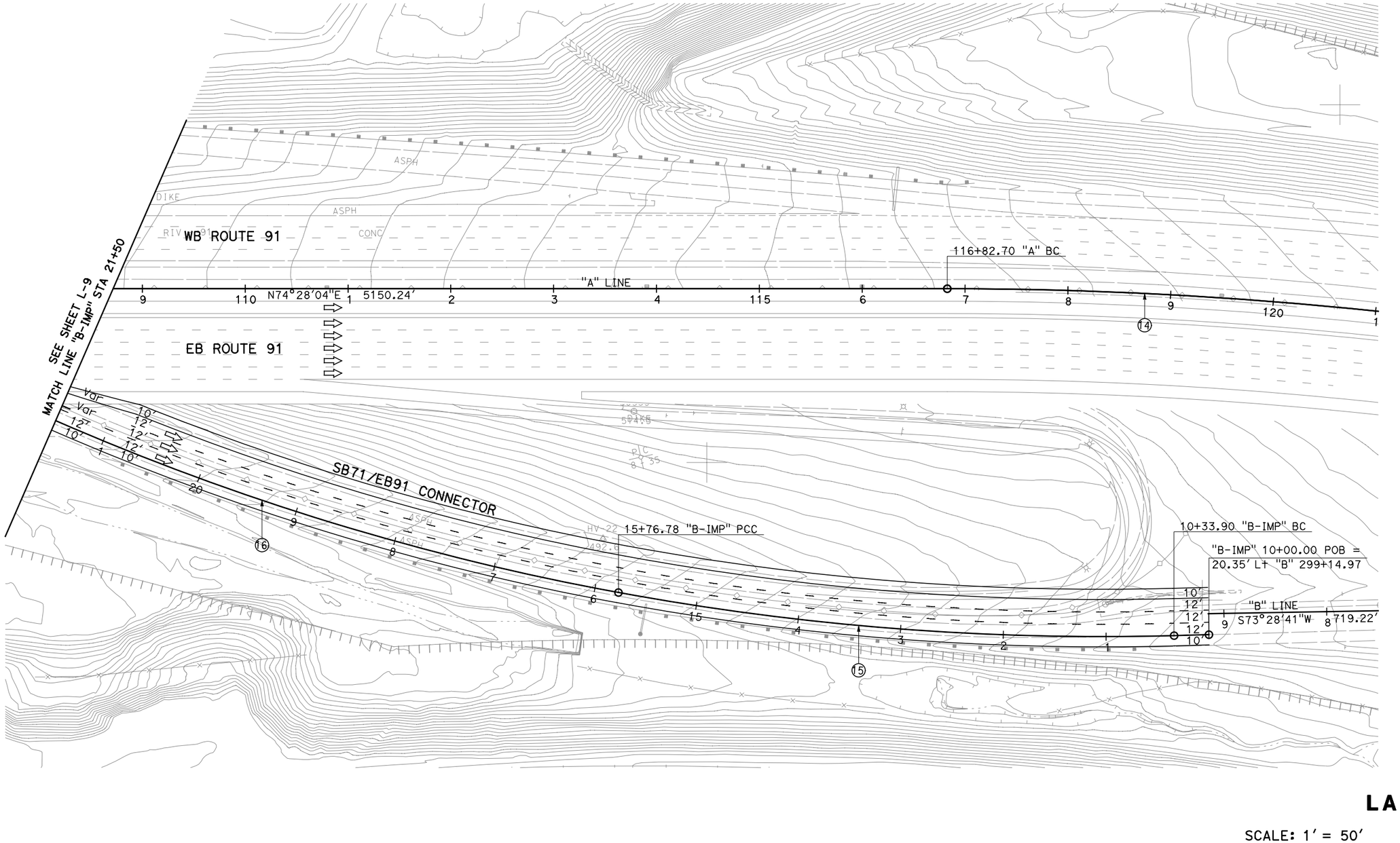

LAYOUT

SCALE: 1′ = 50′ **L-10**

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BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	1	9

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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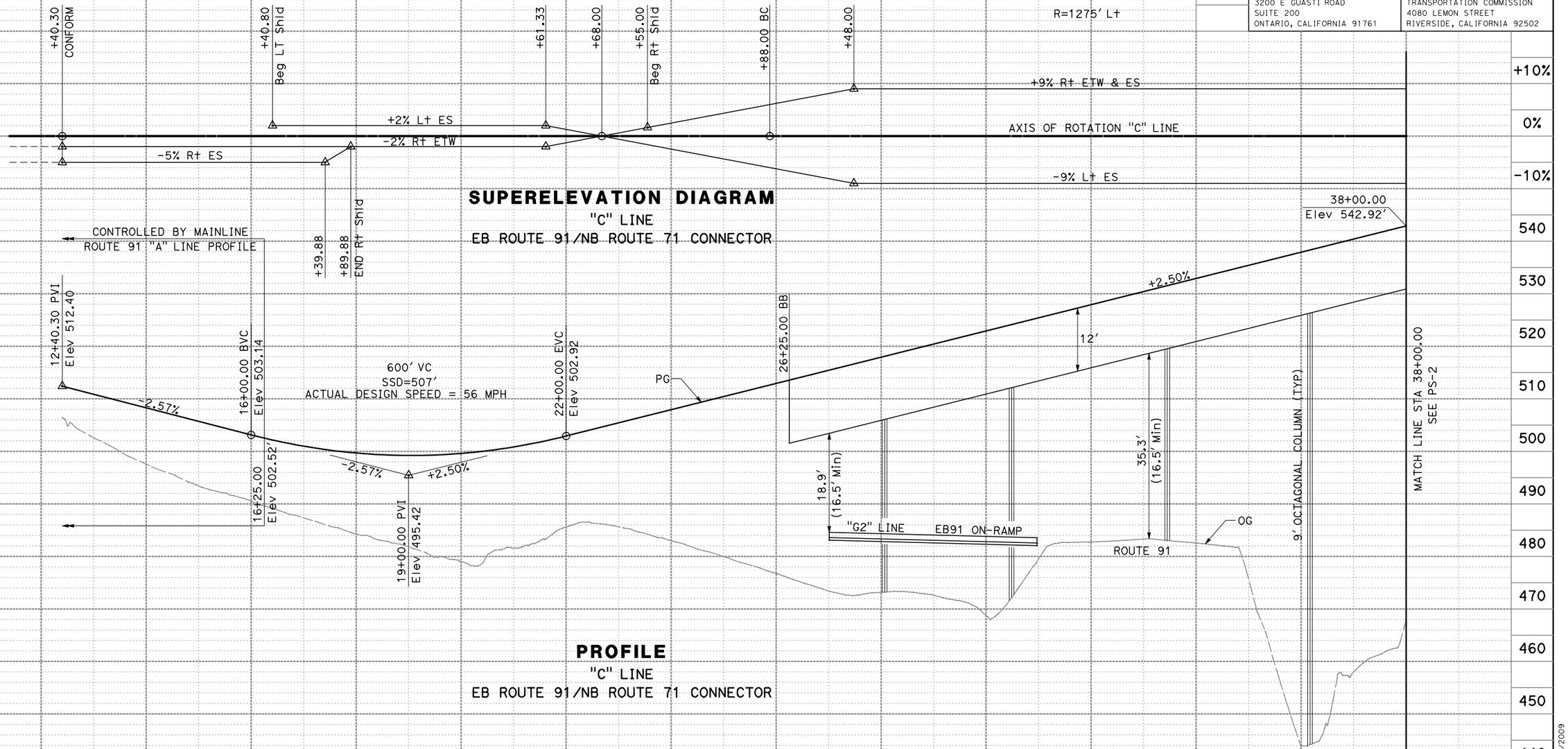
SUPERELEVATION DIAGRAM

"C" LINE

EB ROUTE 91/NB ROUTE 71 CONNECTOR



PROFILE

"C" LINE

EB ROUTE 91/NB ROUTE 71 CONNECTOR

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1"=50"
Vert 1"=10"

PS-1

STATION	12+00	13+00	14+00	15+00	16+00	17+00	18+00	19+00	20+00	21+00	22+00	23+00	24+00	25+00	26+00	27+00	28+00	29+00	30+00	31+00	32+00	33+00	34+00	35+00	36+00	37+00	38+00	TOTAL
CY Exc																												
CY Emb																												

LAST REVISION DATE PLOTTED => 12/11/2009
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BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972fb001.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	2	9

REGISTERED CIVIL ENGINEER DATE

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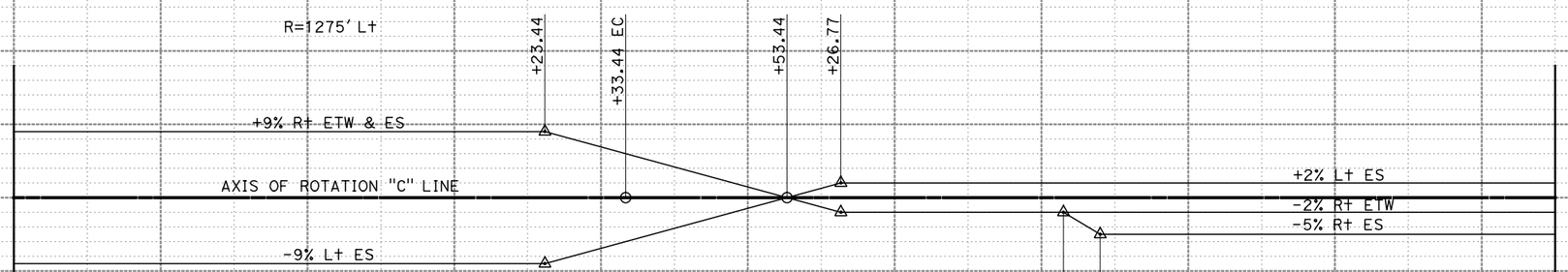
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

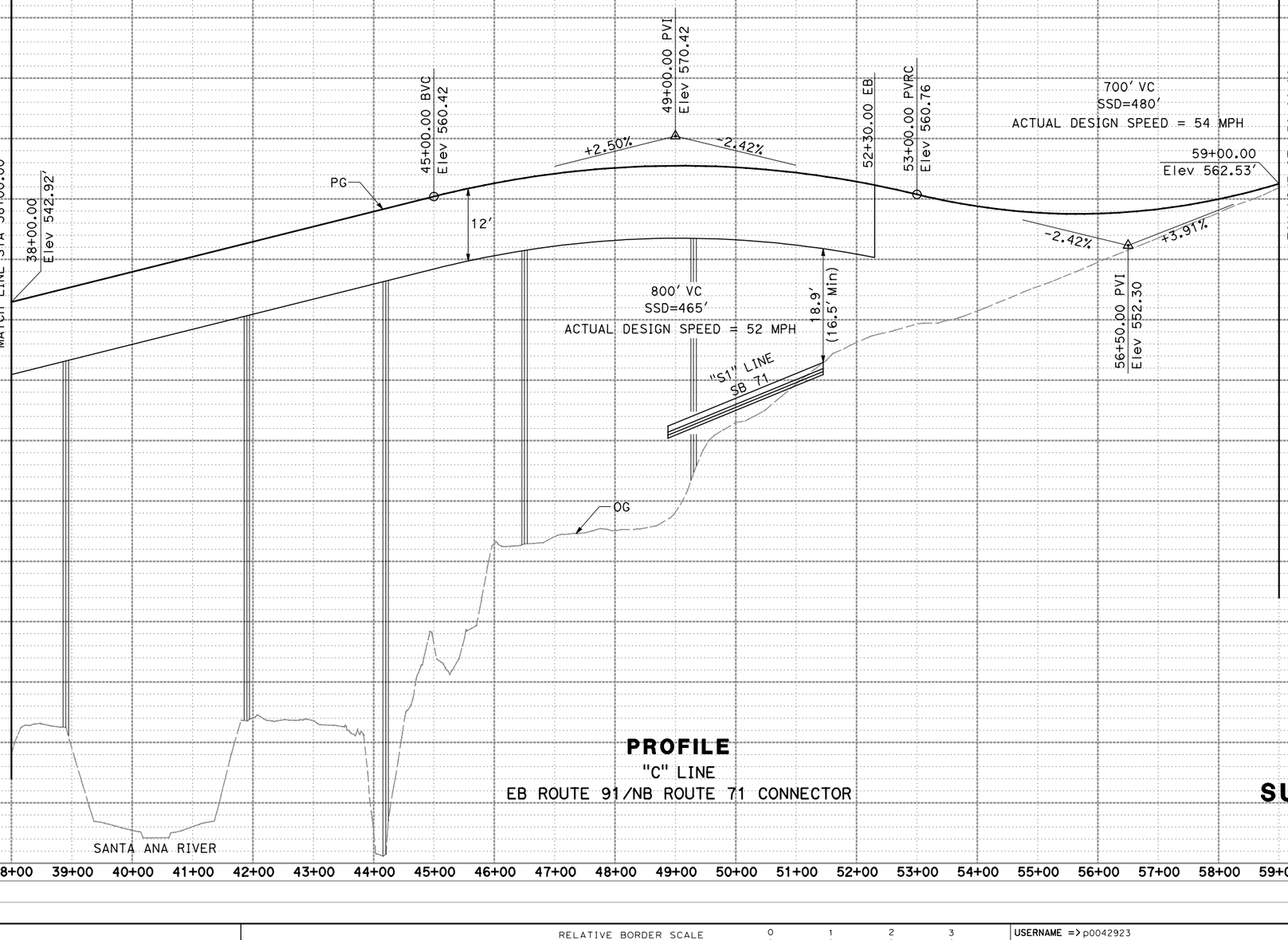
Gibbons

SUPERELEVATION DIAGRAM

"C" LINE

EB ROUTE 91/NB ROUTE 71 CONNECTOR





STATION	38+00	39+00	40+00	41+00	42+00	43+00	44+00	45+00	46+00	47+00	48+00	49+00	50+00	51+00	52+00	53+00	54+00	55+00	56+00	57+00	58+00	59+00	TOTAL
CY Exc																							
CY Emb																							

PROFILE

"C" LINE

EB ROUTE 91/NB ROUTE 71 CONNECTOR

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1"=50"
Vert 1"=10"

PS-2

LAST REVISION 00-00-00 | DATE PLOTTED => 12/11/2009 | TIME PLOTTED => 11:06:35 AM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972fb002.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	3	9

REGISTERED CIVIL ENGINEER DATE

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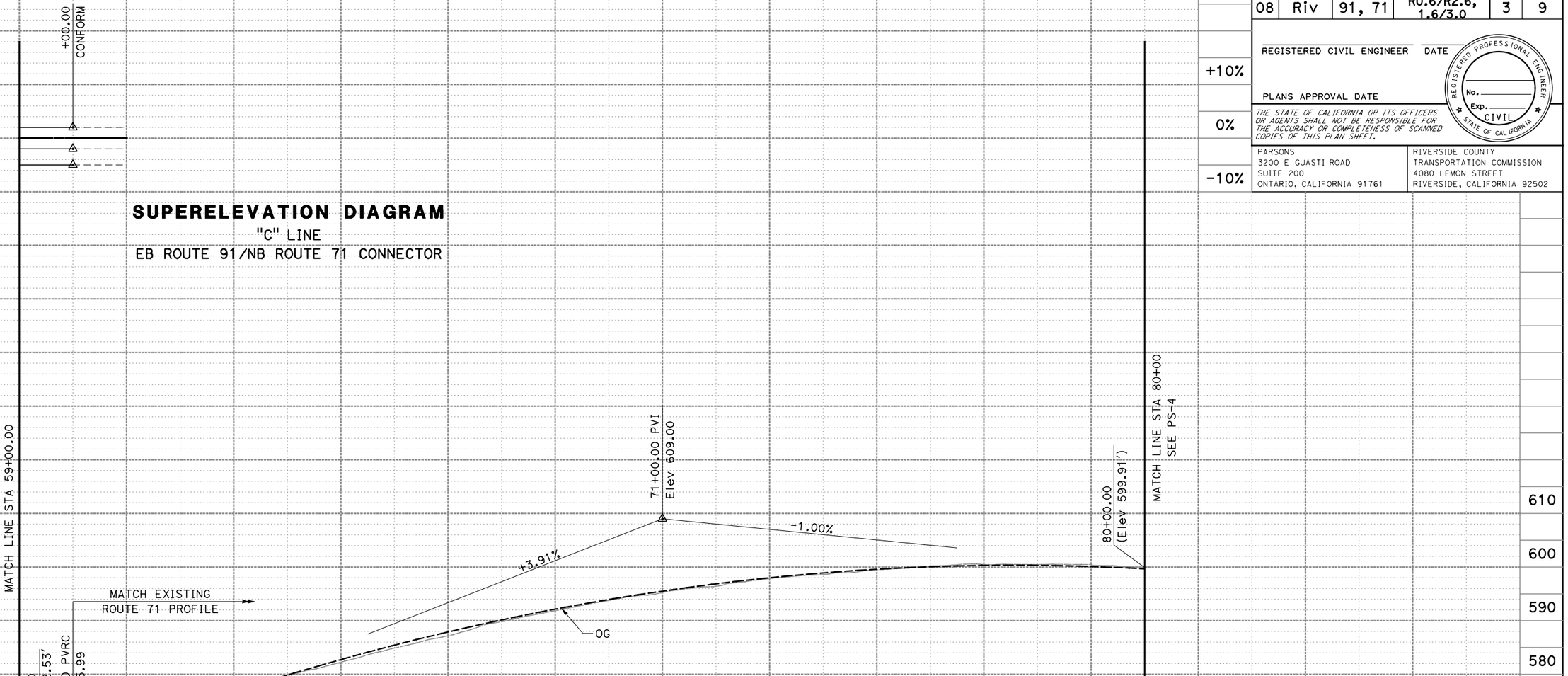
SUPERELEVATION DIAGRAM

"C" LINE

EB ROUTE 91/NB ROUTE 71 CONNECTOR



PROFILE

"C" LINE

EB ROUTE 91/NB ROUTE 71 CONNECTOR

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1"=50"
Vert 1"=10"

PS-3

STATION	59+00	60+00	61+00	62+00	63+00	64+00	65+00	66+00	67+00	68+00	69+00	70+00	71+00	72+00	73+00	74+00	75+00	76+00	77+00	78+00	79+00	80+00	TOTAL
CY Exc																							
CY Emb																							

LAST REVISION 00-00-00 | DATE PLOTTED => 12/11/2009 | TIME PLOTTED => 11:06:38 AM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972fb003.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	4	9

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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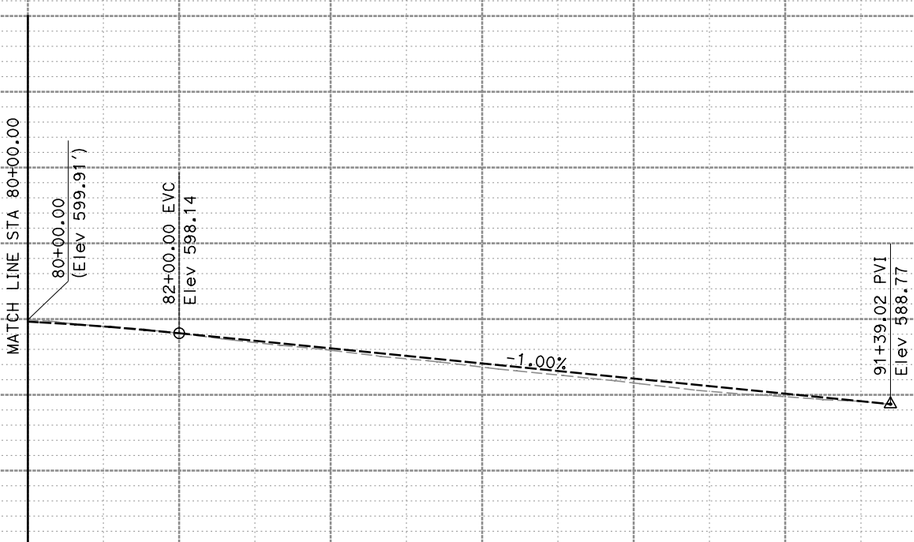

PROFILE

"C" LINE

EB ROUTE 91/NB ROUTE 71 CONNECTOR

STATION	80+00	81+00	82+00	83+00	84+00	85+00	86+00	87+00	88+00	89+00	90+00	91+00	92+00	TOTAL
CY Exc														
CY Emb														

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1"=50"
Vert 1"=10"

PS-4

LAST REVISION DATE PLOTTED => 12/11/2009
00-00-00 TIME PLOTTED => 11:06:14 AM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972fb004.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	5	9

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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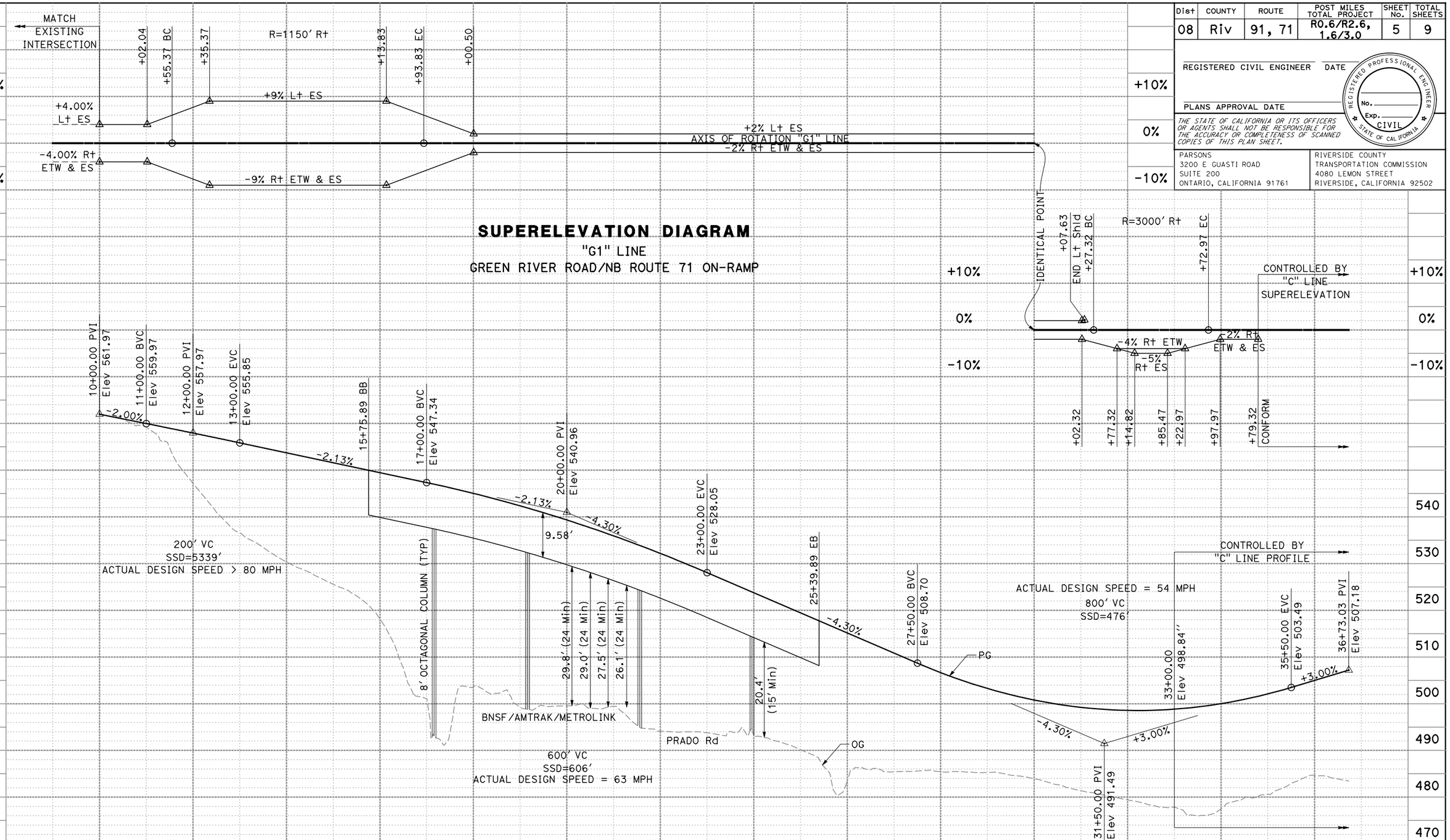
SUPERELEVATION DIAGRAM

"G1" LINE
GREEN RIVER ROAD/NB ROUTE 71 ON-RAMP



PROFILE

"G1" LINE
GREEN RIVER ROAD/NB ROUTE 71 ON-RAMP

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1"=50"
Vert 1"=10"

PS-5

STATION	10+00	11+00	12+00	13+00	14+00	15+00	16+00	17+00	18+00	19+00	20+00	21+00	22+00	23+00	24+00	25+00	26+00	27+00	28+00	29+00	30+00	31+00	32+00	33+00	34+00	35+00	36+00	37+00	TOTAL
CY Exc																													
CY Emb																													

LAST REVISION 00-00-00 | DATE PLOTTED => 12/11/2009 | TIME PLOTTED => 11:06:17 AM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972fb005.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	6	9

