

ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

Route 57/60 Confluence: Chokepoint Relief Project

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 57/60 Confluence: Chokepoint Relief Project*, 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, *Los Angeles County Metropolitan Transportation Authority*, and the Implementing Agency, *Los Angeles County Metropolitan Transportation Authority*, sometimes collectively referred to as the "Parties".

3. RECITAL

- 3.2 Whereas at its December 2, 2020 meeting the Commission approved the Trade Corridor Enhancement Program, and included in this program of projects the *Route 57/60 Confluence: Chokepoint Relief Project*, 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-20-77, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated December 2, 2020

- 4.3 All signatories agree to adhere to the Commission's Trade Corridor Enhancement Program, Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.
- 4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.
- 4.5 The Los Angeles County Metropolitan Transportation Authority (LA Metro) agrees to secure funds for any additional costs of the project.
- 4.6 The Los Angeles County Metropolitan Transportation Authority (LA Metro) 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 Los Angeles County Metropolitan Transportation Authority (LA Metro) agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines.
- 4.9 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits during the course of the project, and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.
- 4.10 The Transportation Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for four years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

5.1 Project Schedule and Cost

See Project Programming Request Form, attached as Exhibit A.

5.2 Project Scope

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

5.3 Other Project Specific Provisions and Conditions

- In the event of a cost overrun the state will cover a share proportionate to the state contribution of the TCEP funding identified in the Project Programming Request (PPR) submitted with this baseline agreement. (For example, if the state/regional TCEP funding share was a 40/60 ratio, the state may fund no more than 40% of the cost overrun.)
- Los Angeles County Metropolitan Transportation Authority intends to request, at time of allocation, use of non-proportional spending because local funds are not available until FY25 for the Construction Phase. This is reflected in Exhibit A.
- The SR-57/60 (PPNO 5394) 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 See attached
Exhibit B: Project Report

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Route 57/60 Confluence: Chokepoint Relief Project
Resolution TCEP-P-2021-07B

Fanny Pan

Digitally signed by Fanny Pan
Date: 2021.05.06 09:49:45 -07'00'

May 6, 2021

Phillip A. Washington

Date

Chief Executive Officer

Project Applicant

Fanny Pan

Digitally signed by Fanny Pan
Date: 2021.05.06 09:49:56 -07'00'

May 6, 2021

Phillip A. Washington

Date

Chief Executive Officer

Implementing Agency

Tony Tavares

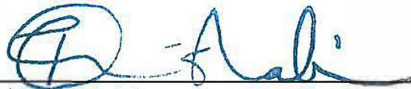
Digitally signed by Tony Tavares
Date: 2021.05.06 16:43:00 -07'00'

May 6, 2021

Date

District Director

California Department of Transportation



Toks Omishakin

6/17/21

Date

Director

California Department of Transportation



Mitchell Weiss

07/16/21

Date

Executive Director

California Transportation Commission

Amendment (Existing Project) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				Date	05/12/2021 14:24:17
Programs <input type="checkbox"/> LPP-C <input type="checkbox"/> LPP-F <input type="checkbox"/> SCCP <input checked="" type="checkbox"/> TCEP <input type="checkbox"/> STIP <input type="checkbox"/> Other					
District	EA	Project ID	PPNO	Nominating Agency	
07	27912	0715000076	5394	Los Angeles County Metropolitan Transportation Authority	
County	Route	PM Back	PM Ahead	Co-Nominating Agency	
Los Angeles	57	R 4.300	R 4.800		
Los Angeles	60	R 23.300	R 26.500	MPO	Element
				SCAG	Capital Outlay
Project Manager/Contact			Phone	Email Address	
Syed Huq			213-897-6714	Syed.Huq@dot.ca.gov	

Project Title

Route 57/60 Confluence: Chokepoint Relief Project

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

In Los Angeles County, the SR-57/60 project is in Diamond Bar and the City of Industry on Route 60 from EB 60 to SB 57 connector overcrossing to near Golden Springs Drive Undercrossing, and Route 57 from NB 57 to WB 60 connector overcrossing to South 57/60 separation. Improvements include construction of EB off-ramp bypass lane from SR-60, a new eastbound travel lane, an EB SR-60 on-ramp bypass; reconfiguration of Grand Ave EB on- and off-ramps and completion of WB on-ramp; widening of Grand Ave and reconstruction of bridge overcrossing; reconstruction of EB SR-60 Diamond Bar on-ramp. Improvements to the SR-57/SR-60 Confluence are needed to improve safety and operational

Component	Implementing Agency
PA&ED	City of Industry
PS&E	Los Angeles County Metropolitan Transportation Authority
Right of Way	Los Angeles County Metropolitan Transportation Authority
Construction	Los Angeles County Metropolitan Transportation Authority

Legislative Districts

Assembly:	55	Senate:	29	Congressional:	39
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Project Milestone	Existing	Proposed
Project Study Report Approved		
Begin Environmental (PA&ED) Phase	12/22/2004	12/22/2004
Circulate Draft Environmental Document		
Document Type EIR		
Draft Project Report		04/27/2007
End Environmental Phase (PA&ED Milestone)	12/01/2013	05/31/2021
Begin Design (PS&E) Phase	11/01/2018	11/01/2018
End Design Phase (Ready to List for Advertisement Milestone)	04/15/2020	02/28/2022
Begin Right of Way Phase	09/30/2018	06/30/2019
End Right of Way Phase (Right of Way Certification Milestone)	04/15/2020	02/21/2022
Begin Construction Phase (Contract Award Milestone)	07/01/2024	08/31/2022
End Construction Phase (Construction Contract Acceptance Milestone)	06/30/2028	10/31/2027
Begin Closeout Phase	07/01/2028	10/31/2027
End Closeout Phase (Closeout Report)	12/31/2028	12/31/2029

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Purpose and Need

The purpose of the project is to: reduce congestion and delays on Grand Avenue from Golden Springs Drive to the interchange at SR-60. Reduce congestion and delays at the Grand Avenue interchange. Reduce congestion and delays on the SR-57/SR-60 freeway mainline. Reduce weaving within the SR-57/SR-60 Confluence. Improve safety by reducing weaving movements and increasing weaving distances along the SR-57/SR-60 Confluence.

NHS Improvements ☒ YES ☐ NO

Roadway Class NA

Reversible Lane Analysis ☐ YES ☒ NO

Inc. Sustainable Communities Strategy Goals ☐ YES ☒ NO

Reduce Greenhouse Gas Emissions ☐ YES ☒ NO

Project Outputs

Category	Outputs	Unit	Total
Operational Improvement	Auxiliary lanes	Miles	1.5
Operational Improvement	Interchange modifications	EA	3.7
Bridge / Tunnel	New bridges/tunnels	SQFT	163,929

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Additional Information

Improvements to the SR-57/SR-60 Confluence are needed to improve safety and operational deficiencies at the Grand Avenue interchange. Regional population and employment growth between 2008 and 2035 are expected to result in more traffic, and the project improvements will eliminate most weaving conflicts in the eastbound direction, improve overall traffic flow, reduce accident rates, and alleviate the bottleneck effect this segment has on the operation of SR-57 and SR-60 and the overall Los Angeles-Inland Empire corridor.

According to the traffic forecast from the Southern California Association of Governments (SCAG) model, traffic volumes are projected to increase 10 to 25 percent over existing volumes along the SR-60 mainline and in the recently constructed High-Occupancy Vehicle (HOV) lanes.

Forecast traffic in 2037 would result in further deterioration of freeway operations and an estimated Level of Service (LOS) of F on the mainline of the SR-57/SR-60 Confluence in both the westbound and eastbound direction. Therefore, improvements are proposed at the SR-57/SR-60 Confluence to accommodate expected traffic and improve LOS from an F to a C or higher.

TCEP and Local Funds Drawdown: The local funds source for match is Measure M funding which per the Measure M Ordinance funding for the construction phase is not available until FY25. Therefore, as allowed by the TCEP guidelines, Metro will request non-proportional spending at the time of Allocation so Metro may draw down first on TCEP funds in FY23 and FY24, and then local funds in FY25 until the overall project reimbursement rate requirement is met. We anticipate drawing down TCEP funds over the extended life of the project's construction phase (62 months), through FY28. The request for additional time to complete the project and draw down the funds will also be included in our allocation request for \$217.9M TCEP Construction funds and coincide with the Project Completion schedule. The extended timeframes for Project Completion and Project Expenditures are allowed per the TCEP guidelines and was confirmed by CTC staff.

Environmental: Both CEQA and NEPA are being revalidated due to further approvals for plans, specifications, and estimates (PS&E) phase, which has not occurred within three years after the approval of the final Environmental Impact Statement (EIS) in December 2013. The revalidation is expected to be completed in May 2021.

Metro intends to apply for INFRA in 2021 (CON). If awarded, local funds will reduce by amount of awarded INFRA. Award notification is anticipated in Fall of 2021.

Implementing Agency Roles: The implementing agency has been changed to Metro to streamline project delivery.

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	43,107,238	0	43,107,238
	TCEP	Daily Truck Trips	# of Trips	0	0	0
	TCEP	Daily Truck Miles Traveled	Miles	0	0	0
Throughput	TCEP	Change in Truck Volume That Can Be Accommodated	# of Trucks	20,791,970	0	20,791,970
	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	1.14	1.31	-0.17
	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	43,107,238	0	43,107,238
Velocity	TCEP	Travel Time or Total Cargo Transport Time	Hours	4,121,396	8,251,869	-4,130,473
	Optional	Average Peak Period Weekday Speed for Road Facility	Miles per Hour	64	32	32
Air Quality & GHG	LPPF, LPPC, SCCP, TCEP	Particulate Matter	PM 2.5 Tons	8	1	7
			PM 10 Tons	8	2	6
	LPPF, LPPC, SCCP, TCEP	Carbon Dioxide (CO2)	Tons	1,248,494	1,149,448	99,046
	LPPF, LPPC, SCCP, TCEP	Volatile Organic Compounds (VOC)	Tons	91	102	-11
	LPPF, LPPC, SCCP, TCEP	Sulphur Dioxides (SOx)	Tons	9	8	1
	LPPF, LPPC, SCCP, TCEP	Carbon Monoxide (CO)	Tons	2,754	3,280	-526
	LPPF, LPPC, SCCP, TCEP	Nitrogen Oxides (NOx)	Tons	879	896	-17
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	26	33	-7
	LPPF, LPPC, SCCP, TCEP	Fatalities per 100 Million VMT	Number	0.23	0.96	-0.73
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries	Number	75	120	-45
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries per 100 Million VMT	Number	1.34	3.45	-2.11
Economic Development	LPPF, LPPC, SCCP, TCEP	Jobs Created (Direct and Indirect)	Number	4,623	0	4,623
Cost Effectiveness	LPPF, LPPC, SCCP, TCEP	Cost Benefit Ratio	Ratio	2.24	0	2.24

District	County	Route	EA	Project ID	PPNO
07	Los Angeles, Los Angeles	57, 60	27912	0715000076	5394
Project Title					
Route 57/60 Confluence: Chokepoint Relief Project					

Existing Total Project Cost (\$1,000s)									Implementing Agency
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	
E&P (PA&ED)	1,600							1,600	City of Industry
PS&E	25,000							25,000	Los Angeles County Metropolitan Tra
R/W SUP (CT)									Los Angeles County Metropolitan Tra
CON SUP (CT)									Los Angeles County Metropolitan Tra
R/W	36,200							36,200	Los Angeles County Metropolitan Tra
CON				225,800				225,800	Los Angeles County Metropolitan Tra
TOTAL	62,800			225,800				288,600	
Proposed Total Project Cost (\$1,000s)									Notes
E&P (PA&ED)									
PS&E	25,300							25,300	
R/W SUP (CT)									
CON SUP (CT)									
R/W	91,000							91,000	
CON		217,900			86,000			303,900	
TOTAL	116,300	217,900			86,000			420,200	

Fund #1:	Local Funds - Local Transportation Funds (Committed)								Program Code
	Existing Funding (\$1,000s)								20.XX.400.100
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)	1,600							1,600	Los Angeles County Metropolitan Tra
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	1,600							1,600	
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									Measure M
PS&E	8,300							8,300	
R/W SUP (CT)									
CON SUP (CT)									
R/W	86,000							86,000	
CON					86,000			86,000	
TOTAL	94,300				86,000			180,300	

Fund #2:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
Existing Funding (\$1,000s)									20.XX.723.100
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									\$15000 PSE voted 06/27/18 \$5000 RW voted 05/15/19
PS&E	15,000							15,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W	5,000							5,000	
CON									
TOTAL	20,000							20,000	
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									TCEP Cycle 1
PS&E	17,000							17,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W	5,000							5,000	
CON									
TOTAL	22,000							22,000	
Fund #3:	Local Funds - Local Transportation Funds (Committed)								Program Code
Existing Funding (\$1,000s)									20.XX.400.100
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									Los Angeles County Metropolitan Tra
PS&E	8,000							8,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W	31,200							31,200	
CON				65,800				65,800	
TOTAL	39,200			65,800				105,000	
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund #4:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
Existing Funding (\$1,000s)									20.XX.723.200
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									\$2000 PSE voted 06/27/18
PS&E	2,000							2,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	2,000							2,000	
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Fund #5:	Future Need - Future Funds (Uncommitted)								Program Code
Existing Funding (\$1,000s)									FUTURE
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									Caltrans District 7
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON				160,000				160,000	
TOTAL				160,000				160,000	
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									TCEP Cycle 2 (State \$87,200,000) Funding. Request to move this allocation to FY21/22. TCEP Cycle 2 (Regional \$130,700,000) Funding. Request to move this allocation to FY21/22.
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund #6:	State SB1 TCEP - Cycle 2 - State (Committed)								Program Code
Existing Funding (\$1,000s)									
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									TCEP Cycle 2 State -
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		87,200						87,200	
TOTAL		87,200						87,200	
Fund #7:	State SB1 TCEP - Cycle 2 - Regional (Committed)								Program Code
Existing Funding (\$1,000s)									
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									TCEP-Cycle 2 Regional
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		130,700						130,700	
TOTAL		130,700						130,700	

Complete this page for amendments only					Date 05/12/2021 14:24:17
District	County	Route	EA	Project ID	PPNO
07	Los Angeles, Los Angeles	57, 60	27912	0715000076	5394

SECTION 1 - All Projects

Project Background

print ePPR for baseline agreement

Programming Change Requested

print ePPR for baseline agreement

Reason for Proposed Change

print ePPR for baseline agreement

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

N/A

Other Significant Information

N/A

SECTION 2 - For SB1 Project Only

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

print ePPR for baseline agreement

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.

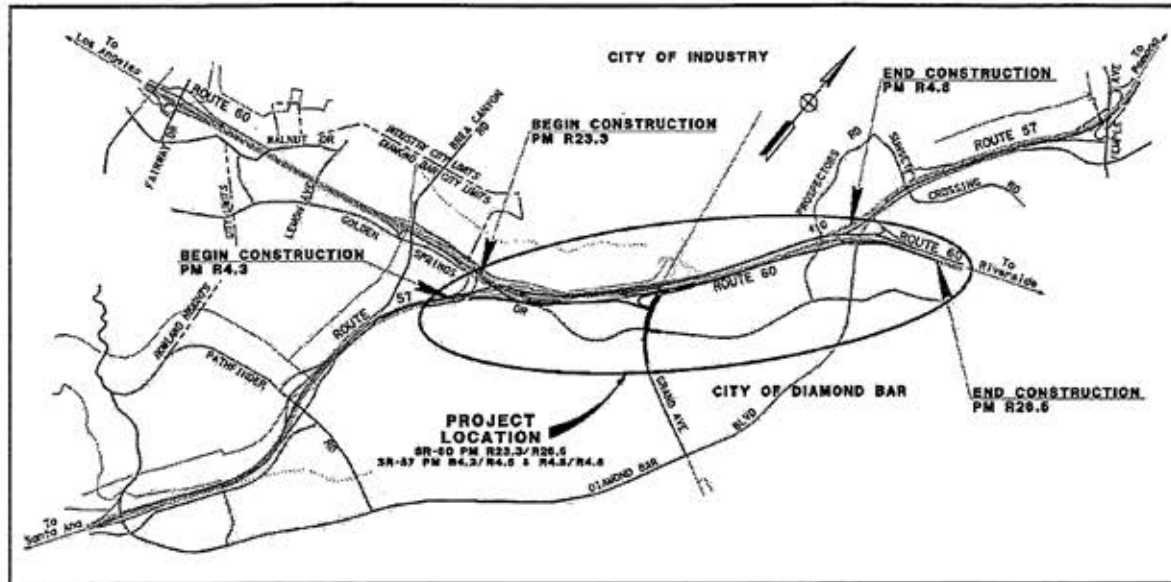
Name (Print or Type)	Signature	Title	Date

SECTION 3 - All Projects

Attachments

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

PROJECT REPORT



The Right-of-Way Data Sheet was completed by a consultant. I have reviewed the right-of-way information contained in this Project Report and the Right-of-Way Data Sheet attached hereto, and find the data to be complete as to form and procedures only. No inferences or assertions are made as to the validity of the data or the values implied by the R/W Data Sheets.

APPROVAL RECOMMENDED BY:

APPROVED BY:

10-25-13
Date

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


REGISTERED CIVIL ENGINEER


DATE



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1. INTRODUCTION

The City of Industry and the city of Diamond Bar (Diamond Bar), in cooperation with the California Department of Transportation (Caltrans), propose freeway improvements to the State Route (SR) 57/SR-60 confluence at the Grand Avenue interchange in Los Angeles County. The primary purpose of the proposed project is to improve traffic operations and safety on SR-57 and SR-60 at the Grand Avenue interchange. Portions of the proposed project are located within City of Industry and Diamond Bar (the City), with the project limits on SR-60 from 0.4 miles east of Brea Canyon Rd to 0.5 miles east of Diamond Bar Blvd, and on SR-57 from 0.8 miles south of Sunset Blvd to 1.2 miles north of Pathfinder Road.

This Project Report (PR) is prepared to address the need for improvements on SR-60 and SR-57, herein referred to as “the Confluence Project”. The preferred alternative (Alternative 3) proposes constructing a new eastbound SR-60 bypass off-ramp to Grand Avenue, a new eastbound bypass connector to SR-60, widening Grand Avenue from Golden Springs Drive to the westbound SR-60 on and off-ramps, reconstructing the Grand Avenue Overcrossing, and reconfiguring the eastbound and westbound ramps at Grand Avenue, including adding a southbound Grand Avenue to eastbound SR-60 loop on-ramp. The project would accommodate the projected traffic volume in the 2008 regional Southern California Association of Governments (SCAG) model for the future year 2037.

The project cost is estimated at \$233.5 million (in 2013), which includes \$38.8 million (in 2017) for right-of-way and utility relocation, and \$38.9 million (in 2013) in support costs. The project is proposed to be funded by a mixture of local, state, and Federal funds in fiscal years 2013/2014 to 2017/2018. This project has been assigned a Project Development Category 4A because it requires substantial right-of-way with no amendment to the existing freeway agreement.

2. RECOMMENDATION

It is recommended that the project be approved using the preferred alternative and the project proceed to the design phase. The affected local agencies (Diamond Bar and City of Industry) 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

A Project Study Report (PSR) was approved on March 27, 2009 for the conceptual interchange modification of SR-60 between the SR-57/SR-60 West Junction and the SR-57/SR-60 East Junction. The PSR identified the westbound SR-60 slip on-ramp from Grand Avenue as the first phase of the project as it was common to all the build alternatives in the PSR, and has independent utility. A Project Report for the westbound SR-60 slip on-ramp (EA255100) was prepared by the City and approved by Caltrans on September 12, 2011. The PSR also identified three build alternatives and recommended they be studied further. Though the PSR identified the

beginning of the project on SR-60 as postmile R23.7, to more accurately reflect the construction limits of the build alternatives evaluated in this Project Report, the beginning of the project has been changed to postmile R23.3.

B. Community Interaction

The Notice of Preparation of a Draft Environmental Impact Report/Environmental Assessment (DEIR/EA) for the project was advertised to the public on August 4, 2009. A public scoping meeting was held by Caltrans at the Diamond Bar Community center on September 2, 2009. The scoping meeting provided the public with an opportunity to review the three alternatives in the PSR, and allow the public to ask questions and provide comments on the project.

The most common public concerns included the following:

- Concerns about noise, air quality and traffic during construction
- The project does not address the potential deficiency on NB SR-57
- Lack of a HOV off-ramp to Diamond Bar Boulevard
- Concern of the State using eminent domain to acquire the necessary right-of-way
- Cumulative impacts of traffic generated by other projects

The DEIR/EA disclosed the analysis of project impacts on the natural and human environment resulting from construction and project operation. Where applicable, mitigation measures were proposed to offset those impacts. The above concerns were considered during the project initiation document phase. Both build alternatives studied in the DEIR/EA minimize the impact to existing properties along SR-60 with no new right-of-way acquired from private residences.

The DEIR/EA was circulated to the public from February 19, 2013 to April 5, 2013. A public hearing was held on March 6, 2013. Notification of the public hearing was provided via newspaper and direct mailings.

C. Local Agency Coordination

Diamond Bar and City of Industry participated in the Project Development Team (PDT) meetings. Both cities were given the opportunity to review the traffic report and provide input on the proposed improvements. The two build alternatives were presented by the city staff to the Diamond Bar city council on April 3rd, 2012 .

The proposed improvements of Grand Avenue Interchange on SR-60 have been coordinated with City of Industry, who is planning a large industrial and commercial development north of SR-60 adjacent to Grand Avenue. As a result of the coordination, Old Brea Canyon Road will be relocated to align with the proposed westbound on and off-ramps on SR-60 at Grand Avenue.

Caltrans has held several coordination meetings with City of Industry and Los Angeles County Department of Parks and Recreation (County). A list of meetings conducted so far with local elected officials and public agency staff members is provided below.

- **December 9, 2009:** Meeting with County Supervisor Don Knabe and County of Los Angeles Parks and Recreation staff to review the project alternatives and their impact on the community.
- **January 26, 2010:** Meeting with representatives from the Los Angeles County Department of Parks and Recreation and the cities of Diamond Bar and Industry to present the reconfiguration options for the golf course.
- **April 27, 2010:** Meeting with representatives from the Los Angeles County Department of Parks and Recreation to discuss the reconfiguration options in detail, with feedback received at the January 26, 2010, meeting.
- **October 13, 2010:** Meeting with Supervisor Knabe and staff to discuss the reconfiguration design's progress.
- **June 8, 2011:** Meeting with representatives from the Los Angeles County Department of Parks and Recreation to discuss the county's March 15, 2011, letter regarding golf course improvements.
- **March 1, 2012:** Meeting with representatives from the Los Angeles County Department of Parks and Recreation to discuss the Caltrans letter dated December 19, 2011, and request letter of concurrence from the County regarding golf course improvements. The County subsequently provided a concurrence letter on March 5, 2012.

At these meetings, various design options for reconfiguration of the golf course were presented to county representatives for their input. The mitigation measures presented in this report incorporate feedback received from the county.

D. Existing Facility

SR-60 (Pomona Freeway) is a major east-west freeway connecting Los Angeles County and Riverside County. SR-60 begins at Interstate 5 (I-5) near downtown Los Angeles and terminates at Interstate 10 (I-10) in Riverside County. The route spans approximately 68 miles.

SR-57 (Orange Freeway) is a major north-south freeway connecting Orange County and Los Angeles County. SR-57 begins at I-5 in Orange County and terminates at Interstate 210 (I-210) in Los Angeles County. The route spans approximately 25 miles. In City of Industry and Diamond Bar, SR-57 has a two mile break in the route at SR-60. SR-60 eastbound west of SR-57 has four general purpose lanes and one HOV lane. With three lanes from northbound SR-57, SR-60 becomes a wide freeway with seven general purpose lanes and two HOV lanes. The HOV lanes merge into a single lane at the Grand Avenue Overcrossing (OC). The rightmost lane from SR-57 exits at Grand Avenue, leaving six general purpose lanes and one HOV lane at Grand Avenue OC. The two lane Grand Avenue on-ramp merges into the outside lane of SR-60 approximately 1,500 feet before the northbound SR-57 connector split. A 7th lane is added 400 feet before the northbound SR-57 connector on the outside.

Westbound SR-60 consists of four general purpose lanes and one HOV lane as it approaches the confluence area. Southbound SR-57 consists of three lanes north of SR-60. The right lane on SR-57 is dropped as it merges with westbound SR-60. SR-60 continues as six general purpose lanes and one HOV lane beyond the SR-57 merge. Near the Grand Avenue OC, a second westbound HOV lane is added. The second HOV lane exits to the southbound SR-57 HOV connector. West of the Grand Avenue OC, three additional lanes are added to the right, for a

total of nine lanes at the southbound SR-57 split. The two right lanes continue to the Brea Canyon bypass off-ramp, three lanes connect to the southbound SR-57, and four lanes continue on SR-60.

Grand Avenue is a major north-south arterial highway with four through lanes throughout the project limits. The Grand Avenue interchange has full access to SR-60 and SR-57 freeways. The westbound SR-60 on and off-ramps at Grand Avenue form a “partial-cloverleaf” interchange with a westbound loop on-ramp to SR-60. The eastbound SR-60 on and off-ramps intersect Grand Avenue as a tight diamond interchange.

The existing right-of-way width along SR-60 from PM R23.3 to 23.8 varies from 250 feet to 580 feet. The existing right-of-way width along SR-60 from postmile R23.8 to 25.7 varies from 260 feet to 920 feet. The existing right-of-way width along SR-60 from postmile 25.7 to 26.5 varies from 240 feet to 1,100 feet. The existing right-of-way width along SR-57 from postmile R4.3 to R4.5 varies from 250 feet to 580 feet. The existing right-of-way width along SR-57 from postmile R4.5 to R4.8 varies from 240 feet to 1,000 feet.

Existing Drainage Conditions

Diamond Bar Creek is a major flood control facility along the north side of SR-60 through the Grand Avenue Interchange. The tributaries to Diamond Bar Creek are mostly located south of SR-60. There are three cross drain box culverts under SR-60 at stations 1260+50, 1279+00 & 1304+00, that carry water south of SR-60 to Diamond Bar Creek. Open concrete box culverts within along the south edge of SR-60 collect water from the golf course and from SR-60. These culverts feed into the cross drains. Drainage within Diamond Bar Golf Course consists of reinforced box culvers and open concrete ditches that feed the open concrete box culverts.

Existing Structures

Within the project limits there are eight (8) bridge structures consisting of overcrossings, undercrossings, and connectors. Each structure is described below.

- Golden Springs Drive Undercrossing Northbound SR-57 (BR 53-2149R) – The existing bridge built in 1969 carries northbound SR-57 traffic over Golden Springs Drive. The 56 feet wide bridge is a reinforced concrete box supported on spread footings. Columns are located in the median of Golden Springs Drive and along the north side of the street at a skew of 64 degrees. The two span bridge has a total length of 321.7 feet.
- Route 57/60 HOV Connector (South) (BR 53-2918) – Construction of the HOV connector was completed in 2008. The connector carries one HOV lane from northbound SR-57 to eastbound SR-60, and westbound SR-60 to southbound SR-57. The 56 feet wide bridge has 19 spans for a total length of 3,133 feet. The structure crosses over Golden Springs Drive and SR-60. The columns are founded on single shaft large diameter CIDH piles. Three bents consist of straddle bents, spanning the WB SR-60, limiting any future widening. The approach structure at the north end is supported on 385 feet long MSE walls.

- SR-57/60 Separation (South) (BR 53-2150L) – The existing bridge is a five span, 593 feet long, cast in place concrete box girder structure constructed in 1969. The central frame (spans 3 and 4) spanning SR-60 is prestressed. The three column bents are founded on 70 ton precast concrete piles. The structure is 56 feet wide, carrying 3 lanes of southbound SR-57 traffic over the SR-60 at the south end of the project.
- Grand Avenue Overcrossing (BR53-1864) –The existing bridge was built in 1965. The structure carries three northbound and two southbound lanes, two left turn lanes, and sidewalks over SR-60. The bridge is a cast in place reinforced concrete box girder founded on four column bents and concrete pile supported footings. The 92 feet wide bridge has two spans, and a total length of 310 feet. In 1986 a seismic retrofit was constructed. In 1987 all four wingwalls were rehabilitated, adding new concrete walls founded on three 70 ton piles. Tieback walls were constructed in front of the abutments in a 2004 widening of the freeway to make room for the HOV lanes.
- Prospectors Road Undercrossing (BR 53-1873) – The existing structure carries SR-60 in both directions and the southbound SR-57 connector over Prospectors Road. The three span bridge varies from 202 feet to 222 feet wide, is 133 feet long, founded on driven pile footings. There are two longitudinal expansion joints, one in the median of SR-60 and one between westbound SR-60 and the SR-57 SB connector. A soundwall was added on the bridge in 1992 along the outside edge of the southbound SR-57. A soundwall was added on the north edge of the bridge in 1993.
- Prospectors Road Undercrossing (BR 53-1873G) –The existing bridge is a three span reinforced concrete box girder structure carrying the northbound SR-57 connector over Prospectors Rd. Built in 1969, the 51 feet wide bridge carries 3 lanes of SR-57 traffic has a total length of 153 feet.
- SR 57/60 Separation (North) (BR 53-1905) – The existing structure carries SR-60 over the SR-57 northbound connector at a very large skew. The bridge was constructed in 1969 as a tunnel structure, 74 feet wide by 630 feet long. The SR-57 connector is on a 3,000 foot radius curved alignment, with three lanes and a wide left shoulder which provides standard sight distance. The abutment and columns are founded on spread footings. Minimum vertical clearance is 17'-0" with a structure depth of 4 feet. Approach slabs were reconstructed on SR-60 against the tunnel walls in 1996.
- Diamond Bar Blvd UC (BR 53-1899) – The existing structure is a 156 foot long cast in place prestressed concrete box girder bridge built in 1969. The structure carries SR-60 and the Diamond Bar Blvd on-ramp over Diamond Bar Blvd. The bridge is single span and varying in width from 148 feet to 156 feet. The abutment alignments are curved to match the Diamond Bar Blvd roadway radius of 1650 feet. The approach slabs were reconstructed on SR-60 in 1996.

4. NEED AND PURPOSE

A. Problem, Deficiencies, Justification

The existing SR57/SR60 Confluence and the Grand Avenue interchange currently exhibit operational deficiencies in the morning (AM) and afternoon (PM) peak periods. The SCAG travel forecasting model estimates regional population and employment growth between the years 2008 and 2035 to result in traffic growth approximately 10% to 25% higher than the existing volumes for the SR-60 mainline and the recently constructed HOV lanes.

The existing AM and PM peak period Level of Service (LOS) for the eastbound SR-60 are D and F respectively. The existing AM and PM peak period LOS for the westbound SR-60 are F and D respectively. Forecast traffic in 2037 would result in further deterioration of freeway operations to an estimated LOS of F for both AM and PM peak periods on the mainline of the SR-57/SR-60 confluence in both the westbound and eastbound direction. Similarly, the LOS of the Grand Avenue interchanges range from B at the eastbound on and off-ramp to D at the westbound on and off-ramps. The 2037 future LOS are projected to be F. Therefore, improvements are needed at the SR-57/SR-60 confluence and Grand Avenue interchanges to accommodate expected traffic growth.

The purpose of the project is:

- Reduce congestion and delays on Grand Avenue from Golden Springs Drive to the interchange at SR-60.
- Reduce congestion and delays at the Grand Avenue interchange.
- Reduce congestion and delays on the SR-57/SR-60 freeway mainline.
- Reduce weaving within the SR-57/SR-60 confluence.
- Improve safety by reducing weaving movements and increasing weaving distances along the SR-57/SR-60 confluence.

B. Regional & System Planning

SR-60 is part of the National Highway System (NHS) and the State Freeway and Expressway (F&E) System.

i. State Planning

The SR-60 Ultimate Transportation Corridor (UTC) for 2025 as identified in the SR-60 Transportation Concept Report (TCR) was approved in July 2005. The TCR identified seven distinct segments for improvements on SR-60. The Grand Avenue interchange is within Segment 5 of the approved TCR report. The UTC for Segment 5 recommends six mixed-flow lanes, plus two HOV lanes, and two truck lanes. The existing SR-60 contains the six mixed-flow and two HOV lanes suggested in the UTC. It is anticipated that truck lanes, if required, would follow a separate corridor alignment outside the existing or proposed Caltrans right-of-way. However, space under Grand Avenue OC should provide adequate clearance for 8 lanes plus two HOV lanes in each direction with standard left and right shoulders.

ii. Regional and System Planning

The proposed project is identified in the 2012 Transportation Plan (RTP) prepared by the Southern California Association of Governments (SCAG).

In 2005, the Los Angeles County Metropolitan Transportation Authority (Metro), in conjunction with Caltrans, City of Industry and Diamond Bar, prepared a Project Feasibility Study (PFS). The PFS presented concepts to improve the SR-57 and SR-60 freeways. Specifically, the purpose of the PFS was to develop a long-range plan by evaluating concepts for improving the SR-57/SR-60 confluence. The study concluded that the primary issue was not a shortage of through lanes, but a high volume of weaving traffic within the interchange. The two sources of weaving are from vehicles exiting and entering Grand Avenue, and from missing the HOV connectors to SR-57 on the east end of the confluence. A subset of the study identified opportunities to improve interchange operations at Grand Avenue and reduce weaving between the mainline and the on- and off-ramps. The study also evaluated a concept for completing the missing connectors between the two freeway-to-freeway interchanges, from westbound SR-60 to northbound SR-57 and the reverse move from southbound SR-57 to eastbound SR-60, and the HOV connectors from northbound SR-57 to westbound SR-60 and the reverse move from eastbound SR-60 to southbound SR-57. Metro completed and approved the report in August 2010. The Grand Avenue interchange improvement alternatives have been coordinated with the concepts developed in the PFS.

iii. Local Planning

A new interchange on SR-60 at Lemon Avenue is planned. The interchange is located approximately two miles west of the Grand Avenue interchange in Diamond Bar. A Project Report for interchange improvements was approved by Caltrans District 7 on October 12, 2010. The Lemon Avenue project would not have a direct impact on the proposed Grand Avenue project.

A new slip on-ramp from Grand Avenue to westbound SR-60 is planned. A Project Report was approved by Caltrans District 7 on September 12, 2011. This planned Grand Avenue slip on-ramp has been incorporated into the proposed project build alternatives. The location and design of the new on-ramp retaining walls have been coordinated with the alternatives presented herein to minimize potential reconstruction.

In the vicinity of the project, the Industry Urban Development Agency is in the process of developing the 592-acre Industry Business Center (IBC). The project is consistent with the Environmental Impact Statement/ Environmental Impact (EIS/EIR) approved in 2004 and the supplemental EIS/EIR of 2008 covering the IBC. The project will continue to be coordinated with the IBC which plans to realign the Old Brea Canyon Rd and rename it Grand Crossing. Forecast traffic volumes from the planned IBC have been incorporated into all alternatives of the traffic report.

The alternatives evaluated in this project report adhere to City of Industry's long range plan to improve traffic circulation along Grand Avenue.

C. Traffic

KOA Corporation developed a Traffic Report (dated December 2011) to evaluate the existing and forecast future conditions in the vicinity of the SR-57/SR-60 Confluence project. Three alternatives including a No-Build alternative were assessed for operational performance. Each of the three alternatives was analyzed for level of service and delays in the existing year (2009), opening year (2017), and horizon year (2037).

i. Existing Traffic Data

Existing turning movement volumes for the AM and PM peak periods were collected for the project intersections in February 2008 and extrapolated to the project initiation year, 2009. The 2009 Average Daily Traffic (ADT) volume for Grand Avenue is shown in Table 1.

Table 1 - Existing 2009 Traffic Volumes*

	Average Daily Traffic	AM Peak Hour	PM Peak Hour
Grand Avenue, North of SR-60 WB Ramps	30,920	3,092	2,861
Grand Avenue, Between SR-60 WB Ramps and SR-60 EB Ramps	31,500	3,150	2,626
Grand Avenue, South of SR-60 EB Ramps	27,500	2,750	2,569
SR-60 Freeway west of SR-57	213,000	9,867	10,569
SR-60 Freeway between Grand Ave Ramps	340,000	18,204	18,370
SR-60 Freeway east of SR-57	223,000	10,987	11,851
SR-57 South of SR-60	202,000	10,379	9,955
SR-57 North of SR-60	129,000	8,054	13,812

* Volumes include both directions (KOA 2011)

A truck count on SR-60 at Grand Avenue was conducted April 16, 2009. From the truck count and the Caltrans PeMS database for the week of April 20-24, the truck volumes as a percentage of the total volumes were developed, and are shown in Table 2 of the next page.

Table 2 - Existing Truck Volumes

	% Trucks			
	EB	SB	WB	NB
Grand Avenue, North of SR-60 WB Ramps		10%		10%
Grand Avenue, Between SR-60 WB Ramps and SR-60 EB Ramps		10%		10%
Grand Avenue, South of SR-60 EB Ramps		2%		2%
SR-60 West of SR-57	6.2%		8%	
SR-60 Between Grand Ave Ramps	5.2%		8%	
SR-60 East of SR-57	5.2%		8.2%	
SR-57 South of SR-60		8.5%		2.4%
SR-57 North of SR-60		4.6%		8%
SR-60 off-ramp at Grand Ave	5.2%		8%	
SR-60 EB on-ramp at Grand Ave	5.2%		5.2%	

Existing Weaving Conditions, Eastbound

Tables 3 and 4 show the results of the weaving level of service analysis for eastbound SR-60 and northbound SR-57 under existing conditions. The weaving analysis shows that the weave between Grand Avenue and the freeway split to the east contributes to a Level of Service F, in the PM peak period.