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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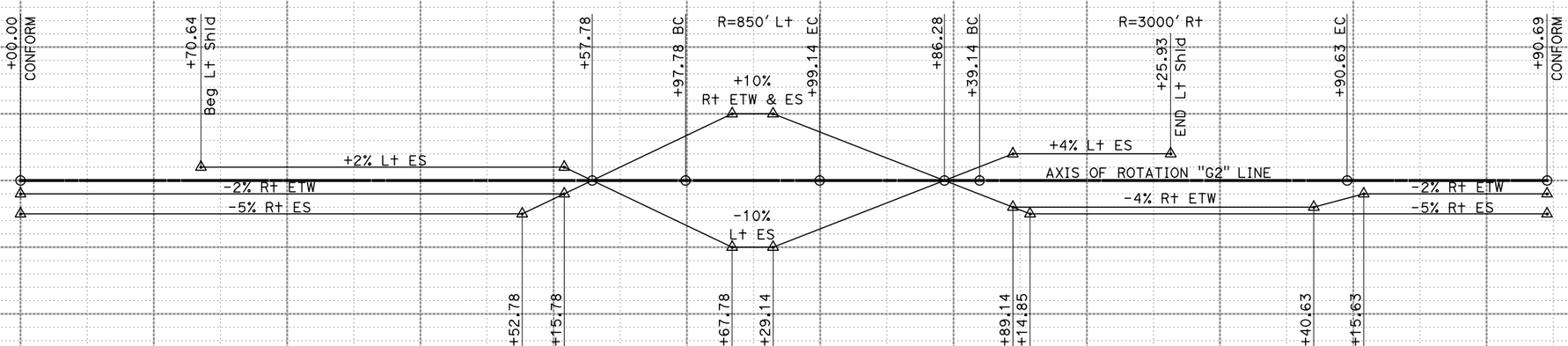
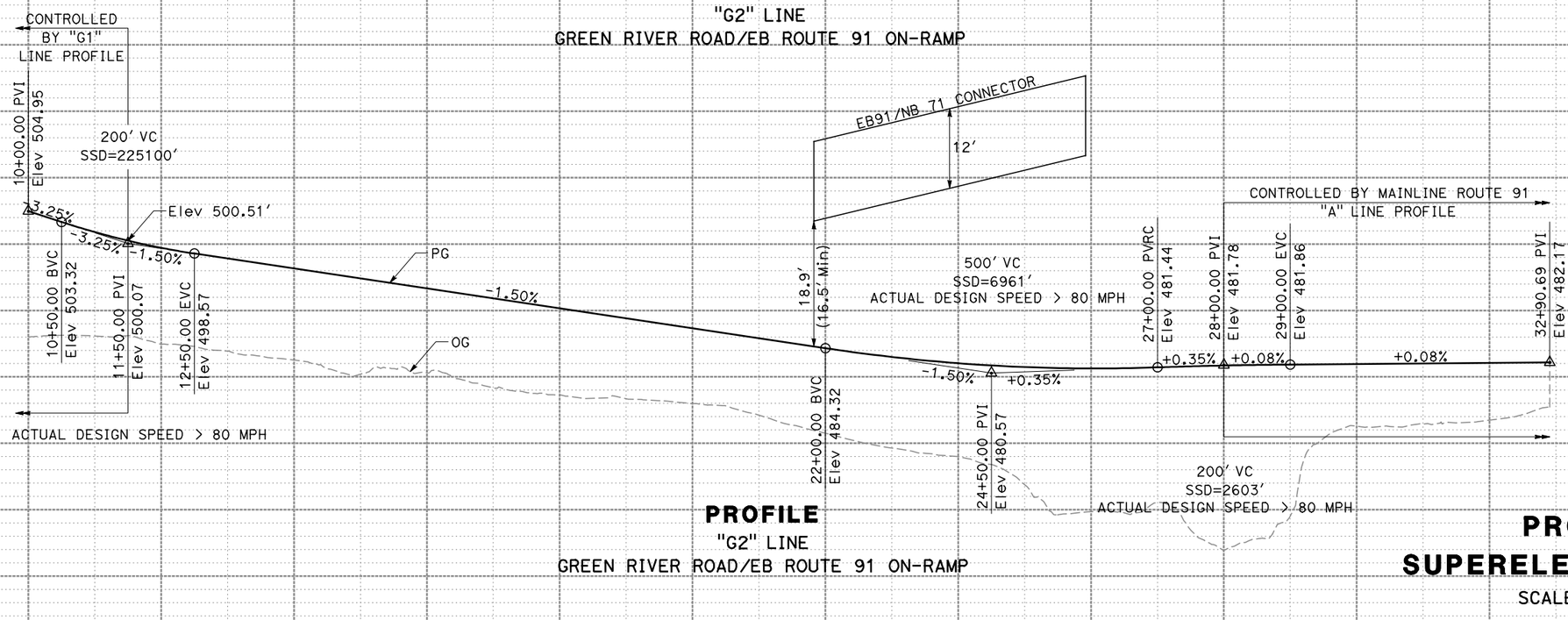
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



SUPERELEVATION DIAGRAM

"G2" LINE

GREEN RIVER ROAD/EB ROUTE 91 ON-RAMP



PROFILE

"G2" LINE

GREEN RIVER ROAD/EB ROUTE 91 ON-RAMP

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1"=50"
Vert 1"=10"

PS-6

STATION	10+00	11+00	12+00	13+00	14+00	15+00	16+00	17+00	18+00	19+00	20+00	21+00	22+00	23+00	24+00	25+00	26+00	27+00	28+00	29+00	30+00	31+00	32+00	33+00	TOTAL
CY Exc																									
CY Emb																									

LAST REVISION 00-00-00 | DATE PLOTTED => 12/11/2009 | TIME PLOTTED => 11:06:20 AM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972fb006.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	7	9

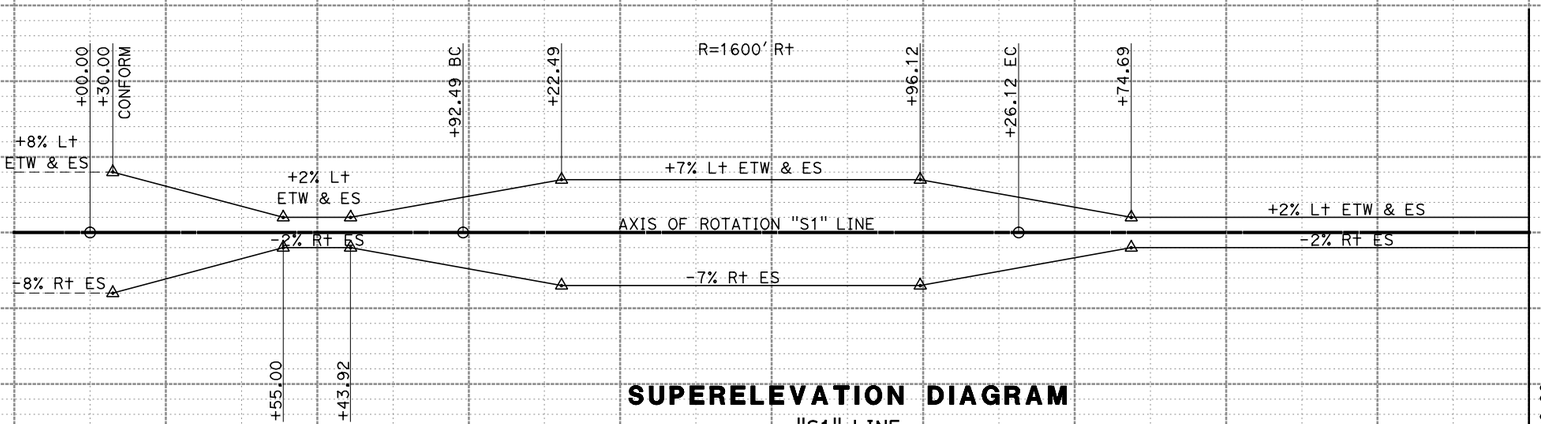
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

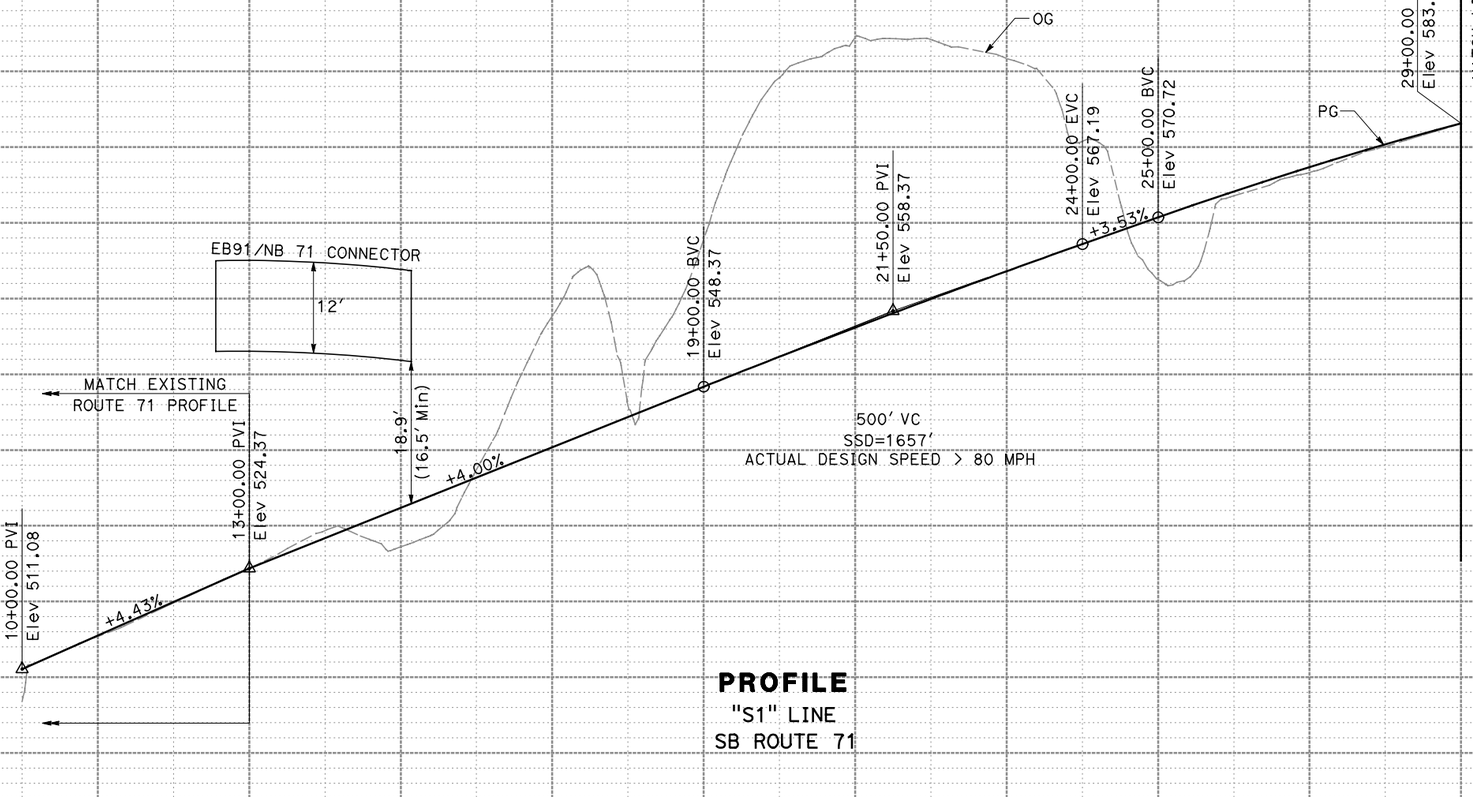
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

PARSONS
3200 E GUASTI ROAD
SUITE 200
ONTARIO, CALIFORNIA 91761

RIVERSIDE COUNTY
TRANSPORTATION COMMISSION
4080 LEMON STREET
RIVERSIDE, CALIFORNIA 92502



SUPERELEVATION DIAGRAM
"S1" LINE
SB ROUTE 71



PROFILE
"S1" LINE
SB ROUTE 71

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1"=50"
Vert 1"=10"

PS-7

+10% 0% -10%

590 580 570 560 550 540 530 520 510 500

STATION 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 TOTAL

CY Exc
Emb

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 12/11/2009 | TIME PLOTTED => 11:06:23 AM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972fb007.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	8	9

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

PARSONS
3200 E GUASTI ROAD
SUITE 200
ONTARIO, CALIFORNIA 91761

RIVERSIDE COUNTY
TRANSPORTATION COMMISSION
4080 LEMON STREET
RIVERSIDE, CALIFORNIA 92502

REVISED BY | DATE REVISED

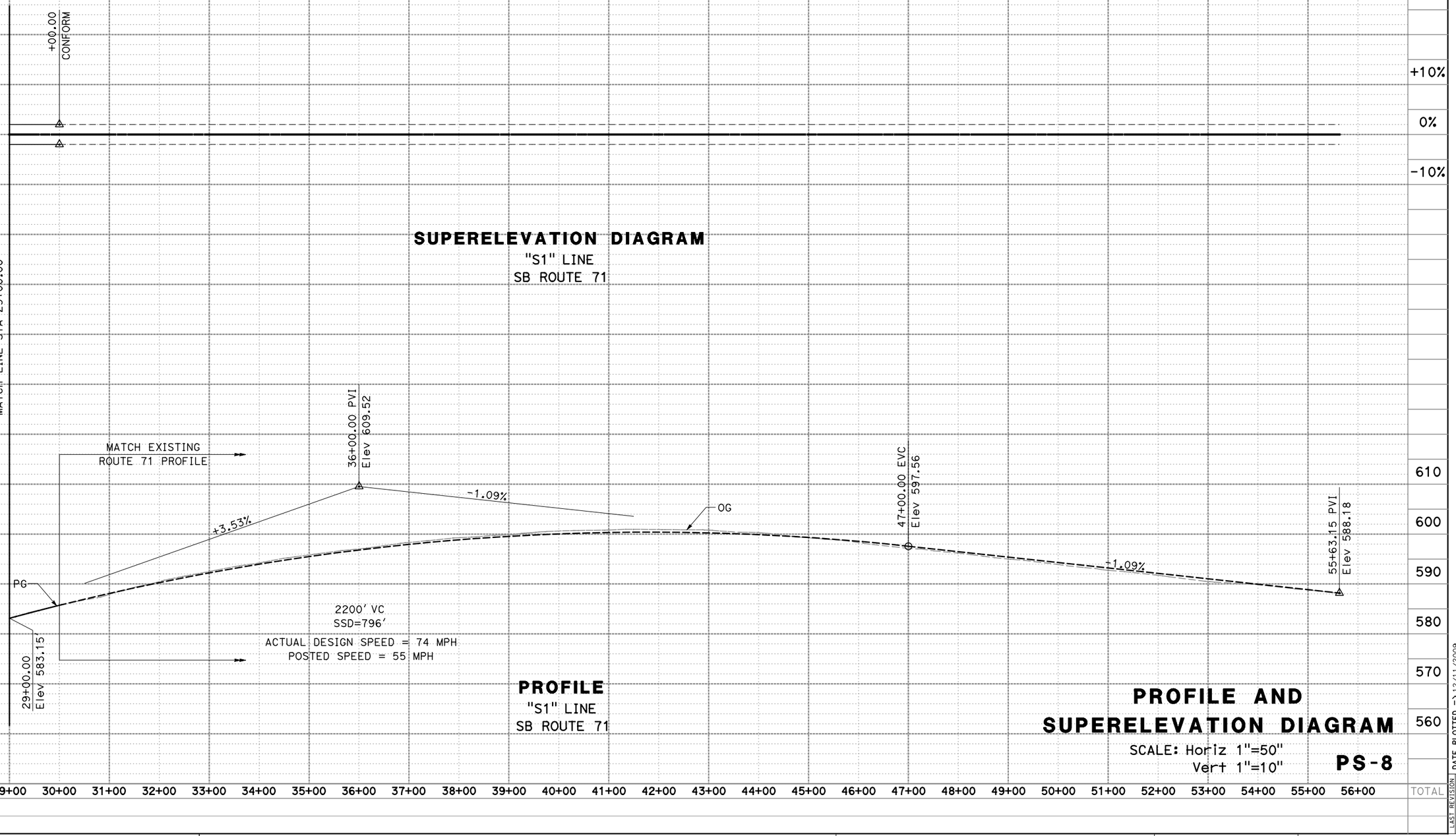
CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

SUPERELEVATION DIAGRAM

"S1" LINE
SB ROUTE 71



PROFILE

"S1" LINE
SB ROUTE 71

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1"=50"
Vert 1"=10"

PS-8

STATION	29+00	30+00	31+00	32+00	33+00	34+00	35+00	36+00	37+00	38+00	39+00	40+00	41+00	42+00	43+00	44+00	45+00	46+00	47+00	48+00	49+00	50+00	51+00	52+00	53+00	54+00	55+00	56+00	TOTAL
CY Exc																													
CY Emb																													

LAST REVISION DATE PLOTTED => 12/11/2009
00-00-00 TIME PLOTTED => 11:06:26 AM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972fb008.dgn

CU 00000

EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	9	9

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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

PARSONS
3200 E GUASTI ROAD
SUITE 200
ONTARIO, CALIFORNIA 91761

RIVERSIDE COUNTY
TRANSPORTATION COMMISSION
4080 LEMON STREET
RIVERSIDE, CALIFORNIA 92502

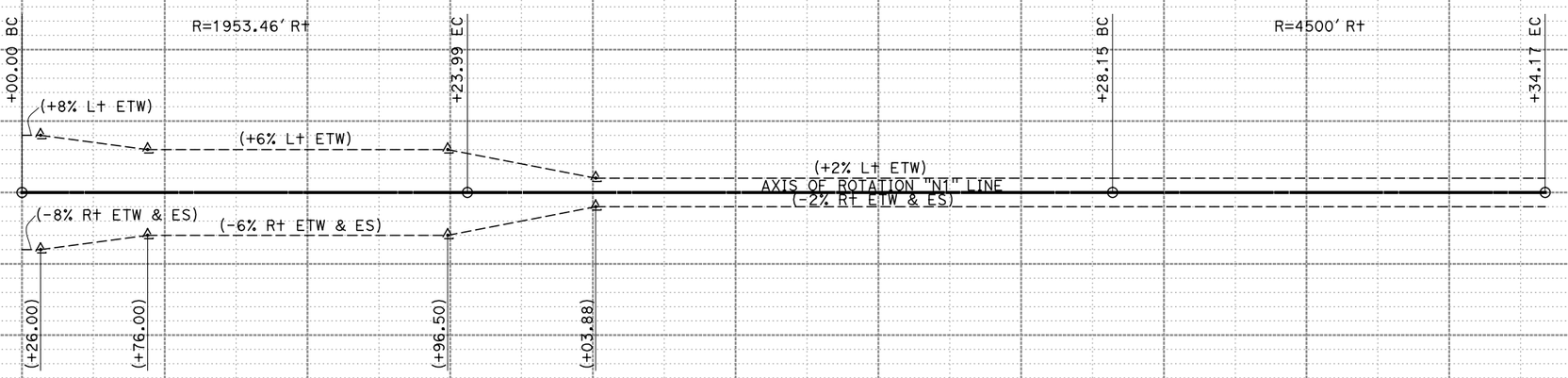
REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

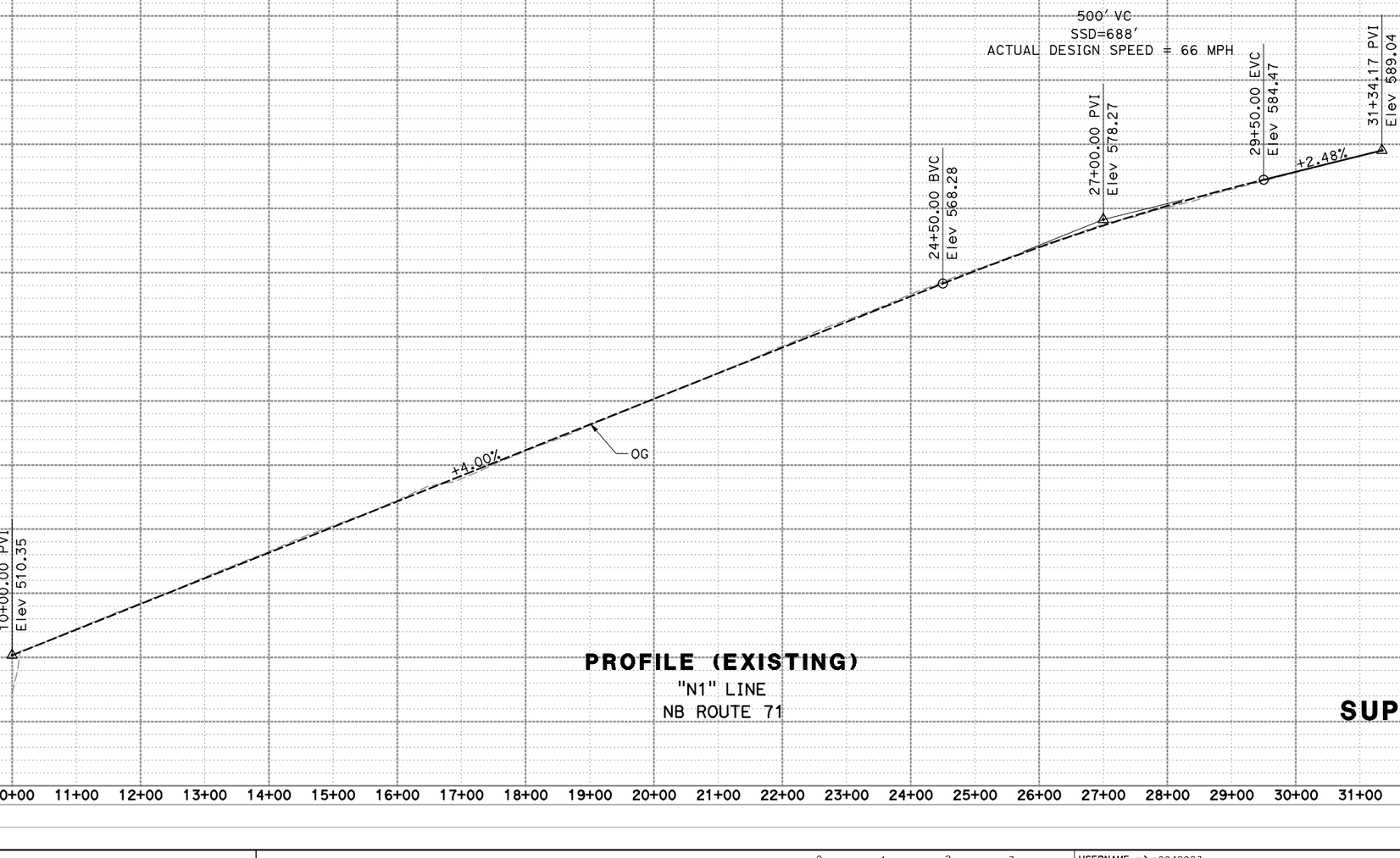
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans



SUPERELEVATION DIAGRAM (EXISTING)

"N1" LINE
NB ROUTE 71



PROFILE (EXISTING)

"N1" LINE
NB ROUTE 71

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1"=50"
Vert 1"=10"

PS-9

LAST REVISION 00-00-00

DATE PLOTTED => 12/11/2009
TIME PLOTTED => 11:06:29 AM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => p0042923
DGN FILE => 646972fb009.dgn

CU 00000

EA 0F5410

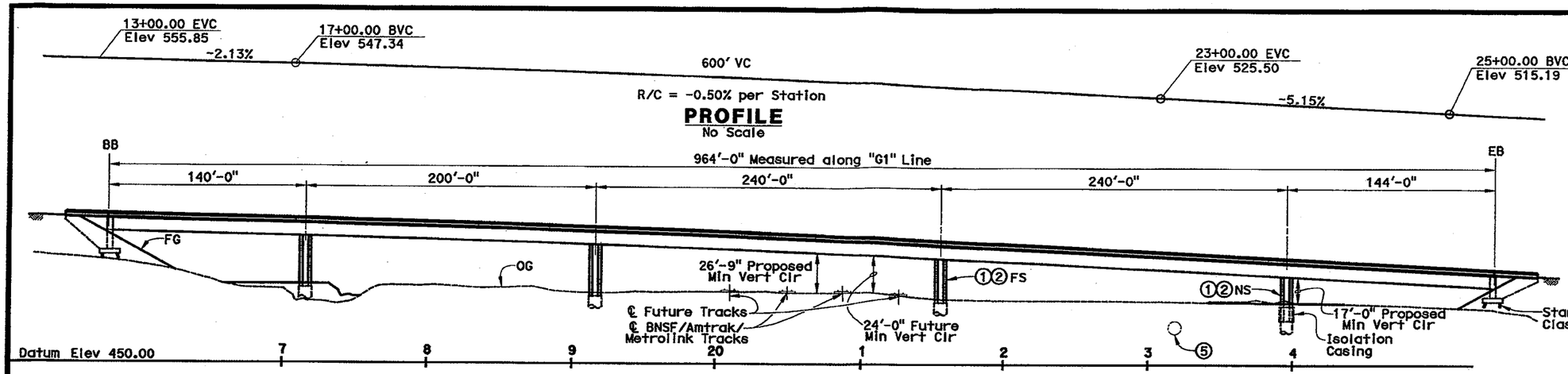
Attachment D

Advance Planning Study (Preferred Alternative)

PREPARED FOR THE STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
08	Riv	91/71	R0.6/R2.6 1.6/3.0

RCTC	4080 Lemon St 3rd Floor P.O. Box 12008 Riverside, CA 92501
PARSONS	2201 Dupont Drive Suite 200 Irvine, CA 92612



PROFILE
No Scale

ELEVATION
1" = 40'

CURVE DATA (1)

R = 1150.00'
Δ = 26°49'39"
L = 538.46'
T = 274.26'

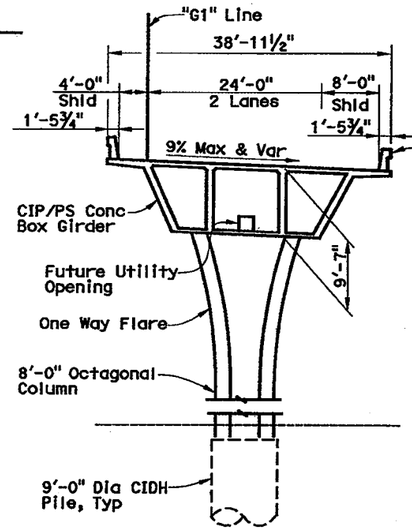
DATE OF ESTIMATE	3-27-09
BRIDGE REMOVAL	= N/A
STRUCTURE DEPTH	= 9'-7"
LENGTH	= 964'-0"
WIDTH	= 38'-11½"
AREA	= 37556 SF
COST/SF INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= $288
TOTAL COST	= $10,800,000

LEGEND

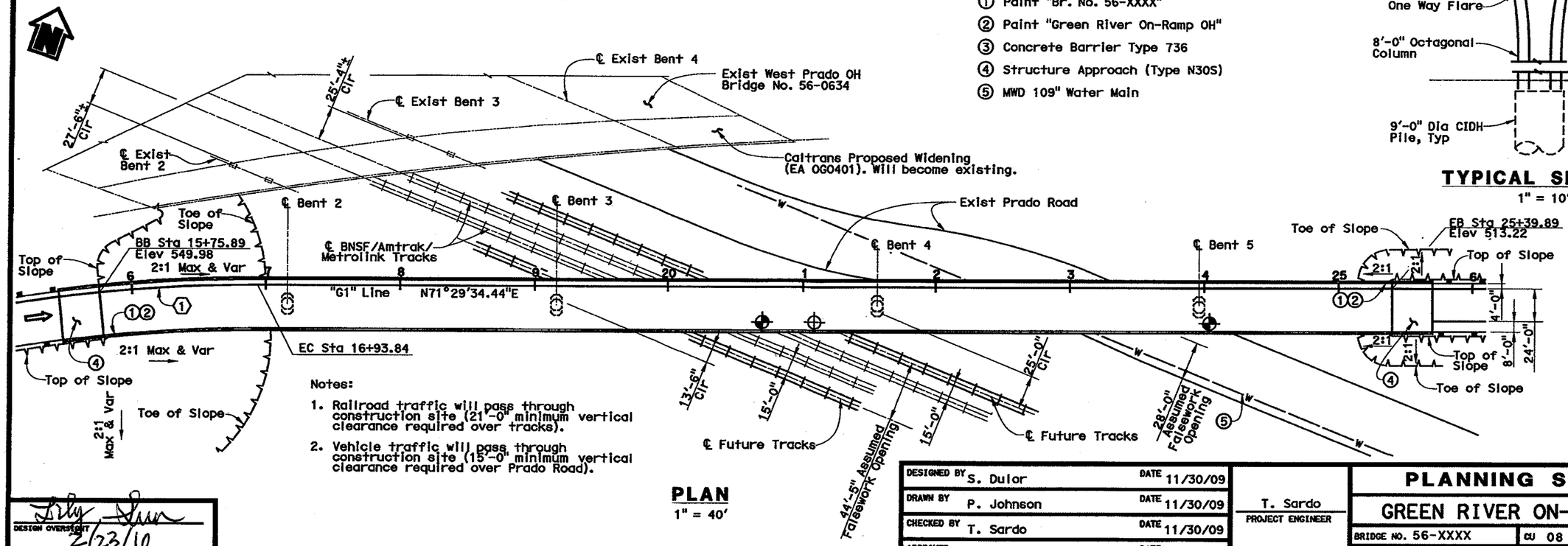
- Indicates Direction of Travel
- Indicates Proposed Point of Minimum Vertical Clearance
- Indicates Future Point of Minimum Vertical Clearance
- MBGR

NOTES

1. Paint "Br. No. 56-XXXX"
2. Paint "Green River On-Ramp OH"
3. Concrete Barrier Type 736
4. Structure Approach (Type N30S)
5. MWD 109" Water Main



TYPICAL SECTION
1" = 10'



Notes:

1. Railroad traffic will pass through construction site (21'-0" minimum vertical clearance required over tracks).
2. Vehicle traffic will pass through construction site (15'-0" minimum vertical clearance required over Prado Road).

PLAN
1" = 40'

DESIGN OVERSIGHT — SIGN OFF DATE 2/23/10

DESIGNED BY	S. Dulor	DATE	11/30/09
DRAWN BY	P. Johnson	DATE	11/30/09
CHECKED BY	T. Sardo	DATE	11/30/09
APPROVED	T. Sardo	DATE	11/30/09

T. Sardo
PROJECT ENGINEER

PLANNING STUDY
GREEN RIVER ON-RAMP OH

BRIDGE NO. 56-XXXX	CU 08
SCALE: AS NOTED	EA 0F5410

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 2/25/08)

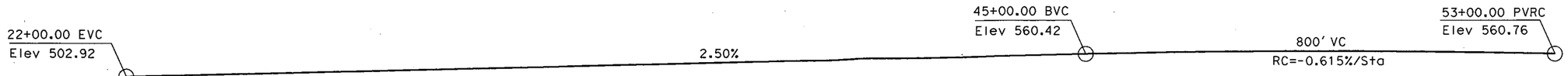
FILE => @REQUEST

USERNAME => @USER DATE PLOTTED => @DATE TIME PLOTTED => @TIME

PREPARED FOR THE STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

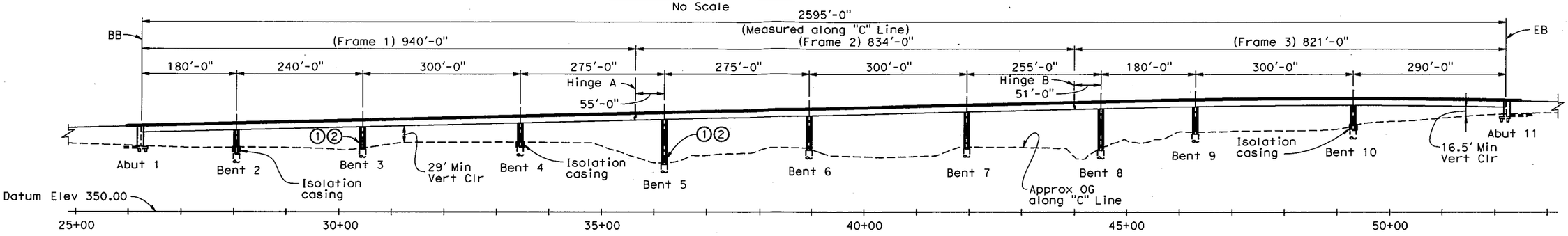
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
8	RIV	91/71	R0.6/R2.6 1.6/3.0

TY LIN INTERNATIONAL
5030 CAMINO DE LA SIESTA, SUITE 204
SAN DIEGO, CA 92108 PHONE (619)692-1920



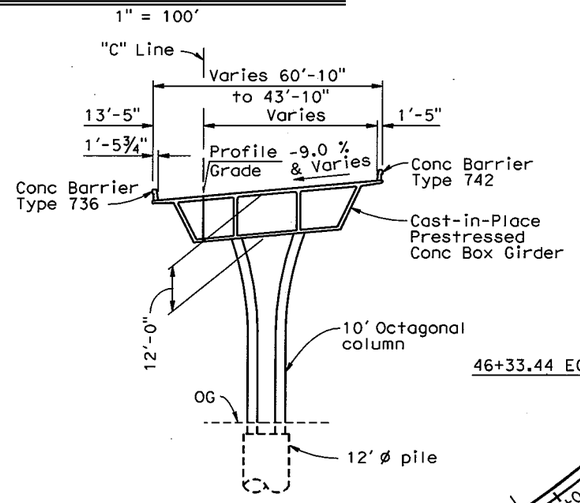
PROFILE GRADE

No Scale



DEVELOPED ELEVATION

1" = 100'



TYPICAL SECTION

1" = 20'

PLAN

1" = 100'

FALSEWORK LEGENDS:

Vehicular traffic will pass through construction site (15'-0" Min Vert clearance required under falsework).

1. Assumed traffic opening width = 90'
2. Assumed traffic opening width = 110'
3. Assumed traffic opening width = 24'
4. Structure Approach Type N(30)

◓ Indicates Minimum vertical clearance

NOTES:

1. Paint Bridge No. 56-XXX
2. Paint "E91/N71 Connector"

Date of Estimate	1-7-10
Structure Depth	= 12'-0"
Length	= 2595'-0"
Width	= Varies
Area	= 133,129 sq ft
Cost / sq ft including 10% Mobilization & 25% Contingency	= $ 324
Total Cost	= $ 43,113,000

? Lily Lim
DESIGN OVERSIGHT
? 2/23/10
SIGN OFF DATE

DESIGNED BY Roya Golchoobian	DATE 1-15-10	Gary Antonucci PROJECT ENGINEER	PLANNING STUDY
DRAWN BY Ivan Martin	DATE 1-15-10		E91/N71 CONNECTOR
CHECKED BY	DATE		BRIDGE NO. 56-XXXX / CU 08
APPROVED	DATE		SCALE: / EA OF5400

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 06-01-09)
Filename*01\projects\2-RIVERSIDE\720003\dgn\720003_e91-n71_ap1.dgnDate*1/15/2010 Time*4:08:46 PM

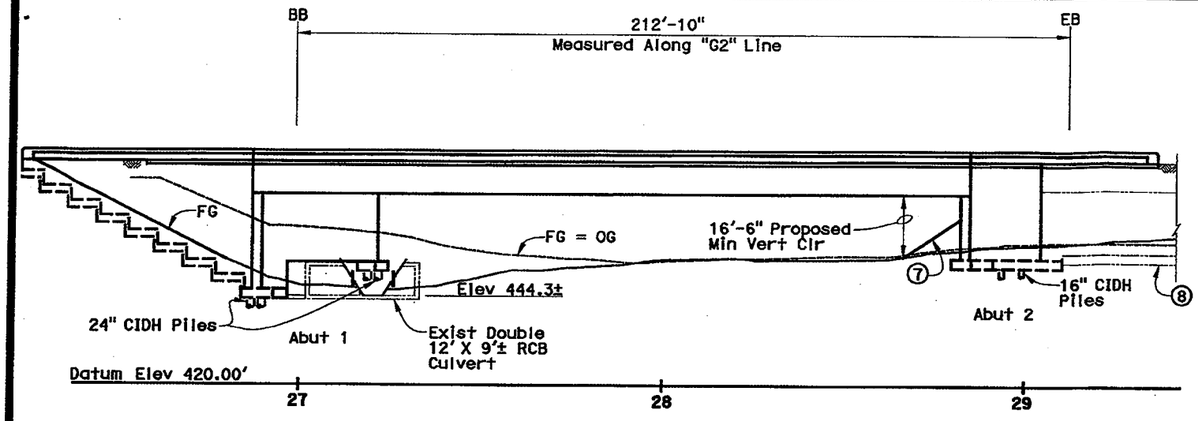
FILE => $REQUEST

USERNAME => $USER DATE PLOTTED => $DATE TIME PLOTTED => $TIME

PREPARED FOR THE STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

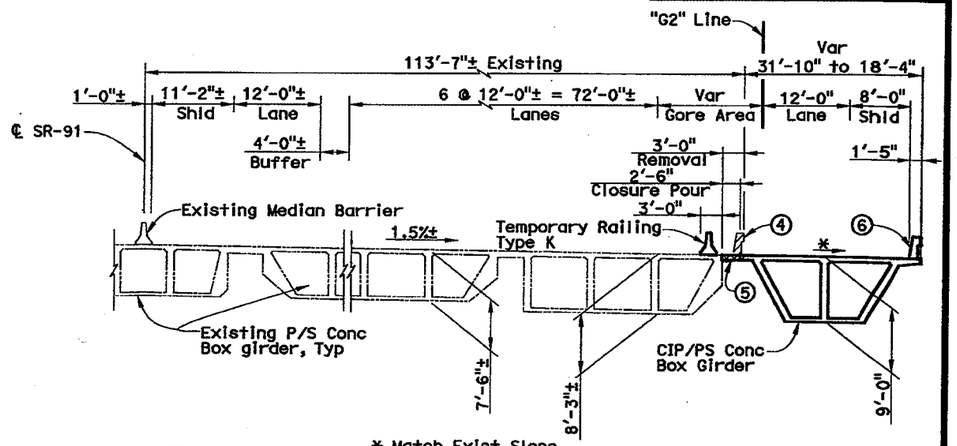
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
08	Riv	91/71	R0.6/R2.6 1.6/3.0

RCTC	4080 Lemon St 3rd Floor P.O. Box 12008 Riverside, CA 92501
PARSONS	2201 Dupont Drive Suite 200 Irvine, CA 92612



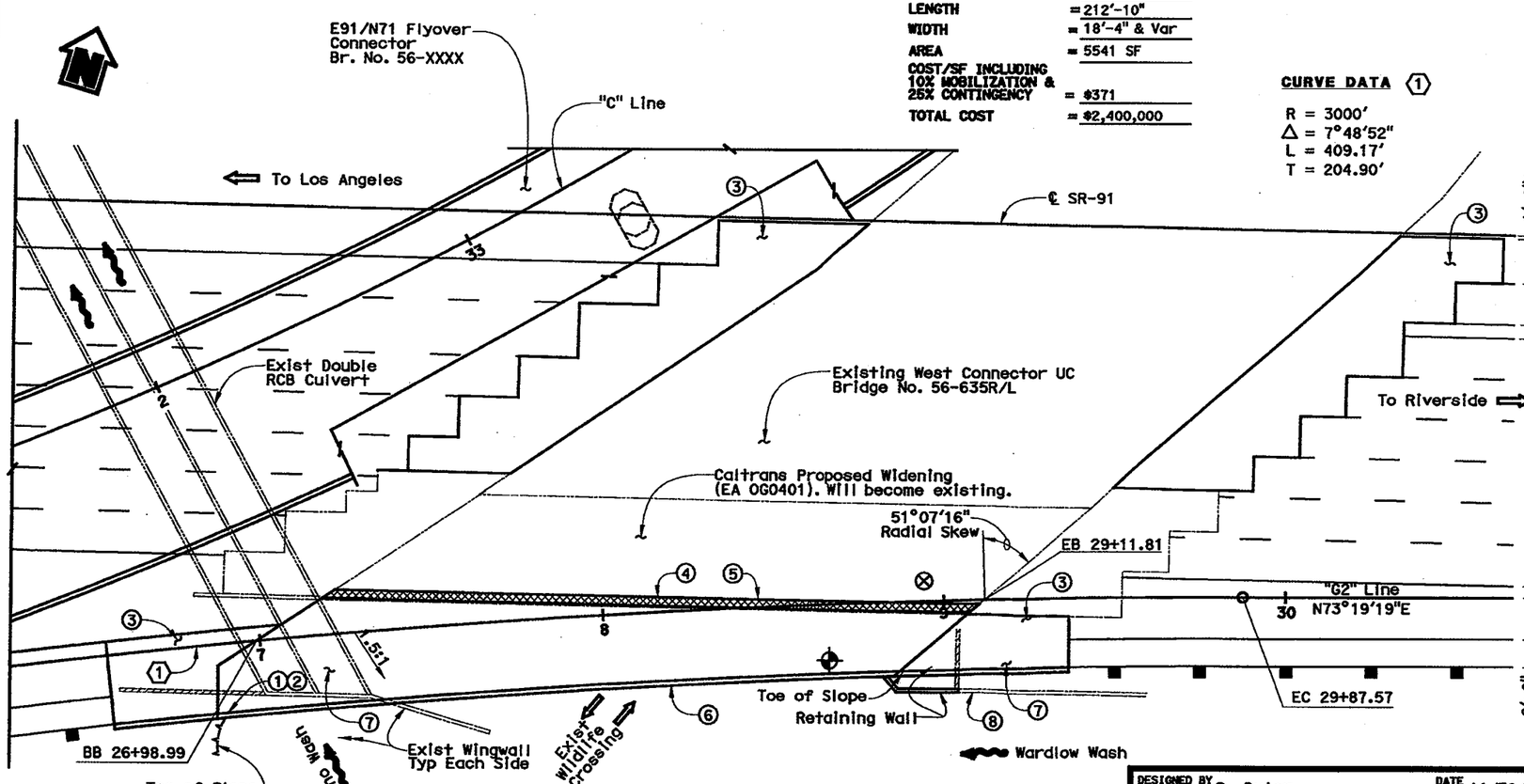
ELEVATION
1" = 20'

DATE OF ESTIMATE	11-30-09
BRIDGE REMOVAL	= $15,000
BRIDGE MAINTENANCE	= $236,000
STRUCTURE DEPTH	= 9'-0"
LENGTH	= 212'-10"
WIDTH	= 18'-4" & Var
AREA	= 5541 SF
COST/SF INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= $371
TOTAL COST	= $2,400,000



* Match Exist Slope

TYPICAL SECTION
1" = 10'



Note:
No traffic will pass through construction site

PLAN
1" = 20'

CURVE DATA (1)
R = 3000'
Δ = 7°48'52"
L = 409.17'
T = 204.90'

NOTES:
1. Paint "Br. No. 56-0635R"
2. Paint "E91-N71 CONNECTOR" and year completed
3. Structure Approach (Type N30S)
4. Remove exist Type 732 concrete barrier railings and deck overhang.
5. Closure pour
6. Concrete Barrier Type 732
7. Slope paving
8. Caltrans proposed retaining wall No. 9450 (EA 0G0401). Will become existing.

LEGEND
- Indicates Direction of Travel
- Indicates Direction of Flow
- Indicates point of proposed Min Vertical Clr
- Indicates point of exist Min Vertical Clr (17'-3")
- Bridge Removal
- Closure Pour
- MBGR

DESIGN OVERSIGHT
SIGN OFF DATE 2/23/10

DESIGNED BY	S. Dulor	DATE 11/30/09
DRAWN BY	P. Johnson	DATE 11/30/09
CHECKED BY	T. Sardo	DATE 11/30/09
APPROVED	T. Sardo	DATE 11/30/09

T. Sardo
PROJECT ENGINEER

PLANNING STUDY
E91-N71 CONNECTOR UC (WIDEN)

BRIDGE NO. 56-0635R	CU 08
SCALE: AS NOTED	EA 0F5410

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 2/25/08)

FILE => $REQUEST

USERNAME => $USER DATE PLOTTED => $DATE TIME PLOTTED => $TIME

Attachment E

Preliminary Cost Estimate (Preferred Alternative)

PRELIMINARY COST ESTIMATE

DIST-CO-RTE	08-RIV-91-71
Type of Estimate	PR/ED
Program Code:	20.20.400.000
KP(PM)	R0.6/R2.6, 1.6/3.0
EA	0F5410
Project No.	

Project Description: **SR-91/SR-71 Interchange Improvement**

Limits: **East of Green River Road interchange to SR-71**

Proposed Improvement (Scope): **Replacing the existing eastbound SR-91 to northbound SR-71 loop ramp connector with a direct fly-over connector, reconfigure Green River eastbound on-ramps & improve southbound SR-71 to eastbound SR-91 connector from one lane to three lane to provide storage before the ramp meter**

Alternative: **#1**

TOTAL ROADWAY ITEMS	$	36,980,000
TOTAL STRUCTURE ITEMS	$	56,360,000
SUBTOTAL CONSTRUCTION COSTS	$	93,340,000
RIGHT OF WAY (Current Value)	$	2,745,050
TOTAL PROJECT CAPITAL OUTLAY COSTS	$	96,085,050
DESIGN	$	7,210,000
CONSTRUCTION MANAGEMENT	$	9,610,000
TOTAL PROJECT COSTS	$	112,905,050
USE	$	**113,000,000**

Note. The capital cost provided in this document are not for programming purposes.

Prepared by: Signature _____ 11/15/2010 Date

Checked by: Signature _____ (909) 218-3587 Phone No. 11/15/2010 Date

DIST-CO-RTE **08-RIV-91-71**
KP(PM) **R0.6/R2.6, 1.6/3.0**
EA **0F5410**

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Roadway Excavation	421,581	CY	$10.00	$4,215,814	
Clearing & Grubbing	17	Acre	$1,500	$25,500	
Develop Water Supply	1	LS	$30,000	$30,000	
				Subtotal Earthwork	$4,271,314
Section 2 Structural Section*					
Jointed Plain Concrete Pavement	8,909	CY	$145.00	$1,291,805	
Lean Concrete Base	4,455	CY	$120.00	$534,600	
Hot Mix Asphalt	3,936	Ton	$80.00	$314,880	
Rubberized Hot Mix Asphalt	2,624	Ton	$90.00	$236,160	
Hot Mix Asphalt Bond Breaker	1,800	Ton	$110.00	$198,000	
Aggregate Base (Class 2)	7,468	CY	$40.00	$298,720	
Aggregate Subbase (Class 2)	6,236	CY	$30.00	$187,080	
Remove Concrete Pavement	4,200	CY	$60.00	$252,000	
				Subtotal Structural Items	$3,313,245
Section 3 Drainage					
Storm Drains	1	LS		$1,800,000	
				Subtotal Drainage	$1,800,000

DIST-CO-RTE 08-RIV-91-71
KP(PM) R0.6/R2.6, 1.6/3.0
EA 0F5410

Section 4 Specialty Items	Quantity	Unit	Unit Price	Unit Cost
Concrete Barrier	5545	LF	$50.00	$277,250
Structure Concrete (Retaining Wall)	67455	SF	$60.00	$4,047,300
Rock Blanket	74600	SF	$12.00	$895,200
Soundwalls (includes Aesthetic)	59120	SF	$20.00	$1,182,400
HMA Dike	5,837	LF	$10.00	$58,370
Hazardous Waste Mitigation	1	LS		$50,000
Aesthetic Treatment (Retaining Wall)	1	LS		$320,000
Environmental Mitigation	1	LS		$1,000,000
Highway Planting	19	Acre	$50,000	$950,000
Erosion Control	1	LS		$520,000
Temporary Fence (Type ESA)	2,800	LF	$5.00	$14,000
Water Pollution Control	1	LS		$1,960,000

Subtotal Specialty Items $11,274,520

Section 5 Traffic Items

Highway Lighting	1	LS	$500,000	$500,000
Signing & Striping	1	LS	$1,000,000	$1,000,000
Traffic Control Systems	1	LS	$400,000	$400,000
Traffic Management Plan	1	LS	$1,127,200	$1,127,200
Overhead Sign Structures	3	EA	$800,000	$2,400,000

Subtotal Traffic Items $5,427,200

SUBTOTAL SECTIONS 1-5 $26,086,279

DIST-CO-RTE 08-RIV-91-71
KP(PM) R0.6/R2.6, 1.6/3.0
EA 0F5410

Section 6 Minor Items				Unit Cost	Section Cost
Subtotal Sections 1-5	$26,086,279	X	5.00% (5% - 10%)	$1,304,314	
			TOTAL MINOR ITEMS		$1,304,314
Section 7 Roadway Mobilization					
Subtotal Sections 1-6	$27,390,593				
Sum	$27,390,593	X	10.00% (5% - 10%)	$2,739,059	
			TOTAL ROADWAY MOBILIZATION		$2,739,059
Section 8 Roadway Additions					
Supplemental					
Subtotal Sections 1-6	$27,390,593				
Sum	$27,390,593	X	5.00% (5% TO 10%)	$1,369,530	
Contingencies					
Subtotal Sections 1-6	$27,390,593				
Sum	$27,390,593	X	20.00% ( )*	$5,478,119	
			TOTAL ROADWAY ADDITIONS		$6,847,648
			TOTAL ROADWAY ITEMS (Total of sections 1-8)		$36,977,300
			USE		$36,980,000

Estimate Prepared By Sean Pong (Print Name) Phone # 218-3566 Date 11/10/2010

Estimate Checked By Sam Saghafi (Print Name) Phone # 218-3587 Date 11/20/2010

DIST-CO-RTE 08-RIV-91-71
KP(PM) R0.6/R2.6, 1.6/3.0
EA 0F5410

II. STRUCTURES ITEMS

	STRUCTURE No. 1	No. 2	No. 3	No. 4
Bridge Name	EB91/ NB71 Connector	Fresno Canyon Widening	Green River Road RR OC	
Structure Type	BOX GIRDER, CIP/PS	BOX GIRDER, CIP/PS	BOX GIRDER, CIP/PS	
Width (out to out) - (FT)	43 to 61	17 to 33	40	
Span Lengths - (FT)	2,610.00	195.00	964.00	
Total Area - (SF)	133,130	6,469	37,556	
Footing Type (Pile/Spread)				
Cost Per SF (includes 10% mobilization and 25% contingency)	$324	$371	$288	
Total Cost for Structure	$43,134,120	$2,399,999	$10,816,128	
Bridge Removal				
Bridge Maintenance				

SUBTOTAL STRUCTURES ITEMS $56,350,247
(Includes Aesthetic Treatment)

Railroad Related Costs

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS $56,350,247

USE $56,360,000

COMMENTS:

Estimate Prepared By Sam Saghafi (Print Name) 218-3587 (Phone #) November 15, 2010 (Date)

(If appropriate, attach additional pages and backup)

DIST-CO-RTE 08-RIV-91-71
KP(PM) R0.6/R2.6, 1.6/3.0
EA 0F5410

III. RIGHT OF WAY

	Current Values (Future Use)	Escalation Rates	Escalated Values*
A. Acquisition, including excess lands, damages to remainder(s), and Goodwill	$1,030,000	10.00%	$103,000
B. Utility Relocation (State share)	$1,442,500	10.00%	$144,250
C. Clearance/Demolition			$0
D. RAP			$0
E. Title and Escrow Fees	$23,000	10.00%	$2,300
F. CONSTRUCTION CONTRACT WORK			$0
TOTAL RIGHT OF WAY (CURRENT VALUES)**	$2,495,500	**TOT. ESC. R/W**	$2,745,050
Use	$2,745,050		

*Escalated to assumed year of advertising of

**Current total value for use on sheet 1 of 6

Estimate Prepared By Sam Saghafi 218-3587 November 15, 2010
(Print Name) Phone # Date

Attachment F

Right-of-Way Data Sheet (Preferred Alternative)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY DATA SHEET FOR LOCAL PUBLIC AGENCIES

(Form #)

EXHIBIT
17-EX-21 (NEW 12/2007)

To: Stephen M. Hatt
Project Delivery Manager
Right of Way
District 8

Date: February 10, 2010
Co. RIV RTE. 91-PM R0.6/R2.6,71-PM 1.60 -3.0
Expense Authorization EA 08-0F5410

Attention: Michael S. Romo, Senior
Local Programs
Right of Way
District 8

Subject: **RIGHT OF WAY DATA SHEET – LOCAL PUBLIC AGENCIES**

Project Description: SR 91/71 Interchange Improvement Project

Right of way necessary for the subject project will be the responsibility of: RCTC

The information in this data sheet was developed by: Parsons Transportation Group

I. Right of way Engineering

Will Right or Way Engineering be required for this project?

- No _____
- Yes ✓ (Submit a copy of the *Right of Way Engineering Surveys and Mapping Services checklist for Locally Funded Projects*. This checklist includes, but is not limited to, the following items.)

•Hard copy (base map)	To be completed during PS&E
•Appraisal map	To be completed during PS&E
•Acquisition Documents	To be completed during PS&E
•Property Transfer Documents	To be completed during PS&E
•R/W Record Map	To be completed during PS&E
•Record of Survey	To be completed during PS&E

II. Engineering Surveys

1. Is any surveying or photogrammetric mapping required?
   No _____ Yes ✓ (Complete the following.)

2. Datum Requirements

   Yes ✓ Project will adhere to the following criteria:

   - Horizontal – datum policy is NAD 83, CA-HPGN, EPOCH 1991.35 and English system of units and measures.
   - Vertical – datum policy is NAVD 88.
   - Units – metric is not required.

   No Provide an explanation on additional page.

3. Will land survey monument perpetuation be scoped into the project, if required?
   Yes ✓
   No _____ Provide explanation on additional page

III. **Parcel Information (Land and Improvements)**

Are there any property rights required within the proposed project limits?

No _____ Yes ✓ (Complete the following.)

	Part Take	Full Take	Estimate $
A. Number of Vacant Land Parcels	2		$77,000
B. Number of Single Family Res. Units			
C. Number of Multifamily Res. Units			
D. Number of Commercial/Industrial Parcels	1		$4,000
E. Number of Farm/Agricultural Parcels			
F. Permanent and/or Temporary Easements	11		$949,000
G. Other Parcels (define in "Remarks" section			
Totals	14		$1,030,000

Provide a general description of the right of way and excel lands required (zoning, use, improvements, critical, or sensitive parcels, etc.).

IV. **Dedications**

Are there any property rights which have been acquired, or anticipate will be acquired, through the "dedication" process for the Project?

No ✓ Yes _____ (Complete the following.)

Number of dedicated parcels _____

Have the dedication parcel(s) been accepted by the municipality involved?

V. **Excess Lands / Relinquishments**

Are there Caltrans property rights which may become excess lands or potential relinquishment areas?

No ✓ Yes _____ (Provide an explanation on additional page.)

RIGHT OF WAY DATA SHEET FOR LOCAL PUBLIC AGENCIES (Cont.)

(Form #)

VI **Relocation Information**

Are relocation displacements anticipated?

No ✓ Yes _____ (Complete the following.)

A. Number of Single Family Residential Units _____
Estimated RAP Payments $_____

B. Number of Multifamily Residential Units _____
Estimated RAP Payments $_____

C. Number of Business/Nonprofit _____
Estimated RAP Payments $_____

D. Number of Farms _____
Estimated RAP Payments $_____

E. Other (define in the "Remarks" section) _____
Estimated RAP Payments $_____

Totals _____ $_____

VII. **Utility Relocation Information**

Do you anticipate any utility facilities or utility rights of way to be affected?