Table 3 - Eastbound SR-60 Existing Traffic Conditions

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Brea Canyon On-ramp to SR-57 SB Connector Ramp	WS	56	19	B
SR-57 SB Connector Ramp to HOV Lane Start	BF	60	17	B
HOV Lane Start to SR-57 NB Merge	BF	62	20	C
SR-57 NB Merge to Grand Ave Off-ramp	WS	61	21	C
Grand Ave Off-ramp to Grand Ave On-ramp	WS	52	29	D
Grand Ave On-ramp Merge Segment	WS	45	34	D
Grand Ave On-ramp Merge Lane Drop to Additional Lane Opening	WS	49	32	D
Additional Lane Opening to SR-57 NB Diverge	WS	56	23	C
SR-57 NB Diverge to Diamond Bar Blvd On-ramp	BF	61	20	C
PM				
Brea Canyon On-ramp to SR-57 SB Connector Ramp	WS	57	20	B
SR-57 SB Connector Ramp to HOV Lane Start	BF	59	18	C
HOV Lane Start to SR-57 NB Merge	BF	61	22	C
SR-57 NB Merge to Grand Ave Off-ramp	WS	17	85	F
Grand Ave Off-ramp to Grand Ave On-ramp	WS	14	117	F
Grand Ave On-ramp Merge Segment	WS	14	208	F
Grand Ave On-ramp Merge Lane Drop to Additional Lane Opening	WS	24	72	F
Additional Lane Opening to SR-57 NB Diverge	WS	47	32	D
SR-57 NB Diverge to Diamond Bar Blvd On-ramp	BF	61	23	C

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 4 - Northbound SR-57 Existing Traffic Condition

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
SR-60 WB Connector Ramp to SR-60 EB Merge	BF	60	22	C
SR-60 EB Merge to Grand Ave Off-ramp	WS	61	21	C
Grand Ave Off-ramp to Grand Ave On-ramp	WS	52	29	D
Grand Ave On-ramp Merge Segment	WS	45	34	D
Grand Ave Merge Lane Drop to Additional Lane Opening	WS	49	32	D
Additional Lane Opening to SR-60 Diverge	WS	56	23	C
SR-60 EB Diverge to 4-Lane Opening	BF	62	20	C
PM				
SR-60 WB Connector Ramp to SR-60 EB Merge	BF	18	89	F
SR-60 EB Merge to Grand Ave Off-ramp	WS	17	85	F
Grand Ave Off-ramp to Grand Ave On-ramp	WS	14	117	F
Grand Ave On-ramp Merge Segment	WS	14	108	F
Grand Ave Merge Lane Drop to Additional Lane Opening	WS	24	72	F
Additional Lane Opening to SR-60 Diverge	WS	47	32	D
SR-60 EB Diverge to 4-Lane Opening	BF	61	25	C

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Field observations indicate that there is a large queue of eastbound vehicles that regularly extend back for 10 miles on SR-60 and for 5 miles on SR-57 during the PM peak. Analysis shows that the queue may be primarily due to the configuration of the NB -57 connector, and secondarily due to the SR-60 traffic weave to Grand Avenue. The reduced lanes clearly cause congestion on the merged SR-57/60 segment in the project vicinity as traffic flow generally improves about 1,500 feet east of the Grand Ave interchange in the PM peak.

Existing Weaving Conditions, Westbound

Tables 5 and 6 show westbound and southbound existing weaving conditions for SR-60 and SR-57 traffic respectively. The tables indicate that both segments are at LOS “F” in the AM peak hour. The westerly segment (near SR-57 south leg) is at LOS “F” in the AM while the easterly segment (near SR-57 north leg) is at LOS “E” in the PM.

Table 5 - Westbound SR-60 Existing Traffic Conditions

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Diamond Bar Blvd On-ramp Merge Lane End to SR-57 Merge	BF	13	107	F
SR-57 Merge to Lane Drop	WS	17	83	F
Lane Drop to Grand Ave On-ramp	WS	37	44	F
Grand Ave On-ramp to Additional Lane Opening	WS	52	28	C
Additional Lane Opening to SR-57 SB Diverge	WS	55	23	C
SR-57 SB Diverge to HOV Lane Merge	BF	62	16	B
PM				
Diamond Bar Blvd On-ramp Merge Lane End to SR-57 Merge	BF	61	17	B
SR-57 Merge to Lane Drop	WS	40	35	D
Lane Drop to Grand Ave On-ramp	WS	54	26	C
Grand Ave On-ramp to Additional Lane Opening	WS	61	21	C
Additional Lane Opening to SR-57 SB Diverge	WS	61	18	B
SR-57 SB Diverge to HOV Lane Merge	BF	62	17	B

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 6 - Southbound SR-57 Existing Traffic Conditions

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Sunset Crossing On-ramp Merge Lane End to SR-60 WB Merge	BF	13	109	F
SR-60 WB Merge to Lane Drop	WS	17	83	F
Lane Drop to Grand Ave On-ramp	WS	37	44	F
Grand Ave On-ramp to Additional Lane Opening	WS	52	28	C
Additional Lane Opening to SR-60 WB Diverge	WS	55	23	C
SR-60 WB Diverge to SR-60 EB Connector Ramp	BF	60	34	D
PM				
Sunset Crossing On-ramp Merge Lane End to SR-60 WB Merge	BF	53	31	E
SR-60 WB Merge to Lane Drop	WS	40	35	D
Lane Drop to Grand Ave On-ramp	WS	54	26	C
Grand Ave On-ramp to Additional Lane Opening	WS	61	21	C
Additional Lane Opening to SR-60 WB Diverge	WS	61	18	B
SR-60 WB Diverge to SR-60 EB Connector Ramp	BF	61	25	C

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 5 shows that in the AM peak hour the speed picks up after the SR-57 lane drop, indicating that merging traffic from SR-57 due to the short distance to the lane drop is contributing to the poor level of service. Table 6 indicates that in both the AM and PM peak hours the approach to the merge operates at a poor level of service, likely due to the lane drop on southbound SR-57.

Local Streets Analysis

LOS and delay queue length calculations along Grand Avenue were performed based on existing peak hour turning movement volumes. Table 7 shows the results of this analysis.

Table 7 – Grand Ave Existing 2009 Traffic Conditions

Intersection	AM Peak Hour			PM Peak Hour		
	Queue Length ⁽¹⁾	Delay (sec)	Level of Service	Queue Length ⁽¹⁾	Delay (sec)	Level of Service
Grand Ave. at SR-60 Westbound Ramps	283 ft (WB)	42.2	D	192 ft (WB)	20.1	C
Grand Ave. at SR-60 Eastbound Ramps	220 ft (EB)	16.2	B	88 ft (EB)	11.3	B
Grand Ave. at Golden Springs Drive	349 ft (SB)	38.6	D	306 ft (SB)	54.0	D

Note 1: 95th Percentile Queue lengths for critical approaches are given as indicated

ii. Forecasted Traffic Data

The traffic forecasts are based on the SCAG RTP 2008 Year 2035 Regional Conformity Model. The regional model includes all approved projects on the 2008 RTP planned to be completed by 2035, along with the projected socioeconomic changes in the region. The SCAG year 2035 model socio economic input was adjusted to account for project trips expected to be generated by the planned IBC project north of the freeway interchange, which were not already incorporated into the model by SCAG. The IBC project trip information was obtained from the approved 2004 EIR. Finally, the traffic forecast was then extrapolated out to 2037 by applying a growth rate of approximately 1% per year.

The build alternatives include additional auxiliary lanes and an additional eastbound SR-60 through lane, which may increase the capacity of the freeway within the project, attracting additional vehicles. To adequately forecast the potential volume change, the 2035 regional model geometry was revised to incorporate the proposed alternative 3 build modifications. The results of this model were then utilized in the build alternative traffic analysis.

Using the traffic growth provided by the regional models as described above, traffic analysis of the freeway mainline using VISSM and intersection analysis using SYNCHRO were prepared for the project horizon year (2037). Tables 8 through 13 summarize the level of service results in 2037 in the AM and PM peak hour conditions for the no-build scenario (alternative 1).

Table 8 - Intersection Year 2037 Traffic Conditions for Alternative 1

Intersection	AM Peak Hour			PM Peak Hour		
	Queue Length ⁽¹⁾	Delay (sec)	Level of Service	Queue Length ⁽¹⁾	Delay (sec)	Level of Service
Grand Ave. at SR-60 Westbound Ramps	1,005 ft	99.7	F	700 ft	178.9	F
Grand Ave. at SR-60 Eastbound Ramps	628 ft	81.9	F	268 ft	84.3	F
Grand Ave. at Golden Springs Drive	615 ft	111.6	F	673 ft	103.6	F

Note 1: 95th Percentile Queue lengths for critical approaches are given as indicated

Table 9 - Detailed Intersection Year 2037 Traffic Conditions for Alternative 1

		AM Peak Hour			PM Peak Hour		
Intersection		Queue Length ⁽¹⁾	Delay (sec)	Level of Service	Queue Length ⁽¹⁾	Delay (sec)	Level of Service
Grand Ave. at SR-60 Westbound Off-ramp	NB	1,672 ft	107.0	F	646 ft	45.9	D
	SB	558 ft	37.4	D	1,793 ft	21.1	F
	EB	184 ft	73.7	E	672 ft	301.3	F
	WB	1,005 ft	152.8	F	700 ft	247.3	F
Intersection Average		N/A	99.7	F	N/A	178.9	F
Grand Ave. at SR-60 Eastbound Ramps	NB	1,288 ft	118.4	F	1,140 ft	111.8	F
	SB	365 ft	22.4	C	736 ft	70.3	E
	EB	628 ft	93.5	F	268 ft	40.2	D
Intersection Average		N/A	81.9	F	N/A	84.3	F
Grand Ave. at Golden Springs Drive	NB	1,364 ft	143.7	F	918 ft	132.7	F
	SB	615 ft	71.0	E	673 ft	87.7	F
	EB	339 ft	74.2	E	654 ft	88.1	F
	WB	1,025 ft	131.3	F	777 ft	116.6	F
Intersection Average		N/A	111.6	F	N/A	103.6	F

Note 1: 95th Percentile Queue lengths for critical approaches are given as indicated

Table 10 - Eastbound SR-60 Year 2037 Traffic Conditions, Alternative 1

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Brea Canyon On-ramp to SR-57 SB Connector Ramp	WS	48	31	D
SR-57 SB Connector Ramp to HOV Lane Start	BF	56	25	C
HOV Lane Start to SR-57 NB Merge	BF	56	30	D
SR-57 NB Merge to Grand Ave Off-ramp	WS	22	73	F
Grand Ave Off-ramp to Grand Ave On-ramp	WS	36	47	F
Grand Ave On-ramp Merge Segment	WS	38	42	E
Grand Ave On-ramp Merge Lane Drop to Additional Lane Opening	WS	50	37	E
Additional Lane Opening to SR-57 NB Diverge	WS	60	26	C
SR-57 NB Diverge to Diamond Bar Blvd On-ramp	BF	60	27	C
PM				
Brea Canyon On-ramp to SR-57 SB Connector Ramp	WS	58	20	B
SR-57 SB Connector Ramp to HOV Lane Start	BF	59	20	B
HOV Lane Start to SR-57 NB Merge	BF	59	24	C
SR-57 NB Merge to Grand Ave Off-ramp	WS	14	98	F
Grand Ave Off-ramp to Grand Ave On-ramp	WS	12	124	F
Grand Ave On-ramp Merge Segment	WS	12	115	F
Grand Ave On-ramp Merge Lane Drop to Additional Lane Opening	WS	26	63	F
Additional Lane Opening to SR-57 NB Diverge	WS	51	28	C
SR-57 NB Diverge to Diamond Bar Blvd On-ramp	BF	61	24	C

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 11 - Northbound SR-57 Year 2037 Traffic Conditions, Alternative 1

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
SR-60 WB Connector Ramp to SR-60 EB Merge	BF	13	116	F
SR-60 EB Merge to Grand Ave Off-ramp	WS	22	73	F
Grand Ave Off-ramp to Grand Ave On-ramp	WS	36	47	F
Grand Ave On-ramp Merge Segment	WS	38	42	E
Grand Ave Merge Lane Drop to Additional Lane Opening	WS	50	37	E
Additional Lane Opening to SR-60 Diverge	WS	60	26	C
SR-60 EB Diverge to 4-Lane Opening	BF	62	23	C
PM				
SR-60 WB Connector Ramp to SR-60 EB Merge	BF	15	99	F
SR-60 EB Merge to Grand Ave Off-ramp	WS	14	98	F
Grand Ave Off-ramp to Grand Ave On-ramp	WS	12	124	F
Grand Ave On-ramp Merge Segment	WS	12	115	F
Grand Ave Merge Lane Drop to Additional Lane Opening	WS	26	63	F
Additional Lane Opening to SR-60 Diverge	WS	51	28	C
SR-60 EB Diverge to 4-Lane Opening	BF	62	22	C

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 12 - Westbound SR-60 Year 2037 Traffic Conditions, Alternative 1

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Diamond Bar Blvd On-ramp Merge Lane End to SR-57 Merge	BF	9	115	F
SR-57 Merge to Lane Drop	WS	21	95	F
Lane Drop to Grand Ave On-ramp	WS	27	55	F
Grand Ave On-ramp to Additional Lane Opening	WS	60	20	B
Additional Lane Opening to SR-57 SB Diverge	WS	61	18	B
SR-57 SB Diverge to HOV Lane Merge	BF	62	13	B
PM				
Diamond Bar Blvd On-ramp Merge Lane End to SR-57 Merge	BF	58	26	C
SR-57 Merge to Lane Drop	WS	26	59	F
Lane Drop to Grand Ave On-ramp	WS	31	56	F
Grand Ave On-ramp to Additional Lane Opening	WS	60	25	C
Additional Lane Opening to SR-57 SB Diverge	WS	60	23	C
SR-57 SB Diverge to HOV Lane Merge	BF	61	20	C

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 13 - Southbound SR-57 Year 2037 Traffic Conditions, Alternative 1

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Sunset Crossing On-ramp Merge Lane End to SR-60 WB Merge	BF	11	115	F
SR-60 WB Merge to Lane Drop	WS	21	95	F
Lane Drop to Grand Ave On-ramp	WS	27	55	F
Grand Ave On-ramp to Additional Lane Opening	WS	60	20	B
Additional Lane Opening to SR-60 WB Diverge	WS	61	18	B
SR-60 WB Diverge to SR-60 EB Connector Ramp	BF	61	28	C
PM				
Sunset Crossing On-ramp Merge Lane End to SR-60 WB Merge	BF	13	114	F
SR-60 WB Merge to Lane Drop	WS	26	59	F
Lane Drop to Grand Ave On-ramp	WS	31	56	C
Grand Ave On-ramp to Additional Lane Opening	WS	60	25	C
Additional Lane Opening to SR-60 WB Diverge	WS	60	23	C
SR-60 WB Diverge to SR-60 EB Connector Ramp	BF	60	31	D

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 9 shows that by 2037 the intersections along Grand Avenue are projected to reach LOS F at all intersections in the morning and evening peak hours with average delays as much as 179 seconds. In the eastbound direction through the shared corridor, the speeds are projected to reduce from 14 MPH down to 12 MPH in the evening peak hour. Additionally traffic in the morning would slow from 61 mph down to 22 mph with a LOS of F by 2037.

iii. Accident Rates and Analysis

Traffic Accident Surveillance and Analysis System (TASAS) data was provided by Caltrans District 7. The data covers the 36-month period from July 1, 2008 through June 30, 2011. The table below provides the actual accident rates for fatal, fatal plus injury, and total accidents to the average rate for mainline per million vehicle miles, and for ramps and connectors per million vehicles.

Table 14 - TASAS Accident Rate from July 2008 through June 2011

Accident Summary									
Location		Post Mile	Total No. of Accidents	ACTUAL RATE (acc. /million vehicle miles)			AVERAGE RATE (acc. /million vehicle miles)		
				F	F+I	TOTAL	F	F+I	TOTAL
Grand Avenue	Br No. 53-1864	R24.451	Grand Ave would be included as part of the ramp data						
Grand Avenue Ramps	WB Off-Ramp	R24.712	17	0.000	0.26	1.49	0.003	0.35	1.01
	WB On-Ramp	R24.551	6	0.000	0.09	0.55	0.003	0.24	0.72
	EB Off-Ramp	R24.277	35	0.000	0.36	3.17	0.003	0.36	1.01
	EB On-Ramp	R24.552	22	0.000	0.07	1.61	0.002	0.22	0.63
Diamond Bar Blvd. Ramps	WB Off-Ramp	R25.876	21	0.000	0.60	1.59	0.003	0.35	1.01
	WB On-Ramp	R25.659	11	0.000	0.00	1.93	0.003	0.24	0.72
	EB Off-Ramp	R25.440	6	0.000	0.18	1.07	0.003	0.35	1.01
	EB On-Ramp	R25.706	12	0.000	0.00	0.99	0.002	0.22	0.63
Connectors at SR-57/SR-60	NB57 to WB60	R4.160	14	0.000	0.14	0.64	0.004	0.16	0.49
	SB57 to WB60	R25.372	4	0.000	0.01	0.06	0.003	0.11	0.32
	WB60 to SB57	R23.884	32	0.000	0.08	0.37	0.004	0.16	0.49
	NB57 to EB60	R23.708	16	0.000	0.06	0.19	0.003	0.11	0.32
	EB60 to SB57	R23.252	19	0.000	0.33	0.91	0.005	0.13	0.38
	EB60 to NB57	R25.157	9	0.000	0.01	0.13	0.004	0.16	0.49
SR-60	WB	R23.173-R26.527	921	0.004	0.45	1.72	0.004	0.32	1.07
	EB	R23.173-R26.527	496	0.007	0.26	0.93	0.004	0.32	1.07
SR-57	NB	R4.160-4.519	99	0.000	0.85	3.99	0.003	0.24	0.77
	SB	R4.160-4.519	19	0.000	0.20	0.77	0.004	0.25	0.82
SR-57	NB	R4.518-5.272	32	0.000	0.20	0.58	0.004	0.26	0.82
	SB	R4.518-5.272	72	0.00	0.36	1.30	0.004	0.26	0.82

The summary in Table 14 provides a comparison to the average rates as provided in the TASAS reports. Based on the data provided, the following 12 locations have been identified with higher than average accident rates within the specified period:

- Westbound Grand Avenue Off-Ramp
- Eastbound Grand Avenue Off-Ramp
- Eastbound Grand Avenue On-Ramp
- Westbound Diamond Blvd Off-Ramp
- Westbound Diamond Blvd On-Ramp
- Eastbound Diamond Blvd Off-Ramp
- Eastbound Diamond Blvd On-Ramp
- Northbound SR-57 to Westbound SR-60
- Eastbound SR-60 to Southbound SR-57
- Westbound SR-60
- Northbound SR-57 approaching SR-60
- Southbound SR-57 approaching SR-60

Based on the data provided, the following five locations have been identified with higher than average injury rates:

- Westbound Diamond Blvd Off-Ramp
- Eastbound SR-60 to Southbound SR-57
- Westbound SR-60
- Northbound SR-57 approaching SR-60
- Southbound SR-57 approaching SR-60

Based on the data provided, one location was identified with higher than average fatality rates, which was eastbound SR-60.

The predominant collision types for the northbound SR-57 connector to westbound SR-60 and for the eastbound SR-60 to southbound SR-57 was hit object. Hit object collisions are typically associated with inadequate sight distance and inadequate shoulder.

The predominant collision type was rear-end for the other eleven locations listed above. Rear-end collisions are typically associated with congestion.

5. ALTERNATIVES

A. Viable Alternatives

Two build alternatives were developed considering the project need, purpose, and surrounding environment. The decision regarding choosing a Preferred Alternative was made by the Project Development Team based on the merits of alternatives, consideration of environmental impacts, and public input provided through the environmental review process. Public and agency comments and any expressed concerns regarding the proposed build alternatives were given serious consideration.

The preferred alternative is Alternative 3. Alternative 3 provides greater traffic operation improvements for the Grand Avenue Interchange to a greater extent than Alternatives 1 and 2. The additional impact to the golf course due to constructing Alternative 3 over Alternative 2 was not a concern expressed by the public, who did express support of Alternative 3 over Alternative 2. Further the County agrees to the mitigation features proposed by the project to minimize harm to the golf course. Alternative 3 was also selected as the preferred alternative because it provided a much greater improvement in operational traffic flow at a marginal increase in cost compared to Alternative 2. Although the No-Build Alternative would not result in the impacts that would occur under the build alternatives, this alternative would not achieve the identified objective of the project. The project study area would continue to experience unacceptable levels of service in the peak hours, which would only worsen over time because of projected local and regional growth. No changes to the project design or mitigation features were made as a result of the public comments.

i. Common Proposed Engineering Features

The two build alternatives, 2 and 3, have the following improvements in common:

For the two build alternatives, a new bypass off-ramp is proposed for eastbound SR-60 west of the southern/western SR-57/SR-60 interchange. The bypass off-ramp contains a single ramp lane that is barrier separated from the mainline freeway traffic until passing the exit gore of the Grand Avenue off-ramp from SR-57. Traffic from northbound SR-57 would have an optional exit to Grand Avenue. The SR-57 off-ramp lane would join the one lane bypass off-ramp to form a two lane off-ramp to Grand Avenue. The off-ramp would widen to three lanes at the final approach to the intersection at Grand Avenue. All three lanes that originated from northbound SR-57 would continue through the Grand Avenue Interchange.

The eastbound on-ramp from Grand Avenue would be built as an auxiliary lane that would exit to a new two-lane connector to eastbound SR-60 which would bypass the northbound 57 connector. The eastbound bypass connector would require a new overcrossing structure at Prospector Road and Diamond Bar Boulevard off-ramp and Diamond Bar Boulevard. The Diamond Bar Blvd on-ramp would be realigned to accommodate the new bypass connector.

In the westbound direction of SR-60, all three lanes of SR-57 would be maintained by extending the existing dropped lane on SR-57 for approximately 2,500 feet to the Grand Avenue off-ramp. This lane would exit to the Grand Avenue off-ramp. The adjacent right lane would be an optional exit to Grand Avenue, creating a two-lane exit ramp at Grand Avenue. The off-ramp would transition to five lanes at the Grand Avenue intersection. The interchange configuration for the westbound SR_60 at Grand Avenue would remain as a combination of partial cloverleaf. Widening of Grand Avenue to the east requires reconstruction of the loop on-ramp and corresponding relocation northward of the intersection with Grand Avenue.

Grand Avenue would be widened to four through lanes in each direction. Grand Avenue centerline would be shifted to the east as it crosses SR-60 in order to avoid a right-of-way acquisition from a vacant automobile dealership. The centerline shift would require realigning the eastbound loop on-ramp approximately 100 feet north of the existing intersection. The

intersection relocation would also require realigning westbound off-ramp and the Old Brea Canyon Road (to be renamed Grand Crossing Parkway) by the same distance.

The existing Grand Avenue Overcrossing (Br. No. 53-1864) does not have sufficient length to accommodate the proposed widening of SR-60. A new overcrossing would be required with longer span and higher vertical clearance that meets the design standard. Because of the longer span, the new overcrossing bridge would be deeper than the existing structure. This would require Grand Avenue profile be raised by 9 feet over the existing bridge, and transitioned back to the existing profile at the westbound off-ramp intersection to the north, and the Golden Springs Drive intersection to the south.

The widening of Grand Avenue would continue south to Golden Springs Drive. Golden Springs Drive would be widened to allow additional through lanes, double left-turn lanes, and one right-turn lane on three legs of the intersection of Grand Avenue and Golden Springs Drive. One right-turn lane would be provided on Grand Avenue on the northbound approach to Golden Springs Drive. Approximately 600 feet of Grand Avenue in the northbound direction south of the intersection at Golden Springs Drive would be reconfigured to accommodate three lanes in each direction.

A continuous pedestrian walkway is currently provided on the west side of Grand Avenue between Golden Springs Drive and Old Brea Canyon Road. Eight feet wide sidewalks would be provided on both sides of Grand Avenue, constructed from Golden Springs Drive to the new westbound ramp intersection.

ii. Alternative 3 Proposed Engineering Features

In addition to the above features, Alternative 3 would change the eastbound on and off-ramp configuration from a tight diamond to a partial cloverleaf interchange that includes a new eastbound loop on-ramp serving southbound Grand Avenue traffic. The partial cloverleaf on and off-ramps would eliminate the need for the existing southbound left turn lanes on Grand Avenue Overcrossing. In order to provide space for the new loop on-ramp, the off-ramp intersection with Grand Avenue would be shifted approximately 500 feet south of the existing intersection.. The new eastbound loop on-ramp would join SR-60 as a new eastbound auxiliary lane. The existing eastbound slip on-ramp would be realigned to accommodate the widened Grand Avenue and the additional freeway lanes, and would merge into the eastbound auxiliary lane on SR-60.

The existing Grand Avenue Overcrossing would be replaced with a new overcrossing structure over SR-60, 136 feet-wide accommodating eight through lanes, a median and two eight-foot sidewalks.

iii. Alternative 2 Proposed Engineering Features

The main difference of Alternative 2 when compared to Alternative 3 is the eastbound SR-60 interchange at Grand Avenue. Alternative 2 would maintain the existing interchange configuration (compact-diamond) for the eastbound on and off-ramps on SR-60. The ramps would be relocated to provide room for the additional SR-60 through lane. A third lane would be added to the eastbound on-ramp. An auxiliary lane would be added connecting the relocated

eastbound SR-60 on-ramp from Grand Avenue to the new connector that bypasses the north/east SR-57/SR-60 interchange.

The existing Grand Avenue Overcrossing (Br. No. 53-1864) would be replaced with a new structure, 148 feet-wide accommodating ten lanes and eight foot sidewalk on both sides of the structure. The ten lanes would be striped for eight through lanes and two 450-foot-long double left turn lanes for the southbound Grand Avenue left turn to the eastbound on-ramp.

iv. Analysis of Alternatives

The build alternatives were evaluated against the purpose and need including operational efficiency, safety performance, constructability, cost effectiveness and impact to the environment. Alternative 3 improves the operational efficiency of both the mainline and Grand Avenue more than improvements realized by Alternative 2.

Alternative 3

Local Intersection Analysis

Local street intersection LOS was prepared using 2037 forecast volumes to assess the impact of the improvements along Grand Avenue. Operation along Grand Avenue at the intersections of the westbound on and off-ramps and the eastbound on and off-ramps through the intersections would be improved from LOS “F” with Alternative 1 to LOS “D” with this alternative for both AM and PM peak hours. The calculated trip delays on Grand Avenue would be improved by a factor of three at the westbound on and off-ramp intersection from 179 sec to 51.4 sec. A significant improvement can be seen at the eastbound off-ramp intersection in the PM peak hour, which would reduce the trip delays from 84.3 seconds to 10.3 seconds per vehicle. Alternative 3 would also improve operations along Golden Springs Drive, cutting the delay time by half.

Table 15 - Intersection Year 2037 Traffic Conditions for Alternative 3

Intersection	AM Peak Hour			PM Peak Hour		
	Queue Length ⁽¹⁾	Delay (sec)	Level of Service	Queue Length ⁽¹⁾	Delay (sec)	Level of Service
Grand Ave. at SR-60 Westbound Ramps	527 ft	37.5	D	305 ft	51.4	D
Grand Ave. at SR-60 Eastbound Ramps	443 ft	20.0	C	172 ft	10.3	B
Grand Ave. at Golden Springs Drive	372 ft	49.6	D	469 ft	53.9	D

Note 1: 95th Percentile Queue lengths for critical approaches are given as indicated

Table 16 - Detailed Intersection Year 2037 Traffic Conditions for Alternative 3

		AM Peak Hour			PM Peak Hour		
Intersection		Queue Length ⁽¹⁾	Delay (sec)	Level of Service	Queue Length ⁽¹⁾	Delay (sec)	Level of Service
Grand Ave. at SR-60 Westbound Off-ramp	NB	743 ft	36.3	D	251 ft	26.5	C
	SB	338 ft	27.4	C	739 ft	68.2	E
	EB	106 ft	58.9	E	333 ft	48.7	D
	WB	527 ft	48.2	D	305 ft	43.6	D
Intersection Average		N/A	37.5	D	N/A	51.4	D
Grand Ave. at SR-60 Eastbound Ramps	NB	446 ft	22.8	C	231 ft	10.2	B
	SB	242 ft	12.3	B	216 ft	8.2	A
	EB	443 ft	26.1	C	172 ft	17.3	B
Intersection Average		N/A	20.0	C	N/A	10.3	B
Grand Ave. at Golden Springs Drive	NB	667 ft	43.1	D	671 ft	62.5	E
	SB	372 ft	65.8	E	469 ft	39.4	D
	EB	236 ft	44.9	D	663 ft	62.9	E
	WB	406 ft	41.9	D	349 ft	49.1	D
Intersection Average		N/A	49.6	D	N/A	53.9	D

Note 1: 95th Percentile Queue lengths for critical approaches are given as indicated

Mainline Analysis

Within the project vicinity, operation of SR-57 and SR-60 were analyzed for the project horizon year of 2037 traffic forecast. The traffic operation analyses were performed with microsimulation model (VISSIM) software that followed the HCM2000 freeway segment analysis methodology. The results of the analysis are presented in the following four tables (Tables 24-27).

Alternative 2

Local Street Intersection Analysis

Local street intersection LOS was prepared using 2037 forecast volumes to assess the impact of the improvements on Grand Avenue. Operation along Grand Avenue at the intersections of the westbound on and off-ramps and the eastbound on and off-ramps, traffic through the intersections would be improved from LOS “F” under the no-build alternative to LOS “D” in the AM peak hour and LOS “E” in the PM peak hour under alternative 2.

Table 17 – Intersection Year 2037 Traffic Conditions for Alternative 2

		AM Peak Hour			PM Peak Hour		
Intersection		Queue Length ⁽¹⁾	Delay (sec)	Level of Service	Queue Length ⁽¹⁾	Delay (sec)	Level of Service
Grand Ave. at SR-60 Westbound Ramps		508 ft	35.7	D	361 ft	46.8	D
Grand Ave. at SR-60 Eastbound Ramps		635 ft	49.6	D	432 ft	55.4	E
Grand Ave. at Golden Springs Drive		523 ft	50.6	D	558 ft	64.6	E

Note 1: 95th Percentile Queue lengths for critical approaches are given as indicated

Table 18 – Detailed Intersection Year 2037 Traffic Conditions for Alternative 2

		AM Peak Hour			PM Peak Hour		
Intersection		Queue Length ⁽¹⁾	Delay (sec)	Level of Service	Queue Length ⁽¹⁾	Delay (sec)	Level of Service
Grand Ave. at SR-60 Westbound Off-ramp	NB	620 ft	38.5	D	300 ft	29.8	C
	SB	260 ft	23.1	C	817 ft	49.4	D
	EB	75 ft	42.0	D	351 ft	73.4	E
	WB	508 ft	44.0	D	361 ft	53.9	D
Intersection Average		N/A	35.7	D	N/A	46.8	D
Grand Ave. at SR-60 Eastbound Ramps	NB	618 ft	68.9	E	767 ft	89.6	F
	SB	336 ft	31.6	C	682 ft	32.1	C
	EB	635 ft	42.7	D	432 ft	43.3	D
Intersection Average		N/A	49.6	D	N/A	55.4	E
Grand Ave. at Golden Springs Drive	NB	741 ft	72.9	E	721 ft	79.0	E
	SB	523 ft	37.8	D	558 ft	64.4	E
	EB	211 ft	37.6	D	680 ft	62.3	E
	WB	340 ft	34.1	C	362 ft	46.3	D
Intersection Average		N/A	50.6	D	N/A	64.6	E

Note 1: 95th Percentile Queue lengths for critical approaches are given as indicated

Alternative 2 meets the project purpose, and would reduce congestion and delays along Grand Avenue and the SR-60 Interchange. Comparing Table 9 (2037 traffic no-build alternative) and Table 16 indicates that delays along Grand Avenue are significantly reduced with Alternative 2. The calculated intersection delays are improved by a factor of 1.6 to 3.8. The most significant improvement on Grand Avenue is at the westbound off-ramp intersection where the traffic delay would be reduced from 178.9 seconds to 46.8 seconds. The overall intersection level of service is improved from “F” to “D” or “E”.

Mainline Analysis

Within the project vicinity, operation of SR-57 and SR-60 were analyzed for the project horizon year of 2037 traffic forecast. The traffic operation analyses were performed with microsimulation model (VISSIM) software that followed the HCM2000 freeway segment analysis methodology. The results of the analysis are presented in the following four tables (Tables 18-21).

Table 19 - Eastbound SR-60 Year 2037 Traffic Conditions, Alternative 2

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Brea Canyon On-ramp to SR-57 SB Connector Ramp	WS	59	26	C
SR-57 SB Connector Ramp to EB Bypass Off-ramp	BF	58	25	C
EB Bypass Off-ramp to SR-57 NB Merge	BF	61	27	C
SR-57 NB Merge to Grand Ave Off-ramp	WS	61	28	C
Grand Ave Off-ramp to Grand Ave On-ramp	WS	55	30	D
Grand Ave On-ramp to SR-57 NB Diverge	M/D	60	26	C
SR-57 NB Diverge to EB Bypass Connector	M/D	61	27	C
EB Bypass Connector to Diamond Bar Off-Ramp	BF	61	27	C
Diamond Bar Off-Ramp to Diamond Bar On-Ramp	BF	61	27	C
Diamond Bar On-Ramp to EB Bypass Connector	M/D	62	23	C
EB Bypass Connector to Phillips Ranch Off-Ramp	BF	62	23	C
PM				
Brea Canyon On-ramp to SR-57 SB Connector Ramp	WS	57	24	C
SR-57 SB Connector Ramp to EB Bypass Off-ramp	BF	54	25	C
EB Bypass Off-ramp to SR-57 NB Merge	BF	63	24	C
SR-57 NB Merge to Grand Ave Off-ramp	WS	60	27	C
Grand Ave Off-ramp to Grand Ave On-ramp	WS	60	26	C
Grand Ave On-ramp to SR-57 NB Diverge	M/D	60	27	C
SR-57 NB Diverge to EB Bypass Connector	M/D	61	24	C
EB Bypass Connector to Diamond Bar Off-Ramp	BF	61	24	C
Diamond Bar Off-Ramp to Diamond Bar On-Ramp	BF	61	24	C
Diamond Bar On-Ramp to EB Bypass Connector	M/D	61	26	C
EB Bypass Connector to Phillips Ranch Off-Ramp	BF	61	26	C

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 20 - Northbound SR-57 Year 2037 Traffic Conditions, Alternative 2

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
SR-60 WB Connector Ramp to SR-60 EB Merge	BF	61	28	C
SR-60 EB Merge to Grand Ave Off-ramp	WS	61	28	C
Grand Ave Off-ramp to Grand Ave On-ramp	WS	56	30	D
Grand Ave On-ramp to SR-60 EB Diverge	WS	60	26	C
SR-60 EB Diverge to EB Bypass Connector	BF	62	22	C
EB Bypass Connector to 4 Lane Opening	BF	61	27	C
PM				
SR-60 WB Connector Ramp to SR-60 EB Merge	BF	60	29	D
SR-60 EB Merge to Grand Ave Off-ramp	WS	60	27	C
Grand Ave Off-ramp to Grand Ave On-ramp	WS	60	26	C
Grand Ave On-ramp to SR-60 EB Diverge	WS	60	27	C
SR-60 EB Diverge to EB Bypass Connector	BF	59	29	D
EB Bypass Connector to 4 Lane Opening	BF	60	33	D

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 21 - Westbound SR-60 Year 2037 Traffic Conditions, Alternative 2

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Diamond Bar Blvd On-ramp Merge Lane End to SR-57 Merge	BF	58	25	C
SR-57 Merge to Lane Drop	WS	57	34	D
Lane Drop to Grand Ave On-ramp	WS	61	26	C
Grand Ave On-ramp to Additional Lane Opening	WS	60	23	C
Additional Lane Opening to SR-57 SB Diverge	WS	60	21	C
SR-57 SB Diverge to HOV Lane Merge	BF	63	15	B
PM				
Diamond Bar Blvd On-ramp Merge Lane End to SR-57 Merge	BF	61	23	C
SR-57 Merge to Lane Drop	WS	61	29	D
Lane Drop to Grand Ave On-ramp	WS	56	32	D
Grand Ave On-ramp to Additional Lane Opening	WS	60	29	D
Additional Lane Opening to SR-57 SB Diverge	WS	60	27	C
SR-57 SB Diverge to HOV Lane Merge	BF	62	24	C

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 22 - Southbound SR-57 Year 2037 Traffic Conditions, Alternative 2

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Sunset Crossing On-ramp Merge Lane End to SR-60 WB Merge	BF	56	36	E
SR-60 WB Merge to Lane Drop	WS	57	34	D
Lane Drop to Grand Ave On-ramp	WS	61	26	C
Grand Ave On-ramp to Additional Lane Opening	WS	60	23	C
Additional Lane Opening to SR-60 WB Diverge	WS	60	21	C
SR-60 WB Diverge to SR-60 EB Connector Ramp	BF	60	33	D
PM				
Sunset Crossing On-ramp Merge Lane End to SR-60 WB Merge	BF	60	37	E
SR-60 WB Merge to Lane Drop	WS	61	29	D
Lane Drop to Grand Ave On-ramp	WS	56	32	D
Grand Ave On-ramp to Additional Lane Opening	WS	60	29	D
Additional Lane Opening to SR-60 WB Diverge	WS	60	27	C
SR-60 WB Diverge to SR-60 EB Connector Ramp	BF	60	34	D

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Alternative 2 improvements would remove the congestion on the eastbound SR-60 up to the Grand Avenue off-ramp. The eastbound SR-60 PM peak hour speeds leading to Grand Avenue would operate above 55 mph. Segments that would have a LOS “F” with Alternative 1 would be improved to LOS “C” or “D”. Average speed on the northbound SR-57 immediately south of the 57/60 interchange would be over 55 mph, indicating operation improvements on the SR-57 as result of the proposed Alternative 2 improvements.

The proposed alternative 2 would also improve the traffic operation on SR-60 as it approaches the northbound SR-57 connector. The LOS during the PM peak is expected to be improved from a “F” to a “C”, and average speed through this segment would be increase by about 35 mph. In the westbound SR-60 direction, Alternative 2 would reduce the AM peak hours lane density for the merge segment with SR-57 from over 100 vehicles per mile per lane to around 25 vehicles per lane per mile. This corresponds to a significant speed increase from 9 mph to 58 mph in the SR-57 merge segment of SR-60.

Table 23 - Eastbound SR-60 Year 2037 Traffic Conditions, Alternative 3

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Brea Canyon On-ramp to SR-57 SB Connector Ramp	WS	59	26	C
SR-57 SB Connector Ramp to EB Bypass Off-ramp	BF	58	25	C
EB Bypass Off-ramp to SR-57 NB Merge	BF	62	27	C
SR-57 NB Merge to Grand Ave Off-ramp	WS	60	28	C
Grand Ave Off-ramp to Grand Ave Loop On-ramp	WS	57	28	C
Grand Ave Loop On-ramp to Slip On-ramp	WS	56	27	C
Grand Ave Slip On-ramp to SR-57 NB Diverge	M/D	56	27	C
SR-57 NB Diverge to EB Bypass Connector	M/D	61	27	C
EB Bypass Connector to Diamond Bar Off-Ramp	BF	61	27	C
Diamond Bar Off-Ramp to Diamond Bar On-Ramp	BF	61	27	C
Diamond Bar On-Ramp to EB Bypass Connector	M/D	62	23	C
EB Bypass Connector to Phillips Ranch Off-Ramp	BF	62	23	C
PM				
Brea Canyon On-ramp to SR-57 SB Connector Ramp	WS	58	24	C
SR-57 SB Connector Ramp to EB Bypass Off-ramp	BF	55	25	C
EB Bypass Off-ramp to SR-57 NB Merge	BF	63	24	C
SR-57 NB Merge to Grand Ave Off-ramp	WS	59	28	C
Grand Ave Off-ramp to Grand Ave Loop On-ramp	WS	58	27	C
Grand Ave Loop On-ramp to Slip On-ramp	WS	60	26	C
Grand Ave Slip On-ramp to SR-57 NB Diverge	M/D	60	26	C
SR-57 NB Diverge to EB Bypass Connector	M/D	61	25	C
EB Bypass Connector to Diamond Bar Off-Ramp	BF	61	25	C
Diamond Bar Off-Ramp to Diamond Bar On-Ramp	BF	62	24	C
Diamond Bar On-Ramp to EB Bypass Connector	M/D	61	25	C
EB Bypass Connector to Phillips Ranch Off-Ramp	BF	61	25	C

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 24 - Northbound SR-57 Year 2037 Traffic Conditions, Alternative 3

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
SR-60 WB Connector Ramp to SR-60 EB Merge	BF	61	28	C
SR-60 EB Merge to Grand Ave Off-ramp	WS	60	28	C
Grand Ave Off-ramp to Grand Ave Loop On-ramp	WS	57	28	C
Grand Ave Loop On-ramp to Slip On-ramp	WS	56	27	C
Grand Ave Slip On-ramp SR-60 Diverge	WS	56	27	C
SR-60 EB Diverge to EB Bypass Connector	BF	61	22	C
EB Bypass Connector to 4-Lane Opening	BF	61	27	C
PM				
SR-60 WB Connector Ramp to SR-60 EB Merge	BF	60	30	D
SR-60 EB Merge to Grand Ave Off-ramp	WS	59	28	C
Grand Ave Off-ramp to Grand Ave Loop On-ramp	WS	58	27	C
Grand Ave Loop On-ramp to Slip On-ramp	WS	60	26	C
Grand Ave Slip On-ramp SR-60 Diverge	WS	60	26	C
SR-60 EB Diverge to EB Bypass Connector	BF	59	29	D
EB Bypass Connector to 4-Lane Opening	BF	60	34	D

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 25 - Westbound SR-60 Year 2037 Traffic Conditions, Alternative 3

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Diamond Bar Blvd On-ramp Merge Lane End to SR-57 Merge	BF	62	23	C
SR-57 Merge to Lane Drop	WS	57	29	D
Lane Drop to Grand Ave On-ramp	WS	60	26	C
Grand Ave On-ramp to Additional Lane Opening	WS	60	23	C
Additional Lane Opening to SR-57 SB Diverge	WS	60	22	C
SR-57 SB Diverge to HOV Lane Merge	BF	64	14	B
PM				
Diamond Bar Blvd On-ramp Merge Lane End to SR-57 Merge	BF	60	24	C
SR-57 Merge to Lane Drop	WS	56	31	D
Lane Drop to Grand Ave On-ramp	WS	56	31	D
Grand Ave On-ramp to Additional Lane Opening	WS	60	27	C
Additional Lane Opening to SR-57 SB Diverge	WS	60	26	C
SR-57 SB Diverge to HOV Lane Merge	BF	62	24	C

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Table 26 - Southbound SR-57 Year 2037 Traffic Conditions, Alternative 3

Freeway Segment	Freeway Type ¹	Speed (mph)	Density (Veh/Mi/Ln)	LOS
AM				
Sunset Crossing On-ramp Merge Lane End to SR-60 WB Merge	BF	58	33	D
SR-60 WB Merge to Lane Drop	WS	57	29	D
Lane Drop to Grand Ave On-ramp	WS	60	26	C
Grand Ave On-ramp to Additional Lane Opening	WS	60	23	C
Additional Lane Opening to SR-60 WB Diverge	WS	60	22	C
SR-60 WB Diverge to SR-60 EB Connector Ramp	BF	60	33	D
PM				
Sunset Crossing On-ramp Merge Lane End to SR-60 WB Merge	BF	60	33	D
SR-60 WB Merge to Lane Drop	WS	56	31	D
Lane Drop to Grand Ave On-ramp	WS	56	31	D
Grand Ave On-ramp to Additional Lane Opening	WS	60	27	C
Additional Lane Opening to SR-60 WB Diverge	WS	60	26	C
SR-60 WB Diverge to SR-60 EB Connector Ramp	BF	61	30	D

Note 1: BF=Basic Freeway, WS = Weaving Segment M/D=Merge/Diverge

Alternative 3 improvements would remove the congestion on eastbound SR-60 up to the Grand Avenue off-ramp. The eastbound SR-60 PM peak hour speeds leading to Grand Avenue Interchange would operate above 59 mph. SR-60 segments that would have a LOS “F” with Alternative 1 would be improved to LOS “C” or “D”. The average speed on northbound SR-57 immediately south of the 57/60 Interchange would be over 50 mph, indicating operation improvements on the SR-57 as result of the proposed Alternative 3 improvements.

In the westbound SR-60 direction, Alternative 3 would reduce the AM peak hours lane density for the merge segment with SR-57 from over 100 vehicles per mile per lane to around 25 vehicles per lane per mile. This corresponds to a significant speed increase from 9 mph to 58 mph in the SR-57 merge with SR-60..

The proposed alternative 3 would also improve the traffic operation on eastbound SR-60 as it approaches the northbound SR-57 Connector. The LOS during the PM peak hours is expected to improve from a “D” to a “C” and the average through this segment by about 10 mph.

v. Non-Standard Mandatory and Advisory Design Features

The project includes several non-standard design features based on design standards described in the 2006 Highway Design Manual (HDM), Sixth Edition. Fact Sheet Exceptions for Mandatory Design Standards were approved on March 19, 2009 to document the non-standard features. Three separate Fact Sheet Exceptions for Advisory Design Standards were approved on March 25, 2009, February 22, 2011, and July 27, 2012 to document the non-standard features. Both alternative 2 and alternative 3 have the following non-standard features:

a. Traveled Way Width

The Mandatory Standard in HDM Index 301.1 states, **“The basic lane width for new construction on two-lane and multilane highways, ramp, collector roads, and other appurtenance roadways shall be 12 feet.”** The proposed project would maintain or relocate the existing non-standard lane widths on WB SR-60 at 10.8’ (SR-60 lanes) and 11.8’ wide (SR-57 lanes).

Location	Traveled Way Width		
	Standard	Existing	Proposed
WB SR-60 Sta 240+00 TO Sta 388+00	12 feet	10.8 feet & 11.8 feet	10.8 feet & 11.8 feet
EB SR-60 Sta 240+00 TO Sta 388+00	12 feet	10.8 feet & 11.8 feet	10.8 feet & 11.8 feet

b. Superelevation

The Mandatory Standard in HDM Index 202.2 states, **“Based on an e_{max} selected by the designer for one of the conditions, superelevation rates from Table 202.2 shall be used within the given range of curve radii. If less than standard superelevation rates are approved (see Index 82.1), Figure 202.2 shall be used to determine superelevation based on the curve radius and maximum comfortable speed.”** The proposed project would maintain the existing non-standard superelevation.

Location	Existing Curve Radius	Superelevation Rate “e”		
		Standard	Existing	Proposed
“A” Line Sta 271+94 to Sta 285+01	10,000 feet	2%	-1.5% (adverse)	-1.5% (adverse)
“A” Line Sta 303+07 to Sta 317+26	10,000 feet	2%	-1.5% (adverse)	-1.5% (adverse)

c. Interchange Spacing

The Mandatory Standard in HDM Index 501.3 states, **“The minimum interchange spacing shall be one mile for urban areas, two miles in rural area, and two miles between freeway-to-freeway interchanges and local interchanges.”** Supplement to Index 501.3 is the Caltrans Design Information Bulletin Number 77 that states, the minimum weaving length for a 2.0-mile interchange spacing shall be 4922 feet.” The existing interchange spacing between the SR-60/SR-57 junctions and Grand Avenue is not proposed to change.

Location	Interchange Spacing		
	Standard	Existing	Proposed
SR-60 West Junction to Grand Avenue	2.0 miles	1.0 mile	1.0 mile
Grand Avenue to SR-60 East Junction	2.0 miles	1.0 mile	1.0 mile

Location	Weaving Length		
	Standard	Existing	Proposed
WB SR-60 from SB SR-57 merge to Grand Avenue WB off-ramp	4920 feet	3168 feet	3168feet
WB Grand Avenue direct on-ramp to SR-60/SB SR-57 split	4922 feet	1584 feet	1584 feet

d. *Shoulder Widths, Horizontal Clearances, and Median Widths*

Highway Design Manual Sixth Edition, (HDM) Index 302.1 states:

“The shoulder widths given in table 302.1 shall be the minimum continuous usable width of paved shoulder.” In accordance with table 302.1, for a freeway of 6 lanes or more, the left and right shoulder widths shall be 10 feet.

Highway Design Manual Sixth Edition, (HDM) Index 308.1 states:

“The minimum design standards for the cross section of the local facility shall be at least equal to those for a conventional highway with the exception that the outside shoulder width shall match the approach roadway, but not less than 4 feet.” In accordance with 308.1, for local facility that crosses over the State facility, the minimum right shoulder width shall be feet.

Highway Design Manual Sixth Edition, (HDM) Index 309.1(3)(a) states:

“The minimum horizontal clearance to fixed objects, such as bridge rails and safety-shaped concrete barriers, on all freeway and expressway facilities... shall be equal to the standard shoulder width of the highway facility as stated in Table 302.1.” In accordance with table 302.1, for a freeway of 6 lanes or more, the left and right shoulder widths and thus the horizontal clearance, shall be 10 feet.

The project does not propose to realign SR-60 and SR-57 through the entire confluence project area to increase the median width, left shoulders and left horizontal clearances due to restrictions at each end. A portion of the eastbound SR-60 will be realigned under the new Grand Avenue OC to provide room for the new bridge

Location	Shoulder Width		
	Standard	Existing	Proposed
EB & WB SR-60, Station 240+00 to 251+00	10'	2', <10' & Var	2', <10' & Var
EB & WB SR-60, Station 267+00 to 290+00	10'	2', 5.5' & Var	2', 5.5' & Var
WB SR-60, Station 290+00 to 300+00	10'	2' left shoulder	8.3' left shoulder
EB & WB SR-60, Station 307+70 to 348+20	10'	1' & Var	1' & Var
EB & WB SR-60, Station 348+20 to 388+00	10'	1' & Var	1' & Var

Location	Horizontal Clearance		
	Standard	Existing	Proposed
EB & WB SR-60, Station 240+00 to 251+00	10'	2', <10' & Var	2', <10' & Var
EB & WB SR-60, Station 267+00 to 290+00	10'	2', 5.5' & Var	2', 5.5' & Var
WB SR-60, Station 290+00 to 300+00	10'	2' left shoulder	8.3' left shoulder
EB & WB SR-60, Station 307+70 to 348+20	10'	1' & Var	1' & Var
EB & WB SR-60, Station 348+20 to 388+00	10'	1' & Var	1' & Var

Location	Median Width		
	Standard	Existing	Proposed
EB & WB SR-60, Station 240+00 to 251+00	22'	6', <22' & Var	6', <22' & Var
EB & WB SR-60, Station 307+70 to 348+20	22'	4' & Var	4' & Var
EB & WB SR-60, Station 348+20 to 388+00	22'	4' & Var	4' & Var

e. Side Slope Standards

The Advisory Standard in HDM Index 304.1 states, “For new construction, widening, or where slopes are otherwise being modified, embankment (fill) slopes should be 4:1 or flatter.” The slope between the westbound slip ramp and SR-60 is 2:1.

Location	Side Slope Standard		
	Standard	Existing	Proposed
Along Ramp “EG-1”	4:1	2:1	2:1

f. Access Control

The Advisory Standard in HDM Index 504.8 states, “For new construction or major reconstruction access right should be acquired on the opposite side of the local road from ramp terminals to preclude the construction of future driveways or local roads within the ramp intersection.” The existing westbound SR-60 off-ramp and Grand Avenue terminates across from Old Brea Canyon Road. This condition is not proposed to change as part of this project.

Location	Access Control Standard		
	Standard	Existing	Proposed
Westbound SR-60 Off-ramp Terminal	No Access	City Street Access	City Street Access

g. Single Lane Ramps

The Advisory Standard in HDM Index 504.3(5) states, “If the length of a single lane ramp exceeds 1,000 feet, an additional lane should be provided on the ramp to permit passing maneuvers.” The eastbound SR-60 bypass off-ramp to Grand Avenue is proposed as a single lane ramp.

h. Mainline Lane Reduction at Interchanges

Highway Design Manual Sixth Edition, September 01, 2006 (HDM) Index 504.6 states: “The basic number of mainline lanes should not be dropped through a local service interchange.” The proposed extension of the southbound SR-57 lane would be dropped at the Grand Avenue off-ramp.

vi. Interim Features

Interim features are not proposed as part of this project.

vii. High Occupancy Vehicle (HOV) Lanes

The two build alternatives would maintain existing HOV lanes and connectors. Currently in the eastbound direction, there is insufficient space for two HOV lanes under the Grand Avenue OC. The build alternatives would provide two standard HOV lanes through the Grand Avenue Overcrossing

An HOV preferential ramp meter bypass lane would be constructed on the eastbound SR-60 slip on-ramp from Grand Avenue, the westbound SR-60 loop on-ramp from Grand Avenue, and the eastbound SR-60 on-ramp from Diamond Bar Blvd. The proposed eastbound loop on-ramp from Grand Avenue for alternative 3 would not include a HOV preferential lane. Both build alternatives would require reconstructing portion of the westbound SR-60 slip on-ramp, which does not include a HOV preferential lane due to right-of-way and natural habitat impact limitations. “Exceptions to Ramp Metering Policy” Fact Sheets were approved for both of these locations.

viii. Ramp Metering

The build alternatives would provide ramp meters at all new and reconstructed on-ramps. In coordination with Caltrans traffic operations, a ramp meter would also be added to the new two-lane eastbound bypass connector. A summary of ramp meter locations is as follows:

Table 27 - Ramp Meter Locations

Ramp Meter Location	Alternative
Westbound SR-60 slip on-ramp at Grand Ave	Alternatives 2 & 3
Westbound SR-60 loop on-ramp at Grand Ave	Alternatives 2 & 3
Eastbound SR-60 slip on-ramp at Grand Ave	Alternatives 2 & 3
Eastbound SR-60 loop on-ramp at Grand Ave	Alternative 2 – N/A Alternatives 3
Eastbound SR-60 on-ramp from Diamond Bar Blvd	Alternatives 2 & 3
Eastbound SR-60 Bypass Connector	Alternatives 2 & 3

ix. CHP Enforcement Areas

CHP enforcement areas would be constructed at each of the new or reconstructed ramp meter locations per the Caltrans Ramp Meter Design Manual. These are included on the layout plans in the appendices.

x. Park and Ride Facilities

A Park and Ride facility is located along Diamond Bar Blvd within the westbound loop on-ramp to SR-60. Operation of the existing facility would not be affected by the proposed project. No new Park and Ride facility is being proposed for the project.

xi. Utilities

Notice letters were sent to all utilities located in the City of Industry. Based on responses from the utilities and other research of the project area the following utility owners were identified:

1. Southern California Edison (SCE)
2. Walnut Valley Water District (WVWD)
3. Verizon Telephone
4. Los Angeles County Sanitation District (LACSD)
5. Southern California Gas Company

The majority of the utility conflicts identified are within the local streets and would be relocated within the same streets. The exceptions are SCE distribution lines within the golf course, SCE transmission lines within the Golf course, and a LACSD sewer line in an easement on the Ayres Hotel property. The power distribution line would be shifted south and require a new utility easement within the golf courses.

The existing LA Sanitation District (LASD) trunk sewer (15 to 18" VCP approximately 2,200ft long) extends down Golden Springs Drive from Copley Drive, runs at the bottom of the slope of the Ayres Hotel parallel to SR-60, and connects to Gateway Center Drive. An existing City of Industry sewer line (12" VCP) crosses under the SR-60 and connects to this LASD trunk sewer. Widening of the freeway would require abandonment of the portion of the existing LASD trunk sewer adjacent to the Ayres Hotel. The LASD trunk line would be relocated to Golden Springs Drive, and a new service lateral from the Ayres Hotel would be re-connected. The existing City of Industry 12" sewer line would be extended approximately 200 feet to connect to the relocated LASD trunk sewer.

There is an array of 66 kV transmission lines owned by Southern California Edison (SCE) that cross SR-60 to the west of Grand Avenue. The transmission lines are hung on a high steel pole in the Diamond Bar Golf Course. Both Alternative 2 and Alternative 3 would require relocating the steel pole within the golf course.

No utility encroachment exception would be required for this project. At the west end of the project, a 650 feet long segment of SCE distribution power line runs along the north edge of the state right-of-way. During PS&E phase, the exact location of these poles would be surveyed to verify they are outside of the state right-of-way. The project would not otherwise impact these poles or require their relocation.

xii. Railroad Involvement

No railroad tracks, crossings, or properties are in the vicinity of the project limits.

xiii. Highway Planting

The project is not included in the Quality for Landscaping Area. Both build alternatives would include new highway planting and vegetation measures within the project limits. This includes landscaping all new or graded slopes that meet Caltrans standard landscaping requirements. Native trees, including coastal live oak present within the existing Caltrans landscaped areas, that require removal would be replaced in proximity to the project at a 1:1 ratio. Diamond Bar's Tree Removal Permit process would be applicable for the removal of any of these trees outside of the freeway right-of-way. All native trees located outside of Caltrans landscaped areas removed would be replaced with the same species at a 2:1 ratio. A qualified biological monitor would be provided during construction to flag and stake adjacent native trees to be protected. The biological monitor would be onsite during construction to ensure the protection of the drip line area of adjacent native trees and that construction limits are enforced.

If Diamond Bar elects to provide special landscape within the new State right-of-way, a new Maintenance Agreement between Caltrans and Diamond Bar is required to assign maintenance responsibilities of the special landscape required by Diamond Bar.

xiv. Erosion Control

The soil along the project alignment has the potential to be erosive. Erosion control measures would be required during and after construction activities and would be included in the design plans and cost estimate during PS&E. Provisions for temporary and permanent erosion control measures would be included in the project.

Storm water runoff requirements of the National Pollutant Discharge Elimination System (NPDES) are included and accounted for in the project design and cost estimate. These measures addressing erosion control would include construction best management practices for temporary control of runoff from the construction site such as the application of fertilizer-seed mulch to exposed soils during or soon after construction, punched-in straw or jute netting to protect soils

during the re-vegetation period, and/or other established erosion control methods. Landscaping would be included as part of the proposed project as an erosion control strategy.

xv. Noise Barrier

A Noise Study Report was prepared for the build alternatives. The noise study report discussed potential noise impacts and related noise abatement measures associated with construction and operation of improvements to the State Route 57/State Route 60 (SR-57/SR-60) confluence. For the build alternatives, the report studied the locations where frequent human use occurs and where a reduced noise level would be beneficial. Locations of studied areas are designated by land use and project locations. Total of seven possible noise barrier locations were studied. Five of the noise barriers studied were found to be feasible from an acoustic perspective.

The Protocol establishes a process for assessing the reasonableness and feasibility of noise abatement. Summary of the estimated construction costs and the maximum calculated cost allowances are shown in table below.

Table 28 – Noise Barrier Costs

Noise Barrier Designation	Wall Height	No. of Benefited Residences	Estimated Cost	Maximum Cost Allowance
A-2	6 ft	36	\$3,068,000	\$1,980,000
C	12 ft- 14 ft	35	\$2,825,000	\$1,925,000
C-2	6 ft	16	\$1,367,000	\$880,000
G-1	12 ft	7	\$1,061,000	\$385,000
G-2	12ft	1	\$933,000	\$55,000

The engineering analysis of the five noise barriers indicate that all five noise barriers would exceed the cost reasonableness criteria. Noise barrier G-1 (east half of the golf course) was recommended as a “measure to minimize harm to the Section 4(f) property” as identified in the Programmatic Section 4(f) Evaluation report for the Confluence Project. Therefore, noise wall G-1 is considered reasonable because it satisfies a project requirement as stated in the referenced 4(f) report.

xvi. Drainage

Diamond Bar Creek runs through the Diamond Bar Golf Course south of SR-60 where the flows are split in two drainage channels before they are interrupted by the freeway. The creek crosses under SR-60 in two separate reinforced concrete box culverts (RCB); namely a double 6’x4’ RCB SR-60 Station 1304+25, and a triple 6’ x 6’ RCB at SR-60 Station 1279+90. Both RCB cross diagonally underneath SR-60. At the north side of SR-60, Diamond Bar Creek continue to flow westward in a natural meandering channel approximately 150 to 350 feet north of SR-60. Alternaitve 3 would require the extension of the south end of the existing triple 6’x6’ RCB located at Station 1279+90 SR-60, and the extension of the south end of the existing double 6’x4’ RCB located at Station 1304+25 SR-60.

Along the eastbound SR-60 east of Grand Avenue, there are series of existing drainage inlets in the shoulders that drain into a 60-inch reinforced concrete pipe (RCP) underneath the shoulder.

The pipe outlets to the SR-60 cross-drain box culvert. The project would relocate the 60-inch RCP underneath the shoulder of the widened freeway.

The existing eastbound on-ramp at Grand Avenue has several drainage inlets that drain to a 24" corrugated metal pipe (CMP) and crosses under SR-60 and outlets to a drainage ditch on the north side of SR-60. A new drainage pipe is proposed to replace the existing 24" CMP cross-drain, and would outlet to be pre-treated with a detention basin proposed in the new eastbound loop on-ramp area and eventually discharge to the existing reinforced concrete box cross-drain west of Grand Avenue to the west.

Along the eastbound SR-60 at Grand Avenue, there is an existing inlet that drains to a 24-inch CMP that crosses SR-60 and outlet to a drainage ditch on the north side of SR-60. The project proposes to divert the 24-inch CMP to a new infiltration basin adjacent to the westbound Grand Avenue slip on-ramp.

Along the eastbound SR-60 between Stations 1260+60 and 1272+60, there is an existing 12-foot wide open reinforced concrete channel at the toe of the freeway embankment that runs for approximately 1,100 feet along the Diamond Bar Golf Course, and it terminates at an 12'x3' RCB that crosses SR-60 leading to the Diamond Bar Creek north of SR-60. There are two existing inlets on the freeway shoulder that drain through a 24" CMP to the open concrete channel. The project proposes to reconstruct the open concrete channel along the new bypass ramp shoulders within the State right-of-way. The new channel would connect to the existing RCB cross-drain.

Along the westbound SR-60, east of Grand Avenue, the freeway runoff sheet flows into a dirt "v-ditch". The "v-ditch" drains to two separate cross pipes feeding into Diamond Bar Creek. The project would maintain this drainage pattern.

Runoff at the westbound off-ramp and the loop on-ramp currently drains directly into Diamond Bar Creek through a series of drainage inlets in the shoulders. The project would incorporate an Austin sand filter to pre-treat runoff from Grand Avenue and portions of the off-ramp and loop on-ramp. Runoff on the lower portions of the on and off-ramps and some inlets from the westbound SR-60 would be pre-treated with bio swales prior to flowing into Diamond Bar Creek.

Along the westbound SR-60 west of Grand Avenue, there is a series of drainage inlets along the shoulder. The existing inlets currently discharge into Diamond Bar Creek. The project would divert this flow to be, pre-treated with an existing bio-swale before discharging to Diamond Bar Creek.

xvii. Non-Motorized and Pedestrian Features

The project would improve pedestrian circulations on Grand Avenue. The sidewalks along Grand Avenue would be widened from existing five feet to eight feet between Golden Springs Drive and Old Brea Canyon Rd. There is no existing sidewalk on the northbound side of Grand Avenue between the Grand Avenue OC and the westbound off-ramp intersection. The project

would build a new eight foot sidewalk on the Grand Avenue OC through the new westbound off-ramp intersection, and a new crosswalk north of the westbound off-ramp intersection.

Pedestrian safety at the intersection of Grand Avenue and Golden Springs Drive would be improved with the installation of countdown timers at all four crosswalks. All curb returns would be reconstructed with curb ramps at the intersections to be designed in compliance with Americans with Disabilities Act (ADA) requirements.

Grand Avenue is not designated as a bike route; however, bicycle safety would be improved along Grand Avenue by providing standard four foot shoulders. Golden Springs Drive has class 2 bike lanes to the east and west of the Grand Avenue intersection. The project would replace bike lanes where widening occurs, though the lanes would not be continued through the intersection in order to limit the golf course right-of-way impacts.

xviii. Needed Roadway Rehabilitation and Upgrading

The “Caltrans 2009 Pavement Condition Survey Inventory” reports on the pavement condition for SR-60 between PM R23.380 and R24.000 as of September 29, 2011 indicates that most lanes are rated in Good Condition with no defects. The exceptions are on lane L5 with 12 percent of the pavement in a first stage cracking, one percent of pavement in a third stage cracking and two percent of pavement showed corner cracking; lane R7 has unsealed cracks.

The pavement condition report for SR-60 between PM R24.000 and R25.000 indicates that most lanes are rated in Good Condition with no defects. The exceptions are on lane L5 that has about four percent of the pavement in a first stage cracking; lane R7 has unsealed cracks. SR-60 between PM R25.00 and R25.036 indicates that lane L5 has about 25 percent of pavement in first stage cracking; 21 percent of pavement are in third stage cracking and 22 percent of pavement with corner cracking. From SR-60 PM R25.036 to R25.389 lane, lane L5 has about 25 percent of pavement in first stage cracking, 21 percent of pavement in third stage cracking and 22 percent of pavement with corner cracking. On SR-60 between PM R25.597 and R26.526, the AC pavement exhibits high percentage of Type A & B alligator cracks in lanes L5, L6, R5, and R6. On SR-57 between PM R4.296 to R4.45, no northbound lanes are reported to have defects. On SR-57 from R4.518 to R4.977, the southbound lane No. 3 exhibits 18 percent of 1st stage slab cracking and 2% corner cracking.

A pavement rehabilitation project (EA 07-253304) is currently under construction on Route 60. The rehabilitation project plans to reconstruct distressed PCC pavement panels in lanes 1 through 5 as needed on SR-60 between PM R23.9 and R30.5. The project was awarded on October 10, 2010.

As a current project is underway to rehabilitate the mainline pavement within the project limits this proposed project does not include roadway or pavement rehabilitation.

xix. Needed Structure Rehabilitation and Upgrading

Bridge inspection Reports from 2011 were reviewed for each structure within the project limits. Table 29 lists the recommended work as well as the work proposed as part of this project. Routine maintenance work is not proposed to be completed by this project.

Table 29 - Summary of Needed Structure Rehabilitation and Upgrading

Structure Name	Bridge Number	Work Needed	Work Proposed
Prospector Rd UC	53-1873	1) Eastbound Approach slabs in lanes 1 to 4 have settled. It is recommended that the approach slabs be replaced “reduce impact on the structure and to improve rideability.”	None
E60-N57 Connector UC (north)	53-1905	1) The westbound hinge joint seal is failing and needs replacement.	None
Prospector Rd OC	53-1873G	1) Replace Type “A” joint seals at the abutments 2) Methacrylate bridge deck.	None
Diamond Bar UC	53-1899	1) No work recommended	NA
Golden Springs Drive UC	53-2149R	1) Replace all joint seals	Replace Bridge
S57/60 Separation (south)	53-2150L	1) Repair spalls at soffit and along the railing.	None
Grand Ave OC	53-1864	1) Repair soffit four spalls 2) Level roadway at approaches.	Replace Bridge

xx. Right-of-Way Data

New right-of-way and easements would be required. It is anticipated that all right-of-way acquisitions would be partial takes, with no full takes required. The right-of-way requirements are similar for alternatives 2 and 3 except for the required takes from the county golf course.

The eastbound bypass connector would require an aerial easement from four commercial parcels. Constructing the bypass connector bridge would temporarily eliminate 92 parking in the Best Western Motel and an adjacent restaurant. The aerial easement would permanently eliminate four parking spaces from these two parcels to accommodate the bridge columns and relocated trash receptacles. Both parking lots are currently underutilized. An aerial utility easement would be relocated within the parking lots of the businesses between Prospector Rd and Diamond Bar Blvd.

Relocation of Diamond Bar on-ramp would require partial acquisition of slopes from business center on Palomino Drive.

Relocation of the northbound SR-57 connector to eastbound SR-60 requires partial takes of the landscaped slope near Golden Springs Drive, maintenance easements, and a footing easement for the proposed retaining walls. Construction of the eastbound SR-60 bypass off-ramp to Grand Avenue would require the partial acquisition of the slope adjacent to the Ayres Hotel.

A narrow strip of a landscaped area would be needed from a strip mall on Grand Avenue near the intersection with Golden Springs Drive. The westbound off-ramp to Grand Avenue would require a 115 foot wide undeveloped slope from City of Industry. The slope would be re-graded to eliminate the need for a retaining wall. The driveway into the former Honda dealership would be relocated to the north to accommodate the vertical profile change in Grand Avenue. No access would change as a result of the project.

Alternative 2 would require 7.3 acres from the Diamond Bar Golf Course. Four existing fairways affected by the freeway construction would be reconstructed. Alternative 3 would require 10.1 acres from the Diamond Bar Golf Course. Six existing fairways directly affected by the freeway construction would be completely replaced with new fairways and green complexes. All remaining twelve fairways would be partially reconstructed and all fairways would be improved with new greens and fairway hazards. There would be no loss of clubhouse parking. A driveway to Grand Avenue from the parking lot would be relocated to accommodate the widened Grand Avenue. Alternative 2 would extend the existing golf cart tunnel under Grand Avenue, while Alternative 3 would relocate the tunnel outside the proposed Caltrans right-of-way needed for the eastbound loop on-ramp. Both alternatives require drainage maintenance easements to allow access at the ends of the two box culvert extensions within the golf course.

With the exception of the westbound off-ramp, retaining walls are proposed to minimize right-of-way impact on all affected parcels. Retaining wall construction would require temporary construction easements between ten and fifteen feet beyond the proposed right-of-way line. Except for the retaining walls built along the perimeters of the Diamond Golf Course, a ten foot permanent maintenance or footing easement would be required along the new retaining walls.

Total right-of-way costs include all acquisitions, utility relocations, relocation expenses, demolition costs and title and escrow fees are estimated at approximately \$35,153,000 for alternative 2, and \$38,749,000 for alternative 3. The right-of-way data sheet is presented in attachment F. Right-of-way costs were calculated in 2012 and escalated to the construction year of 2017 by applying an increase of 7% per year.

xxi. Cost Estimates

The preliminary capital cost estimate, which includes detailed roadway, structure, and right-of-way, was prepared for the project. A detailed cost breakdown can be found in Attachment E. The costs were prepared using standard percentages for the addition of minor items, supplemental work, mobilization, and contingencies. The project capital cost estimate in 2012 dollars is summarized below:

Table 30 –Capital Cost Estimates (in 2012)

Item	Alternative 2	Alternative 3
Roadway	\$105,000,000	\$110,000,000
Structures	\$46,600,000	\$45,800,000
R/W Acquisition/Utilities (in 2017)	\$35,152,000	\$38,753,000
TOTAL CAPITAL COST	\$186,752,000	\$194,553,000

xxii. Effect of Projects Funded by Others on State Highway

The project does not have adverse impacts to the state highway system. The build alternatives contain a number of elements designed to improve state highway operations, including a bypass off-ramp, bypass connector, auxiliary lanes, and closing a gap in the number of eastbound through lanes. The traffic analysis results show that both build alternatives would reduce vehicle density on the mainline lanes and increase speeds during peak hours, thus improving state highway operations.

B. Rejected Alternatives

i. Alternative 3B (From PSR)

Alternative 3B presented in the PSR is similar to alternative 3, with a partial cloverleaf design at Grand Avenue. The main difference is the proposed use of a collector/distributor road to separate the Grand Avenue on-ramp traffic from the eastbound SR-60 mainline. The loop on-ramp traffic and the direct on-ramp traffic would form a two lane eastbound collector distributor road to the east of Grand Avenue. One lane would merge into the northbound SR-57 lanes after the split with the SR-60. The benefit of this alternative was the prevention of SR-60 traffic from crossing the 3 SR-57 lanes to use the bypass connector. However, the relatively short lane drop into the outside SR-57 would result in poor operational characteristics that would not meet the project need and purpose. Additionally, this alternative required an additional 25 to 50 feet from the golf course property which would substantially impact the quality of the course. For these reasons alternative 3B was dropped from further consideration.

6. CONSIDERATIONS REQUIRING DISCUSSION

A. Hazardous Waste

An Initial Site Assessment (ISA) was prepared for the project. See attachment K for the ISA checklist. The ISA memo was updated August 8, 2012 to confirm the findings within the project footprint of the two proposed build alternatives. Potential hazardous wastes for the proposed alternative were identified as follows:

- Aerially Deposited Lead
- Potential Groundwater Contamination
- Lead-Based Paints
- Asbestos Containing Materials
- Pole-mounted Transformers and Electrical Boxes

These potential hazardous wastes are considered low to medium risk issues.

i. Aerially Deposited Lead

Areas of exposed soils within the State's ROW, which would be disturbed during excavation/grading activities, should be sampled and tested for lead, so that any special handling, treatment, or disposal provisions associated with aerially deposited lead may be included in construction documents (if aerially deposited lead is present). The areas of exposed soils within the State's R/W has likely resulted in aerially deposited lead contamination in on-site soils.

A site investigation was prepared for the HOV Direct Connector Project on SR-60 and SR-57, EA 43A0078, dated July 2002. The area included the unpaved soil within Caltrans R/W adjacent to the mainline near Grand Avenue OC. The report identified Aerially Deposited Lead exceeding allowable limits within the top three feet. The report indicated the soil could be re-used following the Lead Contaminated Soil Variance from the California Department of Toxic Substance Control. The SR-60 westbound slip-ramp project (EA255100) is scheduled to remove the top three feet of contaminated soil west of Grand Avenue OC and ship offsite to an approved hazardous material handling facility.

Due to the above finding, the cost estimate assumes the top two feet of excavation within unpaved areas would be handled as ADL (Type Z-2) soil and shipped off-site to an approved landfill. A comprehensive ADL testing of exposed soil will be performed during the PS&E phase when the exact location and limits of excavation has been determined. A Lead Compliance Plan requirement will be incorporated into the PS&E specifications to address both non-hazardous and hazardous levels of lead in disturbed soil.

ii. Groundwater Contamination

The ISA identified the off-site regulatory properties 206 South Diamond Bar, 301 South Diamond Bar Boulevard, 22628 East Golden Springs Drive and 23525 East Palomino Drive (dry cleaner facility), and 525 Grand Avenue have likely resulted in groundwater contamination underlying the subject site. Thus off-site regulatory properties have resulted in a Recognized Environmental Condition. Subsequent to the ISA, documentation from Los Angeles County shows that the associated 525 Grand Ave UST was never installed, and ht epermit from the County expired in 2005. Thus is there is no potential for ground water contamination at 525 Grand Ave.

During the PS&E phase, a Site Investigation will be completed for the project footprint to research all existing regulatory documentation to determine if any groundwater contamination plumes either have impacted or have the potential of impacting the project area. The potential for required dewatering will be determined using the foundation soil boring test results durig the PS&E phase.

Should construction require dewatering activities, or if groundwater is expected to be encountered on-site, a qualified hazardous materials consultant with Phase II and Phase III experience should review all available files for the reported addresses 206 South Diamond Bar, 301 South Diamond Bar Boulevard, 22628 East Golden Springs Drive, and 23525 East Palomino Drive.

iii. Lead-Based Paints

Due to the age of the on-site structures (including bridge structures), LBPs may be present and should be tested. Evidence of chipping paints was not observed during the site inspections, and thus the potential presence of LBPs at the subject site is de minimus.

Should construction activities result in the removal of yellow paint or thermoplastic traffic stripes, the age of the traffic striping and the presence of lead and/or chromium should be determined prior to construction. A Lead Compliance Plan requirement will be incorporated into the PS&E specifications both hazardous and non-hazardous lead levels for disturbance of yellow and non-yellow paint.

iv. Asbestos

Pursuant to SCAQMD regulations, an asbestos survey must be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and Cal OSHA certified building inspector to determine the levels of asbestos in structures (including bridge structures) should renovation or demolition

occur and should be tested during the PS&E phase. Evidence of exposed ACMs were not observed during the site inspections, thus the potential presence of ACMs at the subject site is de minimus. If Asbestos is found, Asbestos Compliance Plan requirements will be incorporated into the PS&E specifications.

v. Pole Mounted Transformers and Electrical Boxes

Any transformers and/or high voltage power boxes to be relocated during site construction/demolitions should be conducted under the purview of the local utility purveyor to identify proper handling procedures regarding potential PCBs. Should an on-site transformer (that may be required to be relocated as part of the project) be located under bare soil, the underlying soils should be sampled by a qualified hazardous materials specialist during the PS&E phase.

vi. Project Site Investigation

A project-specific (site wide) site investigation (SI), will be conducted during PS&E phase. The SI will include the proposed comprehensive ADL testing as well as any recognized environmental conditions (REC's) or impacts identified on any properties either in existing Caltrans right of way, or on properties to be dedicated to Caltrans. The scope of the SI will include sampling and analysis of soil per the construction footprint, as well as research existing regulatory documentation to determine if any groundwater contamination plumes either have impacted or have the potential of impacting the project area. Any REC's identified must be remediated prior to property dedicated to Caltrans.

B. Value Analysis

There is no federal cost participation at this time, thus a VA report is not required at this time. If federal funding participation is secured for the project, a Value Analysis (VA) study would be conducted during the PS&E phase.

C. Resource Conservation

It is the objective of the project to reduce congestion, which may lower travel time, and reduce fuel consumptions and vehicular emissions. Existing concrete pavement that would be removed for this project would be crushed and re-used as aggregate base material, or for the embankment fill to construct the new on-ramp. It is the intent of the project to maximize the use of existing hardware items, such as the overhead signs. The project has identified local fill material from adjacent developments which would minimize the fuel required for earth hauling.

This project has coordinated with the design of the westbound on-ramp (EA255101) as the build alternatives require Grand Avenue to be raised. The ramp project retaining walls are designed to support the ultimate fill height proposed in the build alternative 3. This would avoid complete demolition and reconstruction of the retaining wall under either build alternative. This would conserve concrete, reinforcing steel, and fuel that would otherwise be needed to reconstruct these walls.

D. Right-of-way Issues

The project would involve partial right-of-way acquisitions of commercial properties and the Los Angeles County Golf Course. No businesses are expected to be relocated as a result of the partial acquisitions.

The Right-of-Way Data Sheet has been prepared for the project alternatives, and includes all the associated costs such as acquisition cost, title and escrow fees as well as utility relocation costs. The Right-of-Way Data Sheet and right-of-way plan sheets for the preferred alternative (Alternative 3) are included in Attachment F. The project right-of-way requirements are shown in Table 31 below.