No _____ Yes ✓ (Complete the following.)

		Estimated Relocation Expense		
Facility	Owner	State Obligation	Local Obligation	Utility Owner Obligation
A. OH Electrical	SCE	$	$ 800,000	$ 50,000
B. 30" HP Gas	So. Cal Gas	$	$ 132,500	$ 132,500
C. 16" Water	City of Corona	$	$ 185,000	$
D. UG Fiber Optic Cable	Sprint	$	$ 250,000	$
E. OH Cable TV	Time Warner	$	$ 50,000	$
F.		$	$	$
Totals		$ *	$ 1,442,500	$ 182,500
Number of facilities			5	2

* This amount reflects the estimated total financial obligation by the State.

Any additional information concerning utility involvement on this project? See Attached Utility Information Sheet.

RIGHT OF WAY DATA SHEET FOR LOCAL PUBLIC AGENCIES (Cont.)

(Form #)

VIII. **Rail Information**

Are railroad facilities or railroad rights of way affected?

No _____ Yes ✓ (Complete the following.)

Describe railroad facilities or railroad rights of way affected

Owner's Name	Transverse Crossing	Longitudinal Encroachment
A. Rte 91, BNSF Railway Co, Green River ON-Ramp OH, BR 56-XXXX, PM R1 .142/R1.242	✓	
B.		

Discuss types of agreements and rights from the railroads. Are grade crossings that require services contracts, or grade separations that require construction and maintenance agreements involved? **Construction and maintenance agreement will be required for the proposed grade separated crossing of existing BNSF facilities parallel with Prado Road, south of SR-91. A formal CPUC application 26D for a new structure over BNSF Railway will also be required.**

IX. **Clearance Information**

Are there improvements that require clearance?

No ✓ Yes _____ (Complete the following.)

A. Number of Structures to be Demolished 0
Estimated Cost of Demolition $ 0

X. **Hazardous Materials/Waste**

Are there any site(s) and/or improvement(s) in the Project Limits that are known to contain *hazardous materials*? None ✓ Yes ___ (Explain the "Remarks" section.)

Are there any site(s) and/or improvement(s) in the Project Limits that are suspected to contain *hazardous waste*? None ___ Yes ✓ (Explain the "Remarks section.)

XI. **Project Scheduling**

	Proposed lead time		Completion date
Preliminary Engineering Surveys	6	(months)	December 2010 (est.)
* R/W Engineering Submittals	6	(months)	July 2011 (est.)
* R/W Appraisals/Acquisition	18-24	(months)	October 2012 (est.)
Proposed Environmental Clearance			July 2010 (est.)
Proposed R/W Certification			October 2012 (est.)

Date: February 16, 2010

08-Riv-91-PM R0.6 /2.6, 08-Riv-71-1.6/3.0
SR 91/SR 71 Interchange Improvements
EA: 08-0F5410

This utility estimate was prepared using "project specific" data and unit values. This information is not to be utilized for the updating or preparation of this, or any other Right of Way Cost Report or Utility Information Sheet.

UTILITY INFORMATION SHEET

1. Name of utility companies involved in project:

   A. Southern California Edison (SCE)
   B. Southern California Gas, Co.
   C. City of Corona Water
   F. Sprint
   E. Time Warner Cable

2. Types of facilities and agreements required:

   A. Overhead Electric Line (SCE) – conductor relocation
   B. Overhead Electric (SCE) – est. 5 poles relocation.
   C. Southern California Gas – est. 250 LF of 30" HP gas line and valve manifold relocation.
   D. Water Line (City of Corona) – est. 400 LF of 16" water line relocation.
   E. Underground Fiber Optic (Sprint) – est. 300 LF of fiber optic cable in BNSF right of way.
   F. Overhead Television Cable (Time Warner) – est. 250 LF of overhead cable on SCE poles.

3. Is any facility a longitudinal encroachment in existing or proposed access controlled right of way? Explain.

   See above.

   Disposition of longitudinal encroachment(s):
   _X_ Relocation Required
   _____ Exception to Policy Needed
   _____ Other, Explain

4. Additional information concerning utility involvements on this project, i.e., long lead time materials, growing or species seasons, customer service seasons (no transmission tower relocations in summer).

   None

5. PMCS Input Information

   Total estimated cost of State's / (RCTC) obligation for utility relocation on this project:
   $ **1,442,500**

Note: Total estimated cost to include any Department obligation to relocate longitudinal encroachments in access controlled right of way and acquire any necessary utility easements.

Utility Involvement

U4-1	2	U5-7	2
-2	0	-8	0
-3	0	-9	7
-4	5		

Prepared By: Tim Kirkley — Date: **February 16, 2010**
Right of Way Utility Estimator

RIGHT OF WAY DATA SHEET FOR LOCAL PUBLIC AGENCIES (Cont.)

(Form #)

XXI **Proposed Funding**

	Local	State	Federal	Other
Acquisition	100%			
Utilities	89%			11%
Relocation Assistance Program	-			
R/W Support	80%	20% (oversight)		
Cost (Eng. Appraisals, etc.)	80%	20% (oversight)		

XXXI **Remarks**

Hazardous Materials—Based on preliminary information, it is suspected that aerially deposited lead is present within the project limits.

Project Sponsor Consultant
Prepared by:

Parsons Transportation Group

Sam Saghafi

2/16/10
Date

Project Sponsor
Reviewed and Approved by:

Riverside County Transportation Commission

Min Saysay, Right of Way Manager

2/16/10
Date

Caltrans
Reviewed and approved based on information provided to date:

8-3-10
Date

Michael S. Romo, Senior
Local Programs
Right of Way
District 8

Attachment G

Transportation Management Plan

TRANSPORTATION MANAGEMENT PLAN (TMP) DATA SHEET # 4 for PID, PSR, PR or PSE including DTM requirements for PSE and Construction Phase - This TMP is valid for **two years** from date of preparation, unless the project or impact changes.

T:\DTM.TMP\project docs\SBD-10\0H93\090211\0H9301 Data Sheet # 4.xls (includes signature/background sheet, estimate, table, DTM requirements, and Revisions & Notes)

TEMPLATE: 0 TMP Data Sheet revised 090109.xls. CT & CONSULTANTS, PLEASE REQUEST THE LATEST TEMPLATE SINCE IT WILL HAVE THE CURRENT RATES, etc. CAUTION - ck for formulas in cells - amounts flow from Tab 3 to 2 to 1.

EA **08-0F5410** **DATE** **12/10/2009**

08-RIV-91-PM R0.6/R2.6 & 08-RIV-71-PM 1.6/3.0
Location: State Route 91 & State Route 71 Freeway to Freeway Interchange
Work: Interchange Improvement & New Connector

Date of TMP/Review Request memo:
Documents available: Layouts, Stage Concept,Night Closure, Estimates, LRC

TMP request letter, Title sheet, Plans.

SAMPLE TMP DATA SHEET - Instructions see Tab 6

Construction period per PE

EST START DATE	Jan-2013
EST END DATE	Dec-2015

Construction period per WPS

EST START DATE	Jan-2013
EST END DATE	Dec-2015

BACKGROUND INFORMATION:

DURATION: 500 WORKING DAYS
PROJECT COST: $98,805,000
TMP ESTIMATE: $1,127,200 or 1.14% OF THE PROJECT COST

IMPACT	High	Medium	Low	NA
STATE HWY		X		
LOCAL RD			X	
Ramps/connectors		X		

Details:Contra traffic flow is required for bridge falsework installation and removal, remainder of work will be completed behind K-Rail. Lane, Ramp, connector and Local Road closure will be staged. Lane closure are also planned for k-rail placement.

This Transportation Management Plan (TMP) has been prepared under the direction of the following Registered Engineer. The Registered Civil Engineer attests to the technical information contained therein and the engineering data upon which recommendations, conclusions, and decisions are based.

Prepared by Signature Date 10/5/2009

Name SAM SAGHAFI
Title
Organization PARSONS
Telephone/FAX (909)218-3587
email sam.saghafi@parsons.com

TMP ESTIMATE	EA	08-0F5410	DATE	12/10/2009

1. Public Information	NO	[YES]	MAYBE	$160,000
2. Motorist Information Strategies	NO	YES	[MAYBE]	$33,600
3. Incident Management	NO	[YES]	MAYBE	$458,600
4. Construction Strategies	NO	YES	[MAYBE]	$375,000
5. Demand Management (DM)	NO	YES	[MAYBE]	$0
6. Alternate Route Strategies	NO	YES	[MAYBE]	$100,000
7. Other Strategies	NO	YES	[MAYBE]	$0
			TMP TOTAL	**$ 1,127,200**

TMP TABLE **EA** **08-0F5410** **DATE** **12/10/2009**

An X in the check box means you need to include this in the project unless staging, material, or work hour changes eliminate the need for the item. A ? in the box means TMP anticipates this - please check into this. A blank box means the item is not needed at this time based on the information received.

1 Public Information/Public Awareness Campaign (PAC)

COST

BEES 066063 - Traffic Management Plan Public Information.
Cost to be reduced by Public Affairs (PA) and Construction Liaison (CL) only.

			PA COST	CL COST
			80000	80000
1.0	[ ]	Include Rideshare information in PA/CL project material to encourage vehicles reduction in work area		
1.1	[X]	Brochures and Mailers		
1.2	[X]	Media Releases (& minority media sources)		
1.3	[X]	Paid Advertising		
1.4	[ ]	Public Information Center/Kiosk		
1.5	[X]	Public Meetings/PAC Mtgs./Speakers Bureau (show cost also for room rental)		
1.6	[X]	Handdeliver notices to vicinity		
1.7	[ ]	Broadcast fax service		
1.8	[ ]	Telephone Hotline OR		
1.9	[ ]	1-800-COMMUTE or 511 (the telephone number is shown on CS-Info signs) - contact Cyrin Kwong, 383-4256, to place msg into the 1800C telephone system.		
1.10	[ ]	Visual Information (videos, slide shows, etc.)		
1.11	[X]	Local cable TV and News		
	[ ]			
1.13	[X]	Internet, E-mail		
1.14	[X]	Notification to targeted groups:		
	[X]	Revised Transit Schedules/maps		
	[ ]	Rideshare organizations		
	[X]	schools		
	[ ]	organizations representing people with disabilities		
	[X]	bicycle organizations		
1.15	[ ]	Include PA/CL/Consultant resources in WPS		
1.16	[X]	Commercial traffic reporters/feeds - e.g. brief Traffic Information people (TIP) group		
1.17	[ ]	Insert SSP (no number at this time) "A representative of the Contractor, at Superintendent level or higher, and authorized to commit the Contractor, shall attend and participate in all Public Awareness Campaign meetings. Time commitment for the meeting(s) varies from two to four hours per month."		
1.18	[ ]	Others		
		Subtotals	$ 80,000	$ 80,000

SUBTOTAL $160,000

TMP TABLE	EA	08-0F5410	DATE	12/10/2009

2 Traveler Information Strategies

Project team needs to coordinate with Traffic Design!

2.1 ☐ Existing Electronic Message Signs (Stationary) - list locations. See Note 5

☐ New Installation (Stationary) - BEES 860530 CHANGEABLE MESSAGE SIGN SYSTEM - list locations. See Note 5

2.2 ☒ Portable Changeable Message Signs (PCMS).

Construction prefers Rental Lumpsum BEES 066578 in Supplemental Funds

And include SSP 12-370

These PCMS advise motorists to divert at remote advance decision points - outside the usual work limits. Unlike stationary CMS, you are allowed to use them for advance motorist information - e.g. a week ahead. Their placement may need to be cleared **environmentally** so that they can be included in plans and SSP later. They may be **in addition** to Traffic Design's PCMS for regular traffic handling in and next to a work area. 22,500

Placement Details:

2.3 ☐ BEES 860503 Extinguishable Signs (only shown because they are on the TMP Guidelines list. Usually found at Weigh Stations - Weigh Station "open/closed".)

2.4 Ground Mounted Signs / Fabric signs — Note 2

- ☒ C40/40A Double Fine Sign - black and white — $3,600
- ☒ BEES 860926 Regulatory speed signs — $2,500
- ☐ SC6-4 (per MUTCD) (Ramp will be closed...)
- ☐ CS-SPECIAL w/ SC6-2 PANEL ("Dates/Days/Hours/Expect delay") Use when conventional highways or local roads will be affected for longer periods. To encourage traffic to detour so delay in your work area is less, use at advance location and add the work location. **Use fabric signs if short duration or fast moving operation.**

- ☐ CS-INFO/1-800-COMMUTE Panel Sign. **Also see 1.9.**
- ☐ Blue and white Rideshare guide signs, including website (1-800-COMMUTE/www.commutesmart.info). **Need to be installed at the same time as the funding signs.**

2.5 ☐ BEES 860520 Commercial Traffic Radio (usually only applicable in the Upper desert)

☐ Highway Advisory Radio (HAR) - Fixed. List locations here. They can be obtained from TMC Manager. See Note 5.

☐ Highway Advisory Radio - mobile (signs alerting motorists to the HAR will also be needed) Contact TMC manager for assistance with specifications to include portable HARs as bid item in the contract. To avoid FCC fines, CT Portable HAR cannot be used except for emergencies. Seldom used. See Note 5

List proposed locations here:

2.6 ☒ Lane Closure Web Site 5000

2.7 ☒ Caltrans Highway Information Network (CHIN)

2.8 ☐ Radar Speed Message Sign (Specter sign) BEES 066064 (approx. EA @ $30,000)

2.9 ☐ Bicycle and pedestrian information, e.g. Detour maps

2.10 ☐ Others

SUBTOTAL $33,600

TMP TABLE **EA** **08-0F5410** **DATE** **12/10/2009**

3 Incident Management

3.1 CHP's Construction or Maintenance Zone Enhanced Enforcement Program – COZEEP or MAZEEP. BEES 066062 - show under "State or Agency furnished" in the Cost Estimate. **SSP 12-225 has been deleted per HQ OE.** See note 1.

Consider the LC hours and add CHP driving time to/from their office

Hourly Cozeep overtime loaded rate: $ 95

COZEEP - to protect active closures

50	8	1	50	8	2	$114,000
# of days	hours	# of officers (1 per car)	**nights**	**hours**	# of officers (Remember - nights require 2 per car)	

ECOZEEP - to mitigate continuos restrictions. Add weekends days if needed.

75	8	1	0	0	0	$57,000
# of days	hours	# of officers	**nights**	**hours**	see above	

(add weekends days as needed)

CHP TRAFFIC HANDLING - reduce delay by keeping traffic flowing and/or to enforce closures - total facility/structure/major traffic shifts/ramps/connectors/local road/extended closures. Freeway closures with local road detours may require **2 officers per intersection** to direct traffic.

0	0	0	0	0	0	$0
days	hours	# of officers	**nights**	**hours**	see above	

CHP Officer in TMC during major construction closures

10	8	1	$7,600
days	hours	# of officers	

CHP Officer for Command Post during regional impact construction closures

10	8	1	$7,600
days	hours	# of officers	

3.1 Total $186,200

3.2 BLANK

3.3 **Freeway Service Patrol (FSP) for Construction (CFSP)** $/hr/truck $75

BEES 066065 - show under "State or Agency furnished" in the Cost Estimate

Short duration or remote area CFSP usually is bid w much higher hourly rates. If enhancement of program FSP feasible, CFSP could tie into the lower long-term FSP rates.

FOR SERVICE **WITHIN** REGULAR FSP HOURS:

A days & hrs: 200 8 # of trucks: 1 $120,000

FOR SERVICE **OUTSIDE** REGULAR FSP HOURS:

Extend Peak hour coverage

B days & hrs: 200 4 # of trucks: 1 $60,000

Night support during structure freeway closures and major traffic shifts

C days & hrs: # of trucks: $0

Weekend support

TMP TABLE **EA** **08-0F5410** **DATE** **12/10/2009**

D days & hrs: [ ] [ ] # of trucks: [ ] $0

Local agency (SAFE) support 8% of truck cost $14,400

CFSP CHP support 25% of truck cost $30,000
THIS % ONLY IF **WITHIN** REGULAR FSP HOURS AND AREA!

Equipment/Supplies 10% $18,000
% of truck cost unless more detail available

CONSULT W INLAND DIVISION CHP OR BORDER IN SOUTHERN RIVERSIDE CO. which method is acceptable FOR B,C,D WHICH ARE OUTSIDE REGULAR FSP HOURS OR AREA!

Method 1

CFSP CHP support - including time for meetings 50% of truck cost $30,000

or

Method 2

CFSP Dispatcher @ $55

		0	$ -
days/nights	hours	Dispatcher(s)	

CFSP CHP Officers (See Cozeep rate)

		0	0	0	0	$ -
days	hours	# of officers	**nights**	**hours**		

Include time for meetings:

		0			0	$ -
days	hours	# of officers	**nights**	**hours**		

☐ Cooperative Agreement or Task Order with SAFE for $194,400

☐ Task Order with CHP (Statewide Master Agreement for FSP support). for $60,000
Contact District FSP Coordinator for task orders.

☐ Service Contract

☐ Local Agency will arrange CFSP with SAFE

☐ Local Agency will arrange CFSP administration with CHP

3.3 Total $272,400

3.4 ☐ CHP Helicopter/Airplane

3.5 ☐ Traffic Surveillance Stations for construction impact mitigation (loop detectors and CCTV)
Keep existing operational during construction

☐ New CCTV

☐ New loops

3.6 **Call Boxes - also see NOTE 4 in the Revisions & Notes tab**
TEMPORARY INSTALLATION to mitigate impact ($5000/box/move from project funds to SAFE). Project Report/Design PE: Please discuss with the D8 Call box coordinator if it is feasible to keep this motorist aid available during construction. If it is not, please notify TMP, then other mitigation needs to be considered. For location in SBd County see Q:\Ops\Call Boxes\SBD\Excel List. Apparently no list available for Riv County.

☐ callboxes x [ ] moves x $5,000.00 = $0

☐ *Add 15% to callbox cost since contractor will need to pay SAFE through CCO.*

3.7 ☐ 911 Cellular Calls

3.8 [X] Project needs to provide resources to Transportation Management Center Unit 370 for additional staff during high impact closures

3.9 [ ] Traffic Management Teams (TMT) needed to assist w system diversion/impact reduction. Project needs to provide resources.

See 7/3/05 in Tab 6 - Revisions

3.10 [ ] On-site Traffic Advisor

3.11 [ ] Others

SUBTOTAL $ 458,600

4 Construction Strategies

4.1 [X] Coordinate with adjacent construction and planned projects - also on detour routes.

Use SSP 07-850

4.2 This TMP presumes work is planned as below. If different, TMP needs to be revised. The Lead Project Engineer is responsible to include all appropriate closure charts.

[X] Off peak
[X] Night
[ ] Weekend

4.3
[X] Flagging
[X] Shoulder
[X] Lane
[X] Street
[X] Ramp
[X] **Connector***
[ ] **Extended Weekend Closures***
[ ] **Total Facility Closures***

***Consult w TMP and DTM re Cozeep & other cost. Show your detour and traffic diversion plans.**

4.4 [X] Contra Flow (put traffic into opposing roadbed)

4.5 [ ] Reversible Lanes

4.6 [ ] Project Phasing

4.7 [ ] BEES 152372 - If K-Rail is placed, consider including cost item for lateral shifting to open a minimum of 2.4 m (8') shoulder space as soon as possible. Please include supplemental work funds in the estimate to pay for the extra work. See Standard Specifications 12-4, Measurement and Payment. **PE must discuss this and traffic screen w Traffic Design!**

4.8 [ ] BEES 129150 Temporary Traffic Screens (Gawk Screen - see 5/10/06 entry in Revisions tab)

4.9 [ ] Movable Barrier

4.10 [ ] Truck Traffic Restrictions

4.11 [ ] BEES 066008 Incentives/Disincentives

4.12 [X] BEES 070010 Strictly enforce Constr. Progress Schedule (CPM)

CAUTION: If the Lane Closure Chart (LCC) for full mainline closures (one or both directions on a highway or freeway) does not show a maximum number of allowable days, the PSE cannot be certified by DTM/TMP.

Please contact Saleh Yadegari, 4232, to get Delay Calculations, lane closure charts, Table Z and Special events list. Inform him of any concerns/committments re special LC days, times, season, events; environmental restrictions; if work may be affected by snow and low or high temperatures. E.g. desert heat may delay AC digout curing which may increase traffic impact when vehicles overheat in the queue; etc. IF traffic volumes vary significantly between seasons, consider 2 sets of closure charts to avoid CCOs later.

Use SSP 12-130 and following

TMP TABLE		EA	08-0F5410	DATE	12/10/2009
4.13	☐ Include Specification 12-220				
4.15	☒ **Delay Damages (DD)**	**Please contact Saleh Yadegari, 4232, regarding Delay Calculations.**			375000
4.16	☐ Others				

SUBTOTAL $ 375,000

5 Demand Management (DM)

Project team needs to coordinate with RCTC/SANBAG/CVAG

Traffic diversion may increase available work hours.

5.1 ☐ A coop will be executed - mentioned in PSR or PR.

☐ Instead of a coop, 15% is added to the cost of DM elements since the payment to the local agency will be routed through the contractor.

☐ Instead of a coop, the local agency will make their own arrangements with RCTC/SANBAG.

☒ PA/CL or local agency need to inform commuters through RCTC/SANBAG. Funds part of PA/CL.

5.2 ☐ HOV Lanes/Ramps (New or Convert)

5.3 ☐ Park-and-Ride Lots

☐ LEASED SPACES (Sponsored spaces may be feasible in exchange for signs and print coverage)

5.4 ☐ Parking Management/Pricing (Coordination with local agency required)

5.5 ☐ BEES 066069 Rideshare Promotion

5.6 Rideshare Incentives -
As far as D8 DTM.TMP knows, incentives to individuals cannot be paid by the State, however, State can pay for Local Transportation agency staff time, postage, cost of extra busses, etc.

☐ Carpool/vanpool
☐ Transit
☐ Train
☐ Light-Rail

5.7 BEES 066066

☐ Public Transit Support/Improvements/Shuttle Service
☐ School Shuttle Service

5.8 ☐ Variable Work Hours

5.9 ☐ Telecommute

5.10 ☐ Ramp Metering (Modify or new)

5.11 ☐ Blue and white Rideshare signs needed - unless already signed. See 2.4

5.12 ☐ Others

SUBTOTAL $ -

6 Alternate Route Strategies

TMP TABLE		EA	08-0F5410	DATE	12/10/2009

X

Traffic diversion may increase available work hours. Please work with Traffic Design.

6.1	[ ]	Add Capacity to Freeway connector	
6.2.1	[X]	Upstream Ramp Closures needed to avoid conflicts with closure tapers, etc., during construction	
6.2.2	[X]	Upstream Connector Closures needed to avoid conflicts with closure tapers, etc., during construction	
6.3	[X]	Temporary Highway Lanes or Shoulder Use	
6.4	[ ]	Parking Restrictions	
6.5	[ ]	Street Improvements	
	[ ]	State R/W - Signals, Widen, etc.	
	[ ]	Local R/W - Signals, Widen, etc. Coop or Permit may be needed	
6.6	[ ]	Local Street USE - Coop or Permit may be needed	
6.7	[ ]	Traffic Control Officers (see 3.1 Cozeep)	
6.8	[ ]	Signed detour - using State routes	
6.9	[X]	Signed detour - using local streets and roads	
6.10	[X]	Adjust signals (time signals to allow detour traffic to flow)	$ 100,000
6.11	[ ]	Temporary bicycle or pedestrian facilities	
6.12	[ ]	Others	

SUBTOTAL $ 100,000.00

7 Other Strategies

7.1	[ ]	Application of new technology
7.2	[ ]	Innovative products
7.3	[ ]	Others

SUBTOTAL $ -

TOTAL $ 1,127,200

Attachment H

Final Environmental Document

SCH # 2010111083

Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Department), in cooperation with the Riverside County Transportation Commission (RCTC), proposes to improve the State Route (SR) 91/SR 71 interchange by constructing a new direct flyover connector from eastbound SR 91 (post mile [PM] R0.6/R2.6) to northbound SR 71 (PM 1.6/3.0). The project includes the following project components: flyover connector ramp, bridge widening, restriping of SR 91 eastbound lanes, modification or construction of new drainage facilities, retaining walls, and relocation of access roads. The project will improve the current and future operational efficiency and enhance the capacity of the eastbound SR 91 to northbound SR 71 connector.

Determination

The Department has prepared an Initial Study (IS) for this project, and following public review, has determined from this study that the project will not have a significant effect on the environment for the following reasons:

The project will have no effect related to the following resources:

Farmland/Timberland Resources
Mineral Resources

In addition, the project will have no significant effects related to the following resources:

Land Use and Planning
Community Impacts
Utilities and Emergency Services
Growth
Cultural Resources
Relocations/Real Estate Acquisition
Utilities and Service Systems
Parks and Recreation
Paleontological Resources

The project will have no significantly adverse effects on Traffic/Transportation, Aesthetics, Hydrology/Water Quality, Geology, Hazardous Waste, Air Quality, Noise, and Biological Environment because the following mitigation measures will reduce potential effects to insignificance:

Traffic/Transportation

TC-1 Prior to project construction, a Transportation Management Plan (TMP) will be prepared to address the detours and traffic issues that may occur to the traveling public as a result of construction activities. The TMP will address elements such as signage, traffic controls, Construction Zone Enhanced Enforcement Program (COZEEP), and public awareness campaign.

TC-2 During the design phase, RCTC will coordinate with the City of Corona, United States Army Corps of Engineers (USACE), and other affected parties to ensure that access to their jurisdictions or properties will be maintained during construction.

Aesthetics

AES-1 Work with the community during preliminary design to implement the Aesthetics and Landscape Master Plan for the project improvements through a formalized structure that allows for community input.

AES-2 Develop Context-Sensitive Solutions for the aesthetic and landscape treatments of the project elements based on the Caltrans Aesthetics and Landscape Master Plan.

AES-3 Apply architectural detailing to the bridges in the corridor, including textures, colors, and patterns. Potential bridge elements that might receive aesthetics treatments include columns, pier caps, parapets, fencing, abutment, and wing walls.

AES-4 Apply architectural detailing to the retaining walls, including textures, colors, and patterns. Include caps that will provide shadow lines, as shown in the Caltrans Aesthetics and Landscape Master Plan.

AES-5 Save and protect as much existing vegetation as feasible, especially trees.

AES-6 Include skyline trees in the new plantings to help break up views to the new flyover.

AES-7 Utilize drainage and water quality elements, where required, that maximize the allowable landscape. Place any water quality or detention ponds out of clear view of the interchange or from the highway. If this is not possible, integrate these features into the landscape design.

AES-8 The Project Engineer will ensure that replacement planting to mitigate the loss of existing landscaping is included in the final design. All planting must be reviewed and approved by the District Landscape Architect.

Replacement planting will be funded with project's construction and will include no less than 3 years of plant establishment. The Project Engineer will ensure that the replacement is under construction within 2 years of acceptance of the highway contract that damaged or removed the existing planting.