Table 31 –Right-of-way Requirements

Description	Alt 2 No. of Appraisals	Alt 3 No. of Appraisals
Partial R/W Acquisition	8	9
Temporary Construction Easement	11	12
Permanent Easement	9	9

E. Environmental Issues

i. United States Army Corps of Engineers (ACOE) Jurisdiction

Implementation of Alternative 2 would result in the permanent loss of 0.12 acres of wetlands due to culvert extensions to accommodate the widening of SR-60 and Grand Avenue. Implementation of Alternative 3 would result in the permanent loss of 0.16 acres of waters of the United States and State, including 0.12 acres of wetlands, due to culvert extensions to accommodate the widening of SR-60 and Grand Avenue, and installation of the new SR-60/Grand Avenue eastbound loop on-ramp. Retaining walls are proposed along the roadway at the cross drains to limit the impacted wetlands area. Biological resources mitigations described below for the channel relocations would be coordinated with ACOE.

ii. California Department of Fish and Game (CDFG) Jurisdiction

The areas described above would also be subject to California Department of Fish and Game pursuant to Section 1600 of the California Fish and Game Code. A streambed alteration agreement under Section 1600 would be required. Biological resources mitigations described below for the channel relocations would be coordinated with CDFG.

iii. Biological Resources

Biological resources found within the biological study area (BSA) include a few scattered native riparian tree species located within and around the tributaries to Diamond Bar Creek, raptor foraging and jurisdictional waters/wetlands. Two concrete-lined channels present within the BSA would be relocated as part of the project. It is anticipated that resource agency permits would be required from the United States Army Corps of Engineers (ACOE), California Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Game (CDFG) under Sections 404 and 401 of the federal Clean Water Act (CWA) and Section 1600 of the State

Fish and Game Code, respectively, for the channel relocations. Native birds protected under the Migratory Bird Treaty Act (MBTA) may also nest within and adjacent to the BSA.

The project would fund a native habitat replacement program at a 2:1 ratio for impacts to waters and wetlands is anticipated. The downstream portion of Diamond Bar Creek owned by City of Industry is proposed as the mitigation site. A 5-year Habitat Mitigation and Monitoring Program (HMMP) would be developed in consultation with the resource agencies (ACOE, CDFG, RWQCB, FWS) to ensure the success of the native habitat replacement program. The HMMP would include provisions for initial planting, performance monitoring and success criteria.

Mitigation measures for native birds includes limiting grubbing of vegetation to occur outside of the bird nesting season, generally defined as February 1 to September 1, to avoid potential impacts to nesting birds. However, work may occur during the nesting season if a preconstruction nest survey is conducted by a qualified biologist within three days prior to the start of construction to ensure no impacts to nesting birds occur.

Mitigation measures for tree removal include a tree replacement ratio of 1:1 for landscaped areas inside state right-of-way, and a tree replacement ratio of 2:1 for trees outside of state right-of-way.

iv. Parkland

A Programmatic Section 4(f) evaluation has been prepared in accordance with 49 United States Code Section 303 and the Federal Highway Administration (FHWA) regulations for Section 4(f) compliance codified at 23 Code of Federal Regulations Part 774. The study evaluates the effects of the two build alternatives on a public golf course, Diamond Bar Golf Course. The combination cloverleaf/diamond interchange configuration alternative (Build Alternative 2) would require direct use of Diamond Bar Golf Course because of the permanent loss of approximately 7.3 acres of golf course property. The partial cloverleaf interchange configuration alternative (Build Alternative 3) would result in direct use of Diamond Bar Golf Course because of the permanent loss of approximately 10.1 acres of golf course property. The proposed project's minor use of a protected Section 4(f) property satisfies the applicability criteria of FHWA's *Section 4(f) Evaluation and Approval for Transportation Projects That Have a Net Benefit to a Section 4(f) Property*.

The lead agency (California Department of Transportation) has been in consultation with the County of Los Angeles (owner of Diamond Bar Golf Course) regarding potential effects on this Section 4(f) property (Diamond Bar Golf Course) as well as enhancements and measures to minimize harm. The minimization measures identified in the Section 4(f) evaluation include reconfiguring the golf course so that it continues to function as an 18-hole golf course and the user experience is not diminished, constructing a noise barrier on the east half of the course, converting the concrete surface drains to underground pipes, protective netting, compensation or reasonable functional replacement of parkland, and consideration of lost revenue through a Loss of Business Goodwill claim. A detailed list of minimization measures is presented in the Section 4(f) evaluation of the Environmental Document.

F. Air Quality Conformity

This project conforms and is compatible with the State Implementation Plan (SIP) for air quality because it was included in the 2011 Federal Transportation Improvement Program (FTIP), as prepared by SCAG and approved by FHWA.

The project was proposed and is included in the 2012 Regional Transportation Plan (RTP), which was found to be conforming by the Federal Highway Administration (FHWA)/Federal Transit Administration (FTA) on June 4, 2012. The project (Project ID# LA0D450) is included in the 2013 FTIP approved by SCAG on September 12, 2012, which was found conforming by the FHWA/FTA on December 14, 2012.

A project-level conformity determination was provided by FHWA on June 26, 2013. A copy of the determination is provided in Attachment L.

The Environmental Impact Report/Environmental Assessment identified two minimization measures required to be implemented as part of the project. The minimization measures are to implement California Department of Transportation standard specifications (2010), section 14 and to comply with SCAQMD's Rule 403 requirements to control construction Emissions of fugitive dust.

G. Title VI Considerations

A Community Impact Analysis was prepared for this project finding that the SR-57/SR-60 Confluence Project would not result in significant long-term adverse impacts on population and housing within the study area. There are no schools or places of worship within the project study area. No populations of minority low income residents were found to be impacted by the project.

Access through the site for low mobility individuals would be maintained through the project during and after construction. The proposed sidewalks and curb ramps along Grand Avenue would be reconstructed to meet the requirements of the Americans with Disabilities Act (ADA).

H. Noise Abatement Decision Report

This section summarizes the Noise Abatement Decision Report (NADR) which:

- Is an evaluation of the reasonableness and feasibility of incorporating noise abatement measures into this project;
- Constituted the preliminary decision on noise abatement measures incorporated into the Environmental Document; and
- Is required for Caltrans to meet Title 23, Code of Federal Regulation, Part 772 of the Federal Highway Administration standards.

The Noise Study Report (NSR) prepared by ICF International has been approved by Jin S. Lee, Noise and Vibration Branch Chief, on May 23, 2012. Five noise barriers were evaluated in the noise analyses, Barrier A-1 could benefit residences along Palomino Drive, Barrier A-2 could benefit residences along Decorah Road, Barriers C and C-2 could benefit residences along Rock River Road, Barriers G-1 and G-2 could benefit the golf course. Five barriers were found to be

feasible from an acoustical perspective: noise barriers A-2, C, C-2 and G-1 and G-2. Summary of these five walls is shown in Table 32 below.

Table 32 - Summary of Noise Abatement Data

Noise Barrier Designation	Location (by street)	Wall Height	Length
A-2	Decorah Road	6 ft	2,640 ft
C	Rock River Drive west of Prospectors Road	12 ft- 14 ft	2,150 ft
C-2	Rock River Drive east of Prospectors Road	6 ft	1,280 ft
G-1	Diamond Bar Golf Course east of Grand Avenue	12 ft	2,970 ft
G-2	Diamond Bar Golf Course west of Grand Avenue	12 ft	2,220 ft

A noise abatement decision report (NADR) was prepared for the five noise barriers that were found feasible. The NADR has been approved by Jin S. Lee, Noise and Vibration Branch Chief, on June 28, 2012. The NADR evaluated the cost reasonableness of the noise barriers based on the requirements of Title 23 of the Code of Federal Regulations. A reasonable cost allowance for each benefitted receiver was calculated for one receiver per residential property, or in the case of the golf course one receiver per fairway. When the estimated sound barrier construction cost is equal or less than the reasonable allowance, the sound barrier is deemed preliminarily reasonable. Conversely, when the estimated construction cost exceeds the reasonable allowance, it is deemed unreasonable. The engineering evaluations of the five acoustically feasible barriers provided the estimated construction costs of the five barriers. The summary is shown in Table 33 below.

Table 33- Noise Barrier Estimated Cost and Reasonableness Check

Noise Barrier Designation	Wall Height	No. of Benefitted Residences	Estimated Construction Cost	Maximum Cost Allowance
A-2	6 ft	36	\$3,068,000	\$1,980,000
C	12 ft- 14 ft	35	\$2,825,000	\$1,925,000
C-2	6 ft	16	\$1,367,000	\$880,000
G-1	12 ft	7	\$1,061,000	\$385,000
G-2	12ft	1	\$933,000	\$55,000

The engineering analyses of the acoustically feasible noise barriers indicated that all five barriers were deemed not cost reasonable. The Programmatic Section 4 (f) Evaluation report for required noise barrier G-1 (east half of the gold course) is to be included in the project as an enhancement measure for the Section 4(f) property. None of the other noise walls are included in the project.

7. OTHER CONSIDERATIONS AS APPROPRIATE

A. Public Hearing Process

A public meeting was held on March 6, 2013 to present the two build alternatives. During the public circulation period, 21 comments were received from the public. The comments were mixed, with those favoring the project, choosing Alternative 3. Those in support of Alternative 1 in general wanted a larger project for the interchange implemented. Suggestions include full connection HOV lanes at each end of the confluence, separation of the two routes through the confluence, and construction of eastbound SR-60 to northbound SR-57. These suggestions are outside the scope of this project and do not address the need and purpose.

The City of Industry supports the project. Diamond Bar had a comment to ensure the ambiance of the city entrance is maintained. Los Angeles County had several comments to clarify the text of the environmental document in regards to the project impacts and mitigation measures to the Golf Course. The comments did not result in any substantial design or mitigation feature changes.

B. Route Matters

A freeway agreement has been executed with Diamond Bar along Route 60 from the south/ west SR-57/SR-60 interchange to the eastern city limits. The proposed project does not change the freeway connections and does not require an update to the existing freeway agreement with Diamond Bar.

C. Permits

The permits, reviews, and approvals listed in Table 34 would be required for project construction.

Table 34 – Permitting Requirements

Agency	Permit/Approval
U.S. Fish and Wildlife Service	Endangered Species Act, Section 7
U.S. Army Corps of Engineers	Clean Water Act, Section 404
California Department of Fish and Game	Section 1600 Agreement for Streambed Alteration
State Water Resources Control Board	Clean Water Act, Section 401
Los Angeles Regional Water Quality Control Board	National Pollutant Discharge Elimination System permit
Los Angeles County	Right of Entry Permit, concurrence regarding parkland conveyance

D. Cooperative Agreements

A cooperative agreement with City of Industry for the PA/ED phase was approved on June 9, 2009. A PS&E and right-of-way cooperative agreement is needed with City of Industry. A

construction Cooperative Agreement for the approved project would be prepared during the PS&E phase.

E. Involvement with a Navigable Waterway

There are no navigable waterways within the project area.

F. Transportation Management Plan for use During Construction

Transportation Management Plan (TMP) Data Sheets have been prepared based upon the planned stage construction presented below to reduce potential construction related traffic conflicts and delays. The TMP identifies several elements to handle traffic on the existing freeways and local streets during construction including the following strategies:

- Public Awareness Campaign: Development of a public awareness campaign to sufficiently inform residents and motorists prior to construction. This campaign, utilizing local media, telephone hotline mailers, direct advertising, and internet updates would inform the public of construction related congestion.
- Real-time communications: Real time communications with motorists advising them of construction activities, closures, and delays would be conducted using portable changeable message signs and fixed changeable message signs.
- Freeway Service Patrol: Provisions would be made to extend the working hours of the Freeway Service Patrol to assist motorists involved in minor incidents or vehicle breakdowns.
- COZEEP: Implementation of a Construction Zone Enhanced Enforcement Program (COZEEP) to provide police assistance and surveillance within construction areas. The officers can enforce speed reductions within work zones and provide emergency response support.

The costs associated with implementing these TMP strategies are included in the Transportation Management Plan Data Sheet as Attachment H. The construction staging traffic control and detour and signing plans for the project would be developed as part of the PS&E phase.

G. Stage Construction

Continued traffic operations throughout construction is a requirement of the project. The geometry of the proposed improvements was developed with consideration for maintaining traffic operations, minimizing detours and closures during construction. The mainline lanes would not be closed during peak hours, however temporary night and weekend closures may be required. Majority of the project would be constructed outside the existing travel lanes which would permit the construction to be sequenced to minimize disruption to the mainline freeway traffic. Staged construction would be required to construct the following improvements:

- Reconstructing the northbound SR-57 to eastbound SR-60 connector
- Reconstructing the Grand Avenue Overcrossing Structure
- Reconstructing Grand Avenue and the on and off-ramps on SR-60

A set of preliminary stage construction plans have been developed for the project to identify potential temporary detours, lane closures, and ramp closures and the potential environmental effects related to the project construction. The proposed construction stages are described herein.

Stage 1- Reconstruct Grand Avenue and Golden Springs Drive

- Widen Grand Avenue south of the SR-60 Interchange;
- Construct a new golf cart tunnel under Grand Avenue;
- Widen Golden Springs Drive;
- Reconstruct street intersection of Grand Avenue and Golden Spring Drive

Traffic Impact:

- Temporarily reduce Grand Avenue from five lanes to four lanes for tunnel construction.

Stage 2- Construct the Eastbound Bypass Off-Ramp to Grand Avenue

Constructing the new eastbound bypass off-ramp to Grand Avenue would require two sub-stages as described below:

2A- Reconstruct the SR-57 / Golden Spring Drive UC

- Construct the northbound SR-57 connector and Golden Springs Drive Undercrossing

Traffic Impact:

- Reduced lane width and shoulder width on the existing SR-57 connector;
- Nighttime closures of Golden Spring Drive for bridge falsework;
- Nighttime lane closure on SR-57 during bridge construction.

2B- Construct the Eastbound Bypass Off-Ramp to Grand Avenue

- Route the northbound SR-57 traffic to the new connector undercrossing in 2A;
- Construct the eastbound SR-60 bypass off-ramp to Grand Avenue;
- Construct the new eastbound off-ramp exit at Grand Avenue.

Traffic Impact:

- Nighttime closures of Golden Spring Drive during bridge removal;
- Nighttime lane closures of SR-57 and SR-60 during lane shifting.

Stage 3- Reconstruct the Grand Ave Interchange

Grand Avenue Interchange would be reconstructed with a new overcrossing at SR-60, new eastbound on and off-ramps, and the westbound off and loop on-ramp at Grand Avenue. The interchange would be constructed in two sub-staging as described below:

3A- Construct Portion of Grand Avenue OC

- Construct the east portion of the Grand Avenue OC replacement structure;
- Reconstruct the westbound off-ramp and the westbound loop on-ramp;
- Construct the westbound auxiliary lane on SR-60;
- Reconstruct the eastbound slip on-ramp adjacent to the existing ramp;
- Construct the new eastbound loop on-ramp up to the bridge abutment.

Traffic Impact:

- Nighttime lane closures of SR-60 during bridge falsework erection;
- A 30-day ramp closure of the eastbound slip on-ramp; on-ramp traffic would be detoured to the eastbound Diamond Bar Boulevard on-ramp;
- Maintain four through lanes and a left-turn lane on existing Grand Avenue OC;
- Nighttime ramp closures of the westbound off-ramp and the loop on-ramp to construct transition pavement.

3B- Construct Full Grand Avenue OC and On and Off-Ramps

- Remove and reconstruct the remaining Grand Avenue OC;
- Complete the construction of the Grand Avenue eastbound loop on-ramp;
- Raise Grand Avenue profile to match the new bridge profile;
- Complete Grand Avenue widening between the westbound off-ramp and the new eastbound off-ramp;
- Raise the profile of existing westbound slip on-ramp.

Traffic Impact:

- Nighttime closure of SR-60 during bridge removal and falsework erection;
- Weekend closures of the eastbound slip on-ramp to SR-60 for lane shift from Stage 3A to 3B;
- Two week closure of the westbound slip ramp during ramp reconstruction; detour traffic to the westbound loop on-ramp constructed in Stage 3A;
- Alt 2 –Full closure of the southbound Grand Avenue traffic to the eastbound on-ramp; on-ramp traffic detoured to Diamond Bar Boulevard on-ramp;
- Alt 3 –Eight-week closure of southbound Grand Avenue traffic to the eastbound on-ramp until the eastbound loop on-ramp is fully constructed; traffic to SR-57 detoured to the West Temple Avenue Interchange on SR-57 via Valley Blvd.

Stage 4- Construct Eastbound SR-60 Bypass Connector

The eastbound SR-60 bypass connector would be constructed in two sub-stages as described below:

4A- Construct Eastbound SR-60 Bypass Connector Overcrossing

- Construct the bypass connector overcrossing structure over the South Prospector Road and Diamond Bar Boulevard;
- Construct the auxiliary lane from the new Grand Avenue on-ramp.

Traffic Impact:

- Temporarily restripe eastbound SR-60 to northbound SR-57 gore;
- Reduce Diamond Bar Boulevard eastbound on-ramp to one lane;
- Nighttime lane closures of eastbound SR-60 between Grand Avenue and SR-57 during pavement construction;
- Nighttime closures of South Prospector Road, Diamond Bar Boulevard and the eastbound SR-60 off-ramp to Diamond Bar Boulevard;

- Nighttime and weekend lane closures on eastbound SR-60 east of Diamond Bar Blvd.

4B- Complete Eastbound Bypass Connector

- Construct the eastbound approach and the merge with SR-60 east of Diamond Bar Boulevard;
- Complete realignment of Diamond Bar Blvd on-ramp to eastbound SR-60.

Traffic Impact:

- Nighttime closures of the eastbound Diamond Bar Boulevard on-ramp during the ramp reconstruction;
- Temporary lane closures of eastbound SR-60 at the merge of the eastbound SR-60 bypass connector.

H. Accommodation of Oversize Loads

The proposed project would construct new lanes and interchanges with standard lane widths, and standard vertical and horizontal clearances. Existing non-standard lane widths would be maintained. As such, the project would not affect the ability of the freeway mainline and ramps to transport oversized loads.

During construction of the Grand Avenue OC, the falsework clearance over the highway would be the standard 15'-6", which may restrict the use of oversize loads over 15'-3" in height. The existing lane widths would be maintained during construction which would not change the ability to carry oversized loads. No known industries utilize this route as an unlimited vertical clearance route since the Existing Grand Avenue vertical clearance is 16'-3", and there are numerous overcrossing structures along SR-57 and SR-60.

I. Graffiti Control

The project is located in an urban area, which is an identified graffiti-prone area. Standard deterrent techniques would be used as part of the proposed design. The project would utilize architectural treatments, such as Fracture Rib Texture, on the face of retaining walls. To prevent vandalism and theft of electrical systems, theft deterrent security pull boxes would be installed.

J. Best Management Practices (BMPs)

A Corridor Stormwater Management Study for SR-60 was published in late 2010. Permanent treatment BMPs have been considered for the project that are consistent with the Corridor Storm Water Management Study. The Storm Water Data Report (SWDR) prepared for this project recommends several permanent BMPS that would result in 25% more treatment credit than proposed in the Corridor Study.

The SWDR recommendations include modifying the westbound SR-60 drainage system west of Grand Avenue OC to divert additional runoff to the biofiltration swale currently planned to be constructed in EA255101. The report also identifies the construction of an infiltration basin within the proposed loop on-ramp for alternative 3, and an Austin Sand Filter within the existing westbound loop on-ramp area. New bioswales near the westbound off-ramp would be constructed with the inclusion of a Linear Radial GSRD in series. The total treatment area of 14.6 acres of paved tributary area would exceed the added paved tributary area of 12.9 acres.

The total treated tributary area would be over 22% of the total proposed project impervious area of 64.3 acres.

Right-of-way cost required for the permanent BMPs is included Right-of-way Data Sheet (Attachment F). The permanent treatment BMP cost along with construction BMP costs identified in the Storm Water Data Report (Attachment I) are accounted for in the Project Cost Estimate (Attachment E).

K. Pavement Design

Life-cycle cost analyses (LCCA) were conducted to determine the long term cost effectiveness of various pavement designs. LCCA generates the total lifetime cost of the pavement converted to its present value, including initial construction costs, as well as future maintenance and user delay costs. The alternative with the lowest life-cycle cost is viewed as the most cost effective pavement type even if it has a higher initial cost.

The project was divided into four typical pavement uses, eastbound mainline, westbound mainline, on/off-ramps with heavy truck usage and on/off-ramps with light truck usage. A pavement life cycle analysis over 55 years was performed for a sample segment of each of these four typical pavement uses. The Life Cycle Analysis followed the Caltrans Life-Cycle Cost Analysis Procedures Manual, updated August 2010, and utilized the *RealCost*(Ver 2.2) software. The Life-Cycle Cost Analysis comparison forms are provided in Attachment J, and the information is summarized in Table 35 below.

Table 35 - Summary of Pavement Life Cycle Costs

Location	Option	Pavement Type and Life	Pavement Section	Initial Cost	Life Cycle Cost (2017)
Eastbound SR-60 Mainline	1	JPCP (40 Year)	1.10' JPCP/0.50' LCB/0.70' AB	\$1,917,779	\$1,960,610
	2	JPCP (20 Year)	1.00' JPCP/0.50' LCB/0.70' AB	\$1,798,155	\$2,103,960
Eastbound SR-60 Mainline	1	JPCP (40 Year)	1.10' JPCP/0.50' LCB/0.70' AB	\$2,567,852	\$2,625,410
	2	JPCP (20 Year)	1.00' JPCP/0.50' LCB/0.70' AB	\$2,407,606	\$2,818,700
Eastbound SR-60 Grand Ave On-Ramp (low truck usage)	1	RHMA (40 Year)	0.20' RHMA/0.35'HMA/0.55' LCB/1.05' AB	\$839,038	\$994,140
	2	RHMA (20 Year)	0.20' RHMA/0.30' HMA/0.50' LCB/0.90' AB	\$781,659	\$1,001,120
Eastbound SR-60 Grand Ave Off-Ramp (high truck usage)	1	RHMA (40 Year)	0.20'RHMA/0.50HMA/0.70' LCB/1.40' AB	\$1,051,984	\$1,276,830
	2	RHMA (20 Year)	0.20'RHMA/0.40HMA/0.65' LCB/1.25' AB	\$954,494	\$1,250,150

Note: Bold rows indicate pavement type selected

For the mainline lanes the 40 year pavement life cycle costs are lower and therefore the preferred pavement type. The low truck usage ramps, the northbound Grand Avenue to eastbound SR-60 direct on-ramp and westbound loop on-ramp, the 40 year pavement life cycle costs are lower and therefore the preferred pavement type. On the high truck usage ramps, the difference in life cycle cost for the two pavement alternatives is minor, while the 40 year RHMA reduced road user delay costs by 70% for the on and off-ramps. Thus, the 40 year RHMA is the preferred alternative for the off-ramps, bypass connector, eastbound SR-60 loop on-ramp, and the westbound SR-60 slip on-ramp. Geosynthetic Pavement Interlayer will be constructed within the HMA layers under all new ramp meter pads.

The westbound direct on-ramp from Grand Avenue (WG-03) will be partially re-constructed using the structure section developed during its design in 2012 (see EA255101). The section consists of 0.60' HMA, Type A/0.65 LCB/1.15' AB, Class 3/Subgrade Enhancement Geotextiles.

8. PROGRAMMING

i. Programming

The Project was programmed in the SCAG adopted 2011 FTIP/RTP, ID# LA0D450. However, the project scope changed. The updated project scope is programmed in the 2011 FTIP amendment #24, and 2012 RTP which were adopted in April 4 2012 by SCAG. The updated project description in the RTP reads "Reconstruct SR 60/Grand Ave Interchange - widen Grand Ave: SB add 1Thru Ln (2 exstng); NB add 1 thru ln (3 exstng), replace Grand Av OC, add EB loop on-ramp, construct Additional EB thru ln from Grand Ave trap ln to SR57 add ln, add two bypass ramp connectors, add aux lns EB and WB from east to west junction of the confluence." The project is included in the FTIP/RTP for a total amount of \$257.9 million.

ii. Funding

The project planning costs would be funded entirely by City of Industry using local funds. The project design costs would be partially funded by City of Industry local funds. The project design costs and capital improvement phases are also partially funded through Regional Surface Transportation Improvement Program (2011 METRO Call for projects) in the amount of \$5.89 million. The remaining portion would be funded by a mixture of local funds, METRO funds, and Federal funds.

iii. Schedule

The target milestones for the project are as follows:

Table 36 – Project Schedule

Milestone	Delivery Date
Project Approval & Environmental Document (PA/ED)	September 2013
Project Plans Specifications & Estimates (PS&E)	September 2014
Right-of-Way Certification	January 2015
Ready to List	March 2015
Construction Completion	Dec 2017

9. REVIEWS

This project has been reviewed by the Project Development Team during a series of PDT meetings. Fact Sheets for the exception to design standards were prepared to document non-standard features. The HQ Project Development Coordinator approved the Fact Sheet for Mandatory Design Standards exception on March 19, 2009. The District Office of Design A Chief approved the Fact Sheet for Advisory Design Standard exceptions on March 25, 2009 February 22, 2011. All project design considerations were also discussed with and reviewed by Caltrans District 7 staff. The project has been reviewed by City of Industry and Diamond Bar representatives, who have also contributed to its development.

10. PROJECT PERSONNEL

Principal contacts for the project are as follows:

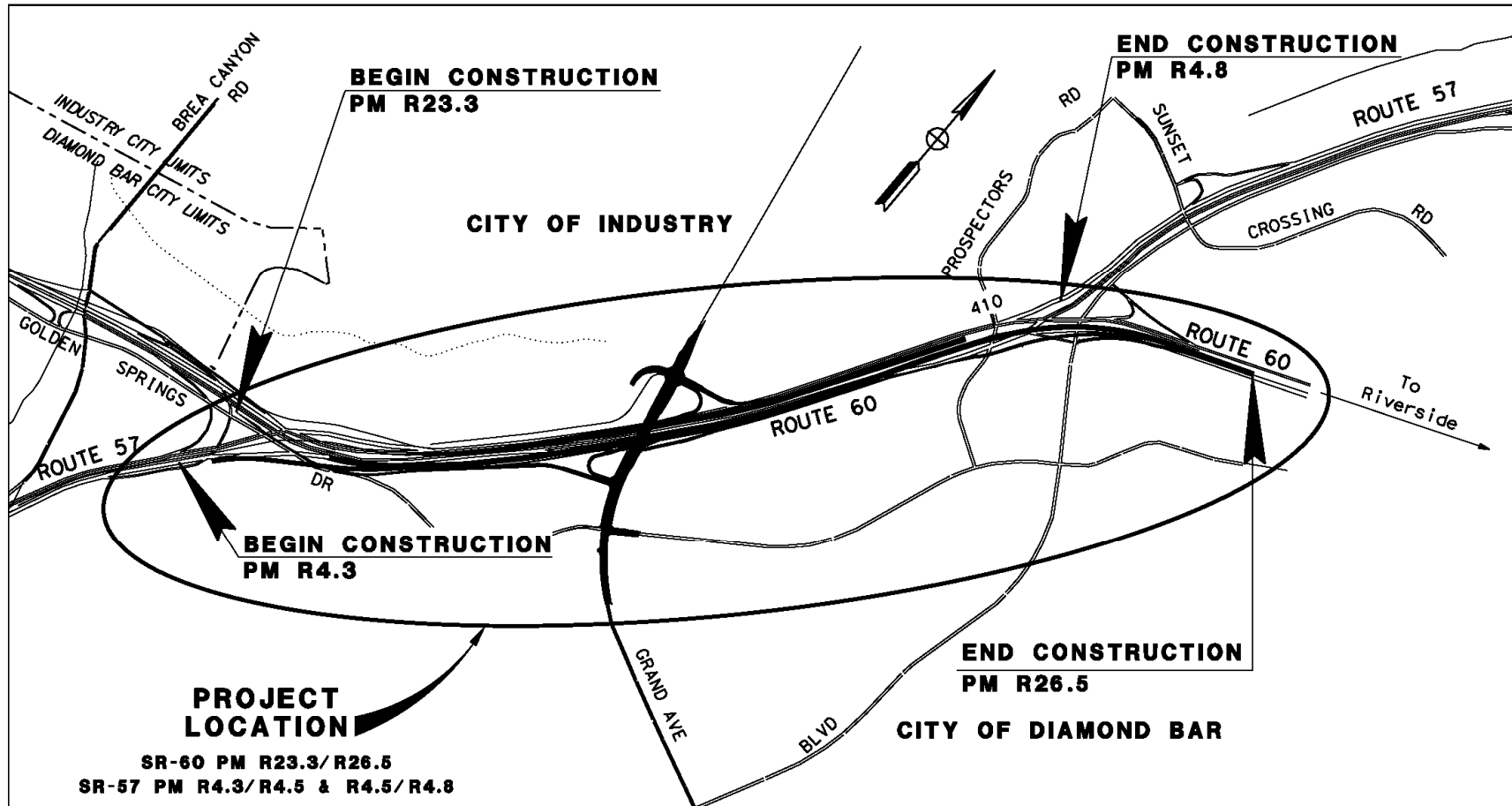
Name	Organization / Branch	Phone No.
Jiwanjit Palaha, P.E.	Project Manager	(213) 897-6926
Amir Elsharief, Ph.d., P.E.	Design Manager, Office of Design C	(213) 897-2752
Godfrey Nzeogu, P.E.	Project Engineer, Office of Design C	(213) 897-7515
Zoltan Elo	R/W Planning & Management, Local Program	(213) 897-0790
Dawn Kukla	Environmental Planning	(213) 897-3646
Agustin Barajas	Environmental Planning	(213) 897-7665
John Ballas, P.E.	City Engineer, City of Industry	(626) 333-2211
Eduardo Pereira, P.E.	CNC Engineering/City of Industry	(626) 333-0336
David Liu, P.E.	Director of Public Works/ City Engineer, Diamond Bar	(909) 839-7041
Wei Koo, P.E.	Project Manager, WKE, Inc.	(714) 953-1008
Hank Nguyen, P.E.	Project Engineer, WKE, Inc.	(714) 953-1015
Lee Lisecki	Environmental Planner, ICF Jones and Stokes	(213) 627-5376
Shilpa Trisal	Environmental Planner, ICF Jones and Stokes	(408) 216-2812
Ronn Knox, AICP	Traffic Engineer, KOA Corporation	(714) 573-0317

11. LIST ATTACHMENTS

Attachment A – Vicinity Map
Attachment B – Alternative 2 Geometrics
Attachment C – Alternative 3 Geometrics
Attachment D – Advanced Planning Studies
Attachment E – Project Cost Estimate
Attachment F – Right-of-Way Data Sheet
Attachment G – TASAS
Attachment H – Transportation Management Plan Data Sheet
Attachment I – Storm Water Data Report (Cover Page)
Attachment J – Life-Cycle Cost Analysis for Pavement
Attachment K – Initial Site Assessment (ISA) Checklist
Attachment L – FHWA Air Quality Project Level Conformity Letter
Attachment M – Final Environmental Impact Report /Finding of No Significant Impact (EIR/FONSI) and Section 4(f) Evaluation Cover Sheet

Attachment A – Vicinity Map

Vicinity Map



ON SR-60

Between SR-57/SR60 West Junction and SR-57/SR60 East Junction

Attachment B – Alternative 2 Geometrics

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER DATE

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REGISTERED PROFESSIONAL ENGINEER

HANK T. NGUYEN

No. C 61227

Exp. 06-30-13

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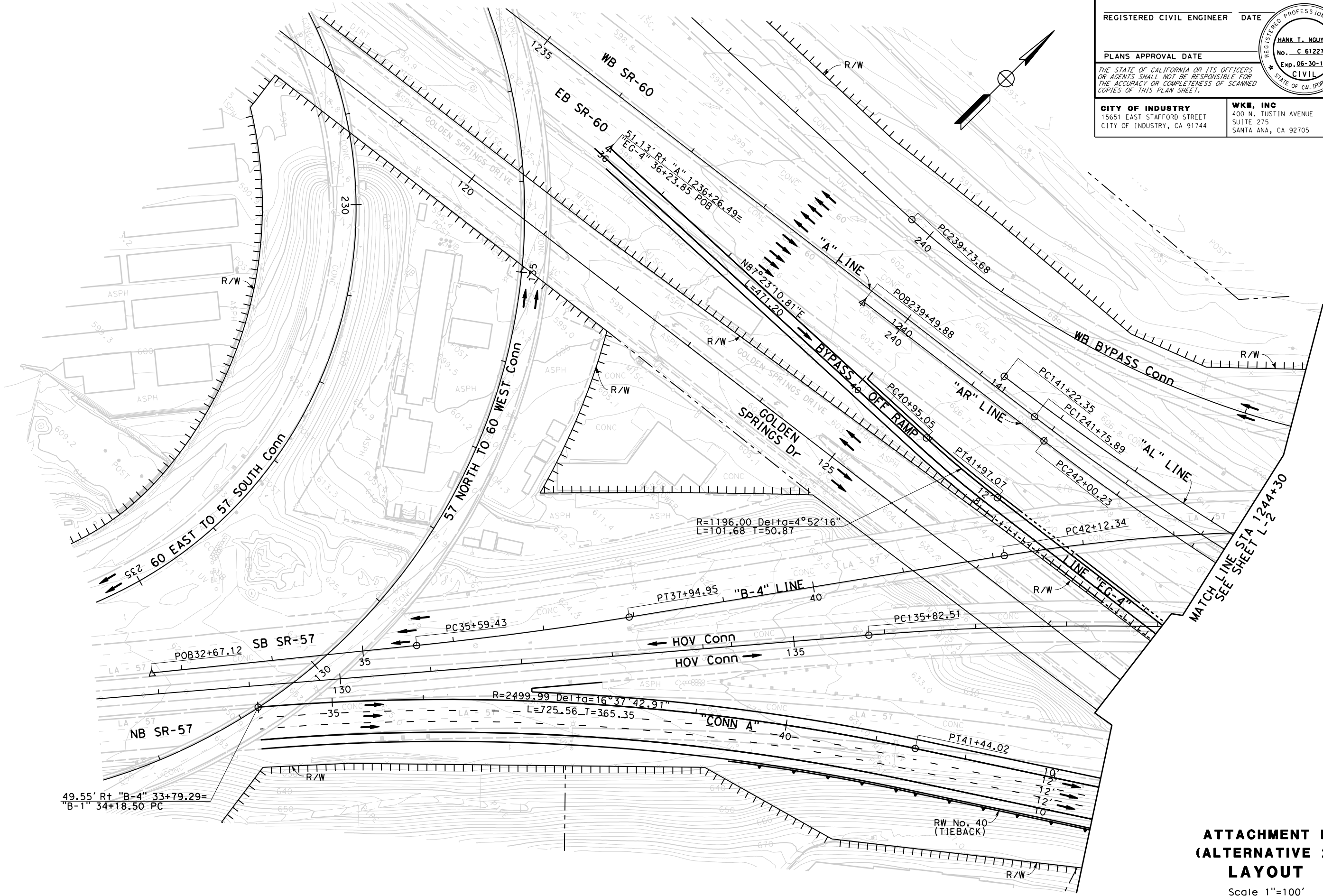
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WKE, INC