AES-9 To address potential impacts associated with views of construction access and staging areas, the Resident Engineer will be required to construct the project in accordance with Caltrans Standard Construction Specifications, including appropriate measures to address visual impacts during construction.

AES-10 To reduce glare, RCTC's Project Engineer will ensure that the project plans specify lighting fixtures with non-glare hoods and that lighting plans require the review and approval of the Department and applicable city and county before construction to assure compliance with their applicable policies regarding public street lighting.

Water Quality and Stormwater Runoff

The Contractor must conform to current Federal, State, and local regulatory requirements to minimize impacts to water resources and water quality, including:

WQ-1 Conform to the requirements of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Storm Water Permit, Order No. 99-06-DWQ, NPDES No. CAS000003, adopted by the State Water Resources Control Board (SWRCB) on July 15, 1999, in addition to the Best Management Practices (BMPs) specified in the Caltrans Storm Water Management Plan (SWMP) (Caltrans 2007b). When applicable, the Contractor shall also conform to the requirements of the General NPDES Permit for Construction Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002 and any subsequent General Permit in effect at the time of project construction.

WQ-2 Prepare and implement the Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall address all State and Federal water control requirements and regulations. The SWPPP shall address all construction-related activities, equipment, and materials that have the potential to impact water quality. The SWPPP shall include BMPs to control pollutants, sediment from erosion, stormwater runoff, and other construction-related impacts. In addition, the SWPPP shall include the provisions of SWRCB Resolution No. 2001-046, which requires implementation of specific Sampling Analysis Procedures to ensure that the implemented BMPs are effective in preventing the exceedance of any water quality standards. The results of

the risk-level determination indicate that the project has a Risk Level of 1, which directs the project to implement the following Risk Level 1 requirements:

- Effluent Standards
- Good Site Management "Housekeeping"
- Non-Stormwater Management
- Sediment Controls
- Run-on and Runoff Controls
- Inspection, Maintenance, and Repair

Risk Level 1 Monitoring and Reporting Requirements specific implementation details regarding these requirements are found in Attachment C of the *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ* (September 2009).

WQ-3 File a Notice of Intent (NOI) with the SWRCB at least 30 days prior to any soil-disturbing activities.

WQ-4 Conform all work to the Construction Site BMP (Category II) requirements specified in the latest edition of the Caltrans SWMP to control and minimize the impacts of construction and construction-related activities, materials, and pollutants on the watershed. These include, but are not limited to, temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-stormwater BMPs. For a complete list, refer to Section 4.5 of the Caltrans SWMP (2003).

WQ-5 Give special attention to stormwater pollution control during the rainy season, which is defined by the SWRCB as year round. Appropriate soil stabilization and sediment controls will be implemented when rain is predicted. Water Pollution Control BMPs will be used to minimize impacts to receiving waters. Measures will be incorporated to contain all vehicle loads and avoid any tracking of materials that may fall or blow onto Caltrans right-of-way (ROW).

WQ-6 If dewatering is necessary, then this project will fully conform to Order No. R8-2009-0003 (NPDES No. CAG998001), General Waste Discharge Requirements for Discharges to Surface Water which Pose an Insignificant (De Minimis) Threat to Water Quality, from the Santa Ana RWQCB. Dewatering BMPs will be used to control sediments and pollutants. A United States Environmental Protection

Agency (EPA)-certified laboratory will test and monitor the discharge for compliance with the requirements of the RWQCB.

WQ-7 The Caltrans SWMP describes BMPs and practices to reduce the discharge of pollutants associated with the stormwater drainage systems of State highways, facilities, and activities. The completed project plans will incorporate all necessary Maintenance BMPs (Category IA), Design Pollution BMPs (Category IB), and Treatment BMPs (Category III) to meet the Maximum Extent Practicable (MEP) requirements. A combination of BMPs from the following categories will be implemented as part of the project:

- Maintenance BMPs – This category includes routine maintenance work, such as litter pickup, toxics control, street sweeping, drainage, and channel cleaning.
- Design Pollution Prevention BMPs – Permanent soil stabilization systems will be incorporated into project design, such as preservation of existing vegetation, concentrated flow conveyance systems (e.g., drainage ditches, dikes, berms, swales), and slope/surface protection systems that utilize either vegetated or hard surfaces. Determination of Design Pollution Prevention BMPs will occur during final design.
- Treatment BMPs – The applicability of all nine Caltrans-approved Treatment BMPs were analyzed as part of this project. This category of BMPs includes traction sand traps, infiltration devices, detention devices, biofiltration strips/ swales, dry weather flow diversion, media filters, multi-chamber treatment trains, wet basins, and gross solids removal devices (GSRDs).

WQ-8 Prior to the disturbance of all jurisdictional drainages, the following are required:

- Obtain and conform to Clean Water Act (CWA) Section 404 permit issued by USACE prior to disturbance of all jurisdictional drainages.
- Obtain and conform to CWA Section 401 Water Quality Certificate issued by Santa Ana RWQCB prior to disturbance of all jurisdictional drainages.
- Obtain and conform to Streambed Alteration Agreement from the California Department of Fish and Game (CDFG) prior to disturbance of all jurisdictional drainages.
- Compensatory mitigation measures for impacts to jurisdictional drainages shall adhere to requirements contained within Section 2.3 of this IS.

Geology/Soils/Seismic/Topography

GEO-1 A site-specific geotechnical investigation will be completed to ensure that piles, retaining walls, and other structures will not impact geology and topography in the area. The final design will address any geotechnical hazards that are identified in the investigation.

GEO-2 An erosion control plan will be prepared prior to construction of the project. The erosion control plan must specify measures such as soil stabilization. As described in the Caltrans Plans Preparation Manual: "The locations and details of the erosion control materials shall be shown on the erosion control plans. Erosion control materials may include, but are not limited to, compost, straw, fiber, stabilizing emulsion, and erosion control blankets/mats."

GEO-3 If slopes are going to be constructed steeper than 2:1 (H:V), then stability analyses shall be performed during the final design phase.

GEO-4 During final design, the most suitable pile type shall be used based on the geotechnical data, site-specific investigation, cost considerations, and the latest Caltrans requirements by using Working Stress Design or Load and Resistance Factor Design methods for abutment and bent.

GEO-5 Earthwork shall conform to requirements of the Caltrans Standard Specifications, Section 19. Soil compaction shall be accomplished in accordance with Section 19-5 of the Standard Specifications. The subgrade shall be compacted to at least 95 percent of the laboratory maximum dry density. Fill placed during widening of the embankments shall be benched into the existing slopes as described in Section 19-6.1 of the Standard Specifications. Actual depths and extend of toe-of-fill keyways will be determined during site-specific investigations.

GEO-6 Import soils shall have the minimum characteristics:

- Non-reactive to Portland cement concrete, or cement type shall reflect corrosivity test results.
- Have shear values of a minimum cohesion equal to 100 pounds per square inch and friction angle of 30 degrees or a combination of strength parameters that will provide a safety factor of at least 1.5 static and 1.1 pseudostatic stability analysis results.
- Expansion index shall be equal to or less than 20.

GEO-7 A minimum over-excavation shall be performed within all areas to receive compacted fill. The over-excavation should extend horizontally a minimum distance equal to the depth of excavation from the edges of new fill.

GEO-8 If soundwalls are determined feasible and reasonable on the hillside homes south of SR 91, then a geotechnical engineer will review the plans to ensure the stability of these soundwalls.

Hazardous Waste/Materials

HW-1 There is a possibility of encountering polychlorinated biphenyl (PCB)-containing liquids, asbestos-containing materials (ACMs), lead-based paint (LBP), and aerially deposited lead (ADL) during construction. Any hazardous materials encountered shall be managed accordingly.

HW-2 Pole-top transformers with PCB-containing liquids shall be properly managed if they are to be removed or relocated.

HW-3 Prior to the final environmental document, presumed ACM materials, including rails, bearing pads, support piers, expansion joint material of bridges, asphalt, and concrete, will be surveyed and assessed in compliance with 40 CFR *(Code of Federal Regulations)* 763. During construction, if bridge structures not previously tested for asbestos are anticipated to be disturbed or if suspect ACMs are discovered, the contractor shall stop work and these materials will be surveyed and assessed for asbestos prior to disturbance.

HW-4 Paint used for lane striping shall be tested for LBP prior to demolition/removal to determine proper handling and disposal requirements.

HW-5 Any soils with ADL contamination shall be managed properly and disposed. During project construction, soil in the project limits may be reused within Department ROW, provided it is placed a minimum of 5 feet (ft) above the maximum water table and is covered by pavement. Soil export will be minimized, and excess soil generated during project construction, if any, will be disposed of at a non-Resource Conservation and Recovery Act (RCRA) California Class I hazardous waste disposal facility.

HW-6 LBP, ACM, and ADL surveys shall be conducted if data has not already been collected in this area by previous projects. LBP, ACM, ADL, and herbicide/ pesticide surveys should take approximately 4 to 6 weeks (for sampling and report

generation). Further needed investigations will be postponed until final design is complete.

Air Quality

AQ-1 In addition to the South Coast Air Quality Management District (SCAQMD) rules, the following mitigation measures set forth a program of air pollution control strategies that will ensure that construction emissions will not exceed any applicable standard. Measures 1 and 2 include fugitive dust reduction strategies, in addition to Rule 403 requirements. Measures 3 through 5 provide reduction for other contaminants, including nitrogen oxide (NO_X) emissions.

1. In addition to SCAQMD Rule 403 requirements, apply water to all excavation/grading activity areas as necessary to remain visibly moist during active operations.
2. Apply nontoxic soil stabilizers, as needed, to reduce offsite transport of fugitive dust from unpaved staging areas and unpaved road surfaces.
3. Properly tune and maintain construction equipment and vehicles in accordance with manufacturer's specifications. Low-sulfur fuel shall be used in construction equipment per California Code of Regulations (CCR) Title 17, Section 93114.
4. During construction, keep trucks and vehicles in loading/unloading queues with their engines off when not in use to reduce vehicle emissions. Phase construction activities to avoid emissions peaks, where feasible, and discontinue during second-stage smog alerts.
5. To the extent feasible, use construction equipment that is either equipped with diesel oxidation catalyst or is powered by alternative fuel sources (e.g., methanol, natural gas).
6. Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.

All measures provided above and included in SCAQMD Rules 403 and 1403 that are applicable to the project construction activities shall be implemented to the extent feasible to avoid adverse short-term air quality impacts.

AQ-2 Active construction areas shall be watered regularly to control dust and minimize impacts to control dust and minimize impacts to adjacent vegetation.

Noise

N-1 To minimize construction-generated noise, Standard Specification Section 14-8.02 "Noise Control" and Standard Special Provision S5-310 need to be followed. This Standard Special Provision will be edited specifically for the project during the plans, specifications, and estimate (PS&E) phase.

Construction noise control and noise monitoring must comply with Caltrans General "5-1 Noise Control" standard special provisions. This section applies to equipment on the project or associated with the project, including trucks, transit mixers, stationary equipment, and transient equipment. Do not exceed 86 A-weighted decibels (dBA) at 50 ft from the project limits from 7:00 p.m. to 7:00 a.m. Do not operate construction equipment or run equipment engines from 7:00 p.m. to 7:00 a.m. or on Sundays, except you may operate within the project limits during these hours to:

- Service traffic control facilities
- Service construction equipment

Noise Monitoring

Provide one Type 1 sound-level meter and one acoustic calibrator to be used by the Department until contract acceptance. Provide training by a person trained in noise monitoring to one Department employee designated by the Engineer. The sound-level meter must be calibrated and certified by the manufacturer or other independent acoustical laboratory before delivery to the Department. Provide annual recalibration by the manufacturer or other independent acoustical laboratory. The sound-level meter must be capable of taking measurements using the A-weighting network and the slow response settings. The measurement microphone must be fitted with a windscreen. The Department returns the equipment to you at contract acceptance. The contract lump sum price paid for noise monitoring includes full compensation for furnishing all labor, material, tools, equipment, and incidentals and for doing all work involved in noise monitoring.

N-2 If possible, avoid using impact pile driving for bridge demolition/reconstruction. Utilize less noise-intrusive piling techniques using vibratory pile driving or cast-in-drilled-hole (CIDH) piling.

N-3 In case of construction noise complaints by the public, the construction manager will be notified and noise monitoring will be conducted if necessary.

N-4 All equipment will have sound-control devices no less effective than those provided on the original equipment. No equipment will have an unmuffled exhaust.

N-5 Truck loading, unloading, and hauling operations will be conducted so that associated noise impacts are kept to a minimum by carefully selecting routes to avoid going through residential neighborhoods to the greatest possible extent.

N-6 Use and relocate temporary barriers, if warranted and practicable, to protect sensitive receptors from excessive construction noise. Such temporary noise barriers can be made of heavy plywood or moveable insulated sound blankets. They will be free of visible internal gaps, and the material will provide a transmission loss of at minimum 15 dBA (preferably at least 20 dBA) relative to the noise source requiring abatement so that it can provide a useful level of insertion loss when used as a barrier.

N-7 As directed by the Department's resident engineer, the contractor will implement appropriate additional noise abatement measures including, but not limited to, changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, or installing acoustic barriers around stationary construction noise sources.

Biological Environment

BIO-1 The limits of grading required for all aspects of the interchange and construction staging areas will be clearly marked, and all construction areas, including staging of construction equipment, will be surveyed.

BIO-2 Planned roads will be located in the least environmentally sensitive location feasible, including disturbed and developed areas or areas that have been previously altered.

BIO-3 Alignments will follow existing roads, easements, ROWs, and disturbed areas, as appropriate, to minimize habitat fragmentation. Implementation of BMPs, as discussed in Section 5.2.5 of the SR 91 and SR 71 Interchange Improvement Project Habitat Assessment and Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis Report (Parsons/MBA 2010), preconstruction surveys, construction monitoring, and prescribed mitigation for impacts to riparian/riverine areas, will reduce all potential impacts to sensitive species not considered adequately conserved under the MSHCP to less than substantial.

BIO-4 Incorporate measures to control the quantity and quality of runoff from the site entering the MSHCP Conservation Area. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into MSHCP Conservation Areas. According to the *Water Resources and Water Quality Technical Report* (Parsons 2010), the construction of a new flyover connector will not generate any changes in existing runoff in the area, and an SWPPP will be prepared for construction of the site.

BIO-5 The use of chemicals or generation of bioproducts (i.e., manure) that are potentially toxic or may adversely affect wildlife species, habitat, or water quality shall not result in discharge to the MSHCP Conservation Area. The greatest risk is from landscaping fertilization overspray and runoff. Contractor shall avoid the discharge of chemicals, generation of bio products and over spraying of landscaping fertilizer within the MSHCP Conservation Area.

BIO-6 Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure that ambient lighting in the MSHCP Conservation Area is not increased.

BIO-7 Noise-generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms, or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards.

BIO-8 Land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate, in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping into the MSHCP Conservation Areas. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or appropriate mechanisms. Manufactured slopes associated with the site development shall not extend into the MSHCP Conservation Area.

BIO-9 To maintain the integrity of the wildlife corridor, the design plans of culvert improvements in the Fresno Canyon area will be submitted to the wildlife agencies for review and approval.

BIO-10 If jurisdiction is confirmed by USACE, RWQCB, and CDFG, then the following permits will be acquired: a Section 404 permit from USACE pursuant to Section

404 of the CWA; a Section 401 Water Quality Certification from the RWQCB; and a Section 1600 Streambed Alteration Agreement from CDFG pursuant to Section 1600 of the California Fish and Game Code.

BIO-11 To offset impacts to jurisdictional resources, RCTC will obtain mitigation credits at a minimum ratio of 2:1. Currently, there are three potential mitigation areas under consideration by RCTC for riparian/riverine and jurisdiction resources mitigation: (1) habitat restoration of lands within Chino Hills State Park (CHSP); (2) habitat restoration of lands within the Green River Golf Course; and (3) habitat restoration or creation of lands owned by the Regional Conservation Authority (RCA).

BIO-12 Planned roads will avoid, to the greatest extent feasible, impacts to wetlands. If wetlands avoidance is not possible, then any impacts to wetlands will require issuance of and mitigation in accordance with a Federal Section 404 and/or State Section 1600 permit.

BIO-13 To minimize direct impacts to special-status plant species, the limits of grading required for all aspects of the interchange and construction staging areas will occur entirely within Department ROW or temporary construction easements and will be clearly marked.

BIO-14 Preconstruction surveys will be conducted for sensitive plants after the final construction ROW has been established. All appropriate plants will be tagged and moved to appropriate offsite locations prior to the start of grading. It may be possible that plants will be salvaged, stored, and replanted within disturbed areas subsequent to construction.

BIO-15 The appropriate biological surveys will be based on field conditions and recommendations of the project manager in consultation with a qualified biologist. The results of the biological resources investigations will be mapped and documented. The documentation will include preliminary conclusions and recommendations regarding potential effects of facility construction on MSHCP Conservation Area resources and methods to avoid and minimize impacts to these resources in conjunction with project siting, design, construction, and operation. The project biologist will work with facility designers during the design and construction phase to ensure implementation of feasible recommendations.

BIO-16 During the Design Phase, a habitat assessment and, as required, focused surveys for the Brand's phacelia (blooming period: March to June), San Diego ambrosia

(blooming period: April to October), and San Miguel savory (blooming period: March to May) will be conducted during the appropriate blooming season. Subsequent to surveys, RCTC will update the information in the Joint Project Review (JPR) and DBESP to address the additional surveys and, as necessary, presence of and impacts to these species. If the federally endangered San Diego ambrosia is identified onsite during the surveys, Caltrans will reinitiate Section 7 consultation with USFWS to amend the Biological Opinion (BO). Applicable mitigation will be determined through coordination with the resource agencies based on the survey results and project impacts. Potential mitigation measures listed below, or a combination of the two measures, could be implemented.

- Onsite conservation of existing Brand's phacelia, San Diego ambrosia, and San Miguel savory though avoidance and designation of environmentally sensitive areas.
- Translocation of Brand's phacelia, San Diego ambrosia, and San Miguel savory individuals outside of the project ROW to areas of suitable habitat, as identified by a contractor-supplied plant biologist with knowledge of and experience with translocation of local flora species of the region.

BIO-17 Design of planned roads will consider wildlife movement requirements, as further outlined in Section 7.5.2, Guidelines for Construction of Wildlife Corridors, and any construction, maintenance, and operation activities that involve clearing of natural vegetation will be conducted outside the active breeding season (February 15 through August 31).

BIO-18 For the wildlife fencing on SR 91 and SR 71, consideration will be given during design to avoid disturbance of the fencing or movement of wildlife. If the project requires removal of the fencing, then biological monitoring will be required and replacement of any disturbed fencing will occur after construction.

For Proposed Constrained Linkage (PCL) 1 and PCL 2, the following measures shall be implemented to improve wildlife connectivity:

- For PCL 1, the project will improve wildlife connectivity by utilizing an open channel instead of a traditional pipe extension, installing wildlife fencing to funnel into the crossing, and planting of native vegetation.
- For PCL 2, the project will improve the function of the undercrossing bridge by removing most of the existing concrete revetment and regrading the slopes of the crossing openings to a 4:1 slope. In addition, wildlife fencing will be

installed to funnel the wildlife into the crossings, and native vegetation will be planted to provide habitat continuity.

Caltrans and RCTC will continue its commitment to work with the RCA and Wildlife Agencies on implementing a replacement linkage for PCL 1, as well as incorporating measures to improve PCL 2 after the completion of cumulative projects in the area (SR-91 Corridor Improvement Project [CIP]). These measures to improve PCL 1 and PCL 2 will be incorporated before the completion of the SR-91 CIP Initial Project, which is anticipated to be completed in 2015.

BIO-19 An appropriate openness ratio of at least 0.6 (calculated in meters as [opening width X height/length of crossing]) and height for crossings intended for use by medium- and large-sized wildlife will be maintained. The openness ratio, which is a function of a structure's length [(height x width)/length], is important for larger animals when using culverts and highway undercrossings. To maintain the integrity of the wildlife corridor, the design plans of culvert improvements in the Fresno Canyon area will be submitted to the wildlife agencies for review and approval.

BIO-20 Crossing facilities will be vegetated as naturally as possible to mimic the surrounding natural crossing area. In some instances, vegetation may need to be tailored to match the needs of the focused species. Natural objects, such as stumps, rocks, and other natural debris, will be used within the crossing facility to create cover for wildlife and to encourage the use of crossings. The landscaping plans near the wildlife corridor areas will be submitted to the wildlife agencies for review and approval.

BIO-21 Sediment and erosion-control measures will be implemented until such time soils are determined to be successfully stabilized. In addition, the following measures will be implemented to areas within the MSHCP Conservation Areas:

- Incorporate measures to control the quantity and quality of runoff from the site entering the MSHCP Conservation Area. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into MSHCP Conservation Areas. According to the report, the construction of a new flyover connector will not generate any changes in existing runoff in the area and an SWPPP will be prepared for construction of the site.
- The use of chemicals or generation of bioproducts (i.e., manure) that are potentially toxic or may adversely affect wildlife species, habitat, or water

quality shall not result in discharge to the MSHCP Conservation Area. The greatest risk is from landscaping fertilization overspray and runoff.

BIO-22 Equipment storage, fueling, and staging areas will be sited on nonsensitive upland habitat types with minimal risk of direct discharge into riparian areas or other sensitive habitat types.

BIO-23 During construction, the placement of equipment within the stream or on adjacent banks or adjacent upland habitats occupied by Covered Species that are outside of the project footprint will be avoided.

BIO-24 When work is conducted during the fire season, as identified by the Riverside County Fire Department, adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, water tankers) shall be available onsite during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventive methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventive actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.

BIO-25 Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.

BIO-26 All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances shall occur only in designated areas within the grading limits of the project site. These designated areas shall be clearly marked and located in such a manner as to contain runoff.

BIO-27 Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat. No erodible materials will be deposited into water courses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks. Silt fencing or other sediment trapping materials will be installed at the downstream end of construction activities to minimize the transport of sediments offsite.

BIO-28 Impacts to Species of Special Concern, such as the coast horned lizard, although adverse, are not considered substantial; however, to avoid any impacts to the coast

horned lizard, a qualified biological monitor will be onsite during the construction phase of the project to ensure that direct take of this species does not occur.

BIO-29 To avoid impacts to bats and potentially suitable habitat for day, night, and maternity roosting, construction activities should avoid the maternity season (March through August). In addition, a qualified biologist will conduct a preconstruction survey to determine if the construction area contains roosting or maternity colonies. If work must be conducted during the maternity period and roost locations are not occupied, exclusion devices will be installed in all potential roosting locations before March and maintained throughout construction. If work must be conducted during the maternity period and roost locations are found to be occupied, then a sufficient buffer, in consultation with CDFG, will be maintained around any bat roosting or maternity colony. In addition, a qualified biological monitor will be onsite during the construction phase of the project to ensure that no direct take occurs and there is no nest abandonment due to excessive disturbance. Any active nurseries found onsite and mitigation to offset impacts to bat species will be coordinated with CDFG.

BIO-30 During the Design Phase of the project, a habitat assessment will be completed in accordance with the Burrowing Owl Survey instructions for the Western Riverside MSHCP Survey Area. If suitable habitat is identified during the survey, additional focused surveys may be completed as applicable. To ensure that any burrowing owl that may occupy the project area in the future are not affected by construction activities, preconstruction surveys will be completed 30 days prior to construction, and a report will be prepared and submitted in accordance with the requirements of the MSHCP 30-day Pre-Construction Burrowing Owl Survey Report Format identified. If preconstruction surveys determine that burrowing owl are present, one or more of the following mitigation measures may be required: (1) avoidance of active nests and surrounding buffer area during construction activities; (2) passive relocation of individual owls; (3) active relocation of individual owls; and (4) preservation of onsite habitat with long-term conservation value for the owl. The specifics of the required measures will be coordinated between the Caltrans District Biologist, RCTC, and the resource agencies.

BIO-31 In accordance with the Migratory Bird Treaty Act, to avoid effects to nesting birds, any native or exotic vegetation removal or tree-trimming activities will occur outside of the nesting bird season (i.e., March 1 through June 30 within Riverside County). If vegetation clearing is necessary during the nesting season, a qualified

biologist will conduct a preconstruction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist. This buffer will be clearly marked in the field by construction personnel under guidance of the biologist, and construction or clearing will not be conducted within this zone until the biologist determines that the young have fledged or the nest is no longer active.

BIO-32 Timing of construction activities will consider seasonal requirements for breeding birds and migratory nonresident species. Habitat clearing will be avoided during species' active breeding season, which is generally defined as February to August.

BIO-33 To offset the permanent loss of 1.0-acre of the MSHCP public, quasi-public (PQP) lands, RCTC will commit to purchase 1.0-acre of land and relinquish it to the RCA for long-term conservation, consistent with the requirements of the MSHCP.

BIO-34 To offset permanent impacts to riverine and riparian areas, the project will perform offsite enhancement at a 3:1 ratio through one of three options: (1) purchasing credits in the Santa Ana Watershed for arundo (*Arundo donax*) or salt cedar (*Tamarix* spp.) removal; (2) restoration within CHSP; or (3) restoration on the Green River Golf Course.

BIO-35 The invasive, non-native plant species listed in the MSHCP will be considered in approving landscape plans to avoid the use of invasive species for portions of the project that are adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography, and other features.

BIO-36 In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration (FHWA), the landscaping and erosion control included in the project will not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

BIO-37 Implementation of the BMPs discussed in Section 5.2.5 of the *SR 91 and SR 71 Interchange Improvement Project Habitat Assessment and MSHCP Consistency Analysis Report* (Parsons/MBA 2010) will limit the introduction of invasive species into the Conservation Area and will reduce any potential impacts to adjacent sensitive communities to less than substantial.

David Bricker
Deputy District Director
District 8 Division of Environmental Planning
California Department of Transportation

6/29/2011
Date

Attachment I

Cooperative Agreement

08-Riv-91 PM 0.36/3.70
08-Riv-71-PM 2.1/3.0
Improvements on SR-91/SR-71
Construct EB 91 to NB 71-direct connector, C-D system EB, EB & WB AUX lane, EB GP lane
EA 0F541K
District Agreement No. 8-1380

PROJECT DEVELOPMENT COOPERATIVE AGREEMENT

This AGREEMENT, entered into effective on July 17, 2008, is between the STATE OF CALIFORNIA, acting by and through its Department of Transportation, referred to herein as "STATE," and the

RIVERSIDE COUNTY TRANSPORTATION COMMISSION public entity, referred to herein as "RCTC."

RECITALS

1. STATE and RCTC, pursuant to Streets and Highways Code sections 114 and 130, are authorized to enter into a Cooperative Agreement for improvements to the State Highway System (SHS) within RCTC's jurisdiction.