400 N. TUSTIN AVENUE

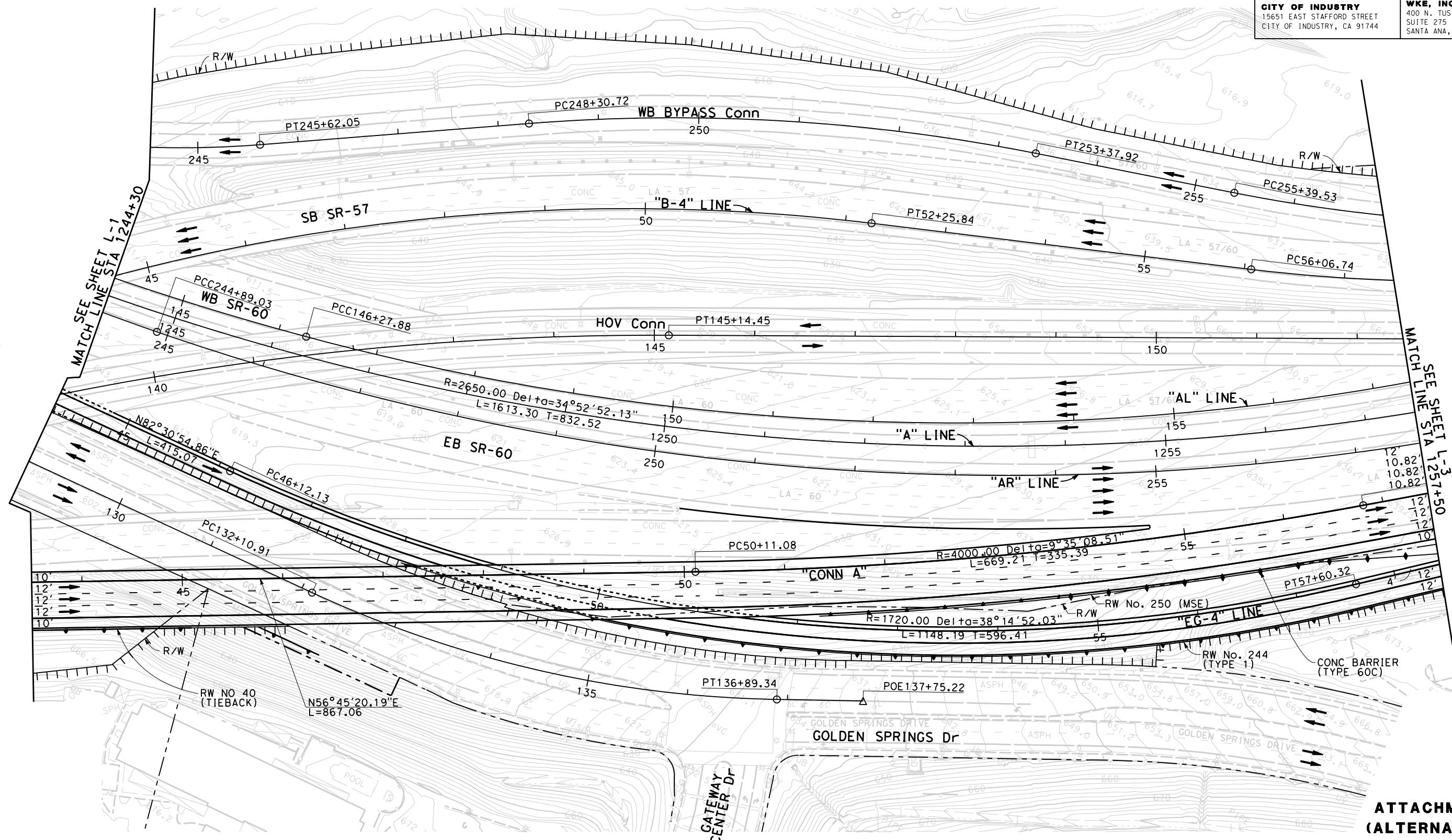
SUITE 275

SANTA ANA, CA 92705



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LAYOUT
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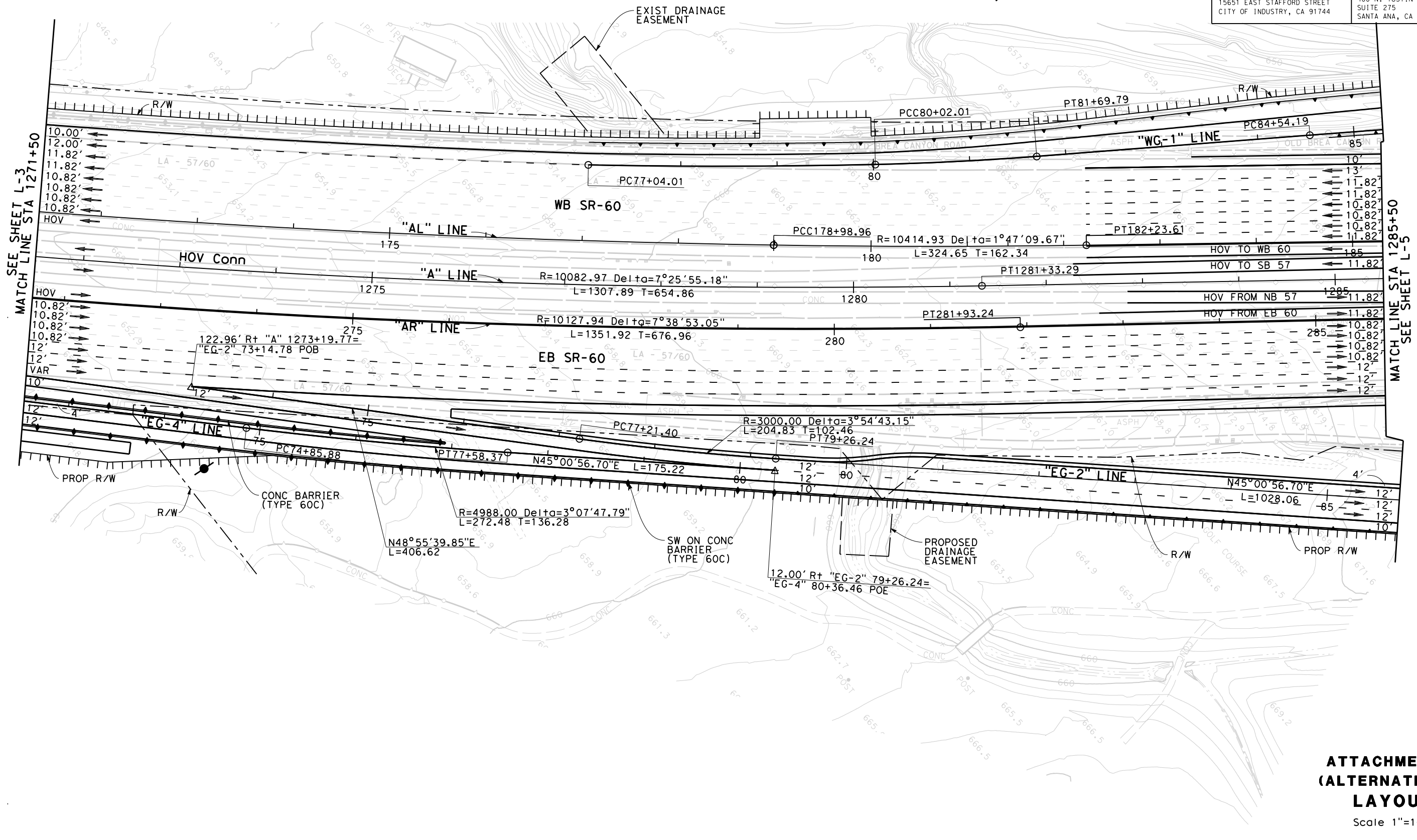
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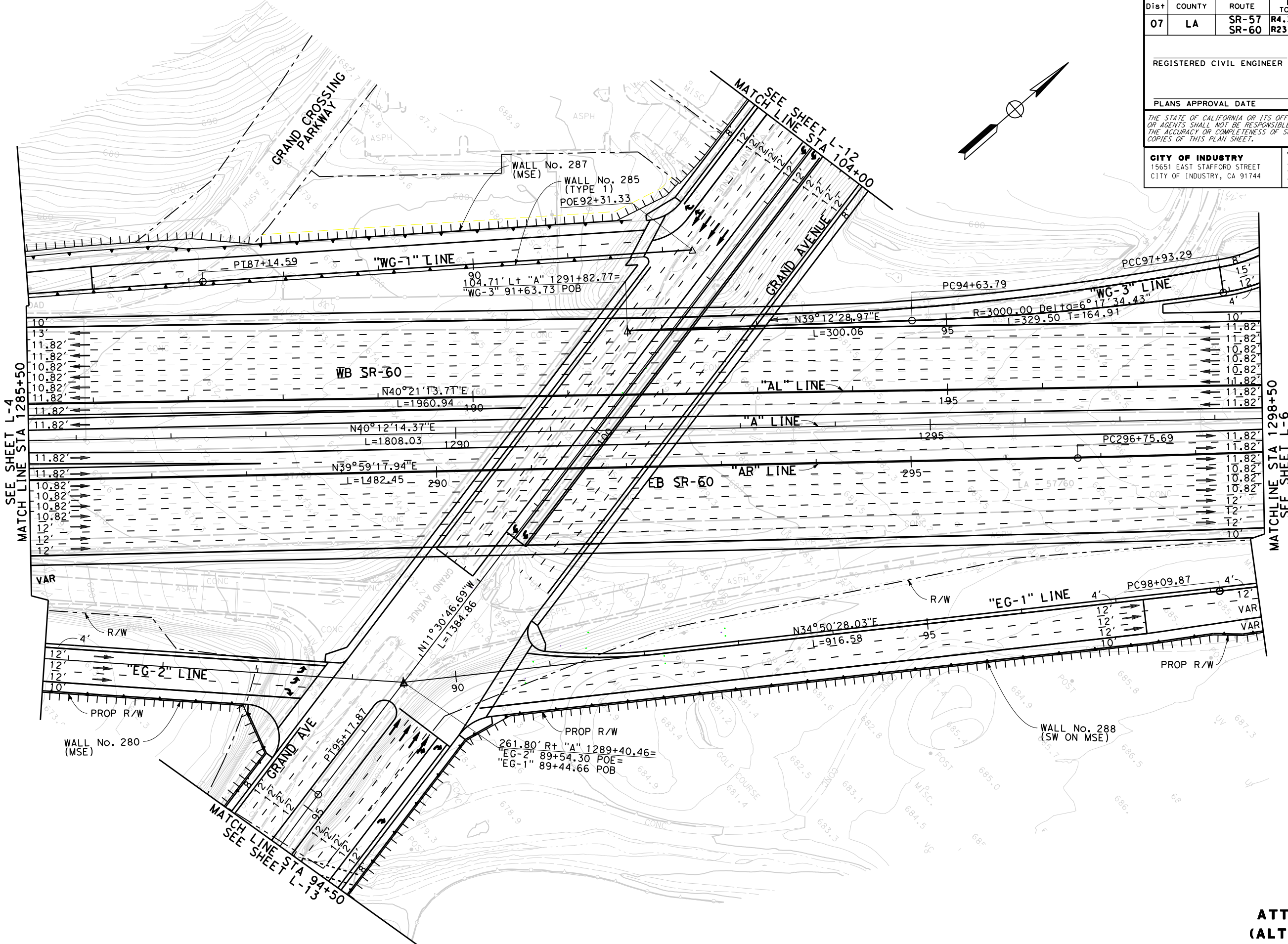
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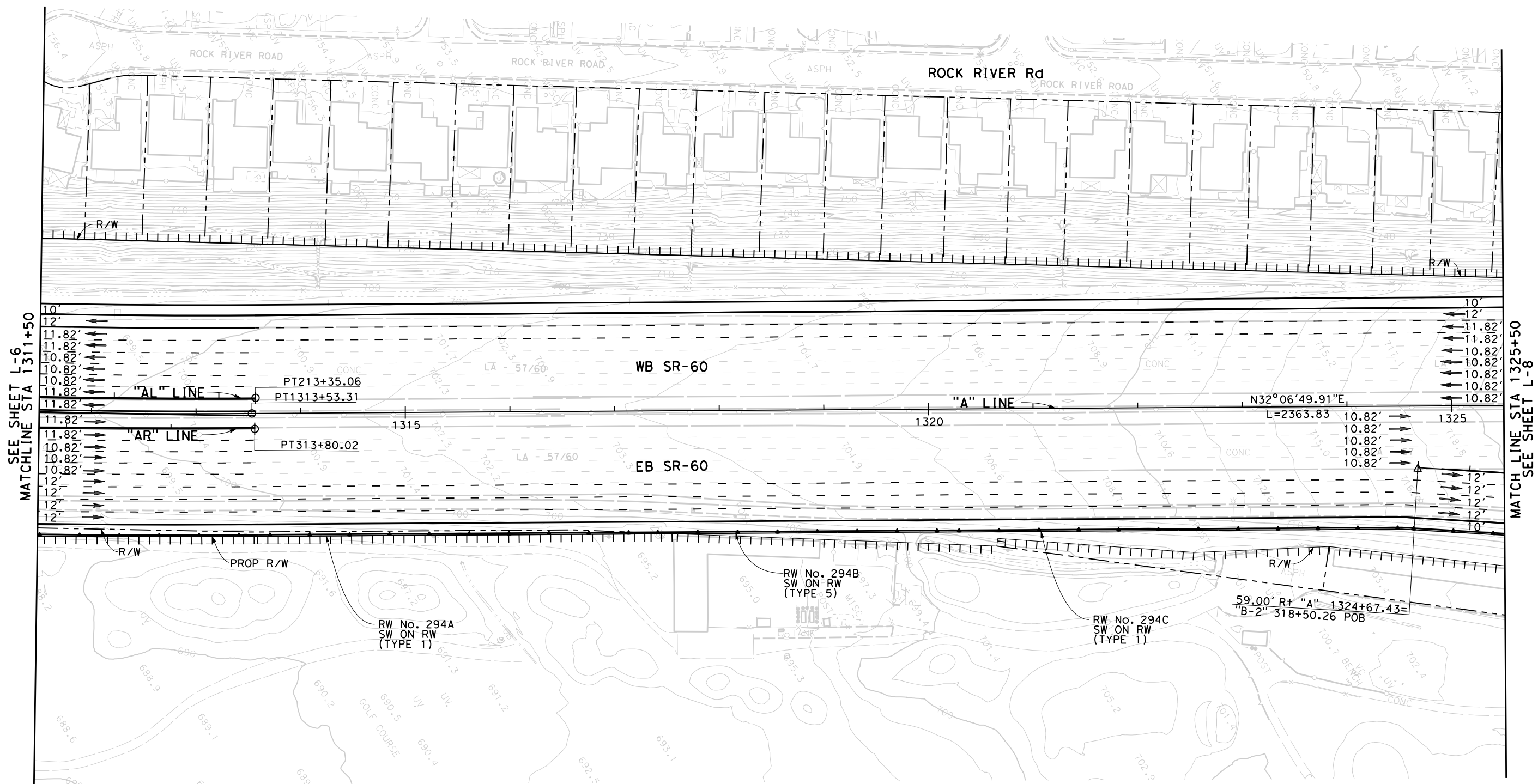
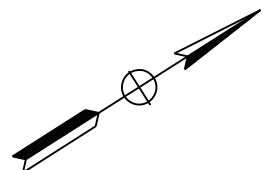


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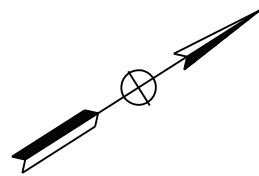
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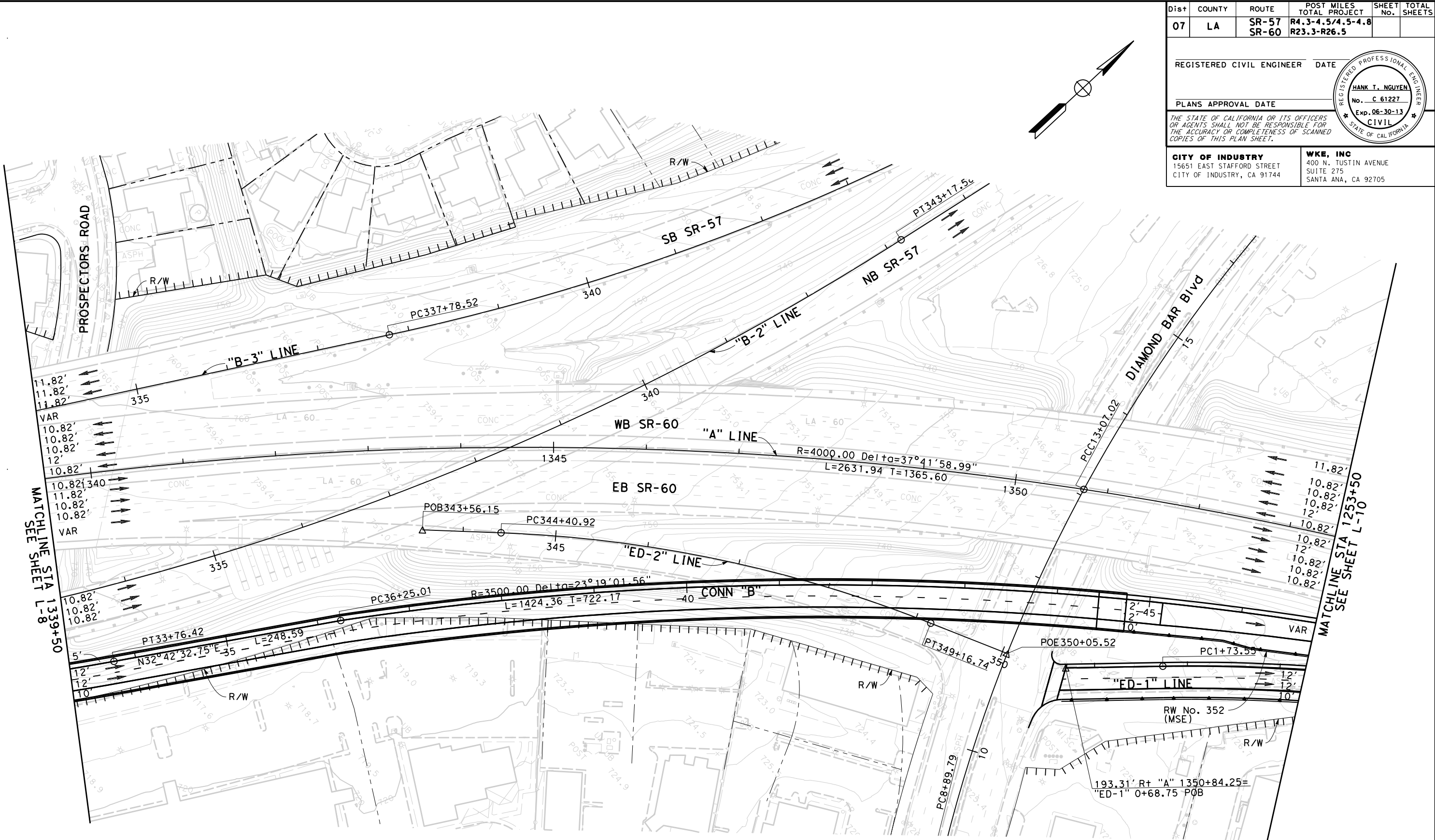


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HANK T. NGUYEN

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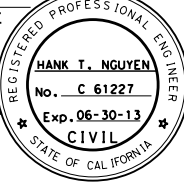
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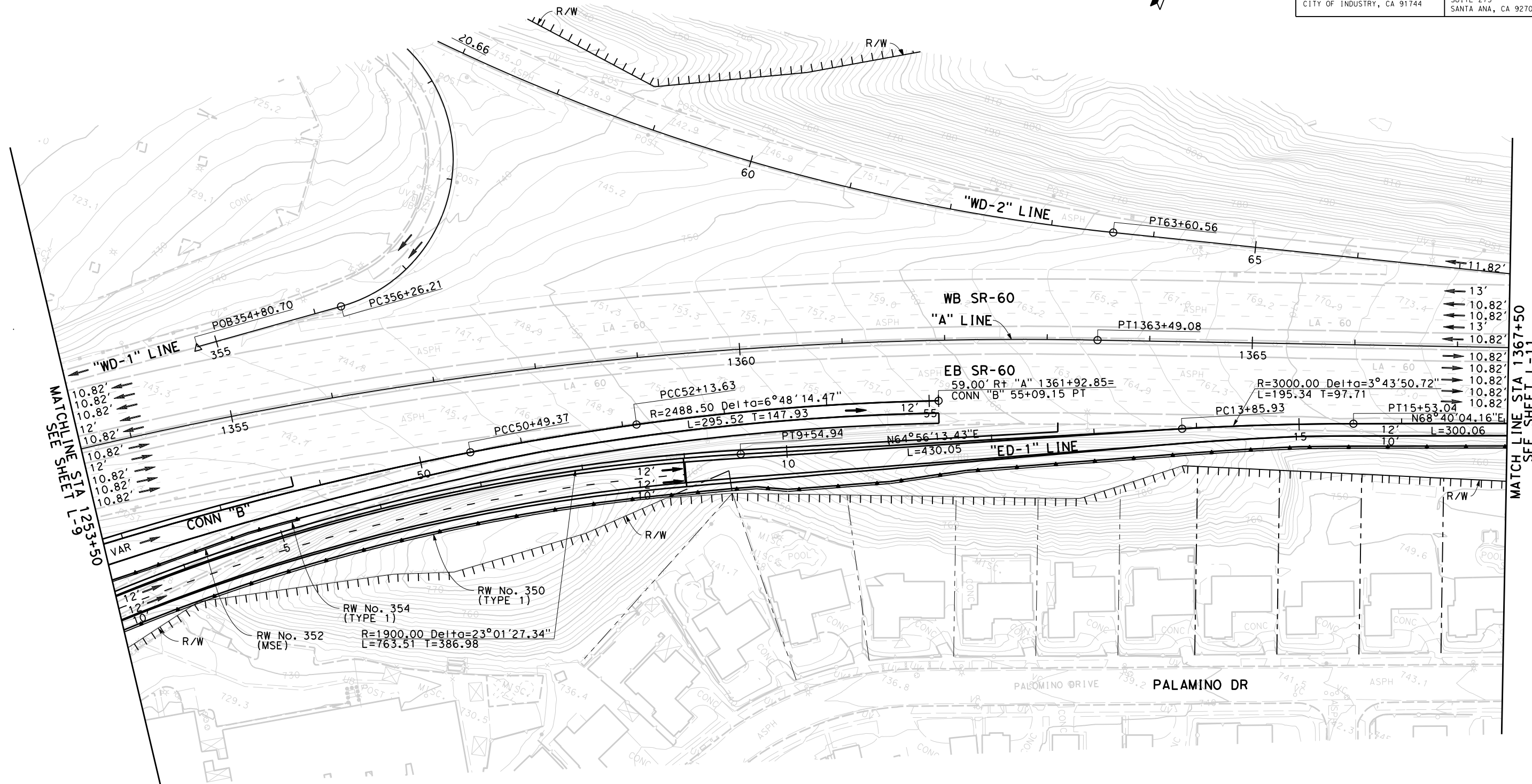
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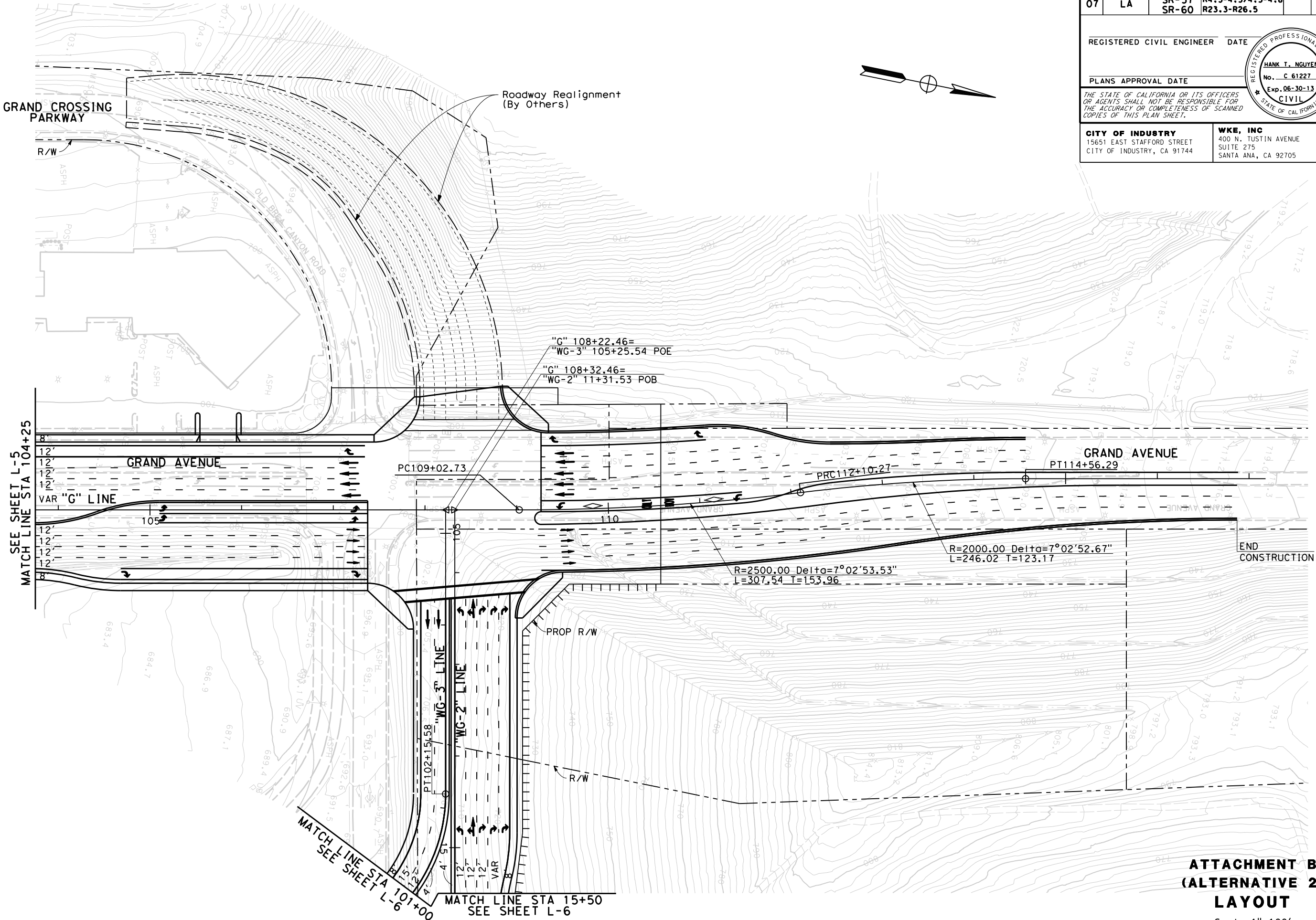
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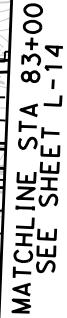


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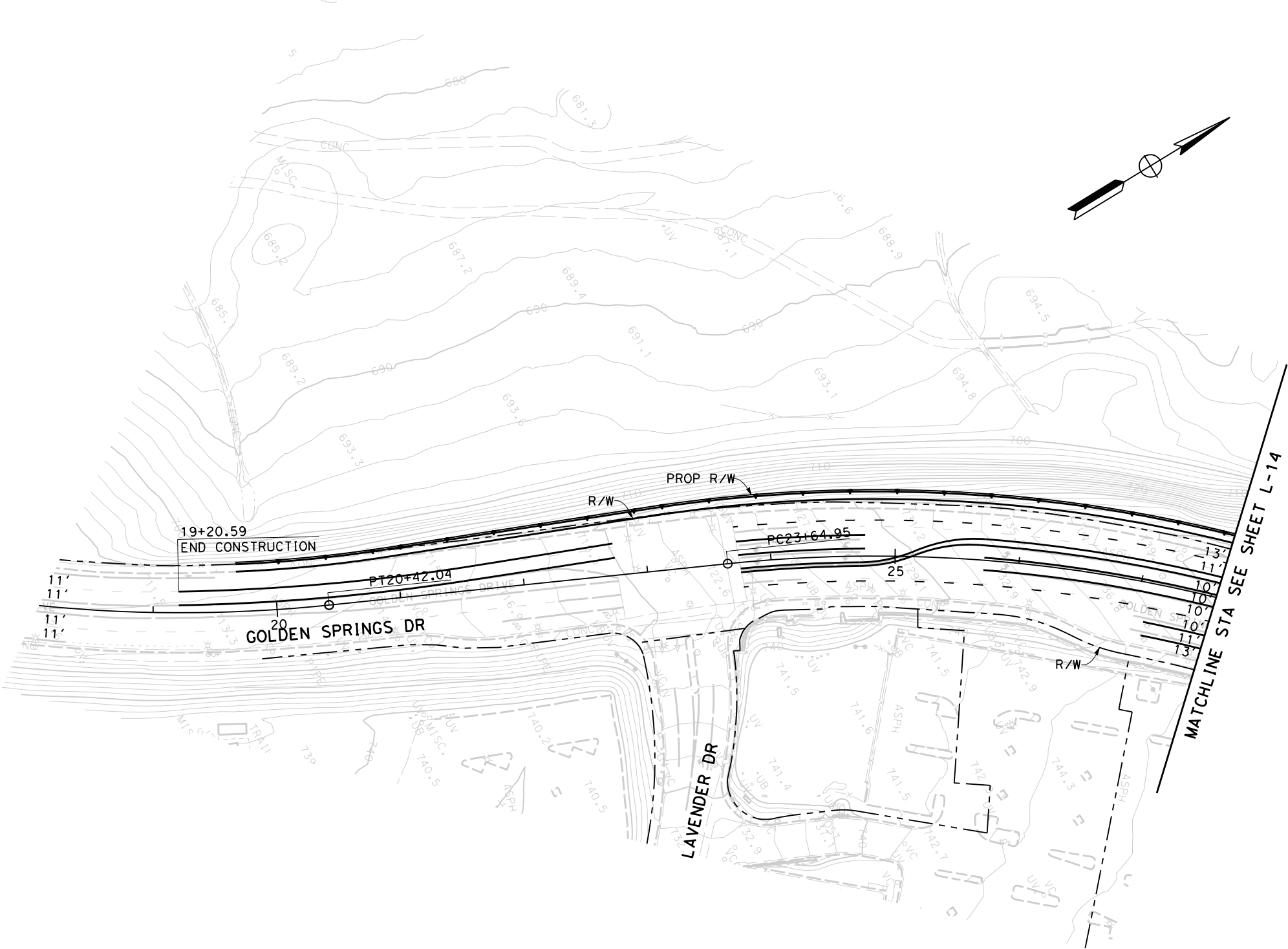


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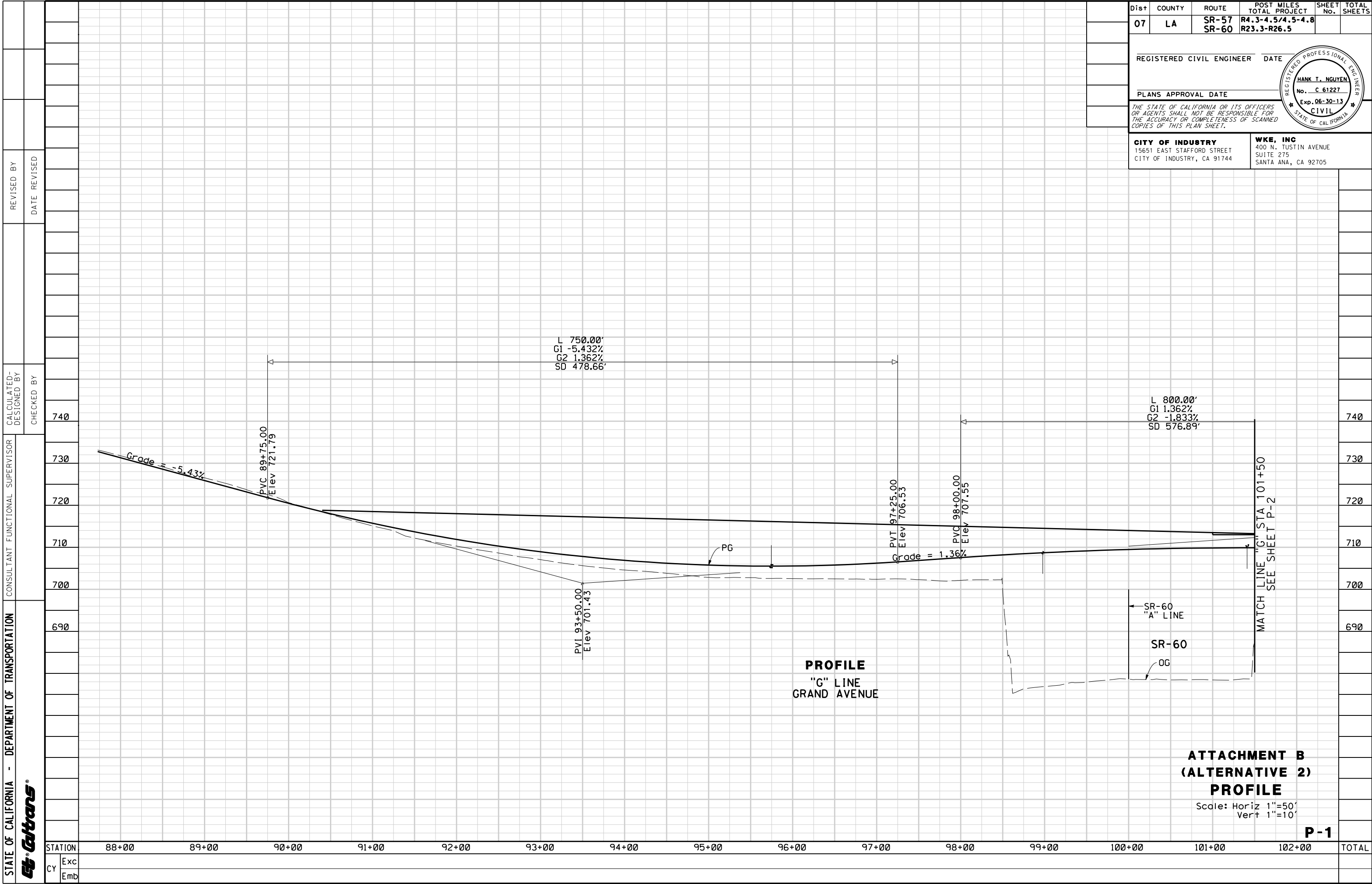
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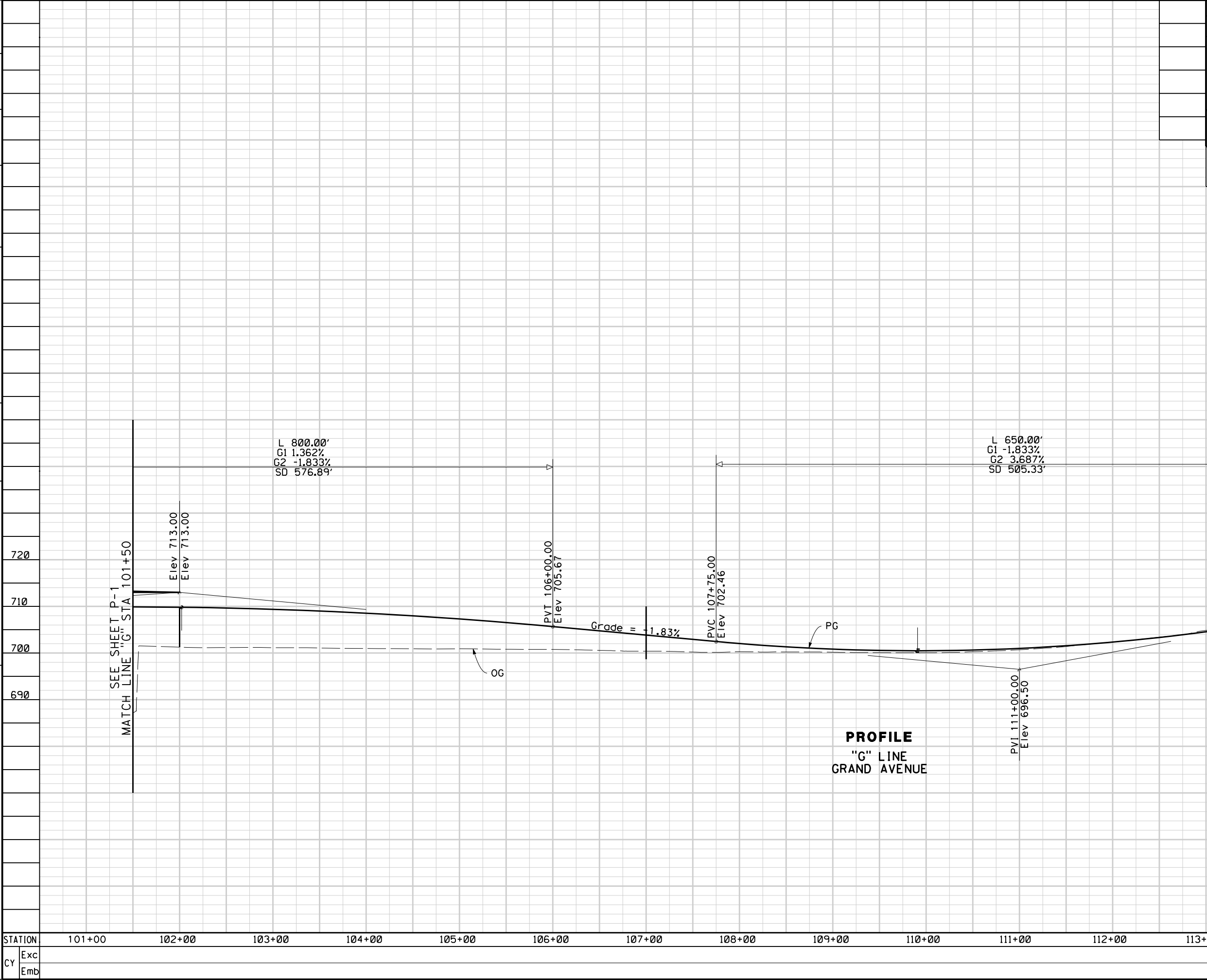
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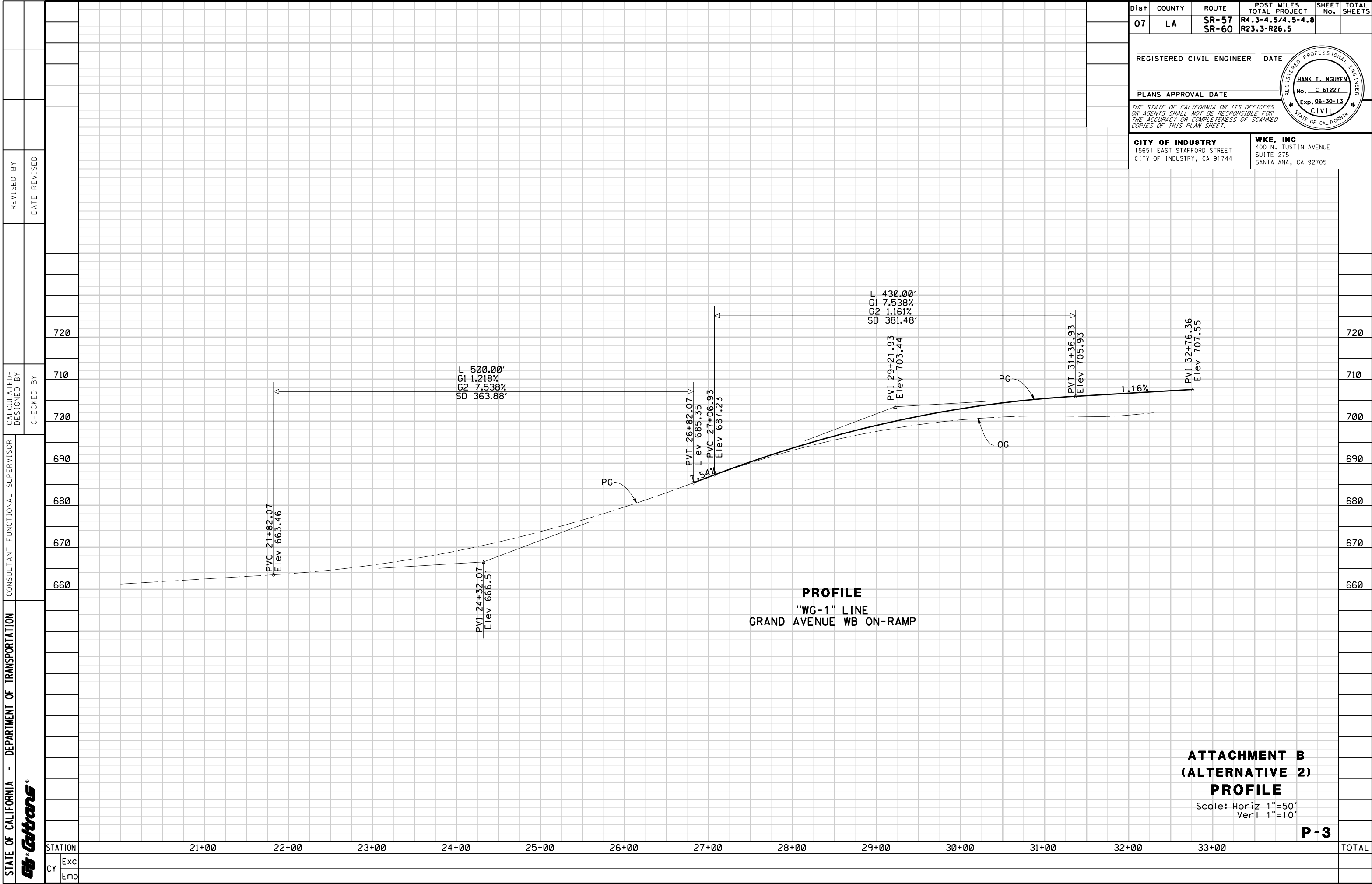
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ATTACHMENT B
(ALTERNATIVE 2)
PROFILE

Scale: Horiz 1"=50'
Vert 1"=10'



Dist		COUNTY	ROUTE	POST MILES		SHEET	TOTAL
				TOTAL PROJECT	No.		
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STATION		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	TOTAL
CY	Exc																
	Emb																

PROFILE
"WG-2" LINE
GRAND AVENUE WB OFF-RAMP

**ATTACHMENT B
(ALTERNATIVE 2)
PROFILE**
Scale: Horiz 1"=50'
Vert 1"=10'

P-4

PVI 11+31.53
Elev 701.53

Grade = -2.00%

PVC 13+69.74
Elev 696.77

L 200.00'
G1 -1.999%
G2 -1.018%

PVT 15+69.74
Elev 693.75

OG

PVI 14+69.74
Elev 694.77

Grade = -1.02%

PVC 18+00.00
Elev 691.41

L 200.00'
G1 -1.018%
G2 0.956%
SD 1774.98'

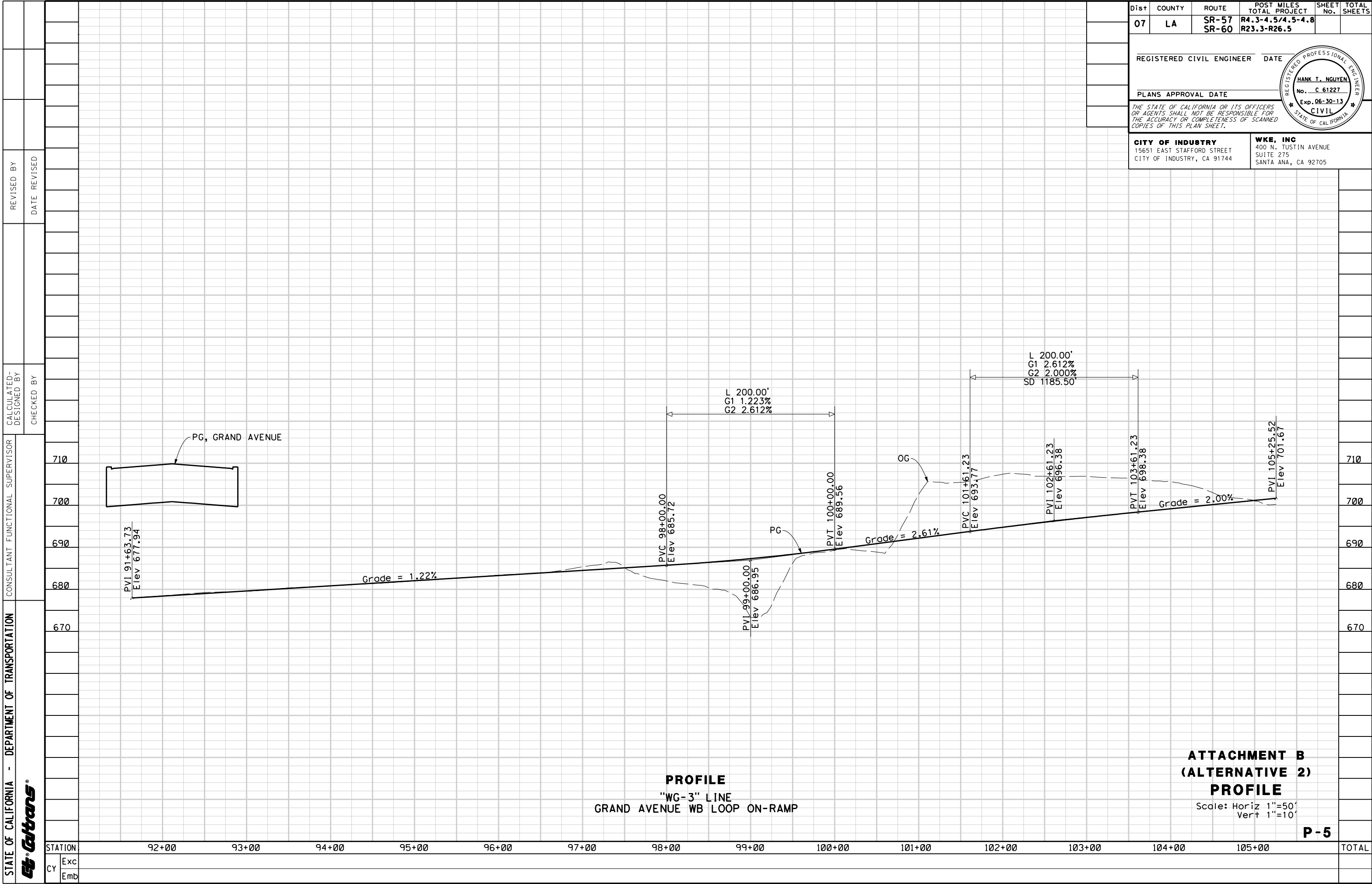
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Elev 690.39

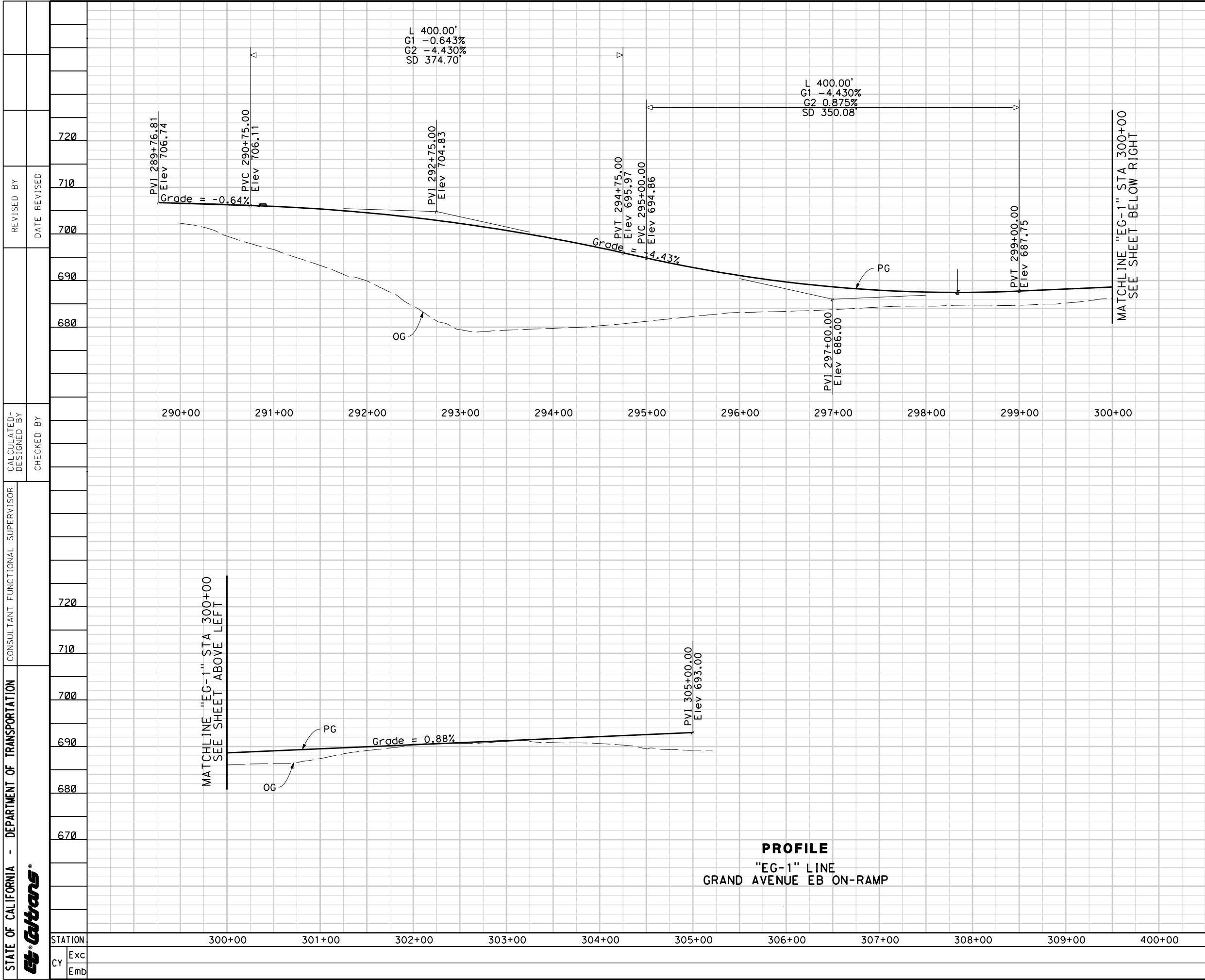
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PVT 20+00.00
Elev 691.34

Grade = 0.96%

PVI 25+25.43
Elev 696.37

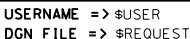




Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE			HANK T. NGUYEN No. C 61227 Exp. 06-30-13 CIVIL STATE OF CALIFORNIA		
CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705		

x

RELATIVE BORDER SCALE
IS IN INCHES



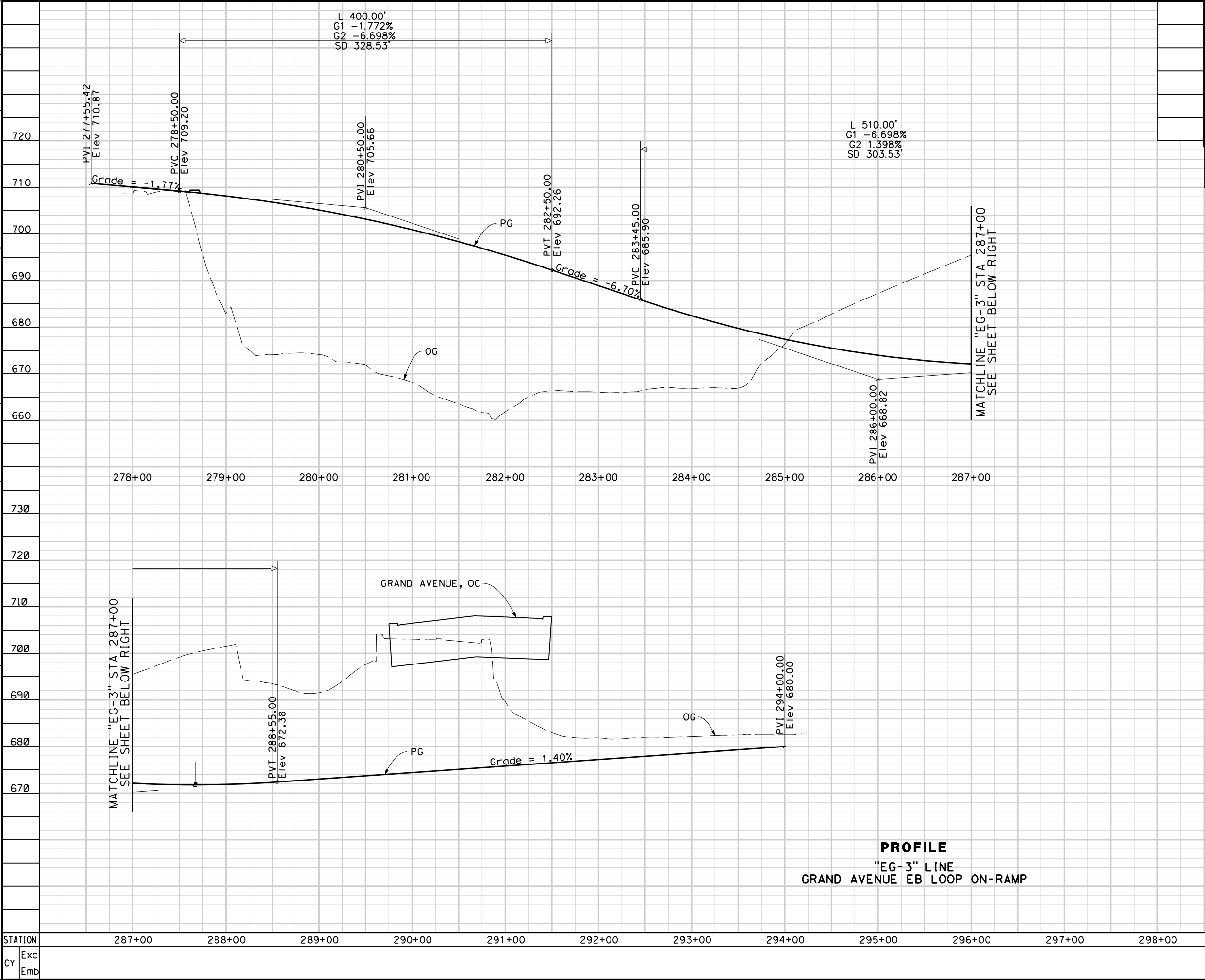
EA 279100

REGISTERED PROFESSIONAL ENGINEER
 HANK T. NGUYEN
 No. C 61227
 Exp. 06-30-13
 CIVIL
 STATE OF CALIFORNIA



Scale: Horiz 1"=50'
Vert 1"=10'

DATE PLOTTED => \$DATE	LAST REVISION
TIME PLOTTED => \$TIME	
00-00-00	



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE			HANK T. NGUYEN No. C 61227 Exp. 06-30-13 CIVIL STATE OF CALIFORNIA		
CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705		

ATTACHMENT B
(ALTERNATIVE 2)
PROFILE
Scale: Horiz 1"=50'
Vert 1"=10'

P-8

LAST REVISION DATE PLOTTED => \$DATE
00-00-00 TIME PLOTTED => \$TIME

[illegible]

[illegible]

[illegible]

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		CONSULTANT FUNCTIONAL SUPERVISOR		CALCULATED-BY DESIGNED BY		REVISOR		DATE	
ST-Caltans				CHECKED BY		DATE			
STATION		48+00		49+00		50+00		51+00	
CY		Exc		Emb					
TOTAL									

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		
REGISTERED CIVIL ENGINEER		DATE			
PLANS APPROVAL DATE					
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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705		

REGISTERED PROFESSIONAL ENGINEER	
HANK T. NGUYEN	
No. C 61227	
Exp. 06-30-13	
CIVIL	
STATE OF CALIFORNIA	

PROFILE	
CONN "A"	
N57-E60 CONNECTOR	
(GOLDEN SPRINGS DRIVE)	

ATTACHMENT B	
(ALTERNATIVE 2)	
PROFILE	
Scale: Horiz 1"=50'	
Vert 1"=10'	
P-13	

SEE SHEET P-13	
MATCHLINE "A-2" STA 48+00	
RAMP "EG-2"	
PG	
OG	
Grade = -0.92%	
Grade = 1.04%	
Grade = +0.15%	
Grade = 1.04%	

L 200.00'	
G1 -0.915%	
G2 1.045%	
SD 1886.23'	
L 435.00'	
G1 1.045%	
G2 -0.149%	
SD 774.20'	
L 200.00'	
G1 -0.149%	
G2 1.039%	

PVT 51+75.00	
Elev 636.55	
PVC 52+25.00	
Elev 636.09	
PVI 53+25.00	
Elev 635.18	
PVT 54+25.00	
Elev 636.22	
PVC 54+45.00	
Elev 636.43	
PVI 56+62.50	
Elev 638.70	
PVT 58+80.00	
Elev 638.38	
PVC 59+00.00	
Elev 638.35	
PVI 60+00.00	
Elev 638.20	
PVT 61+00.00	
Elev 639.24	
PVI 61+11.39	
Elev 639.36	

LAST REVISION	DATE PLOTTED => \$DATE
00-00-00	TIME PLOTTED => \$TIME

[illegible]

[illegible]

x

REGISTERED PROFESSIONAL ENGINEER
 HANK T. NGUYEN
 No. C 61227
 Exp. 06-30-13
 CIVIL
 STATE OF CALIFORNIA



Scale: Horiz 1"=50'
Vert 1"=10'

P-18

DATE PLOTTED => \$DATE	LAST REVISION
TIME PLOTTED => \$TIME	00-00-00

x

EA 279100

DATE PLOTTED => \$DATE
TIME PLOTTED => \$TIME
LAST REVISION
00-00-00

x

REGISTERED PROFESSIONAL ENGINEER
 HANK T. NGUYEN
 No. C 61227
 Exp. 06-30-13
 CIVIL
 STATE OF CALIFORNIA



X-2

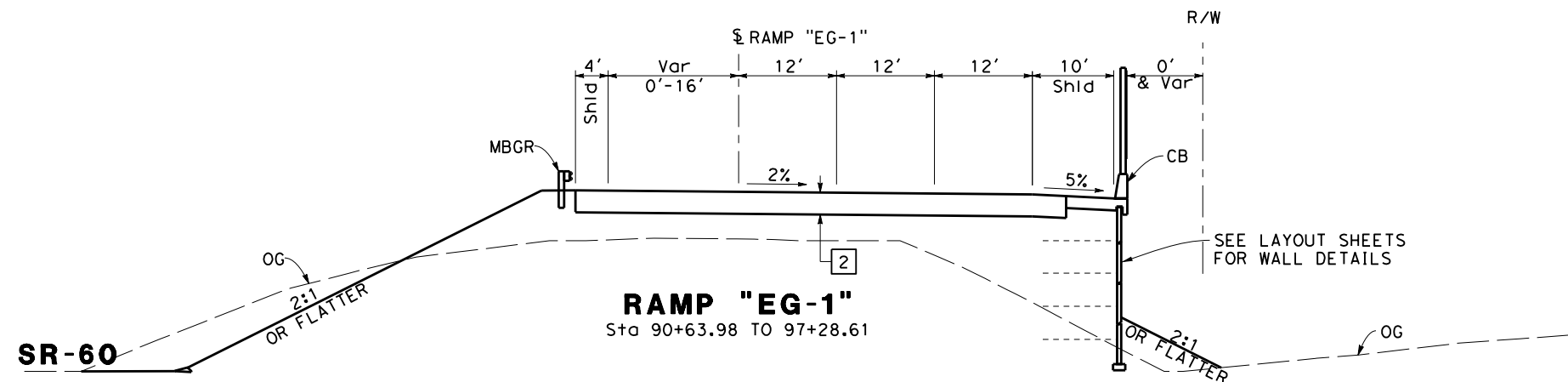
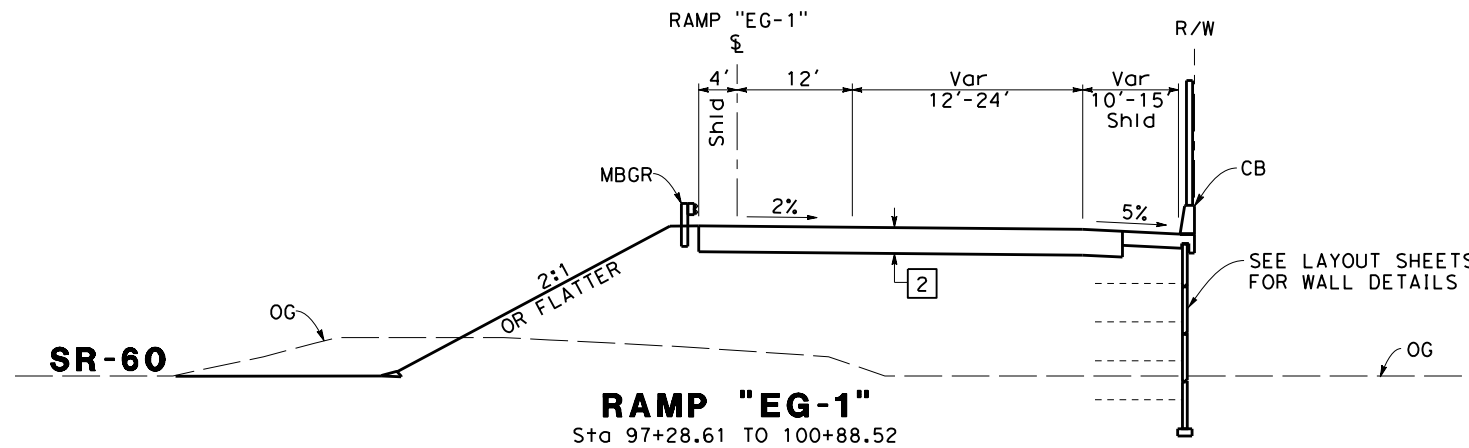
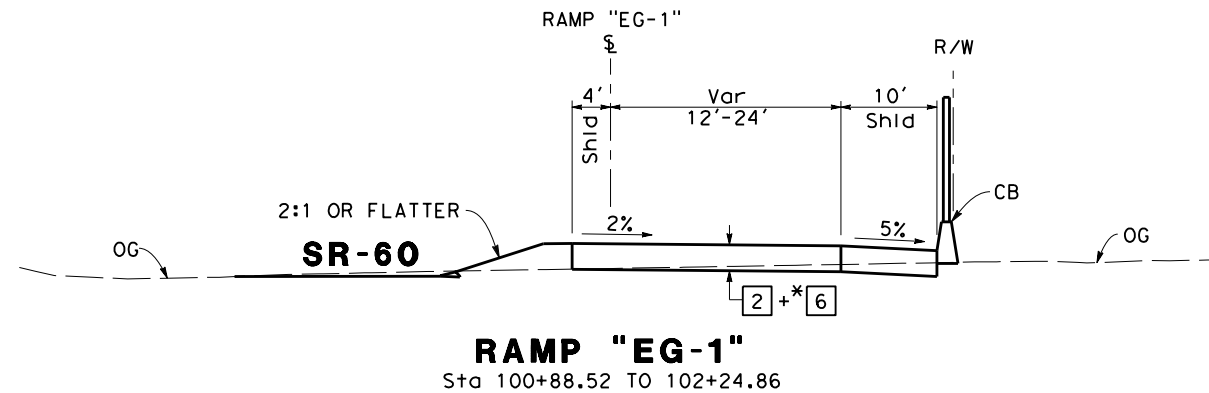
LAST REVISION	DATE PLOTTED => \$DATE
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Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
---	---



ATTACHMENT B
(ALTERNATIVE 2)
TYPICAL CROSS SECTION
NO SCALE

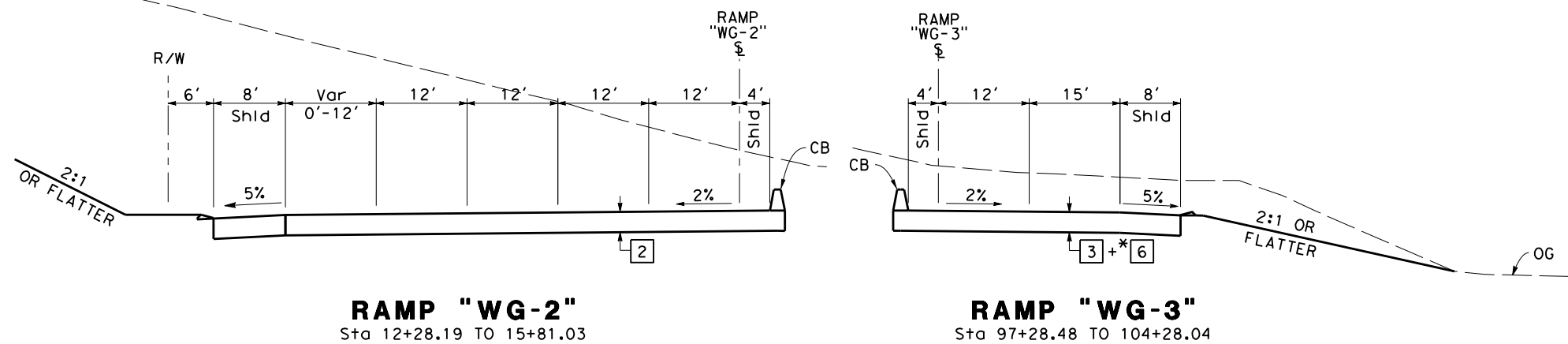
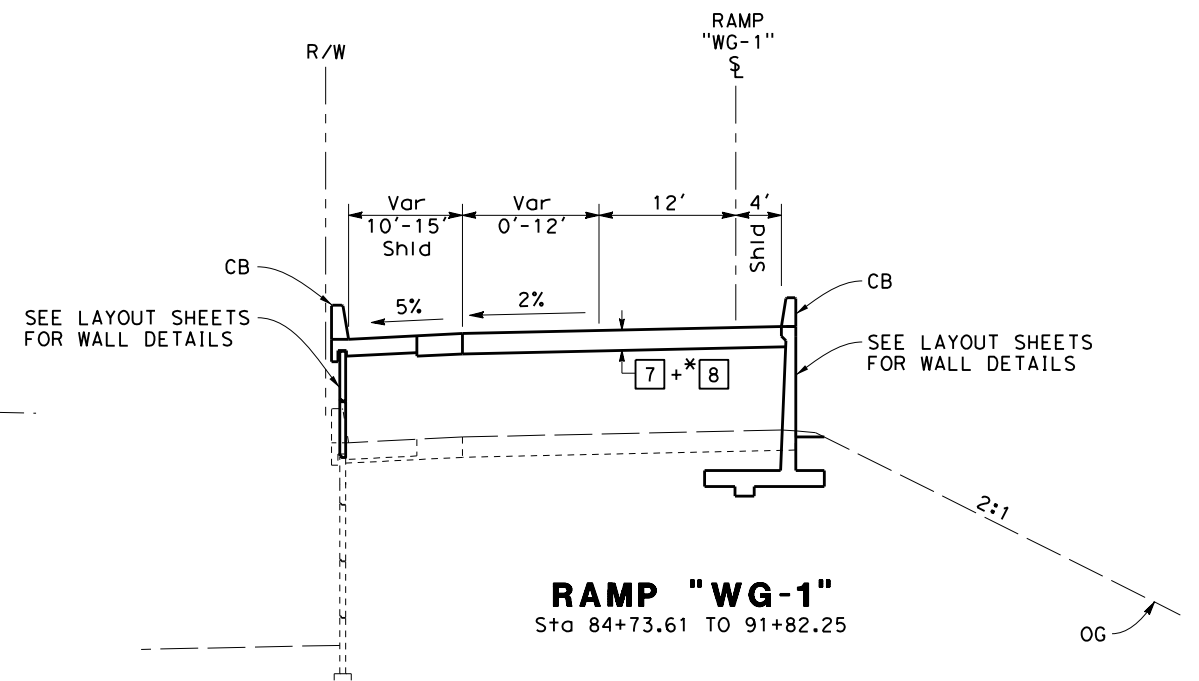
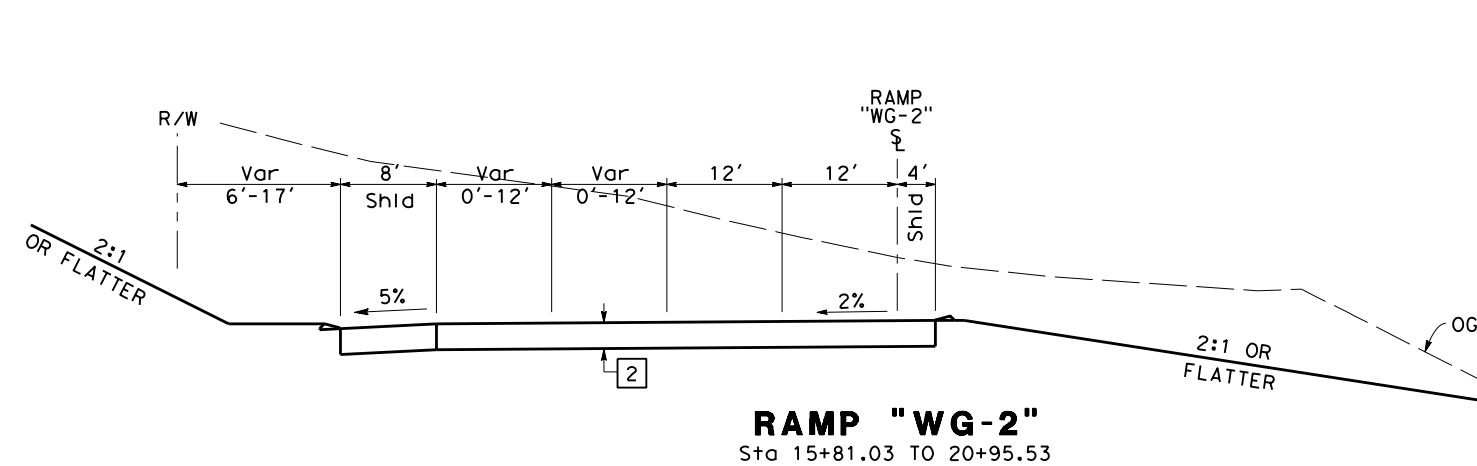
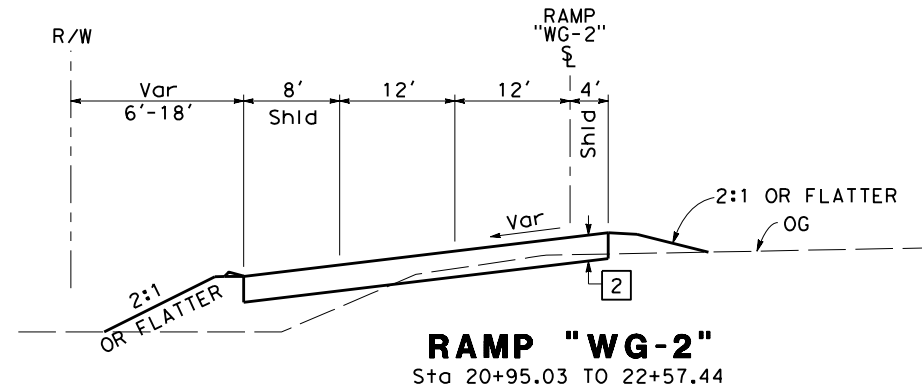
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
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**ATTACHMENT B
(ALTERNATIVE 2)
TYPICAL CROSS SECTION**

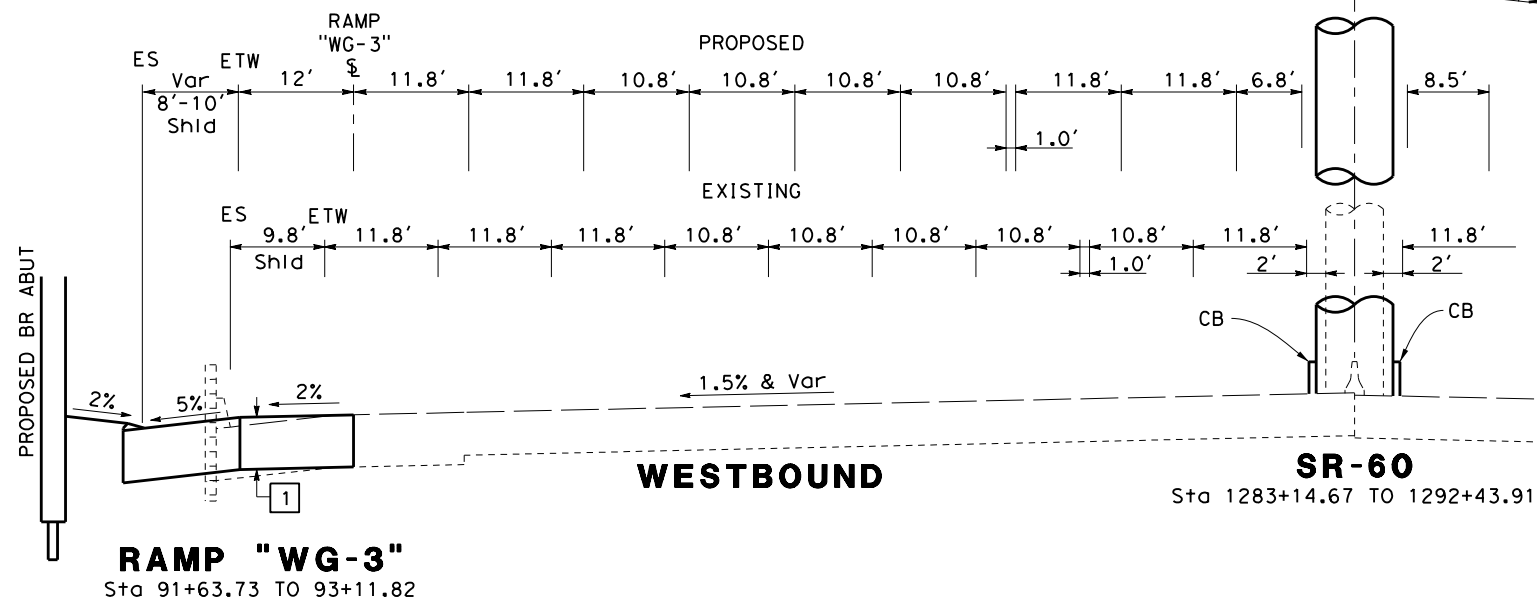
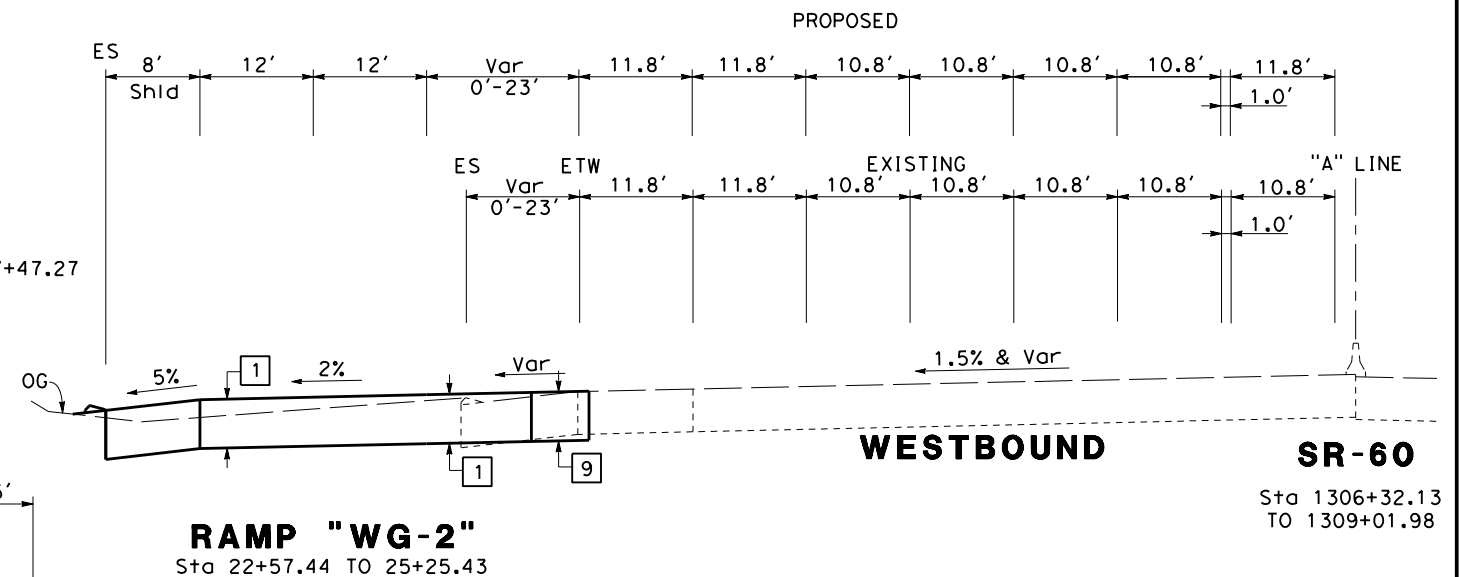
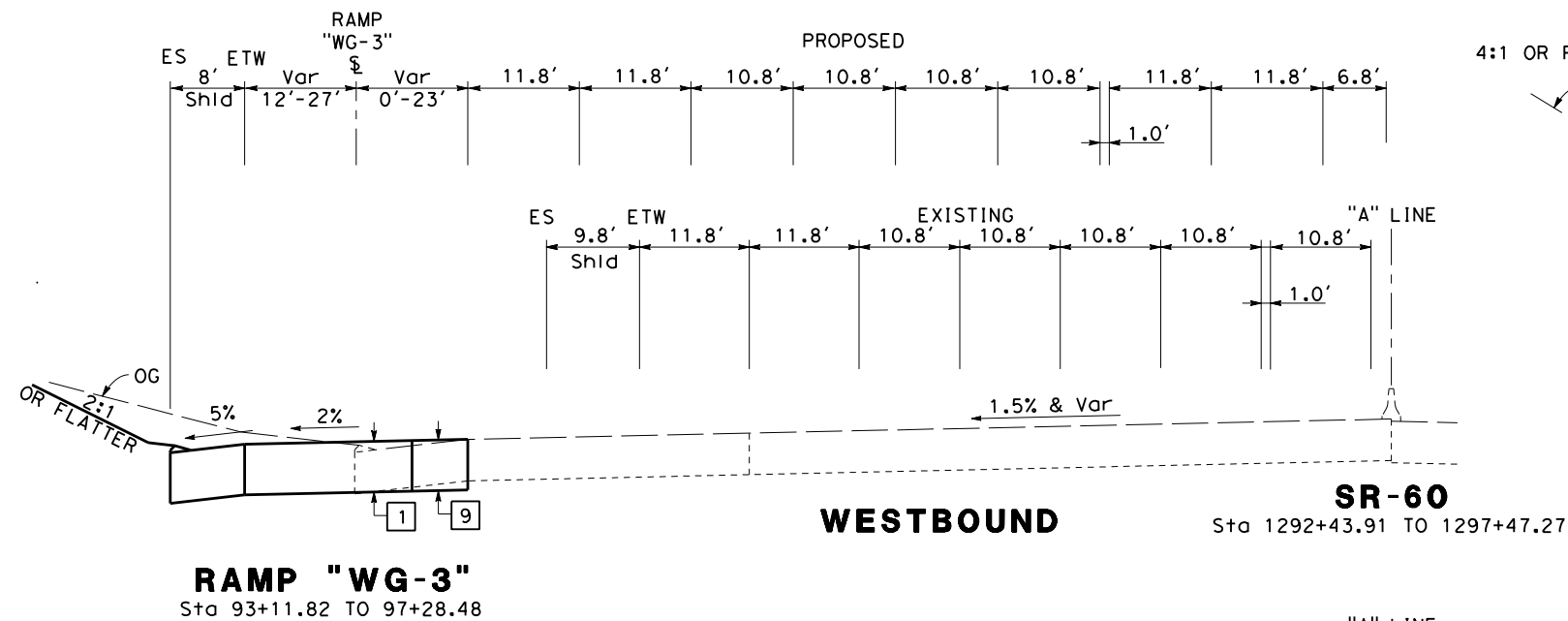
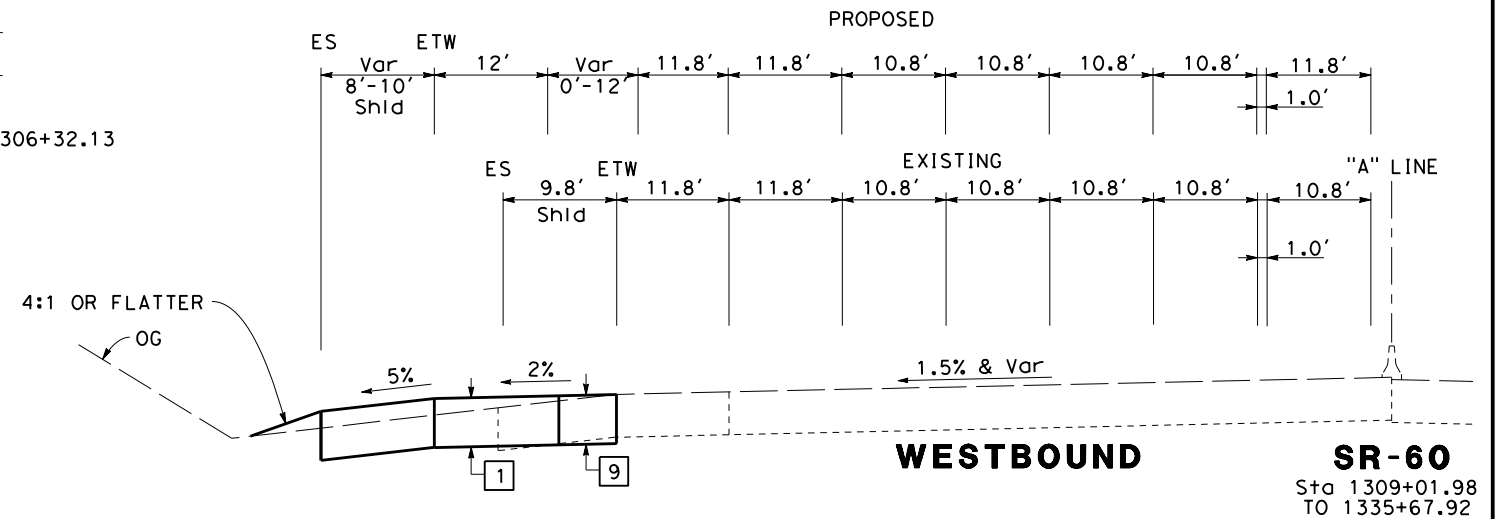
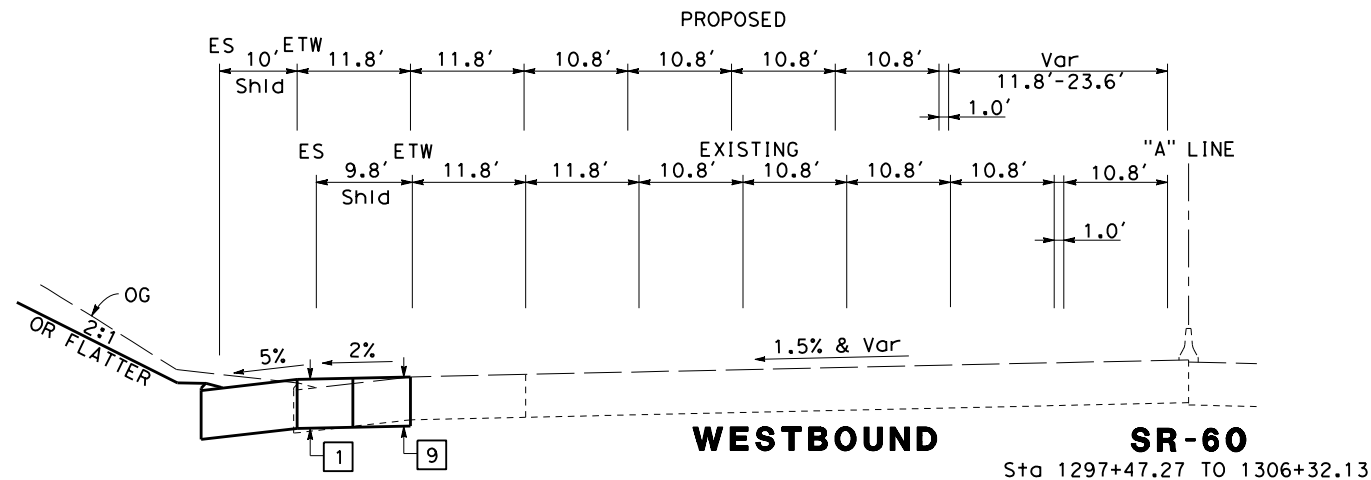
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