2. RCTC desires to construct SHS improvements consisting of the replacement of the existing eastbound (EB) State Route 91 (SR-91) to northbound (NB) State Route 71 (SR-71) connector with a direct fly-over connector; provide a collector-distributor road in the EB direction between the Green River Road Interchange and the SR-91/SR-71 Junction; extend the existing auxiliary lanes from the southbound SR-71 to EB SR-91 connector to Serfas Club Drive; extend the existing auxiliary lanes from the westbound SR-91 to NB SR-71 connector to Serfas Club Drive; and extend the existing fifth general purpose lane from SR-71 to Serfas Club Drive in the EB direction, referred to herein as "PROJECT."

3. RCTC is willing to be responsible for PROJECT cost for capital outlay and support using $11,885,000 from the STATE's Transportation Improvement Plan-Regional Improvement Program (STIP-RIP) funding source, which is to be used for Project Approval and Environmental Document (PA&ED), Plans, Specifications and Estimates (PS&E), and right of way activities costs for PROJECT. STATE's Independent Quality Assurance (IQA) of PROJECT PA&ED, PS&E and right of way and STATE's costs

incurred as the California Environmental Quality Act (CEQA) Lead Agency and National Environmental Policy Act (NEPA) Lead Agency, if applicable, in the review and approval if appropriate of the PROJECT environmental documentation prepared entirely by RCTC, will be borne by STATE. The PROJECT cost estimate is shown on Exhibit A, attached hereto and made a part of this Agreement.

4. The terms of this Agreement shall supersede any inconsistent terms of any prior Memorandum of Understanding (MOU) or agreement relating to PROJECT.

5. PROJECT landscape maintenance and construction will be the subject of a separate future agreement or agreements.

6. This Agreement will define the roles and responsibilities of the CEQA Lead Agency and CEQA Responsible Agency regarding the environmental documentation, studies, and reports necessary for compliance with CEQA. This Agreement will also define roles and responsibilities for compliance with NEPA, if applicable.

7. The parties now define herein below the terms and conditions under which PROJECT is to be developed, designed, and financed.

SECTION I

RCTC AGREES:

1. RCTC is willing to be responsible for PROJECT PA&ED, PS&E and right of way activities costs in the amount of $11,885,000 to be funded by STATE's STIP-RIP funding source. The costs for STATE's IQA, and STATE's review, comment, and approval if appropriate, of the PROJECT environmental documentation for CEQA, and NEPA if applicable, shall be borne by STATE. In the event that an increase in PROJECT funding becomes necessary, said funding will be paid, in full, by RCTC using RCTC funds, pursuant to an amendment to this Agreement.

2. To submit an initial billing in the amount of $1,170,000 to STATE within (30) days upon execution of this Agreement and prior to commencement of any work performed by RCTC. Said initial billing represents two months estimated cost of preliminary engineering, PS&E, and for one month estimated right of way capital and right of way acquisition cost for PROJECT, to be funded from STATE's STIP-RIP funding source.

3. Thereafter, to prepare and submit to STATE monthly billing statements for estimated expenditure for preliminary engineering, environmental documentation, PS&E and right of way capital and right of way acquisition cost one month in advance to STATE as development of PROJECT proceeds.

4. Upon completion of the PA&ED, PS&E, and right of way activities for PROJECT, to furnish STATE with a detailed statement of the total actual costs required to complete the aforementioned services. RCTC thereafter shall refund to STATE, promptly after completion of RCTC's final accounting of costs for the above mentioned work, any amount of STATE's deposits required in Section II, Article 3 and 4 remaining after actual costs to be borne, out of STATE's STIP-RIP funding source, have been deducted, or to bill STATE for any additional amount from STATE's STIP-RIP funds required to complete PROJECT.

5. All PROJECT work performed by RCTC, or performed on RCTC's behalf, shall be performed in accordance with all State and Federal laws, regulations, policies, procedures, and standards that STATE would normally follow. All such PROJECT work shall be submitted to STATE for STATE's review, comment, and concurrence at appropriate stages of development.

6. All PROJECT work, except as set forth in this Agreement, is to be performed by RCTC. Should RCTC request that STATE perform any portion of PROJECT work, except as otherwise set forth in this Agreement, RCTC shall first agree to reimburse STATE for such work pursuant to an amendment to this Agreement or a separate executed agreement.

7. To have a Project Report (PR) and detailed PS&E prepared, at no cost to STATE, and to submit each to STATE for STATE's review and concurrence at appropriate stages of development. The PR, and the final PS&E for PROJECT shall be signed on behalf of RCTC by a Civil Engineer registered in the State of California. RCTC agrees to provide landscape plans prepared and signed by a licensed California Landscape Architect.

8. To have all necessary right of way maps and documents used to acquire right of way by RCTC prepared by or under the direction of a person authorized to practice land surveying in the State of California. Each right of way map and document shall bear the appropriate professional seal, certificate number, expiration date of registration certification and signature of the licensed person in responsible charge of work.

9. To permit STATE to monitor, participate, and oversee the selection of personnel who will prepare the PR, prepare environmental documentation, including the investigative studies and technical environmental reports, prepare the PS&E, provide right of way engineering services, and provide right of way acquisition services. RCTC agrees to consider any request by STATE to discontinue the services of any personnel considered by STATE to be unqualified on the basis of credentials, professional expertise, failure to perform, and/or other pertinent criteria.

10. To submit to STATE for review and concurrence all Right of Way Engineering Land-Net Maps and Right of Way Appraisal Maps, Records of Survey, and Right of Way Record Maps in accordance with STATE's Right of Way Manual, Chapter 6, Right of Way Engineering, STATE's Plans Preparation Manual, STATE's Surveys Manual, applicable State laws, and other pertinent reference materials and examples as provided by STATE.

11. Personnel who prepare environmental documentation, including the investigative studies and technical environmental reports, shall be made available to STATE, at no cost to STATE, through completion of PROJECT construction to discuss problems which may arise during PS&E, right of way acquisition, construction, and/or to make design revisions for contract change orders.

12. Personnel who prepare right of way maps, documents, and related materials shall be made available to STATE, at no cost to STATE, during and after construction of PROJECT until completion and acceptance by STATE of Right of Way Record Maps, Records of Survey, and title to any property intended to be transferred to STATE.

13. To make written application to STATE for necessary encroachment permits authorizing entry of RCTC and/or RCTC's contractor onto the SHS right of way to perform surveying and other investigative activities required for preparation of the PR, environmental documentation, and/or PS&E.

14. To identify and locate all utility facilities within the area of PROJECT as part of the design responsibility for PROJECT. All utility facilities not relocated or removed in advance of construction shall be identified on the PS&E for PROJECT.

15. If any existing utility facilities conflict with the construction of PROJECT or violate STATE's encroachment policy, RCTC shall make all necessary arrangements with the owners of such facilities for their timely accommodation, protection, relocation, or removal.

    The costs for the PROJECT's positive identification and location, protection, relocation, or removal of utility facilities whether inside or outside STATE's right of way shall be determined in accordance with Federal and California laws and regulations, and STATE's policies and procedures, standards, practices, and applicable agreements including, but not limited to, Freeway Master Contracts.

16. To furnish evidence to STATE, in a form acceptable to STATE, that arrangements have been made for the protection, relocation, or removal of all conflicting facilities within the SHS right of way and that such work will be completed prior to the award of the contract to construct PROJECT or as covered in the PS&E for said contract. This evidence shall include a reference to all required SHS encroachment permits.

17. To acquire and furnish all right of way, if any, outside of the existing SHS right of way and to perform all right of way activities, including all eminent domain activities, if necessary, at no cost to STATE, and in accordance with procedures acceptable to STATE. These activities shall comply with all applicable State and Federal laws and regulations, subject to STATE's IQA to ensure that the completed work and title to property acquired for PROJECT is acceptable for incorporation into the SHS right of way.

18. To utilize the services of a qualified public agency or a qualified consultant, as determined by STATE's District Division Chief of Right of Way, in all matters related to the acquisition of right of way in accordance with STATE's procedures as published in STATE's current Right of Way Manual. Whenever personnel other than personnel of a qualified public agency, or a qualified consultant, are utilized, administration of the personnel contract shall be performed by a qualified Right of Way person employed or retained by RCTC.

19. To certify legal and physical control of right of way ready for construction and that all right of way parcels were acquired in accordance with applicable State and Federal laws and regulations, subject to review and concurrence by STATE prior to the advertisement for bids for the contract to construct PROJECT.

20. To deliver to STATE legal title to the right of way, including access rights, free and clear of all encumbrances detrimental to STATE's present and future uses not later than the date of acceptance by STATE of maintenance and operation of the SHS facility. Acceptance of said title by STATE is subject to a review of a Policy of Title Insurance in the name of the State of California to be provided and paid for by RCTC.

21. To be responsible for, and to the STATE's satisfaction, the investigation of potential hazardous material sites within and outside of the existing SHS right of way that could impact PROJECT as part of performing any preliminary engineering work. If RCTC discovers hazardous material or contamination within the PROJECT study area during said investigation, RCTC shall immediately notify STATE.

22. If RCTC desires to have STATE advertise, award, and administer the construction contract for PROJECT, RCTC shall provide STATE with acceptable plans prepared by RCTC or RCTC's consultant on either 80 min/700mb CDs or DVDs 4.7 GB or 8.5 GB double capacity DVDs using MicroStation Version 08.05.02.47 .dgn files, and CaiCE Visual Transportation Version 10. SP5 (CaiCE VT). In addition, each MicroStation plan sheet .dgn file shall be accompanied by a black-and-white, 400 DPI, CCITT G4 tiff image of the same .dgn file. One copy of the data on CD/DVD, including the Engineers electronic signature and seal, shall be provided to STATE upon completion of the final PROJECT PS&E. STATE reserves the right to modify these CD/DVD requirements and STATE shall provide RCTC advance notice of any such modifications. Files may be submitted on up to five (5) CDs or, if larger, on DVDs. All submitted .dgn files shall be compressed and shall be successfully run through AXIOM FILEFIXER software or EDG. Reimbursement to STATE for costs incurred by STATE to advertise, award, and administer the construction contract for PROJECT will be covered in the separate Cooperative Agreement referred to in Article 19 of Section III of this Agreement.

23. All aerial photography and photogrammetric mapping shall conform to STATE's current standards.

24. A copy of all original survey documents resulting from surveys performed for PROJECT, including original field notes, adjustment calculations, final results, and appropriate

intermediate documents, shall be delivered to STATE and shall become property of STATE. For aerial mapping, all information and materials listed in the document "Materials Needed to Review Consultant Photogrammetric Mapping" shall be delivered to STATE and shall become property of STATE.

25. All original recorded land title documents created by PROJECT shall be delivered to STATE and become property of STATE.

26. To submit to STATE a list of STATE horizontal and vertical control monuments which will be used to control surveying activities for PROJECT.

SECTION II

STATE AGREES:

1. At no cost to RCTC, to complete STATE's review as CEQA Lead Agency and NEPA Lead Agency, if applicable, of the environmental documentation, including the investigative studies and technical environmental reports, prepared and submitted by RCTC and to provide IQA of all RCTC work necessary for completion of the PR, PS&E, and right of way activities for PROJECT done by RCTC, including, but not limited to, investigation of potential hazardous material sites and all right of way activities undertaken by RCTC or its designee, and provide prompt reviews and concurrence, as appropriate, of submittals by RCTC, while cooperating in timely processing of documents necessary for completion of the environmental documentation, PR, PS&E, and right of way activities for PROJECT.

2. Upon proper application by RCTC and by RCTC's contractor, to issue, at no cost to RCTC and RCTC's contractor, the necessary encroachment permits for required work within the SHS right of way as more specifically defined elsewhere in this Agreement.

3. To allocate funds in the amount of $11,885,000 from STATE's STIP-RIP funding source to PROJECT. These Funds were programmed by the California Transportation Commission (CTC) at the September 5, 2007 meeting for PROJECT development services for PROJECT.

4. To deposit with RCTC within twenty-five (25) days of receipt of billing therefor, the amount of $1,170,000 which figure represents the estimated initial deposit for two months estimated costs of preliminary engineering, PS&E, and for one month estimated right of way capital and right of way acquisition cost, to be funded from STATE's STIP/RIP funding source, required for PROJECT. Total anticipated PROJECT cost, to be paid from STATE's STIP-RIP funding source, is estimated to be the amount of $11,885,000.

5. To deposit with RCTC not later than twenty-five (25) working days of receipt of billing or the beginning of each month the estimated expenditures for that month, and to continue making such advance deposits on a monthly basis until completion of PA&ED, PS&E, and right of way activities for PROJECT or until the STATE's STIP-RIP amount to the extent of $11,885,000 is paid out to RCTC, which ever occurs earlier.

SECTION III

IT IS MUTUALLY AGREED:

1. All obligations of STATE under the terms of this Agreement are subject to the appropriation of resources by the Legislature, State Budget Act authority and the allocation of funds by the CTC.

2. The parties to this Agreement understand and agree that STATE's IQA is defined as providing STATE policy and procedural guidance through to completion of the PROJECT preliminary engineering, PS&E, and right of way phases administered by RCTC. This guidance includes prompt reviews by STATE to assure that all work and products delivered or incorporated into the PROJECT by RCTC conform with then existing STATE standards. IQA does not include any PROJECT related work deemed necessary to actually develop and deliver the PROJECT, nor does it involve any validation to verify and recheck any work performed by RCTC and/or its consultants or contractors and no liability will be assignable to STATE, its officers and employees by RCTC under the terms of this Agreement or by third parties by reason of STATE's IQA activities. All work performed by STATE pursuant to an amendment to this agreement, that is not direct IQA shall be chargeable against PROJECT funds as a service for which STATE will invoice its actual costs and RCTC will pay or authorize STATE to reimburse itself from then available PROJECT funds.

3. The Project Study Report (PSR) for PROJECT, approved on December 21, 2006, is by this reference, made an express part of this Agreement. If there is a conflict of terms between the PSR and this Agreement, the terms of this Agreement shall prevail.

4. The basic design features addressed in the approved PSR will be evaluated in the PR and environmental documentation in addition to any other viable alternatives, within the PROJECT limits, that may be developed during the course of the studies, unless modified as required for completion of the PROJECT's environmental documentation and/or if applicable, requested by the Federal Highway Administration (FHWA).

5. The design, right of way acquisition, and preparation of environmental documentation and related investigative studies and technical environmental reports for PROJECT shall be performed in accordance with all applicable Federal and STATE standards and practices current as of the date of performance. Any exceptions to applicable design standards shall first be considered by STATE for approval via the processes outlined in

STATE's Highway Design Manual and appropriate memoranda and design bulletins published by STATE. In the event that STATE proposes and/or requires a change in design standards, implementation of new or revised design standards shall be done as part of the work on PROJECT in accordance with STATE's current Highway Design Manual Section 82.5, "Effective Date for Implementing Revisions to Design Standards." STATE shall consult with RCTC in a timely manner regarding the effect of proposed and/or required changes on PROJECT.

6. STATE will be the CEQA Lead Agency and RCTC will be a CEQA Responsible Agency. STATE will be the NEPA Lead Agency, if applicable. RCTC will assess PROJECT impacts on the environment and RCTC will prepare the appropriate level of environmental documentation and necessary associated supporting investigative studies and technical environmental reports in order to meet the requirements of CEQA and if applicable, NEPA. RCTC will submit to STATE all investigative studies and technical environmental reports for STATE's review, comment, and approval. The environmental document and/or categorical exemption/exclusion determination, including the administrative draft, draft, administrative final, and final environmental documentation, as applicable, will require STATE's review, comment, and approval prior to public availability.

   If, during preparation of preliminary engineering, preparation of the PS&E, performance of right of way activities, or performance of PROJECT construction, new information is obtained which requires the preparation of additional environmental documentation to comply with CEQA and if applicable, NEPA, this Agreement will be amended to include completion of those additional tasks by RCTC.

7. RCTC agrees to obtain, as a PROJECT cost, all necessary PROJECT permits, agreements and/or approvals from appropriate regulatory agencies, unless the parties agree otherwise in writing. If STATE agrees in writing to obtain said PROJECT permits, agreements, and/or approvals, those said costs shall be paid by RCTC, as a PROJECT cost.

8. RCTC shall be fully responsible for complying with and implementing any and all environmental commitments set forth in the environmental documentation, permit(s), agreement(s) and/or environmental approvals for PROJECT. The costs of said compliance and implementation shall be a PROJECT cost.

9. If there is a legal challenge to the environmental documentation, including supporting investigative studies and/or technical environmental report(s), permit(s), agreement(s), environmental commitments and/or environmental approval(s) for PROJECT, all legal costs associated with those said legal challenges shall be a PROJECT cost.

10. RCTC subject to STATE's prior review and approval, as a PROJECT cost, shall be responsible for preparing, submitting, publicizing and circulating all public notices related to the CEQA environmental process and if applicable, the NEPA environmental process, including, but not limited to, notice(s) of availability of the environmental document and/or determinations and notices of public hearings. Public notices shall

comply with all State and Federal laws, regulations, policies and procedures. STATE will work with the appropriate Federal agency to publish notices in the Federal Register, if applicable.

STATE, as a PROJECT cost, shall be responsible for overseeing the planning, scheduling and holding of all public meetings/hearings related to the CEQA environmental process and if applicable, the NEPA environmental process. RCTC to the satisfaction of STATE and subject to all of STATE's and FHWA's policies and procedures, shall be responsible for performing the planning, scheduling and details of holding all public meetings/hearings related to the CEQA environmental process and if applicable, the NEPA environmental process. STATE will participate as CEQA Lead Agency and if applicable, the NEPA Lead Agency, in all public meetings/hearings related to the CEQA environmental process and if applicable, the NEPA environmental process, for PROJECT. RCTC shall provide STATE the opportunity to provide comments on any public meeting/hearing exhibits, handouts or other materials at least ten (10) days prior to any such public meetings/hearings. STATE maintains final editorial control of exhibits, handouts or other materials to be used at public meetings/hearings.

11. In the event RCTC would like to hold separate and/or additional public meetings/hearings regarding the PROJECT, RCTC must clarify in any meeting/hearing notices, exhibits, handouts or other materials that STATE is the CEQA Lead Agency and if applicable, the NEPA Lead Agency, and RCTC is the CEQA Responsible Agency. Such notices, handouts and other materials shall also specify that public comments gathered at such meetings/hearings are not part of the CEQA and if applicable, NEPA, public review process. RCTC shall provide STATE the opportunity to provide comments on any meeting/hearing exhibits, handouts or other materials at least ten (10) days prior to any such meetings/hearings. STATE maintains final editorial control of exhibits, handouts or other materials to be used at public meetings/hearings solely with respect to text or graphics that could lead to public confusion over CEQA and if applicable, NEPA, related roles and responsibilities.

12. All administrative reports, studies, materials, and documentation, including, but not limited to, all administrative drafts and administrative finals, relied upon, produced, created or utilized for PROJECT will be held in confidence pursuant to Government Code section 6254.5(e). The parties agree that said material will not be distributed, released or shared with any other organization, person or group other than the parties' employees, agents and consultants whose work requires that access without the prior written approval of the party with the authority to authorize said release and except as required or authorized by statute or pursuant to the terms of this Agreement.

13. RCTC's share of all changes in development and construction costs associated with modifications to the basic design features as described above shall be in the same proportion as described in this Agreement, unless mutually agreed to the contrary by STATE and RCTC in a subsequent amendment to this Agreement.

14. The party that discovers hazardous materials (HM) will immediately notify the other party(ies) to this Agreement.

HM-1 is defined as hazardous material (including but not limited to hazardous waste) that requires removal and disposal pursuant to federal or state law, whether it is disturbed by PROJECT or not.

HM-2 is defined as hazardous material (including but not limited to hazardous waste) that may require removal and disposal pursuant to federal or state law, only if disturbed by PROJECT.

15. STATE, independent of PROJECT, is responsible for any HM-1 found within existing SHS right of way. STATE will undertake HM-1 management activities with minimum impact to PROJECT schedule and will pay all costs for HM-1 management activities.

RCTC, independent of PROJECT, is responsible for any HM-1 found outside existing SHS right of way. RCTC will undertake HM-1 management activities with minimum impact to PROJECT schedule and will pay all costs for HM-1 management activities.

16. If HM-2 is found within the limits of PROJECT, the public agency responsible for advertisement, award, and administration (AAA) of the PROJECT construction contract will be responsible for HM-2 management activities.

Any management activity cost related to HM-2 is a PROJECT construction cost.

17. Management activities related to either HM-1 or HM-2 include, without limitation, any necessary manifest requirements and designation of disposal facility.

18. STATE's acquisition or acceptance of title to any property on which any hazardous material is found will proceed in accordance with STATE's policy on such acquisition.

19. A separate Cooperative Agreement or agreements will be required to address Landscape Maintenance, and to cover responsibilities and funding for the construction phase of PROJECT.

20. Nothing within the provisions of this Agreement is intended to create duties or obligations to or rights in third parties not parties to this Agreement or to affect the legal liability of either party to the Agreement by imposing any standard of care with respect to the development, design, construction, operation, or maintenance of the SHS and public facilities different from the standard of care imposed by law.

21. Neither STATE nor any officer or employee thereof is responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by RCTC under or in connection with any work, authority or jurisdiction conferred upon RCTC or arising under this Agreement. It is understood and agreed that, RCTC will fully defend, indemnify and save harmless STATE and all its officers and employees from all claims,

suits or actions of every name, kind and description brought forth under, including, but not limited to, tortious, contractual, inverse condemnation or other theories or assertions of liability occurring by reason of anything done or omitted to be done by RCTC under this Agreement.

22. Neither RCTC nor any officer or employee thereof is responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by STATE, under or in connection with any work, authority or jurisdiction conferred upon STATE or arising under this Agreement. It is understood and agreed that, STATE will fully defend, indemnify and save harmless RCTC and all its officers and employees from all claims, suits or actions of every name, kind and description brought forth under, including, but not limited to, tortious, contractual, inverse condemnation or other theories or assertions of liability occurring by reason of anything done or omitted to be done by STATE under this Agreement.

23. Prior to the commencement of any work pursuant to this Agreement, either STATE or RCTC may terminate this Agreement by written notice to the other party.

24. No alteration or variation of the terms of this Agreement shall be valid unless made by a formal amendment executed by the parties hereto and no oral understanding or agreement not incorporated herein shall be binding on any of the parties hereto.

25. This Agreement shall terminate upon satisfactory completion of all PA&ED, PS&E and right of way obligations of RCTC described in this Agreement, with concurrence of STATE, or on December 31, 2014, whichever is earlier in time, except that the ownership article, indemnification articles, Section III, Article 6 and 7, environmental commitment article, legal challenge article, and claims article shall remain in effect until terminate or modified, in writing, by mutual agreement. Should any claims arise out of PROJECT PA&ED, PS&E or right of way activities and be asserted against one of the parties hereto, the parties agree to extend the fixed termination date of this Agreement, until such time as the construction related claims are settled, dismissed or paid.

SIGNATURES ON FOLLOWING PAGE:

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

WILL KEMPTON
Director

By: _____
KARLA SUTLIFF
District Director (Acting)

APPROVED AS TO FORM AND PROCEDURE:

By: _____
Attorney,
Department of Transportation

CERTIFIED AS TO FUNDS:

By: _____
District Budget Manager

CERTIFIED AS TO FINANCIAL TERMS AND POLICIES:

By: _____
Accounting Administrator

RIVERSIDE COUNTY
TRANSPORTATION COMMISSION

By: _____
ANNE E. MAYER
Executive Director

Attest: _____
BEST, BEST AND KRIEGER
Legal Counsel

EXHIBIT "A"
PROJECT COST SUMMARY

PHASE	Amount	FUND TYPE			TOTAL
Preliminary Engineering	$2,273,000	STIP-RIP			$2,273,000
Environmental Studies	$3,000,000	STIP-RIP			$3,000,000
PS&E	$6,127,000	STIP-RIP			$6,127,000
Right of Way Engineering	$50,000	STIP-RIP			$50,000
Right of Way Capital	$435,000	STIP-RIP			$435,000
Total Project Cost	$11,885,000	STIP-RIP			$11,885,000

RESOLUTION NO. 05-012

A RESOLUTION OF THE RIVERSIDE COUNTY TRANSPORTATION COMMISSION SUPERCEDING RESOLUTION 91-002 AND ADOPTING AN UPDATED POLICY DESIGNATING OFFICIALS AUTHORIZED TO EXECUTE AGREEMENTS, ORDINANCES AND RESOLUTIONS

WHEREAS, the Riverside County Transportation Commission (the "Commission") is authorized under state law, including Sections 130000 et seq. of the Public Utilities Code, to enter into binding agreements with public and private parties for a variety of purposes, and also to enact resolutions and ordinances; and

WHEREAS, the Commission is eligible to receive Federal and/or State funding for certain Transportation Projects, through the California Department of Transportation; and

WHEREAS, various agreements, including but not limited to Master Agreements, Program Supplemental Agreements, Fund Exchange Agreements and/or Fund Contribution/Transfer Agreements need to be executed with the California Department of Transportation before such funds could be claimed; and

WHEREAS, the Commission wishes to delegate authorization to execute agreements, and any amendments thereto, to designated officials on behalf of the Commission.

NOW, THEREFORE, BE IT RESOLVED by the Riverside County Transportation Commission, as follows:

Section 1. The Chairperson of the Commission shall be authorized to execute agreements, resolutions and ordinances on behalf of the Commission, including but not limited to Master Agreements, Program Supplemental Agreements, Fund Exchange Agreements and/or Fund Contribution/Transfer Agreements with the California Department of Transportation, which have been approved by the Commission. When the Chairperson is not available, the Vice-Chairperson shall be so empowered.

Section 2. The Executive Director shall be authorized to execute agreements on behalf of the Commission, including but not limited to Master Agreements, Program Supplemental Agreements, Fund Exchange Agreements and/or Fund Contribution/Transfer Agreements with the

California Department of Transportation, which have been approved by the Commission. When the Executive Director is not available, the Deputy Executive Director shall be so empowered.

Section 3. Where it is necessary for the signature of the Chairperson, Vice-Chairperson, Executive Director or Deputy Executive Director to be attested, the Clerk of the Commission or her designee shall be authorized to attest as to the authenticity of such signature.

Section 4. This Resolution supercedes Resolution No. 91-002 of the Commission.

APPROVED AND ADOPTED this 14th day of September, 2005.

C. Robin Lowe, Chair
Riverside County Transportation Commission

ATTEST:

Naty Kopenhaver, Clerk of the
Riverside County Transportation Commission

Attachment J

Approved PSR/PDS

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: MICHAEL A. PEROVICH
DEPUTY DISTRICT DIRECTOR

Date: December 20, 2006
File: 08-Riv.91-KP R0.59/R5.98
08-Riv.71-KP 3.33/4.88
EA 0F541K

From: GREG RAMIREZ
Chief
Pre-Programming/Engineering Studies

Subject: Project Study Report/Project Development Support

It is recommended that the attached Project Study Report/Project Development Support be approved for the above referenced project.

RECOMMENDED BY:

Greg Ramirez
Chief, Pre-Prog/Eng Studies

CONCURRED BY:

William A. Mosby
Deputy District Director
Planning and Local Assistance

CONCURRED BY:

For Patricia Romo
Deputy District Director
Design

CONCURRED BY:

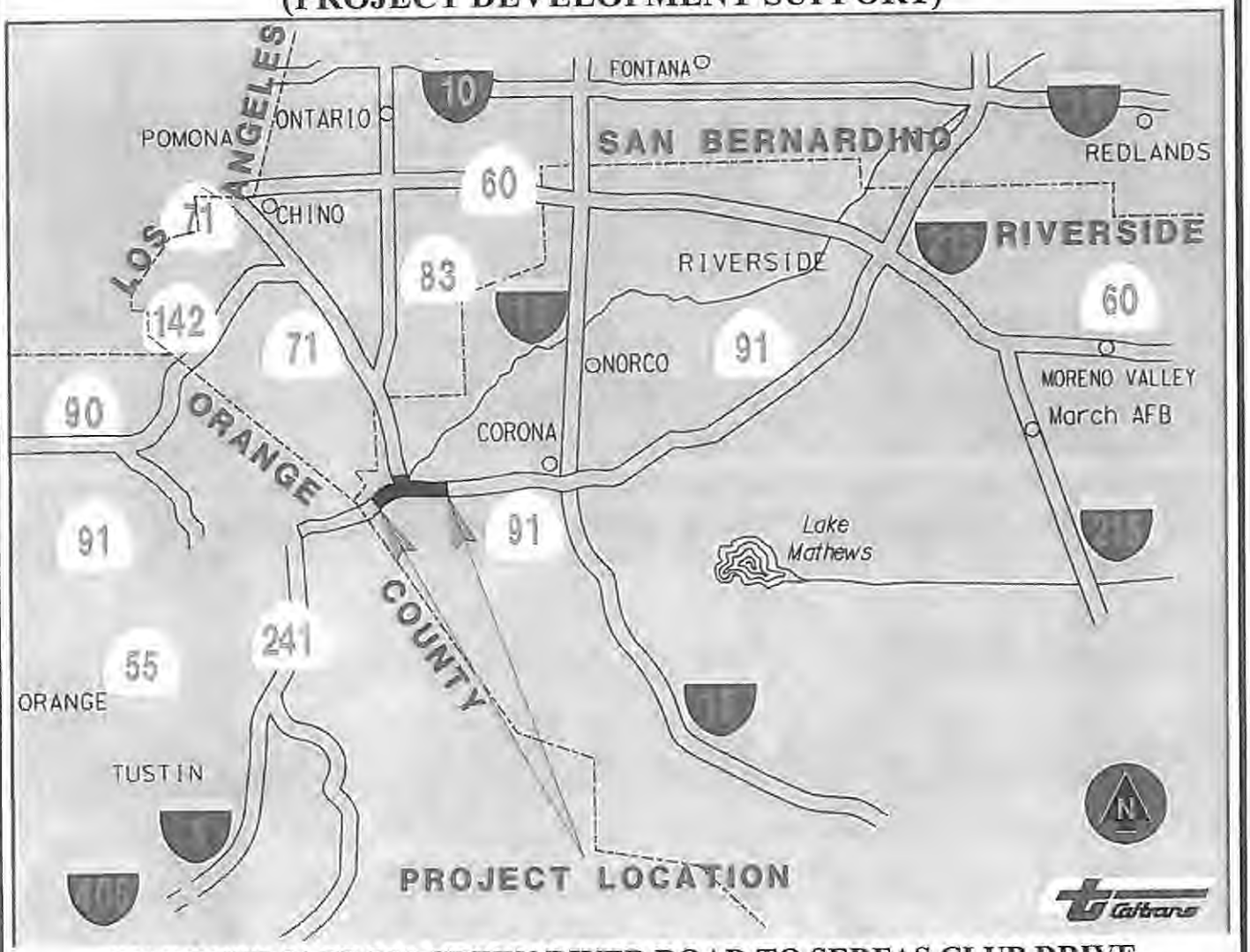
Ernest A. Figueroa
Deputy District Director
Environmental Planning

Attachment / Enclosure [as required]

Project Study Report/Project Development Support

08-Riv.91-KP R0.59/R5.98
08-Riv.71-KP 3.33/4.88
08-804-0F541K
DECEMBER 2006

PROJECT STUDY REPORT
(PROJECT DEVELOPMENT SUPPORT)



ON ROUTE 91 FROM GREEN RIVER ROAD TO SERFAS CLUB DRIVE IN THE CITY OF CORONA IN RIVERSIDE COUNTY

APPROVAL RECOMMENDED: Nassim Elias

NASSIM ELIAS, Project Manager

APPROVED: Michael A. Perovich

MICHAEL A. PEROVICH – District Director

12/21/06
Date

Attachment K

Pavement Life Cycle Cost Analysis Results

Life Cycle Cost Analysis Form

Alternative 4 Connectors (Preferred Alternative)

40 Year Jointed Plain Concrete Pavement (1.05' JPCP, 0.10' HMA-BB, 0.50' LCB and 0.70' AS)

Pavement Design Life:	40	Years	
Initial Construction Costs:		$ 2,448,874.00	
Initial Project Support Costs:		$ 587,730.00	
Future Maintenance & Rehabilitation Costs:		$ 114,376.00	
TOTAL AGENCY COSTS:			$ 3,150,980.00
USER COSTS:			$ 4,940.00
TOTAL LIFE-CYCLE COSTS:			$ 3,155,920.00

Alternative 1 Connectors:

40 Year Dense Graded Hot Mix Asphalt with Open Graded Friction Course (1.45' HMA and 0.50' AB)

Pavement Design Life:	40	Years	
Initial Construction Costs:		$ 3,184,918.00	
Initial Project Support Costs:		$ 764,380.00	
Future Maintenance & Rehabilitation Costs:		$ 517,132.00	
TOTAL AGENCY COSTS:			$ 4,466,430.00
USER COSTS:			$ 13,720.00
TOTAL LIFE-CYCLE COSTS:			$ 4,480,150.00

Reason that this is not the Preferred Alternative:

Higher Life Cycle Cost

Life Cycle Cost Analysis Form

Alternative 2 Connectors:

40 Year Rubberized Hot Mix Asphalt Gap Graded with Rubberized Hot Mix Asphalt Open Graded (0.20' RHMA-G, 1.25' HMA and 0.50' AB)

Pavement Design Life: 40 Years		
Initial Construction Costs:	$ 3,290,615.00	
Initial Project Support Costs:	$ 789,747.00	
Future Maintenance & Rehabilitation Costs:	$ 416,278.00	
TOTAL AGENCY COSTS:		$ 4,496,640.00
USER COSTS:		$ 6,920.00
TOTAL LIFE-CYCLE COSTS:		$ 4,450,560.00

Reason that this is not the Preferred Alternative:
Higher Life Cycle Cost

Alternative 3 Connectors:

40 Year Continuously Reinforced Concrete Pavement (0.95' CRCP, 0.50' HMA and 0.70' AS)

Pavement Design Life: 40 Years		
Initial Construction Costs:	$ 2,562,878.00	
Initial Project Support Costs:	$ 615,091.00	
Future Maintenance & Rehabilitation Costs:	$ 21,011.00	
TOTAL AGENCY COSTS:		$ 3,198,980.00
USER COSTS:		$ 1,960.00
TOTAL LIFE-CYCLE COSTS:		$ 3,200,940.00

Reason that this is not the Preferred Alternative :

Higher Life Cycle Cost

Life Cycle Cost Analysis Form

Alternative 4 Ramps: (Preferred Alternative)

40 Year Jointed Plain Concrete Pavement (0.95' PCC, 0.10'HMA-BB, 0.40' LCB and 0.60' AS)

Pavement Design Life: 40 Years		
Initial Construction Costs:	$ 890,613.00	
Initial Project Support Costs:	$ 213,747.00	
Future Maintenance & Rehabilitation Costs:	$ 42,890.00	
TOTAL AGENCY COSTS:		$ 1,147,250.00
USER COSTS:		$ 520.00
TOTAL LIFE-CYCLE COSTS:		$ 1,147,770.00

Alternative 1 Ramps:

40 Year Dense Graded Hot Mix Asphalt with Open Graded Friction Course (1.20' HMA and 0.50' AB)

Pavement Design Life: 40 Years		
Initial Construction Costs:	$ 1,013,614.00	
Initial Project Support Costs:	$ 243,267.00	
Future Maintenance & Rehabilitation Costs:	$ 193,919.00	
TOTAL AGENCY COSTS:		$ 1,450,800.00
USER COSTS:		$ 1,260.00
TOTAL LIFE-CYCLE COSTS:		$ 1,452,060.00

Reason that this is not the Preferred Alternative :

Higher Life Cycle Cost.

Alternative 2 Ramps:

40 Year Rubberized Hot Mix Asphalt Gap Graded with Rubberized Hot Mix Asphalt Open Graded (0.20' RHMA-G, 1.0' HMA and 0.50' AB)

Pavement Design Life:	40 Years		
Initial Construction Costs:		$ 1,056,977.00	
Initial Project Support Costs:		$ 253,674.00	
Future Maintenance & Rehabilitation Costs:		$ 156,109.00	
TOTAL AGENCY COSTS:			$ 1,466,760.00
USER COSTS:			$ 680.00
TOTAL LIFE-CYCLE COSTS:			$ 1,467,440.00

Reason that this is not the Preferred Alternative:

Higher Life Cycle Cost.

Life Cycle Cost Analysis Form

Alternative 3 Ramps:

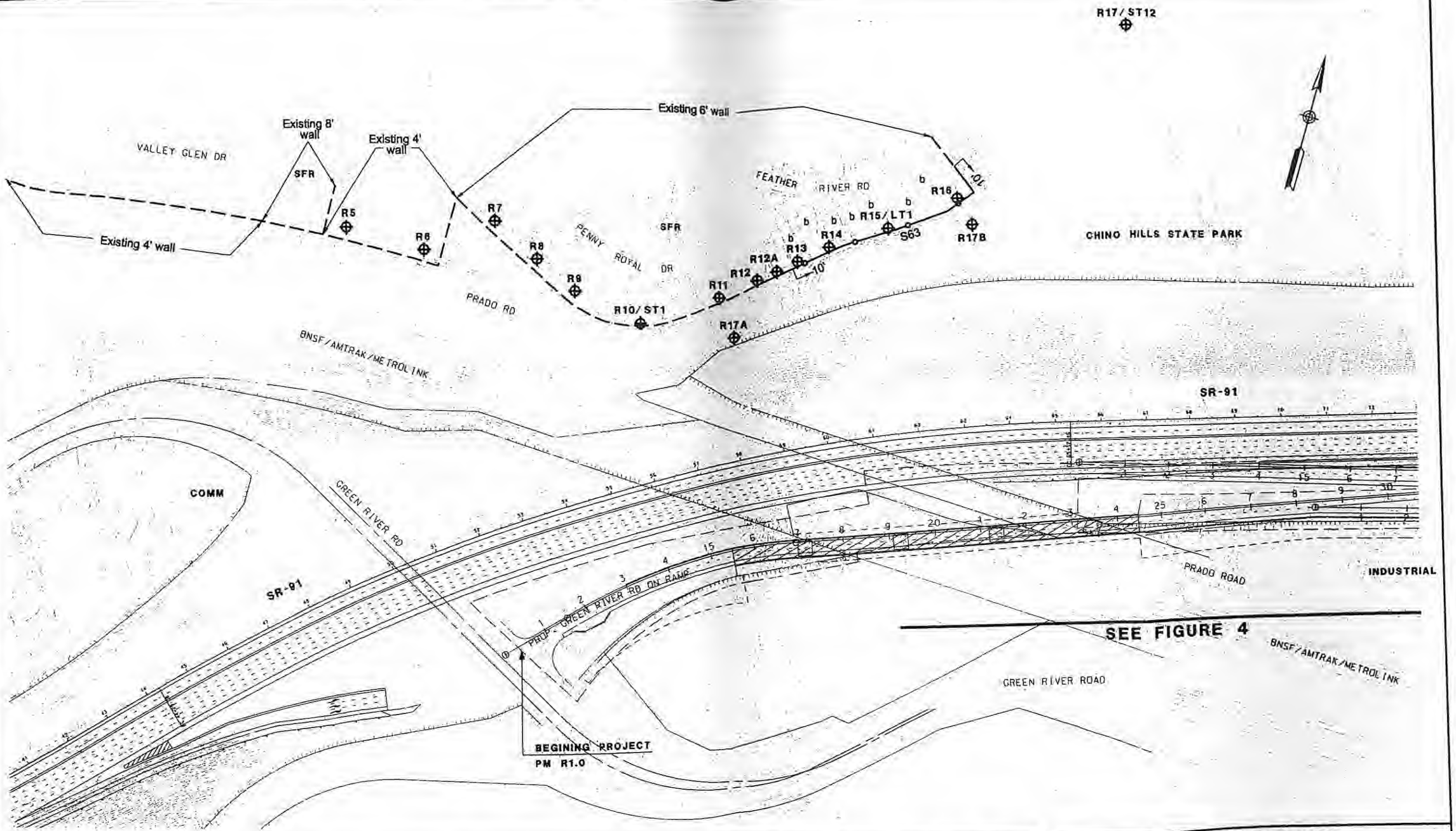
40 Year Continuously Reinforced Concrete Pavement (0.85' CRCP, 0.40' HMA and 0.60' AS)

Pavement Design Life:	40 Years		
Initial Construction Costs:		$ 900,398.00	
Initial Project Support Costs:		$ 216,095.00	
Future Maintenance & Rehabilitation Costs:		$ 8,321.00	
TOTAL AGENCY COSTS:			$ 1,124,814.00
USER COSTS:			$ 210.00
TOTAL LIFE-CYCLE COSTS:			$ 1,125,024.00

Reason that this is not the Preferred Alternative:
Not consistent with the adjacent connector pavement and only slightly lower life cycle cost as opposed to JPCP.

Attachment L

Considered Sound Barrier Location



LEGEND

- ST – SHORTERM MEASUREMENT
- LT – LONGTERM MEASUREMENT
- EXISTING WALL
- SOUNDWALL
- b – BENEFITED RESIDENCE
- SFR – SINGLE FAMILY RESIDENTIAL
- COMM – COMMERCIAL

1in : 200ft

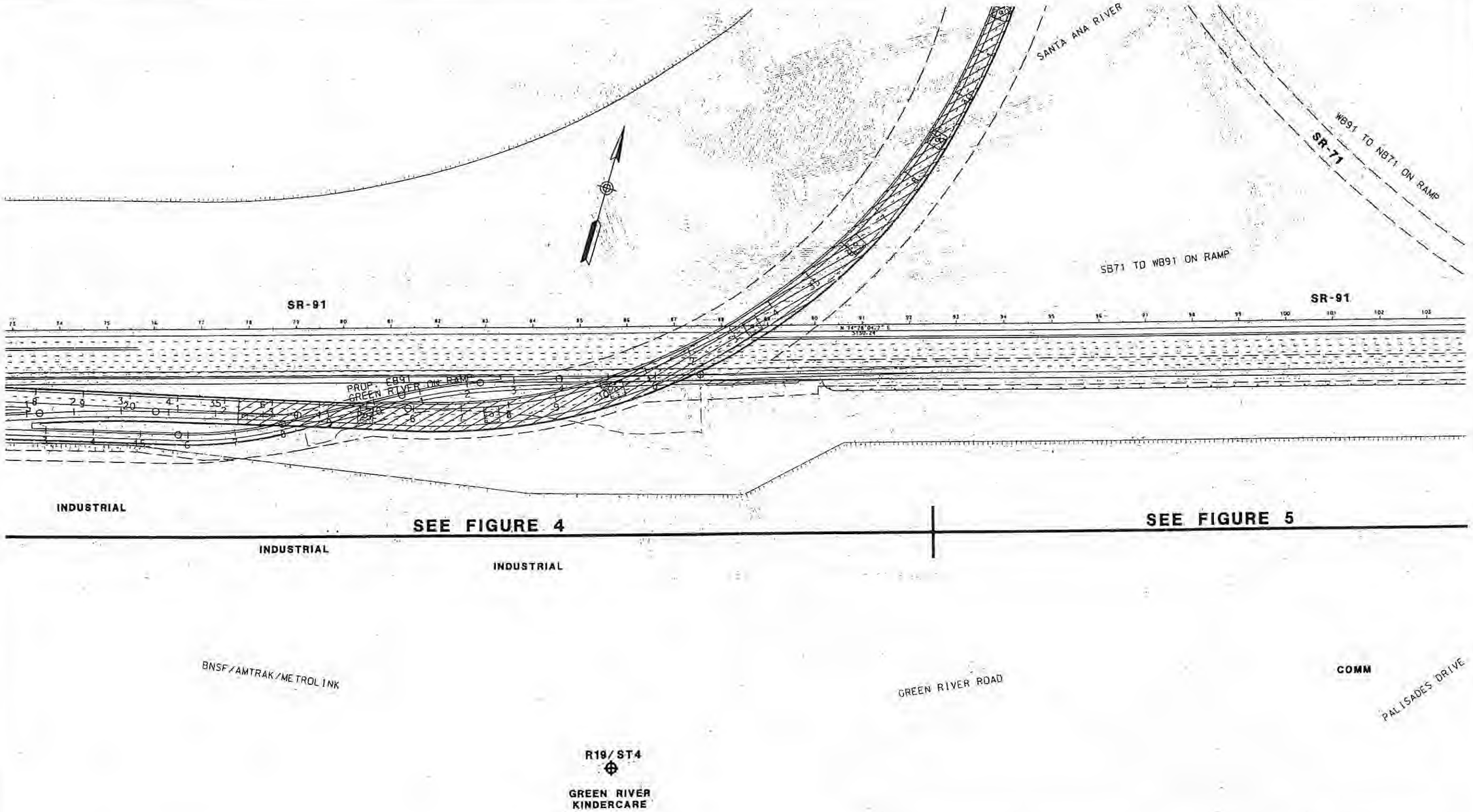
0 ft 100ft 200ft 300ft

PARSONS
100 WEST WALNUT ST.
PASADENA, CA 91124
(626) 440-6100

SR91/ SR71 PROJECT NOISE RECEPTOR & BARRIER LOCATIONS

JULY 1, 2009

FIGURE 1



LEGEND

- ST – SHORTERM MEASUREMENT
- LT – LONGTERM MEASUREMENT
- EXISTING WALL
- SOUNDWALL
- b – BENEFITED RESIDENCE
- SFR – SINGLE FAMILY RESIDENTIAL
- COMM – COMMERCIAL

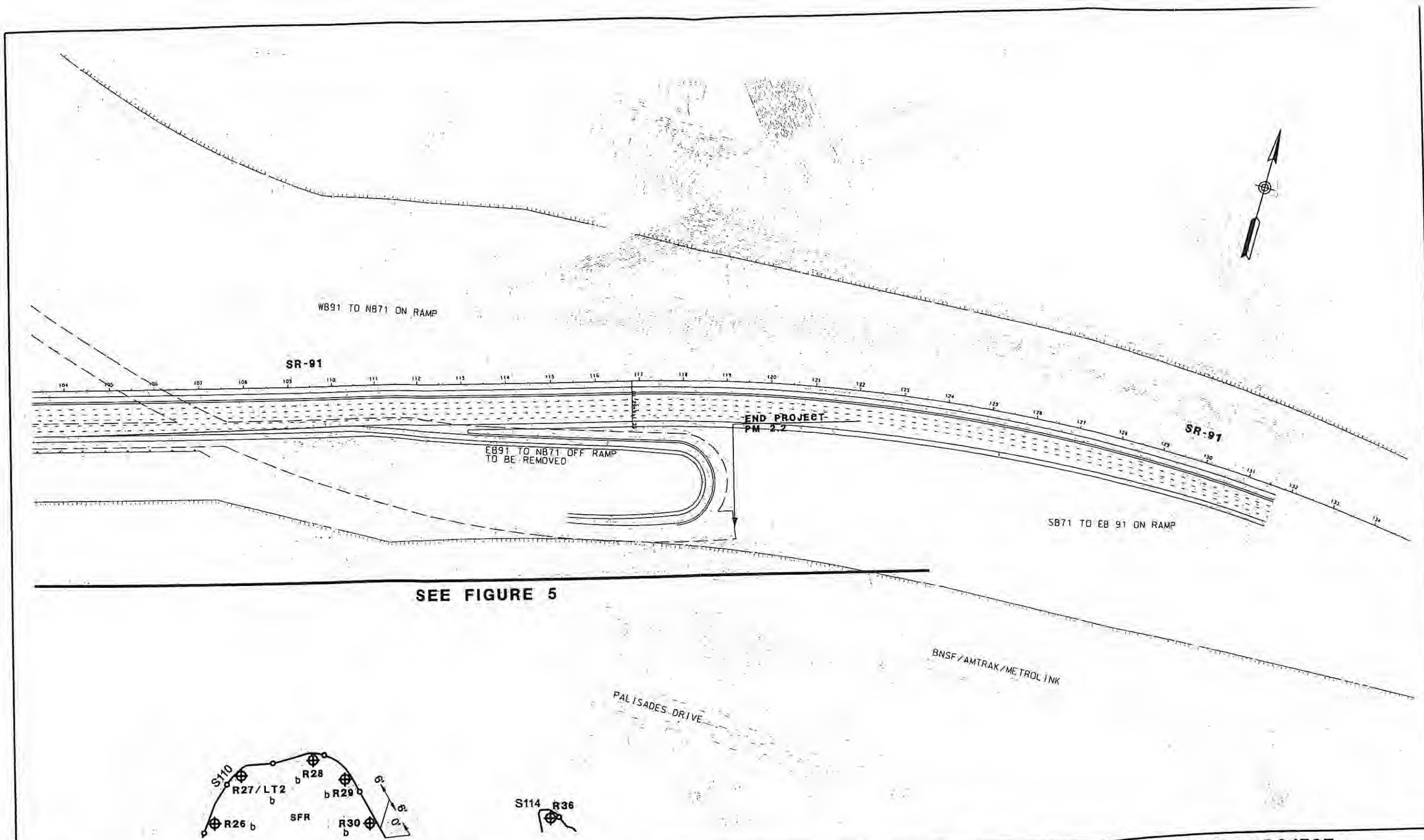
1in : 200ft

0 ft 100ft 200ft 300ft

PARSONS
100 WEST WALNUT ST.
PASADENA, CA 91124
(626) 440-6100

SR91/SR71 PROJECT NOISE RECEPTOR & BARRIER LOCATIONS

JULY 1, 2009 | FIGURE 2



LEGEND

- ST – SHORTERM MEASUREMENT
- LT – LONGTERM MEASUREMENT
- EXISTING WALL
- SOUNDWALL
- b – BENEFITTED RESIDENCE
- SFR – SINGLE FAMILY RESIDENTIAL
- COMM – COMMERCIAL

1in : 200ft

0 ft 100ft 200ft 300ft

PARSONS
100 WEST WALNUT ST.
PASADENA, CA 91124
(626) 440-6100

SR91/ SR71 PROJECT NOISE RECEPTOR & BARRIER LOCATIONS

JULY 1, 2009

FIGURE 3

SEE FIGURE 1

SEE FIGURE 2

INDUSTRIAL

INDUSTRIAL

PRADO ROAD

BNSF/AMTRAK/METROLINK

GREEN RIVER ROAD

DOMINGUEZ RANCH RD

R18/ST3

R19/ST4

GREEN RIVER KINDERCARE

OFFICE

LEGEND

- ST – SHORTERM MEASUREMENT
- LT – LONGTERM MEASUREMENT
- EXISTING WALL
- SOUNDWALL

b – BENEFITED RESIDENCE
SFR – SINGLE FAMILY RESIDENTIAL
COMM – COMMERCIAL

1in : 200ft

0 ft 100ft 200ft 300ft

PARSONS
100 WEST WALNUT ST.
PASADENA, CA 91124
(626) 440-6100

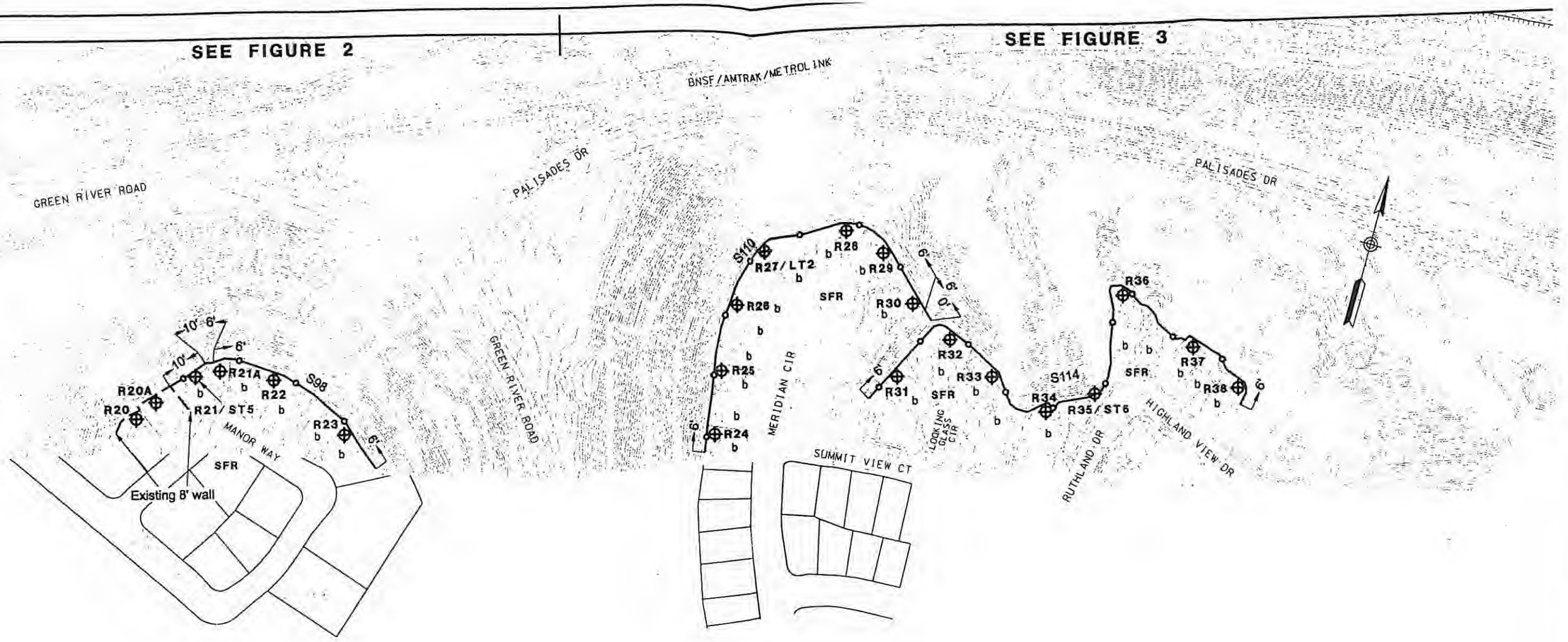
SR91/ SR71 PROJECT NOISE RECEPTOR & BARRIER LOCATIONS