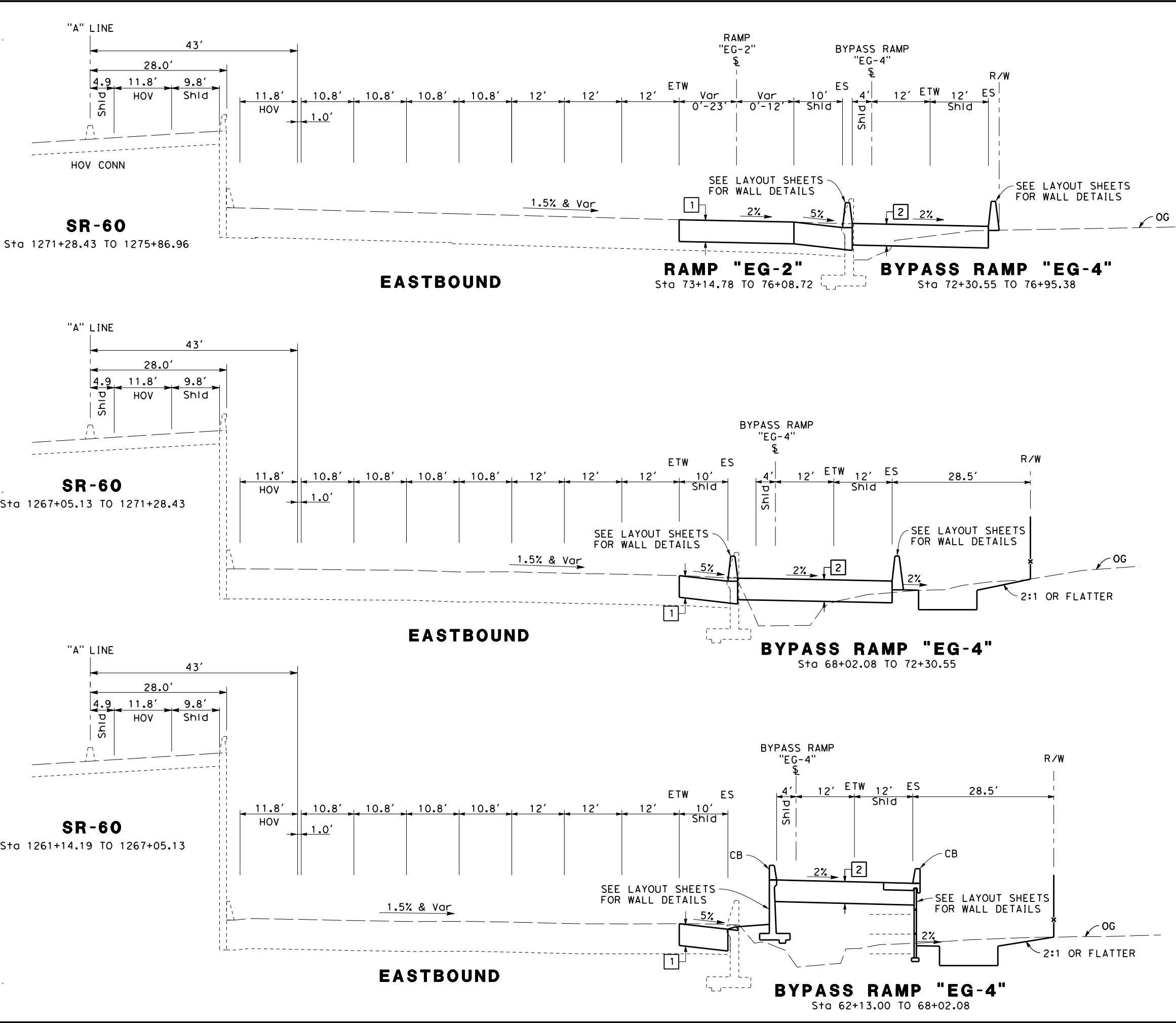
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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
---	---



**ATTACHMENT B
(ALTERNATIVE 2)
TYPICAL CROSS SECTION**

X - 5



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER DATE

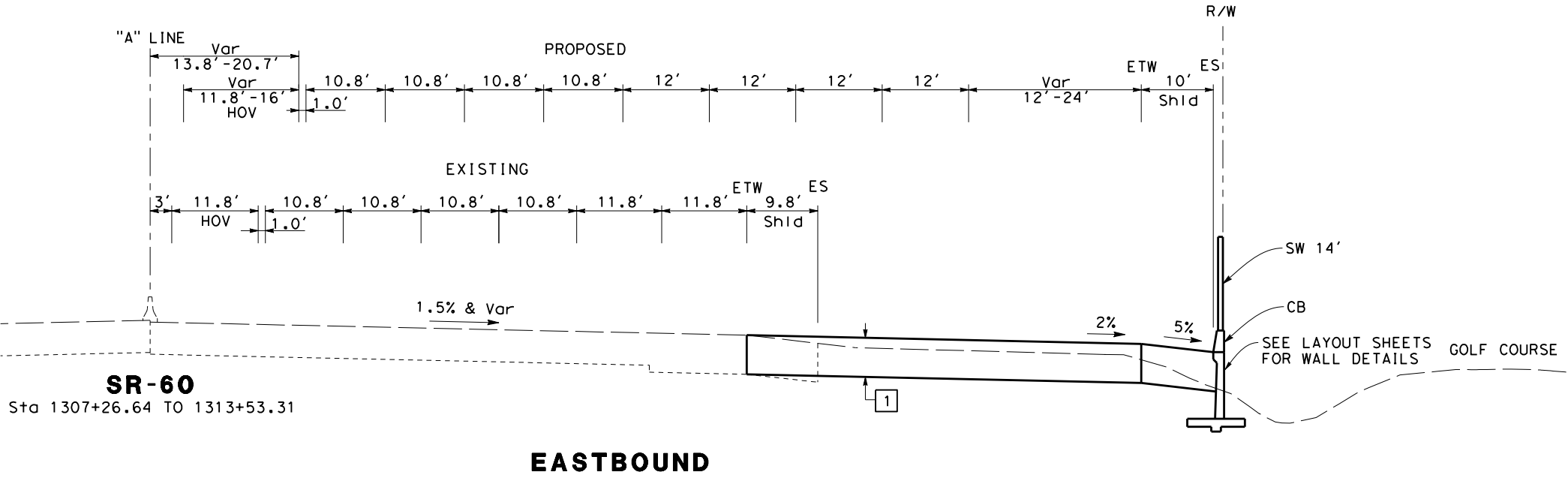
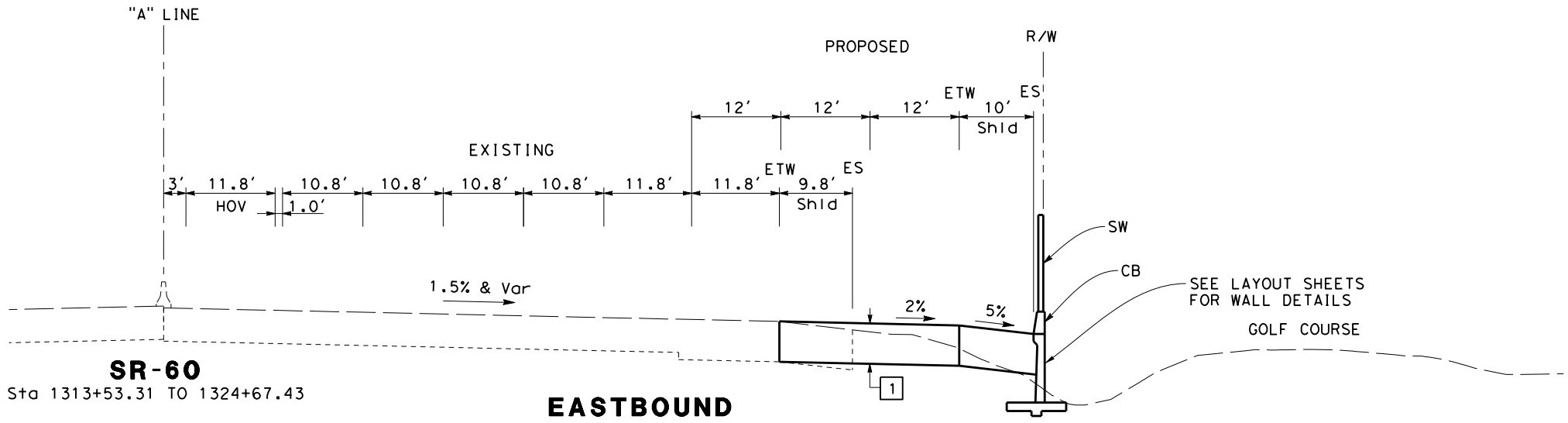
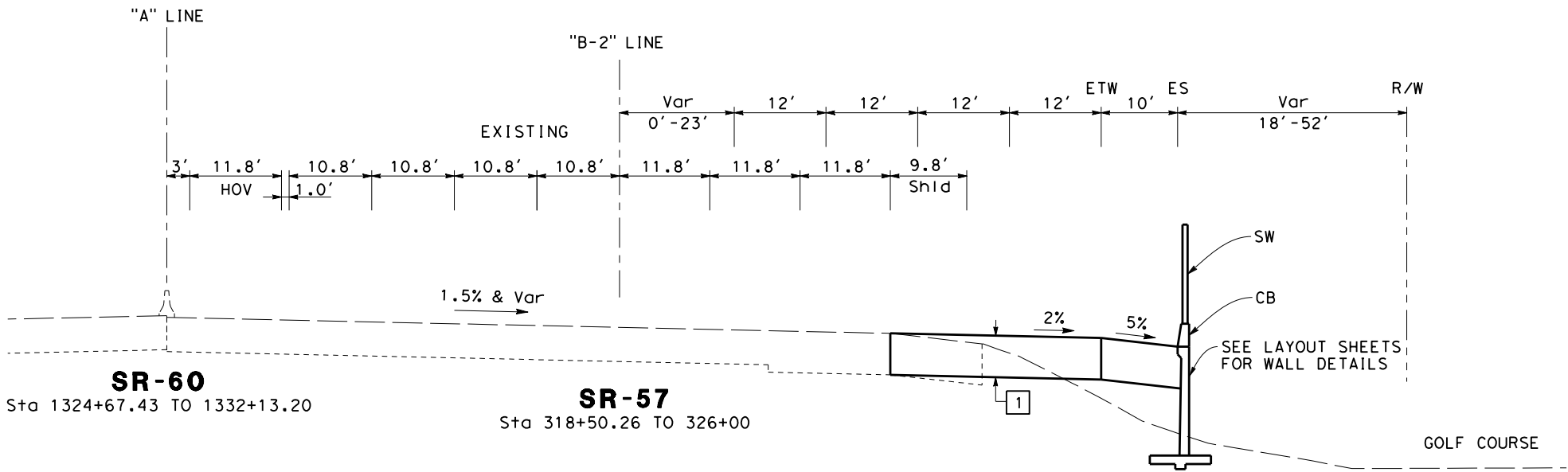
PLANS APPROVAL DATE

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CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

WKE, INC
400 N. TUSTIN AVENUE
SUITE 275
SANTA ANA, CA 92705

HANK T. NGUYEN
No. C 61227
Exp. 06-30-13
CIVIL
STATE OF CALIFORNIA



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

WKE, INC
400 N. TUSTIN AVENUE
SUITE 275
SANTA ANA, CA 92705

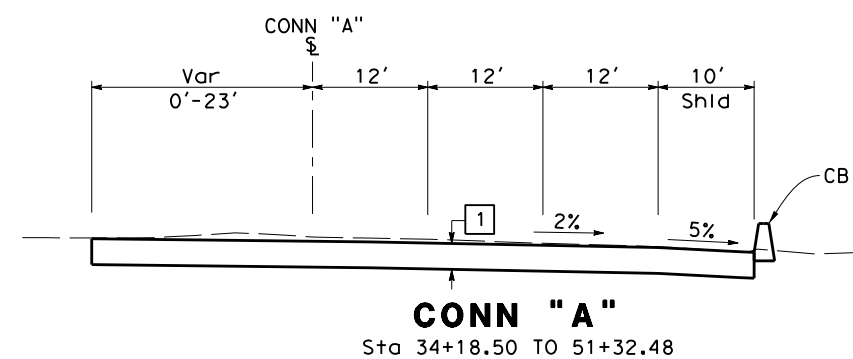
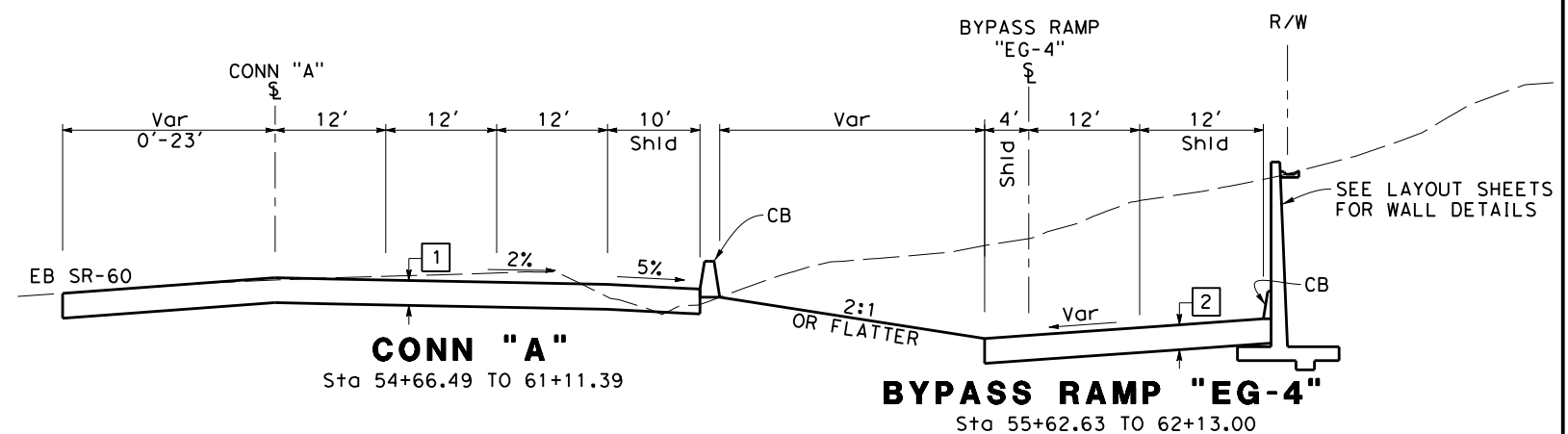
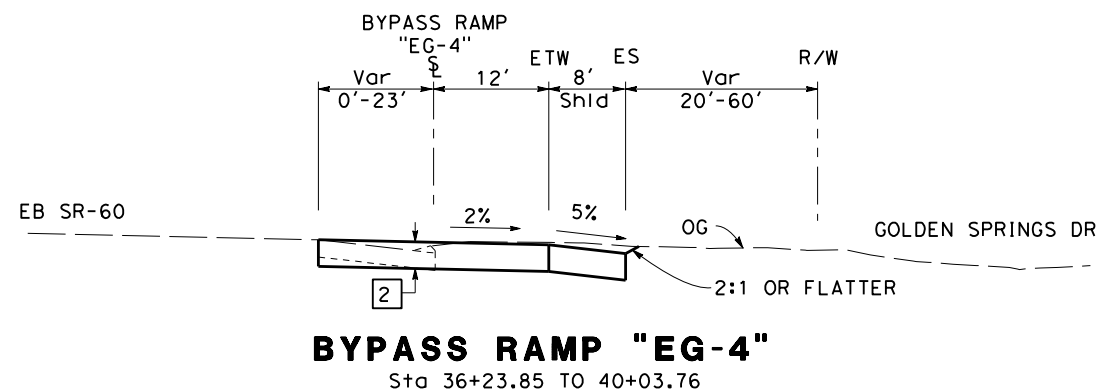
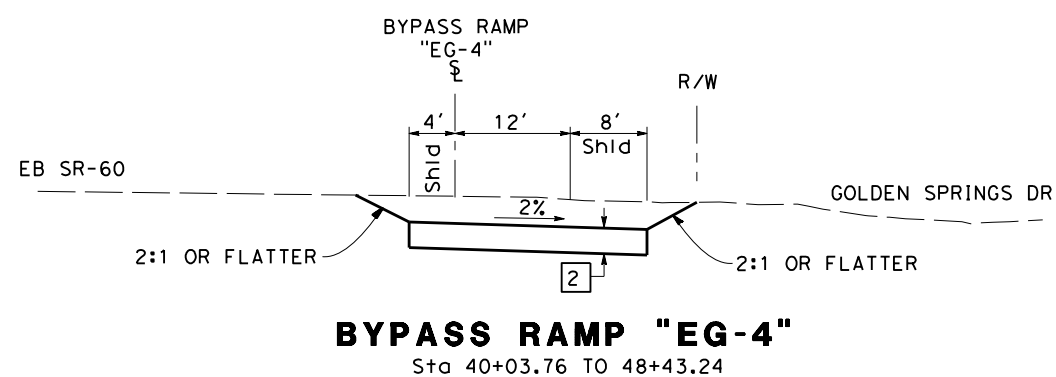
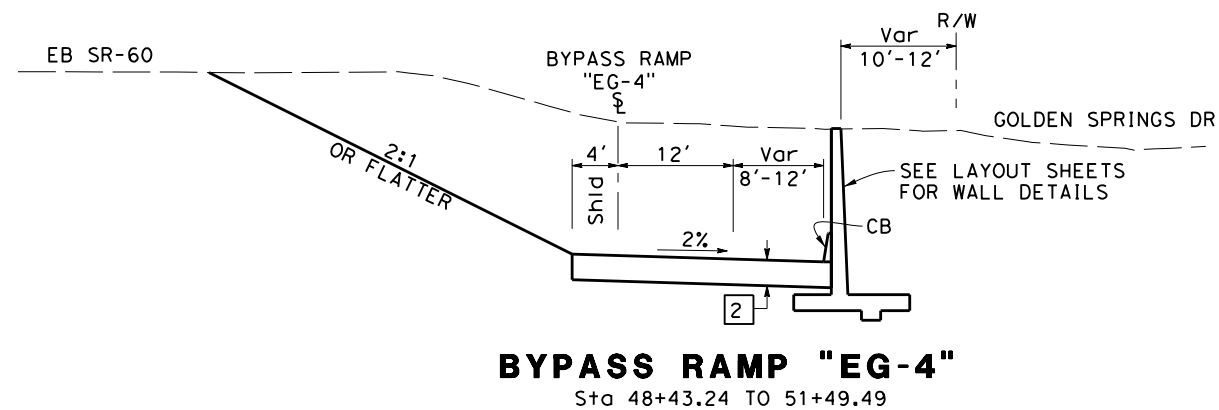
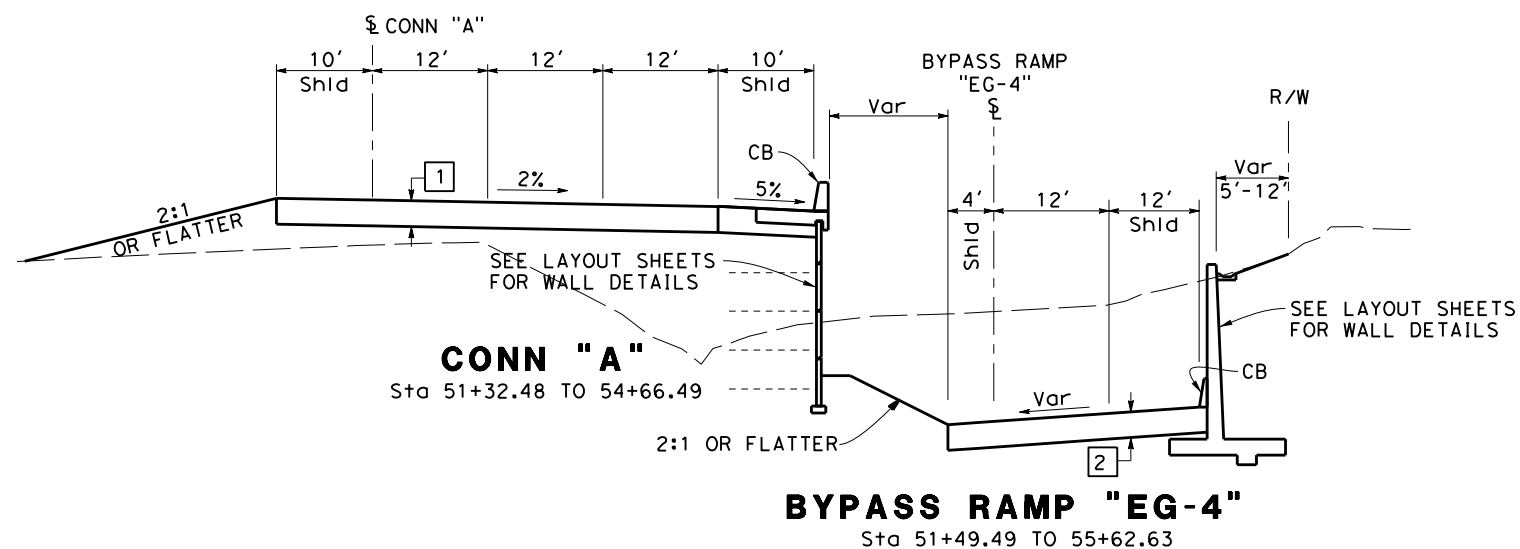
HANK T. NGUYEN
No. C 61227
Exp. 06-30-13
CIVIL
STATE OF CALIFORNIA

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
---	---



ATTACHMENT B
(ALTERNATIVE 2)
TYPICAL CROSS SECTION
NO SCALE

Dist

COUNTY

ROUTE

POST MILES TOTAL PROJECT

SHEET No.

TOTAL SHEETS

07

LA

SR-57
SR-60

R4.3-4.5/4.5-4.8
R23.3-R26.5

REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

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CITY OF INDUSTRY

15651 EAST STAFFORD STREET

CITY OF INDUSTRY, CA 91744

WKE, INC

400 N. TUSTIN AVENUE

SUITE 275

SANTA ANA, CA 92705

REGISTERED PROFESSIONAL ENGINEER

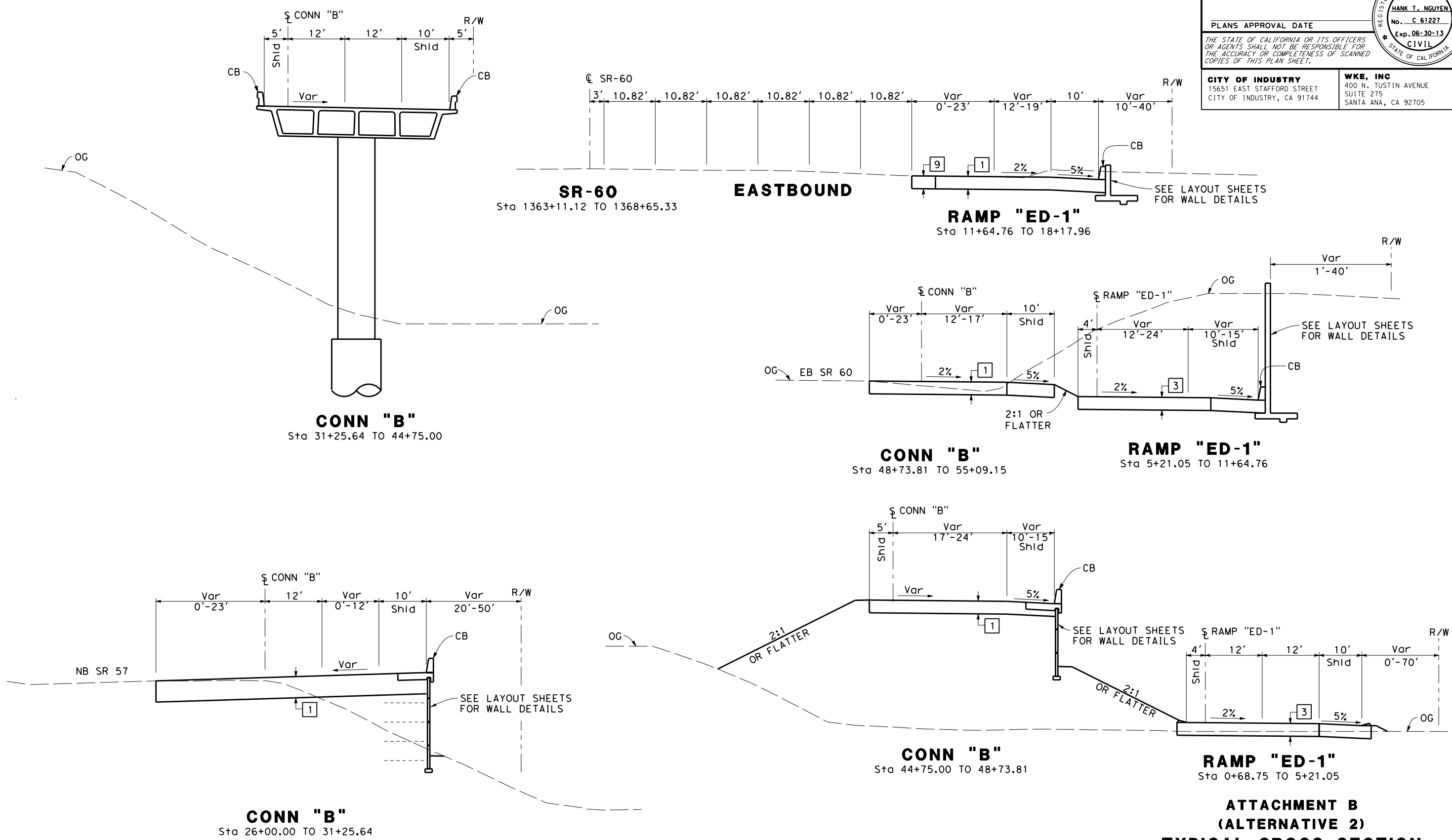
HANK T. NGUYEN

No. C 61227

Exp. 06-30-13

CIVIL

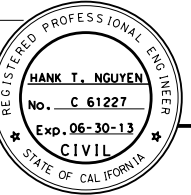
STATE OF CALIFORNIA



ATTACHMENT B
(ALTERNATIVE 2)
TYPICAL CROSS SECTION
NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER DATE / /

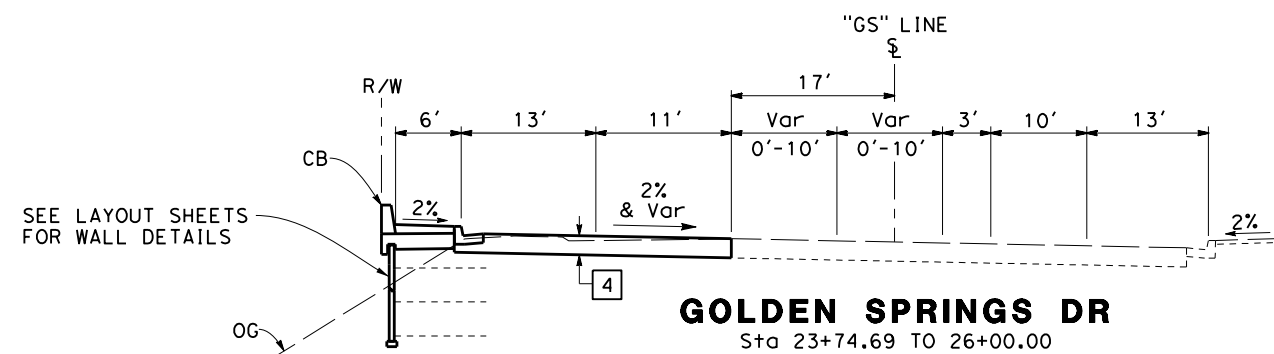
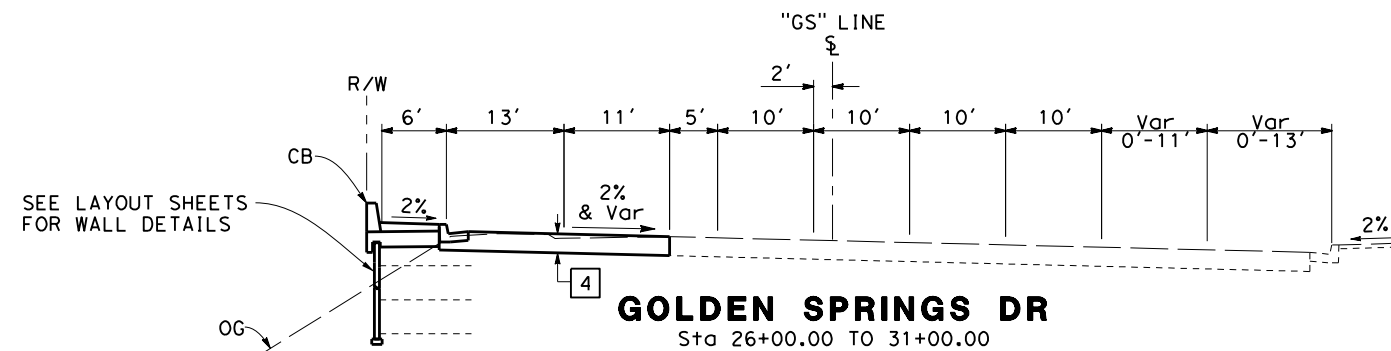
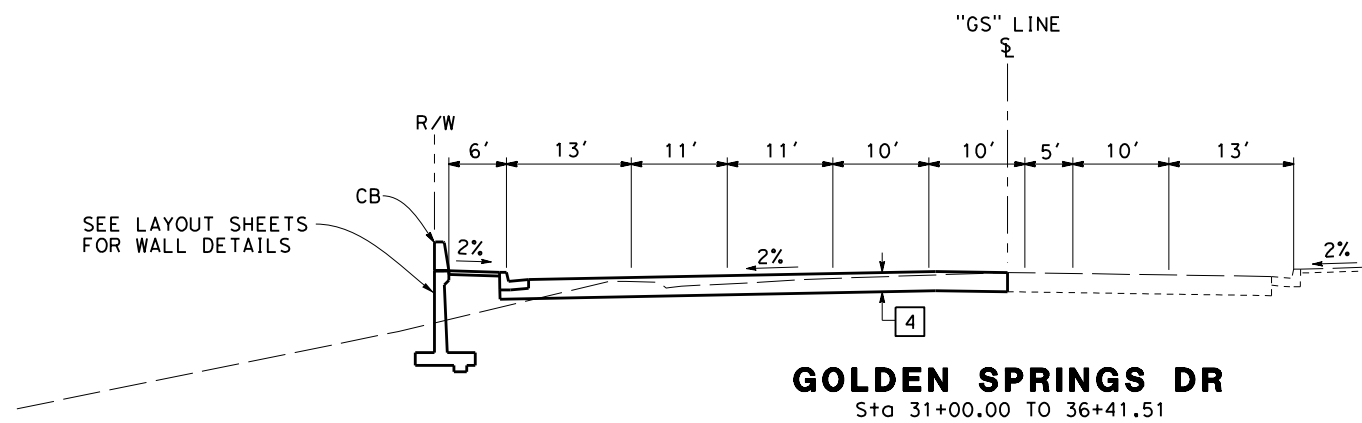


PLANS APPROVAL DATE

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CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

WKE, INC
400 N. TUSTIN AVENUE
SUITE 275
SANTA ANA, CA 92705



**ATTACHMENT B
(ALTERNATIVE 2)
TYPICAL CROSS SECTION**

NO SCALE

X-11

Attachment C – Alternative 3 Geometrics

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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REGISTERED CIVIL ENGINEER DATE

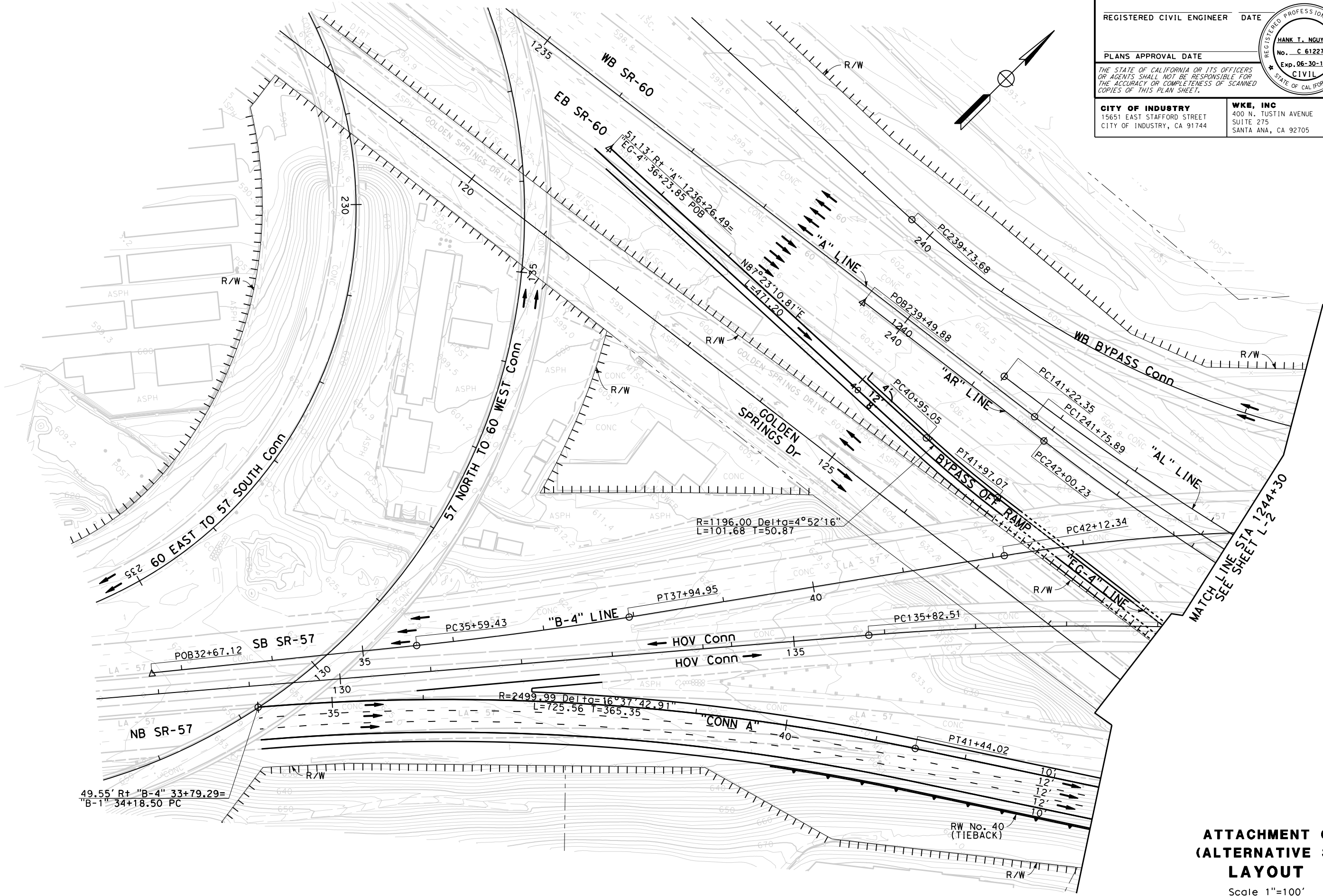
PLANS APPROVAL DATE

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CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

WKE, INC
400 N. TUSTIN AVENUE
SUITE 275
SANTA ANA, CA 92705

REGISTERED PROFESSIONAL ENGINEER
HANK T. NGUYEN
No. C 61227
Exp. 06-30-13
CIVIL
STATE OF CALIFORNIA



ATTACHMENT C
(ALTERNATIVE 3)
LAYOUT

Scale 1"=100'

BORDER LAST REVISED 4/11/2008

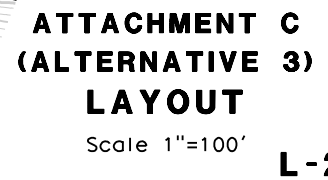
Et. Trans[®]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED PROFESSIONAL ENGINEER	DATE
PLANS APPROVAL DATE	