JULY 1, 2009

FIGURE 4

SEE FIGURE 2

SEE FIGURE 3



LEGEND

- ST – SHORTERM MEASUREMENT
- LT – LONGTERM MEASUREMENT
- EXISTING WALL
- SOUNDWALL
- b – BENEFITED RESIDENCE
- SFR – SINGLE FAMILY RESIDENTIAL
- COMM – COMMERCIAL

1in : 200ft

0 ft 100ft 200ft 300ft

PARSONS
100 WEST WALNUT ST.
PASADENA, CA 91124
(626) 440-6100

SR91/ SR71 PROJECT NOISE RECEPTOR & BARRIER LOCATIONS

JULY 1, 2009

FIGURE 5

Attachment M

Preliminary Stage Construction

DIST	COUNTY	ROUTE	TOTAL PROJECT	NO.	SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	1	7

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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

PARSONS 3200 E GUASTI ROAD SUITE 200 ONTARIO, CALIFORNIA 91761	RIVERSIDE COUNTY TRANSPORTATION COMMISSION 4080 LEMON STREET RIVERSIDE, CALIFORNIA 92502

LEGEND

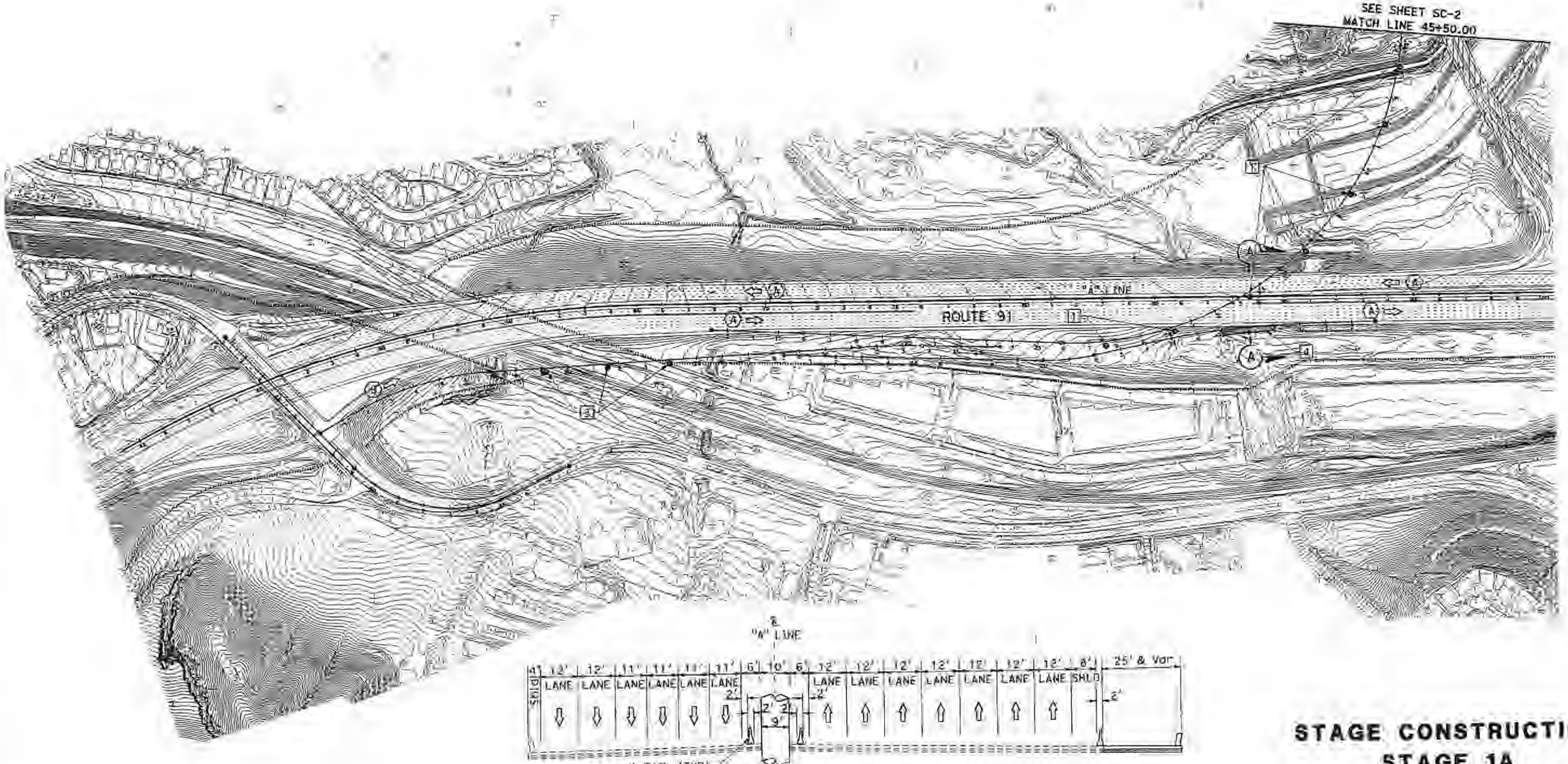
⇨ DIRECTION OF TRAVEL

▨ CONSTRUCT ROADWAY THIS STAGE

⊘ CONSTRUCT BRIDGE COLUMN THIS STAGE

STAGE 1A CONSTRUCTION FEATURE
1 CONSTRUCT PROPOSED EB91/NB71 CONNECTOR COLUMN
2 CONSTRUCT PROPOSED USACE DRIVEWAY
3 CONSTRUCT PROPOSED BNSF/PRADO Rd OC COLUMN
4 CONSTRUCT PROPOSED EB91-N71 CONNECTOR UC WIDENING

TRAFFIC HANDLING FEATURE
(A) EXISTING MAINLINE TRAFFIC TO REMAIN
(B) MAINTAIN TRAFFIC IN GREEN RIVER ROAD ON-RAMP



SECTION A-A
NO SCALE

STAGE CONSTRUCTION
STAGE 1A

SCALE: 1" = 200'

SC-1

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

BORDER LAST REVISED

RELATIVE BORDER SCALE IS IN INCHES

USERNAME =>

DGN FILE =>

CU 00000

EA 0F5410

DATE PLOTTED => | TIME PLOTTED =>

00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	2	7

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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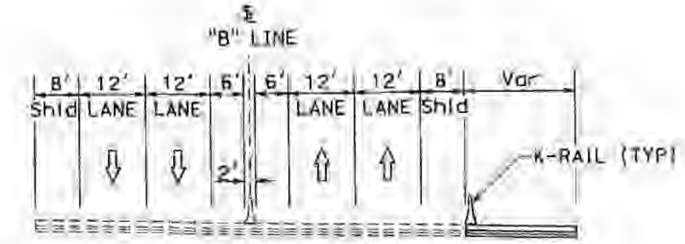
PARSONS
3200 E GUASTI ROAD
SUITE 200
ONTARIO, CALIFORNIA 91761

RIVERSIDE COUNTY
TRANSPORTATION COMMISSION
4080 LEMON STREET
RIVERSIDE, CALIFORNIA 92502

LEGEND
⇨ DIRECTION OF TRAVEL
▨ CONSTRUCT ROADWAY THIS STAGE
⊘ CONSTRUCT BRIDGE COLUMN THIS STAGE

STAGE 1A CONSTRUCTION FEATURE
1 CONSTRUCT PROPOSED EB91/NB71 BRIDGE COLUMN
2 CONSTRUCT PROPOSED USACE DRIVEWAY
3 CONSTRUCT PROPOSED BNSF/PRADO Rd OC COLUMN
4 CONSTRUCT PROPOSED E91-N71 CONNECTOR UC WIDENING

TRAFFIC HANDLING FEATURE
(A) EXISTING MAINLINE TRAFFIC TO REMAIN
(B) MAINTAIN TRAFFIC IN GREEN RIVER ROAD ON-RAMP



SECTION B-B
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONSULTANT FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

STAGE CONSTRUCTION
STAGE 1A

SCALE: 1" = 200'

SC-2

BORDER LAST REVISED 4/11/2006 | RELATIVE BORDER SCALE IS IN INCHES | USERNAME => | DGN FILE => | CU 00000 | EA 0F5410

DATE PLOTTED => 12/10/2006 TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	REVISED No.	SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	3	7

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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PARSONS
3200 E GUASTI ROAD
SUITE 200
ONTARIO, CALIFORNIA 91761

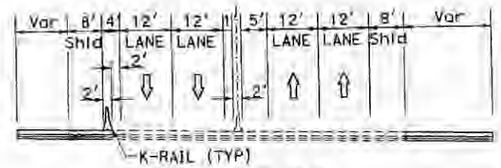
RIVERSIDE COUNTY
TRANSPORTATION COMMISSION
4080 LEMON STREET
RIVERSIDE, CALIFORNIA 92502

LEGEND
- DIRECTION OF TRAVEL
- CONSTRUCT ROADWAY THIS STAGE
- CONSTRUCT BRIDGE COLUMN THIS STAGE

STAGE 1B CONSTRUCTION FEATURE
1 CONSTRUCT PROPOSED SB ROUTE 71
2 CONSTRUCT PROPOSED SUKUT DRIVEWAY

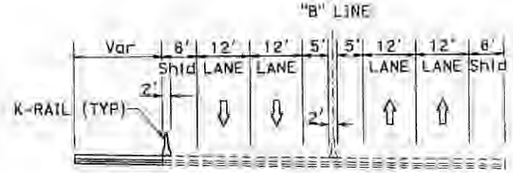
TRAFFIC HANDLING FEATURE
(A) EXISTING MAINLINE TRAFFIC TO REMAIN

℄ "B" LINE



SECTION D-D
NO SCALE

℄ "B" LINE



SECTION C-C
NO SCALE

STAGE CONSTRUCTION
STAGE 1B

SCALE: 1" = 200'

SC-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
CONSULTANT FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

DATE PLOTTED => 12/19/2008
TIME PLOTTED => 11:50:31 AM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES

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CU 00000

EA 0F5410

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	4	7

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

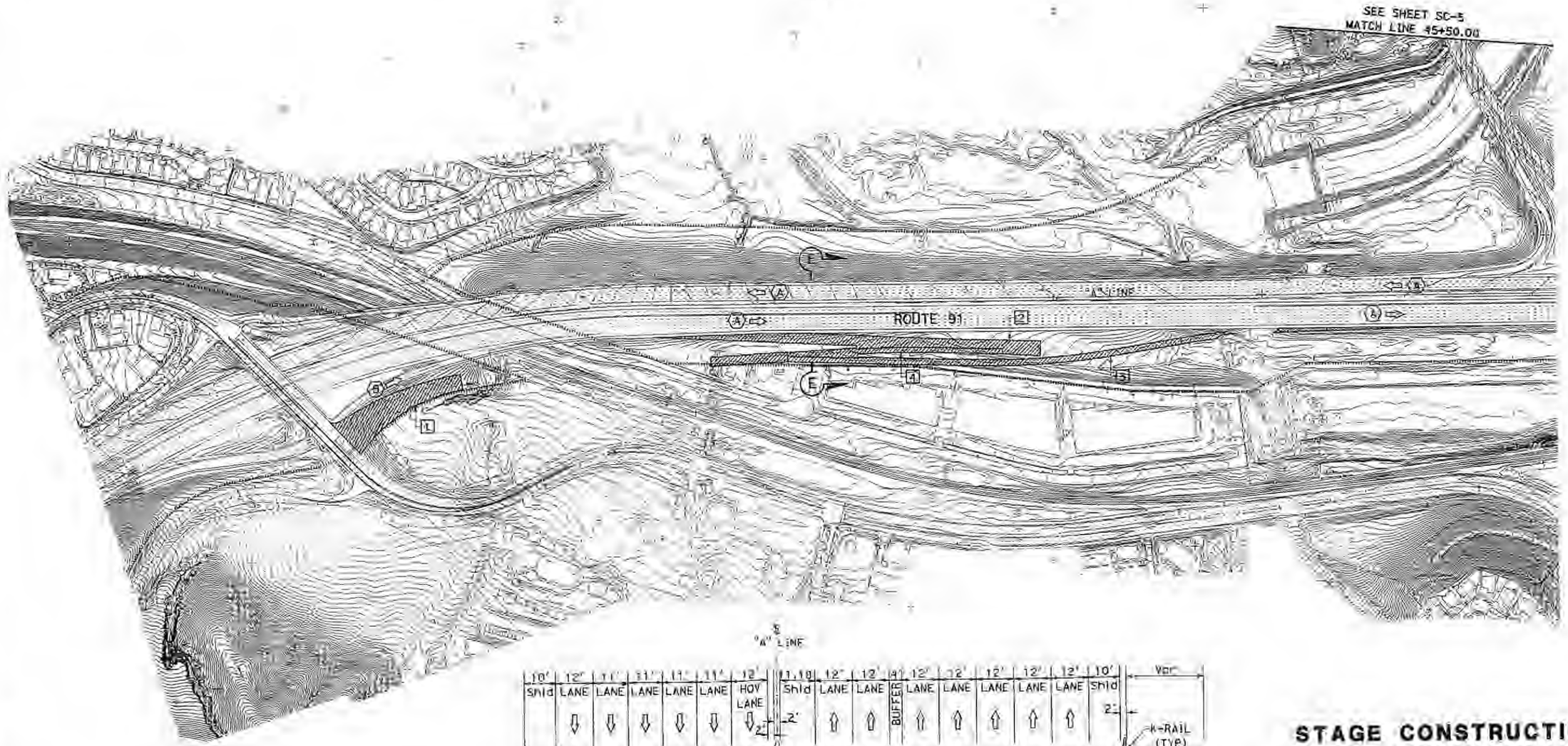
PARSONS
4200 E. [illegible]
SUITE 200
ONTARIO, CALIFORNIA 91761

RIVERSIDE COUNTY
TRANSPORTATION COMMISSION
4080 LEMON STREET
RIVERSIDE, CALIFORNIA 92502

LEGEND
- DIRECTION OF TRAVEL
- CONSTRUCT ROADWAY THIS STAGE
- CONSTRUCT BRIDGE COLUMN THIS STAGE

STAGE 2 CONSTRUCTION FEATURE
1 CONSTRUCT PROPOSED GREEN RIVER ROAD ON-RAMP
2 CONSTRUCT PROPOSED EB91/NB71 EMBANKMENT
3 CONSTRUCT PROPOSED EB ROUTE 91 ON-RAMP
4 CONSTRUCT PROPOSED NB ROUTE 71 ON-RAMP
5 REALIGN WB91/NB71 CONNECTOR

TRAFFIC HANDLING FEATURE
(A) EXISTING MAINLINE TRAFFIC TO REMAIN
(B) MAINTAIN TRAFFIC IN GREEN RIVER ROAD ON-RAMP



SECTION E-E
NO SCALE

STAGE CONSTRUCTION
STAGE 2

SCALE: 1" = 200'

SC-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
CONSULTANT FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

DATE PLOTTED = 12/1/2005
TIME PLOTTED = [illegible]

BORDER LAST REVISED ON 1/1/2002

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DGN FILE = [illegible]

CU 00000
EA 0F5410

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	5	7

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

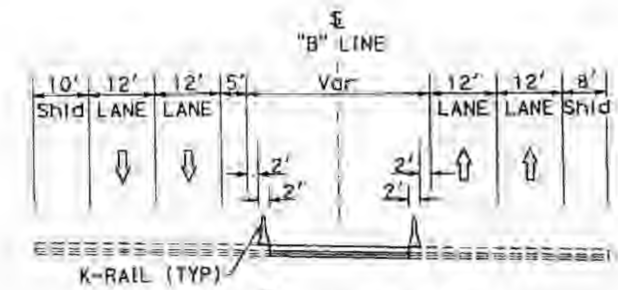
PARSONS
3200 E GUASTI ROAD
SUITE 200
ONTARIO, CALIFORNIA 91761

RIVERSIDE COUNTY
TRANSPORTATION COMMISSION
4080 LEMON STREET
RIVERSIDE, CALIFORNIA 92502

LEGEND
- DIRECTION OF TRAVEL
- CONSTRUCT ROADWAY THIS STAGE
- CONSTRUCT BRIDGE COLUMN THIS STAGE

STAGE 2 CONSTRUCTION FEATURE
1 CONSTRUCT PROPOSED GREEN RIVER ROAD ON-RAMP
2 CONSTRUCT PROPOSED EB91/NB71 EMBANKMENT
3 CONSTRUCT PROPOSED EB ROUTE 91 ON-RAMP
4 CONSTRUCT PROPOSED NB ROUTE 71 ON-RAMP
5 REALIGN WB91/NB71 CONNECTOR

TRAFFIC HANDLING FEATURE
(A) EXISTING MAINLINE TRAFFIC TO REMAIN
(B) MAINTAIN TRAFFIC IN GREEN RIVER ROAD ON-RAMP



SECTION F-F
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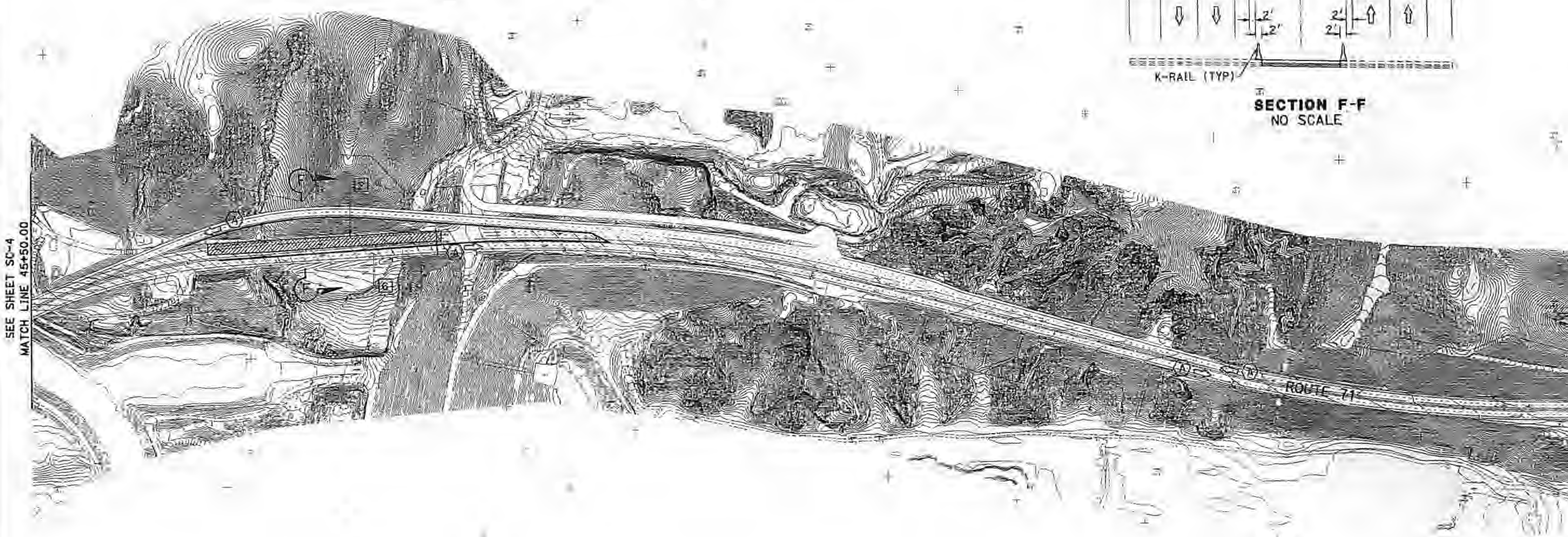

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

STAGE CONSTRUCTION
STAGE 2

SCALE: 1" = 200'

SC-5

CU 00000 EA 0F5410

BORDER LAST REVISED 9/11/2008

RELATIVE BORDER SCALE IS IN INCHES

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DGN FILE => 0f5410ma005.dgn

LAST REVISION 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	91, 71	R0.6/R2.6, 1.6/3.0	6	7

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

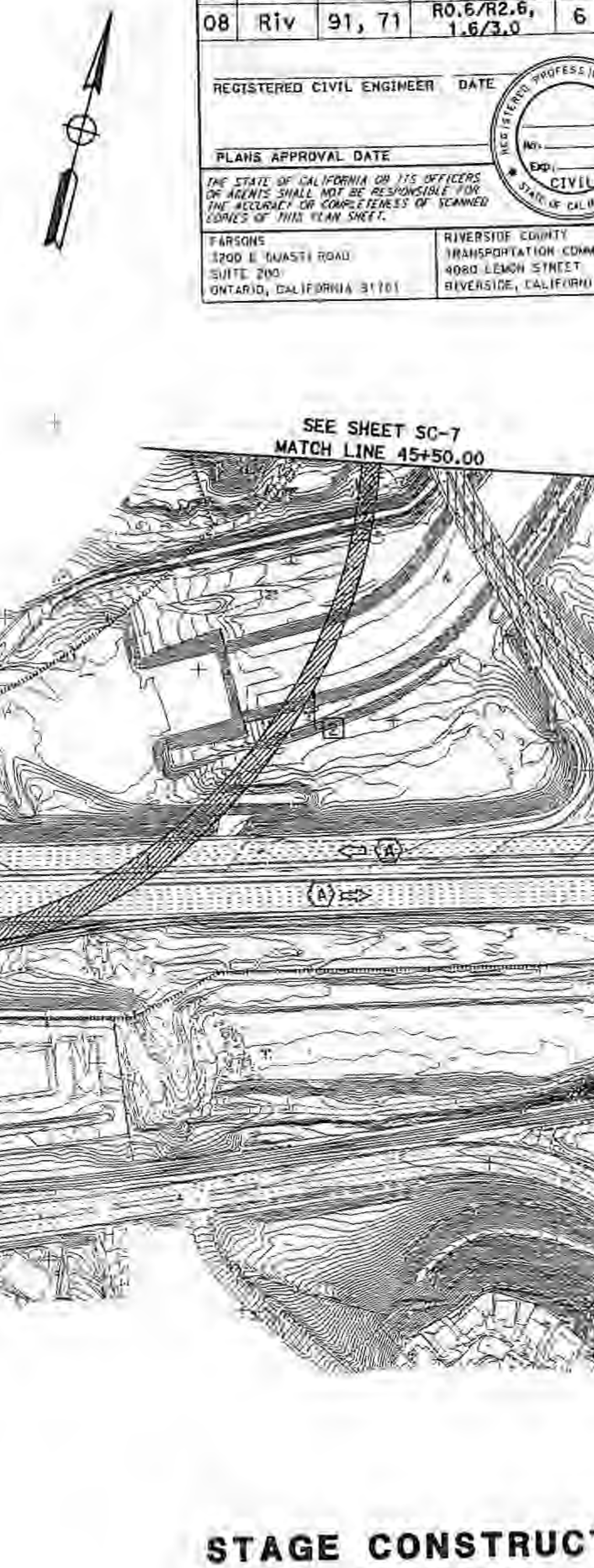
PARSONS
3200 E GUASTI ROAD
SUITE 200
ONTARIO, CALIFORNIA 91761

RIVERSIDE COUNTY
TRANSPORTATION COMMISSION
4080 LEMON STREET
RIVERSIDE, CALIFORNIA 92502

LEGEND
⇨ DIRECTION OF TRAVEL
CONSTRUCT BRIDGE THIS STAGE

STAGE 3 CONSTRUCTION FEATURE
1 CONSTRUCT PROPOSED BNSF/ PRADO ROAD OC BRIDGE
2 CONSTRUCT PROPOSED EB91/NB71 CONNECTOR

TRAFFIC HANDLING FEATURE
(A) EXISTING MAINLINE TRAFFIC TO REMAIN
(B) MAINTAIN TRAFFIC IN GREEN RIVER ROAD ON-RAMP



STAGE CONSTRUCTION
STAGE 3

SCALE: 1" = 200'

SC-6

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION
Caltrans
CONSULTANT FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

CU 00000
EA 0F5410

LAST REVISION 00-00-00
DATE PLOTTED => 12/10/2009
TIME PLOTTED => 11:03:16 AM

USERNAME => p0042923
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RELATIVE BORDER SCALE IS IN INCHES

BORDER LAST REVISED 4/11/2008

Attachment N

Storm Water Data Report

NS1229

Long Form - Storm Water Data Report

Dist-County-Route: 8-RIV-SR91/71

Post Mile Limits: SR 91PM 0.6/R2.6, SR 71 1.6/3.0 (KP SR 91 1.55/R6.73, SR 71 4.14/7.0)

Project Type: Interchange Project

Project ID (or EA): OF541

Program Identification: 0.75.600/400.000

Phase: ☐ PID ☒ PA/ED ☐ PS&E

Regional Water Quality Control Board(s): Santa Ana RWQCB (8)

Is the Project required to consider Treatment BMPs? Yes ☒ No ☐

If yes, can Treatment BMPs be incorporated into the project? Yes ☒ No ☐

If No, a Technical Data Report must be submitted to the RWQCB at least 30 days prior to the projects RTL date. List RTL Date: _____

Total Disturbed Soil Area: 54.5 acres (22.0 hectares) Risk Level: 2

Estimated: Construction Start Date: Jan 2013 Construction Completion Date: Dec 2015

Notification of Intent (NOI) Date to be submitted: December 2013

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

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

[Richard S. Bottcher], Registered Project Engineer/Landscape Architect — 9-22-10 Date

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

[Daniel Ciacchella), Project Manager — 10/19/2010 Date

[Cindy Gano), Designated Maintenance Representative — 10/21/2010 Date

[Ray Desselle), Designated Landscape Architect Representative — 10/21/2010 Date

[Stamp Required for PS&E only)

[Cathy Jochai), District/Regional Design SW Coordinator or Designee — 10/25/10 Date

AN 10/25/10

Attachment O

Category Determination

RCTC
Riverside County Transportation Commission

4080 Lemon Street, 3rd Floor • Riverside, CA
Mailing Address: P. O. Box 12008 • Riverside, CA 92502-2208
(951) 787-7141 • Fax (951) 787-7920 • www.rctc.org

June 8, 2011

Ms. Christy Connors
Deputy District Director, Design
464 West Fourth Street
San Bernardino, CA 92401-1400

Subject: SR 91/71 Interchange Improvements Project
EA 08-0F5410 Riv-71 PM 1.6/3.0 & Riv-91 PM R0.6/R2.6
Category Determination Request

Dear Ms. Connors:

Riverside County Transportation Commission (RCTC) requests approval of the Project Category Determination for the SR 91/71 Interchange Improvements project. According to Caltrans' Project Development Procedures Manual Chapter 8, Section 5, Project Development Categories, this Project is a Category 4A project based on the following criteria.

1. SR 91/71 interchange is an existing facility
2. A revised Freeway Agreement is not required
3. Route adoption is not required
4. Requires substantial new Right of Way
5. Substantially increases traffic capacity

Should you need further information, please contact David Speirs of Parsons at (949)333-4535.

Thank you.

Submitted by:

Khalid Bazmi, P.E. Toll Project Manager
Riverside County Transportation Commission

Concurred by:

Christy Connors, P.E.
Deputy District Director, Design
Caltrans, District 8

Cc: David Speirs - Parsons