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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
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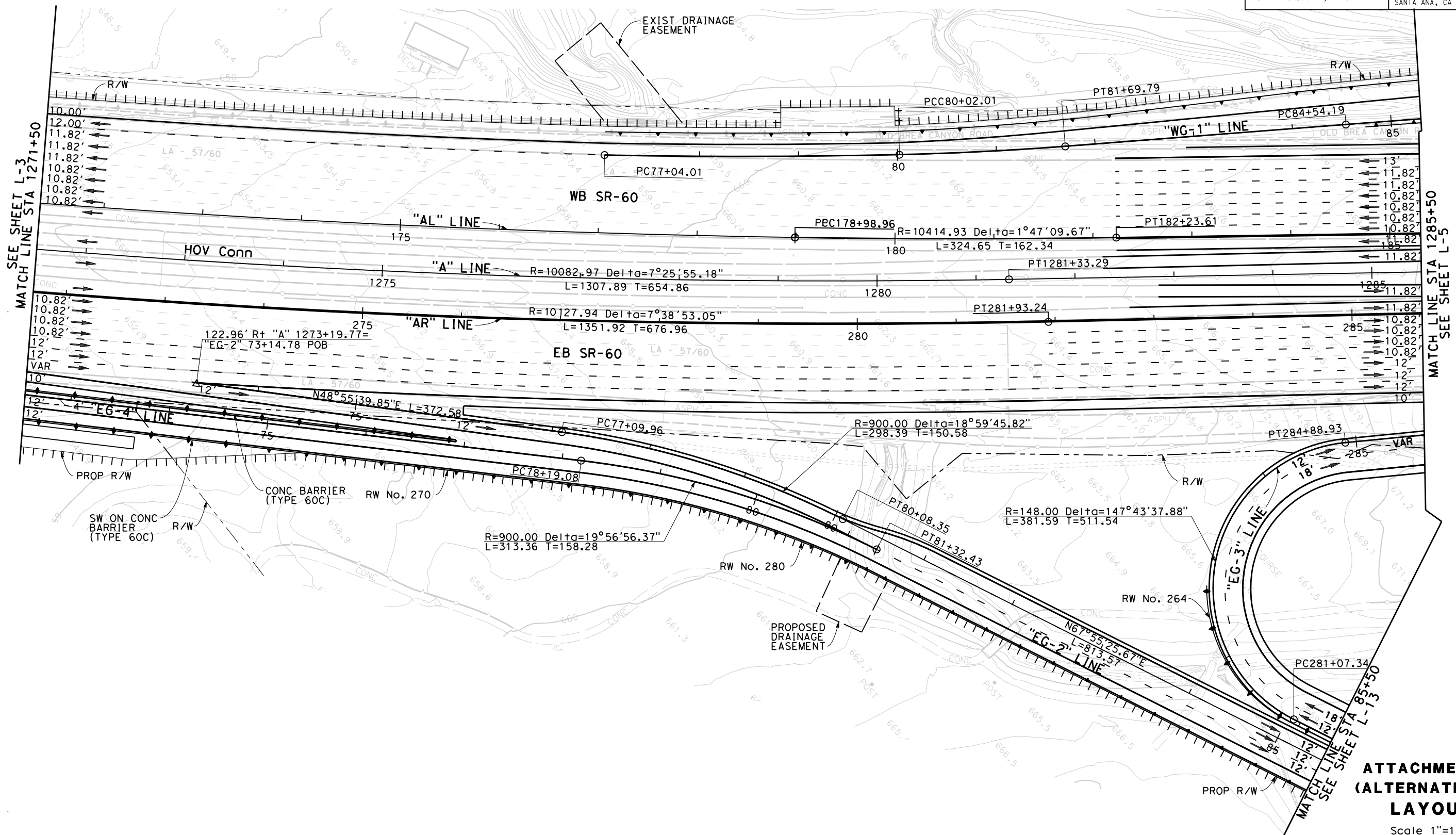


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	


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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
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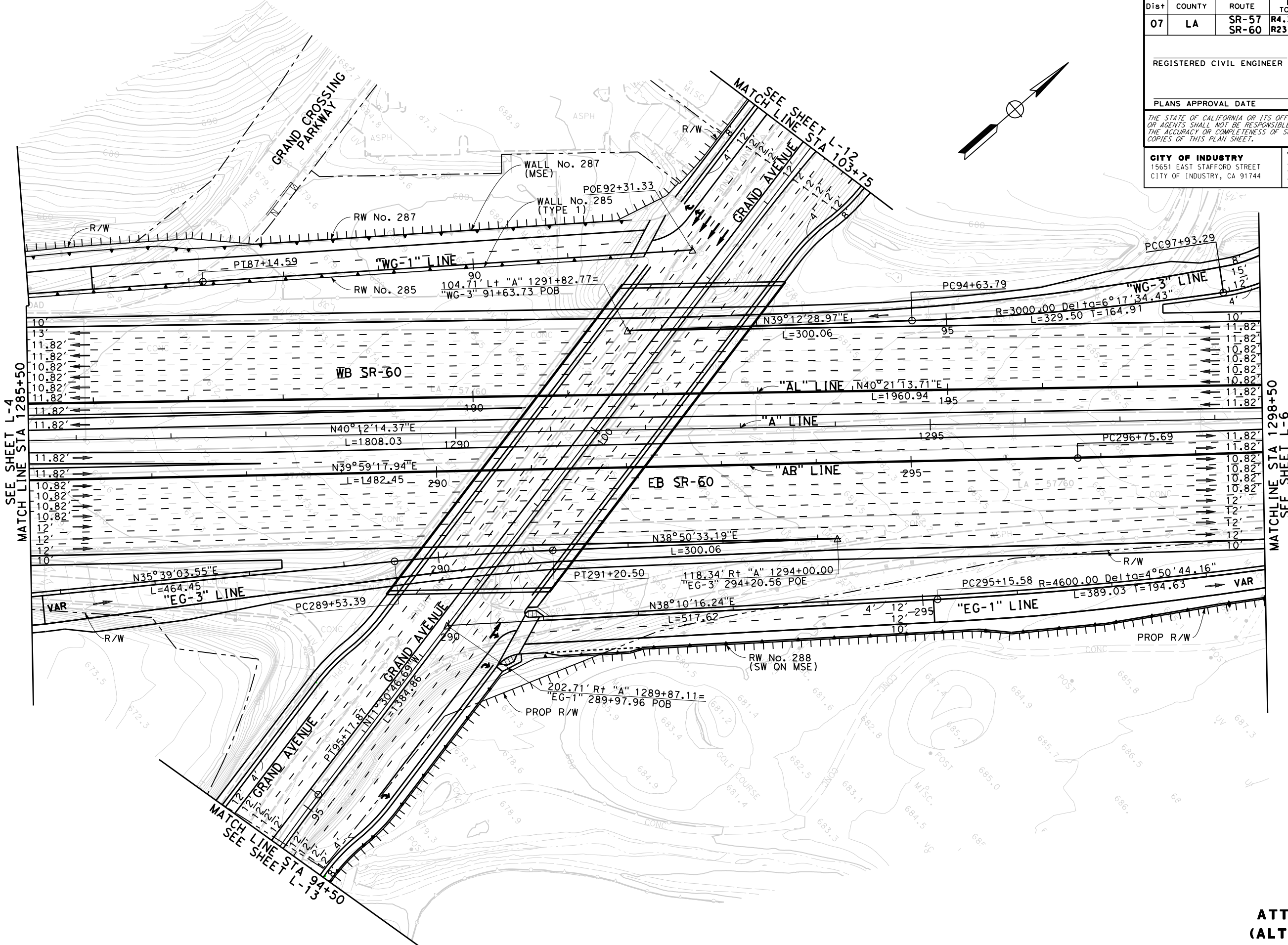


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR					
CET® Caltrans®		CALCULATED-DESIGNED BY	REVISED BY			
		CHECKED BY	DATE REVISED			

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER	DATE
	
PLANS APPROVAL DATE	

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COPIES OF THIS PLAN SHEET.



ATTACHMENT C
(ALTERNATIVE 3)
LAYOUT
Scale 1"=100' **L -**



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CU 00000

EA 279100

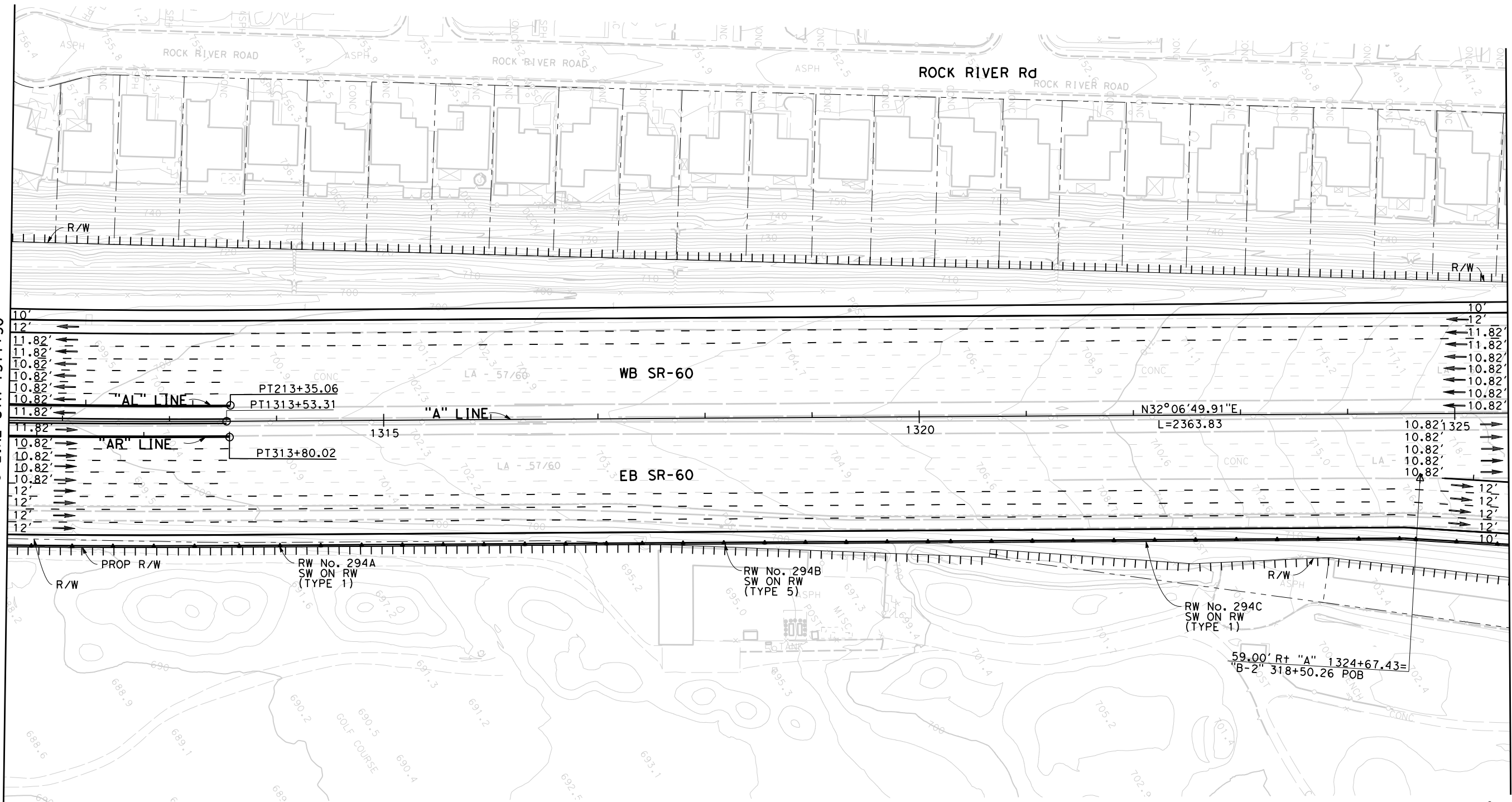
L-5

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LAST REVISION	
00-00-00	00-00-00

x

L-7

Scale 1"=100'



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY		
		CHECKED BY	DATE REVISED		

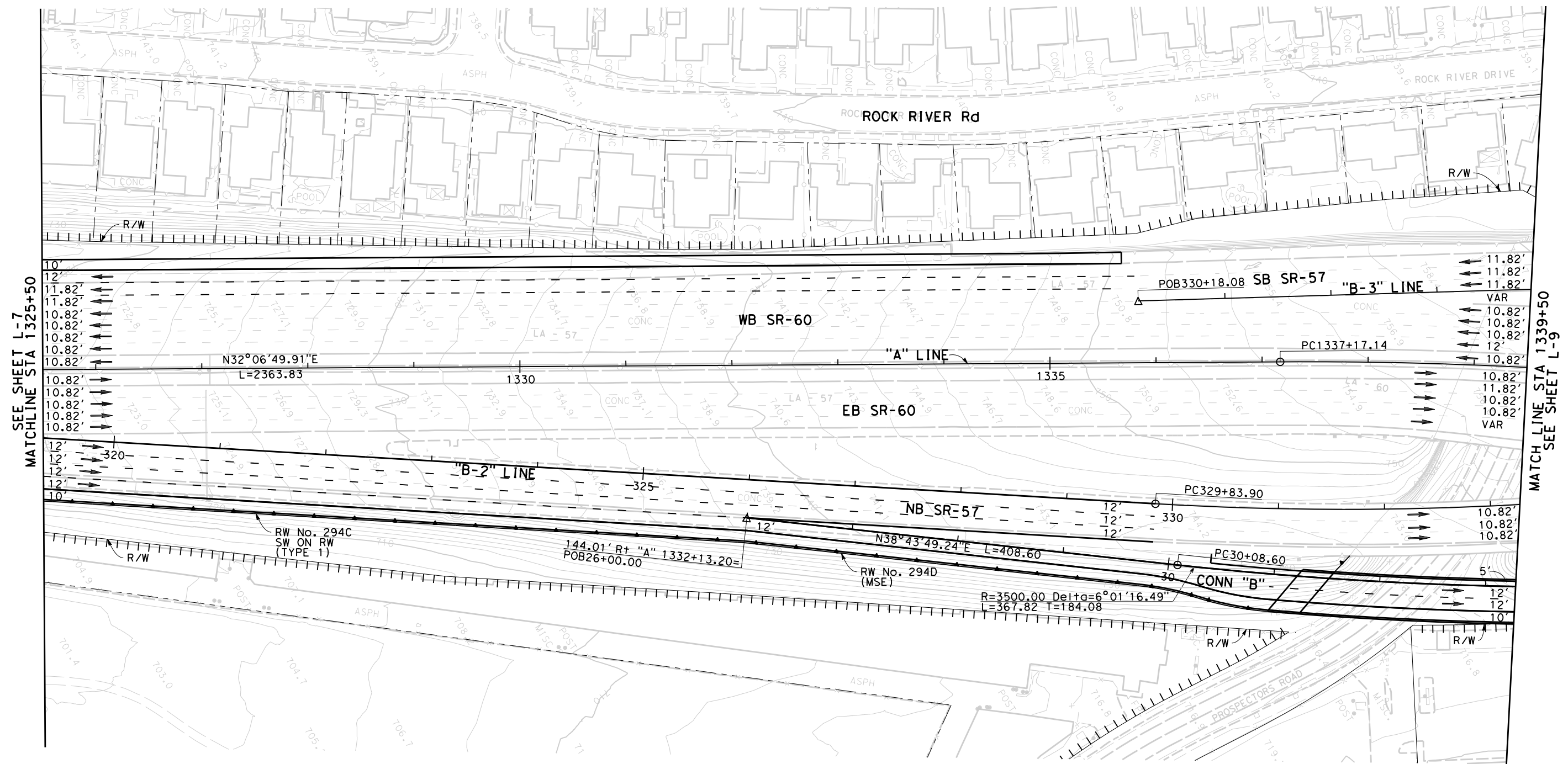
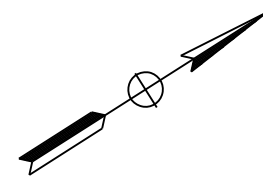
Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER	DATE

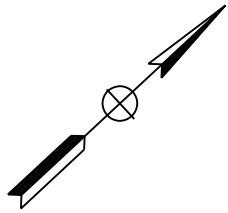
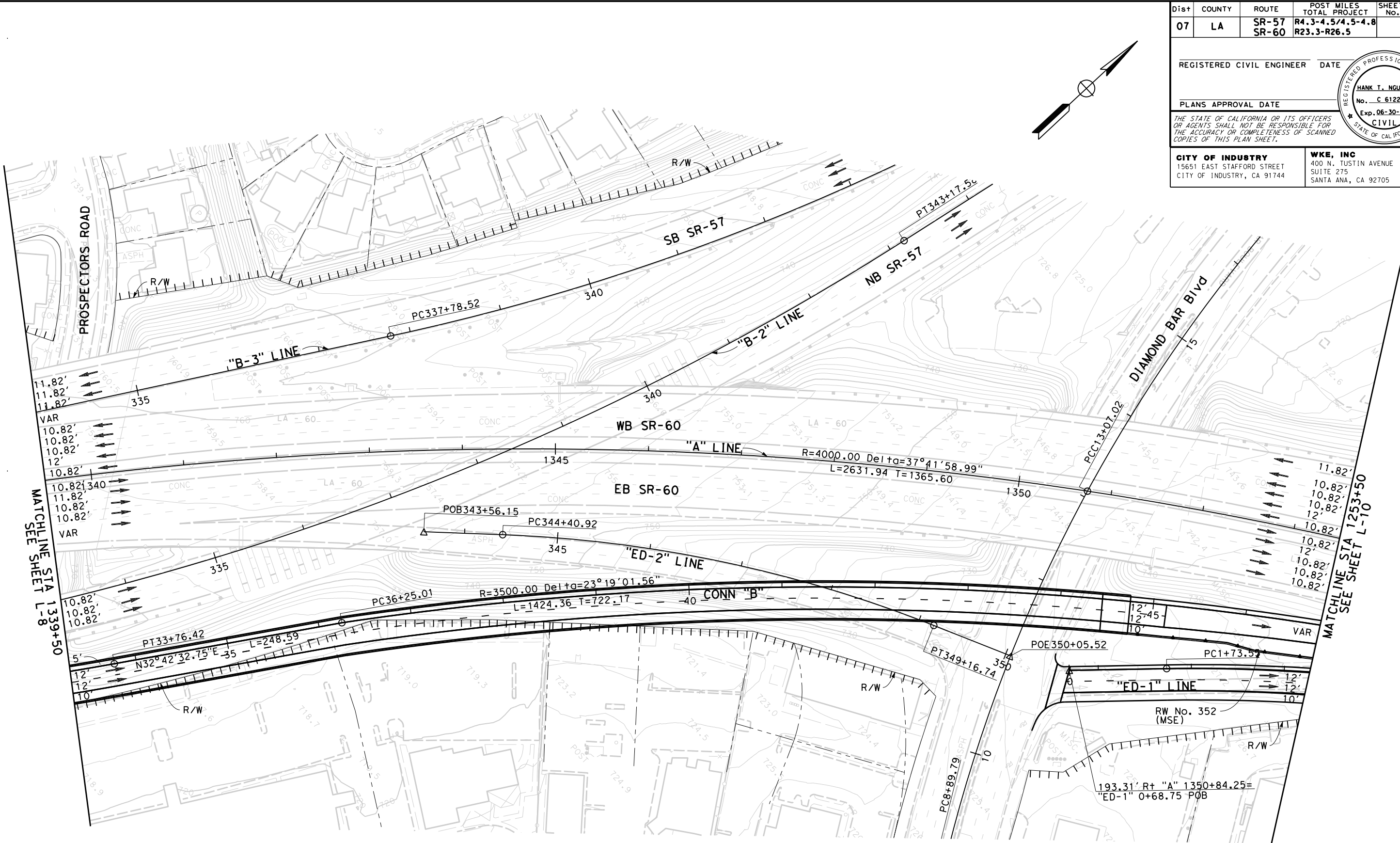
PLAN APPROVAL DATE

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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
---	---



ATTACHMENT C
(ALTERNATIVE 3)
LAYOUT
Scale 1"=100' **L -**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

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.

CITY OF INDUSTRY

15651 EAST STAFFORD STREET

CITY OF INDUSTRY, CA 91744

WKE, INC

400 N. TUSTIN AVENUE

SUITE 275

SANTA ANA, CA 92705

REGISTERED PROFESSIONAL ENGINEER

HANK T. NGUYEN

No. C 61227

Exp. 06-30-13

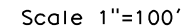
CIVIL

STATE OF CALIFORNIA

BORDER LAST REVISED 4/11/2008

St. Albans

CU 00000	EA 279100
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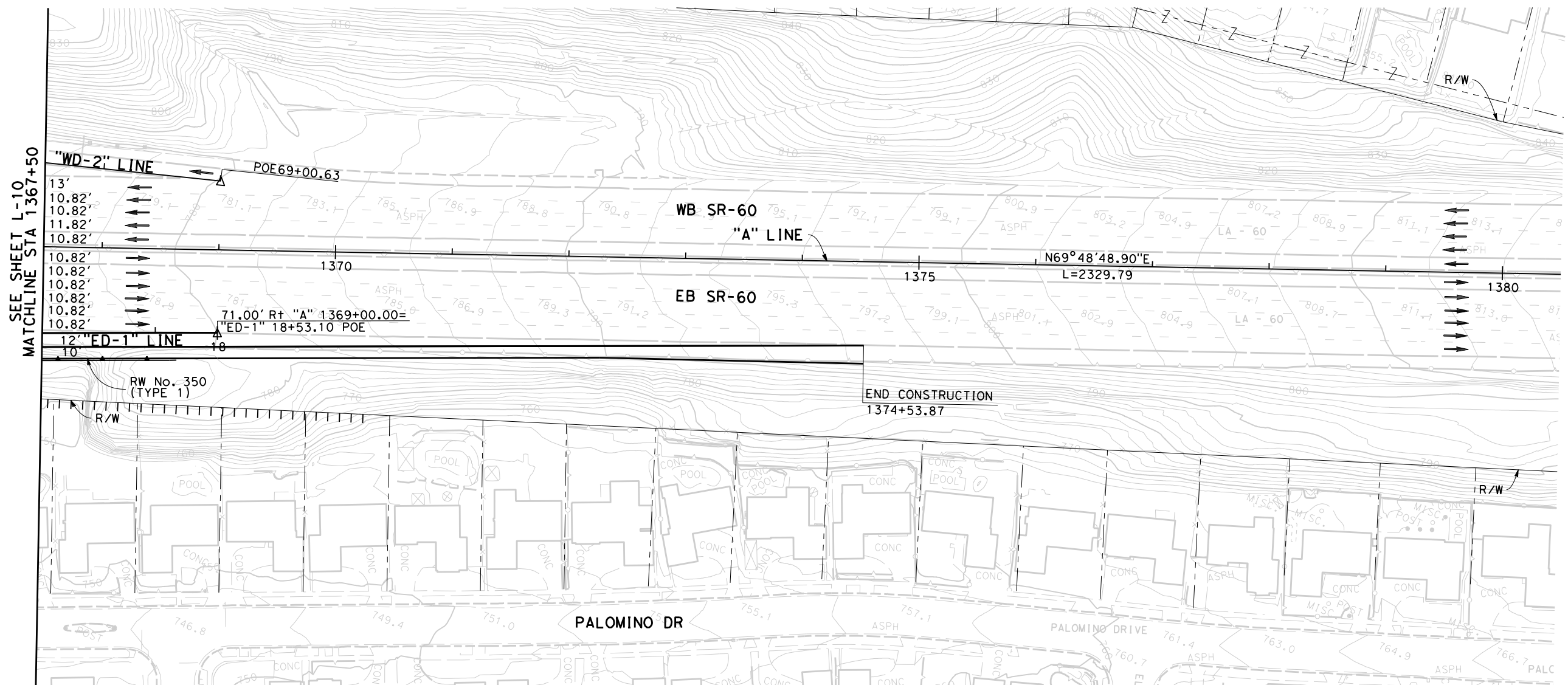
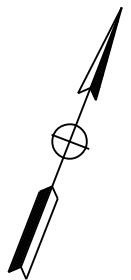
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00-00-00	TIME PLOTTED => \$TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
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**ATTACHMENT C
(ALTERNATIVE 3)
LAYOUT**

Scale 1"=100'

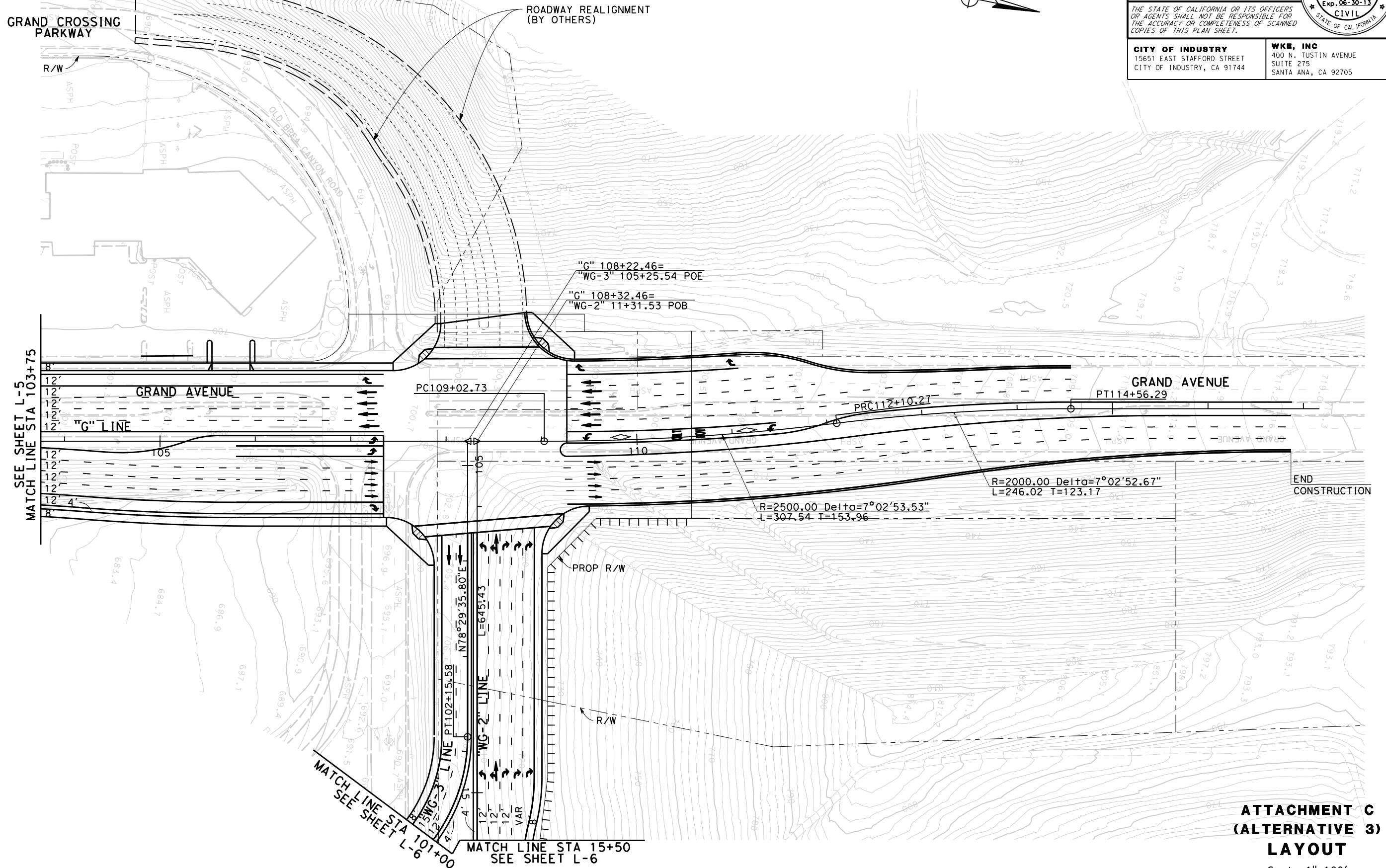
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

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<p>CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744</p>	<p>WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705</p>
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x

RELATIVE BORDER SCALE
IS IN INCHES

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USERNAME => $USER
DGN FILE => $REQUEST

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EA 279100

DATE PLOTTED => \$DATE	TIME PLOTTED => \$TIME
LAST REVISION	00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/R4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER	DATE	
PLANS APPROVAL DATE		
<p><i>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.</i></p>		

CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
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Scale 1"=100'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE
CALTRANS		CHECKED BY		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE					
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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705		

REGISTERED PROFESSIONAL ENGINEER

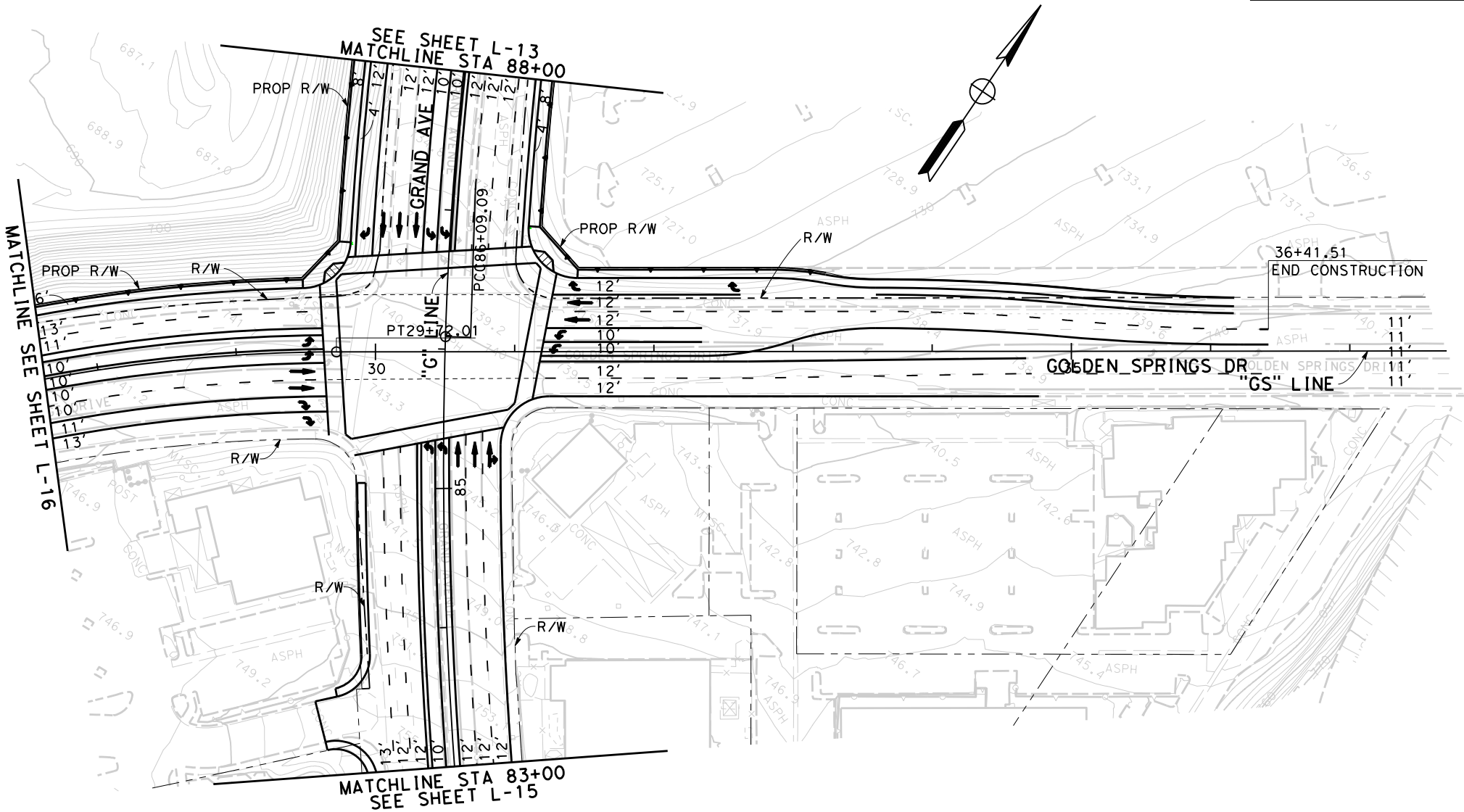
HANK T. NGUYEN

No. C 61227


Exp. 06-30-13

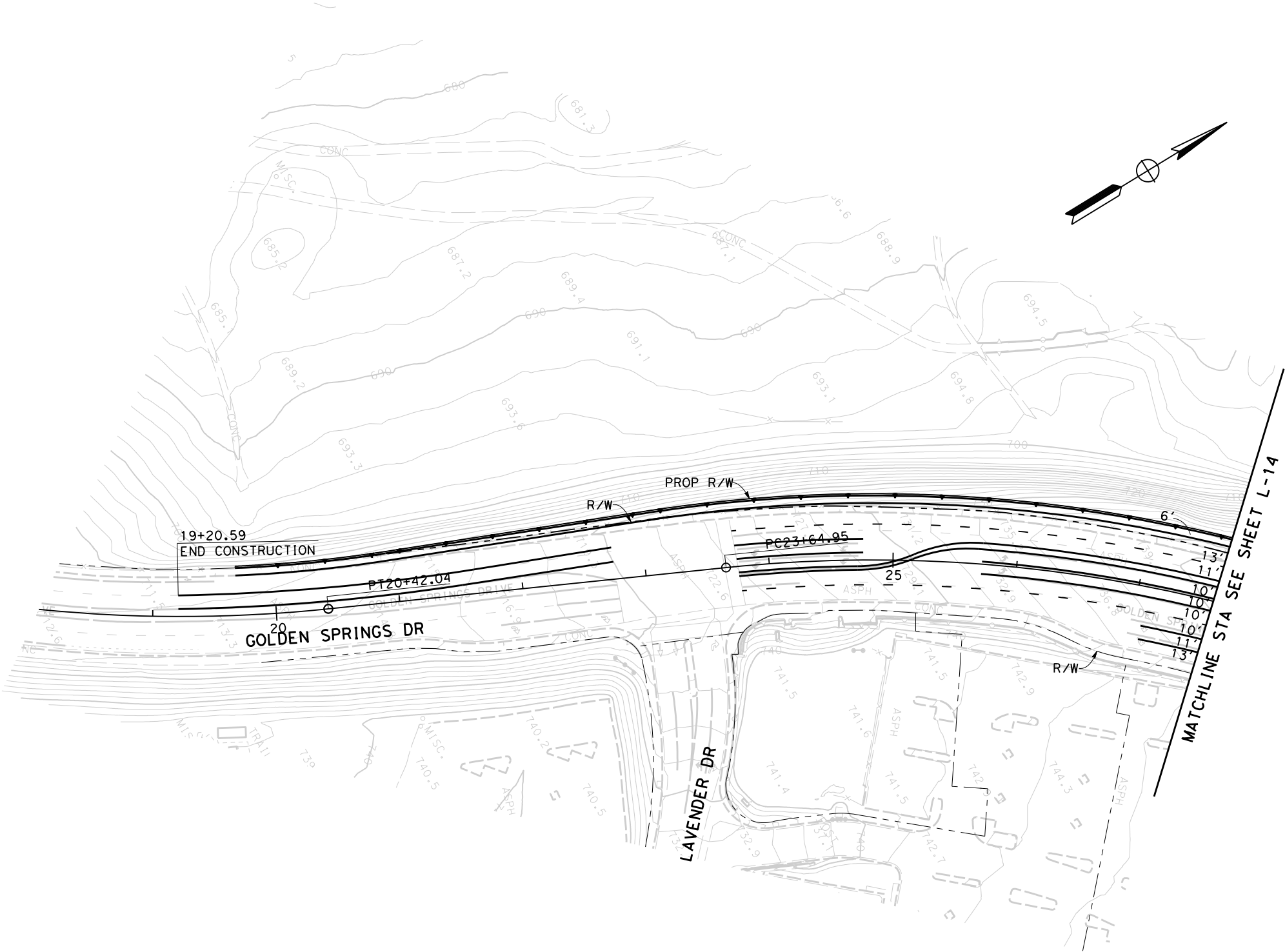
CIVIL

STATE OF CALIFORNIA



ATTACHMENT C
(ALTERNATIVE 3)
LAYOUT
Scale 1"=100'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION 	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED- DESIGNED BY	REVISOR	DATE	BY	DATE



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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REGISTERED CIVIL ENGINEER

DATE

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REGISTERED PROFESSIONAL ENGINEER

HANK T. NGUYEN

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CIVIL

STATE OF CALIFORNIA

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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
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ATTACHMENT C
(ALTERNATIVE 3)
LAYOUT
Scale 1"=100'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		CONSULTANT FUNCTIONAL SUPERVISOR		CALCULATED- DESIGNED BY		REVISOR		DATE		DIST		COUNTY		ROUTE		POST MILES TOTAL PROJECT		SHEET No.		TOTAL SHEETS	
ST-CALTRANS		SR-60		SR-60		SR-60		SR-60		SR-60		SR-60		SR-60		SR-60		SR-60		SR-60	
ST-CALTRANS		SR-60		SR-60		SR-60		SR-60		SR-60		SR-60		SR-60		SR-60		SR-60		SR-60	
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ST-CALTRANS		SR-60																			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		CONSULTANT FUNCTIONAL SUPERVISOR		CALCULATED-DESIGNED BY		REVISOR		DATE		DIST		COUNTY		ROUTE		POST MILES TOTAL PROJECT		SHEET No.		TOTAL SHEETS			
ST-CALTRANS		SEE SHEET P-1 MATCH LINE "G" STA 101+50		CHECKED BY		DESIGNED BY		REVISOR		DATE		07		LA		SR-57 SR-60		R4.3-4.5/4.5-4.8 R23.3-R26.5		REGISTERED CIVIL ENGINEER		DATE	
ATTACHMENT C (ALTERNATIVE 3) PROFILE		Scale: Horiz 1"=50' Vert 1"=10'		P-2		CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744		WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705		HANK T. NGUYEN No. C 61227 Exp. 06-30-13 CIVIL		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.									

STATION		101+00	102+00	103+00	104+00	105+00	106+00	107+00	108+00	109+00	110+00	111+00	112+00	113+00	114+00	115+00	TOTAL
CY	Exc																
	Emb																

OG

PG

Grade = -1.83%

Grade = 3.69%

PVI 106+00.00
Elev 705.67

PVC 107+75.00
Elev 702.46

PVI 111+00.00
Elev 696.50

PVT 114+25.00
Elev 708.48

PVI 114+56.00
Elev 709.63

L 800.00'
G1 1.362%
G2 -1.833%
SD 576.89'

L 650.00'
G1 -1.833%
G2 3.687%
SD 505.33'

Elev 713.00

Elev 713.00

Elev 714+25.00
Elev 708.48

Elev 709.63

SEE SHEET P-1
MATCH LINE "G" STA 101+50

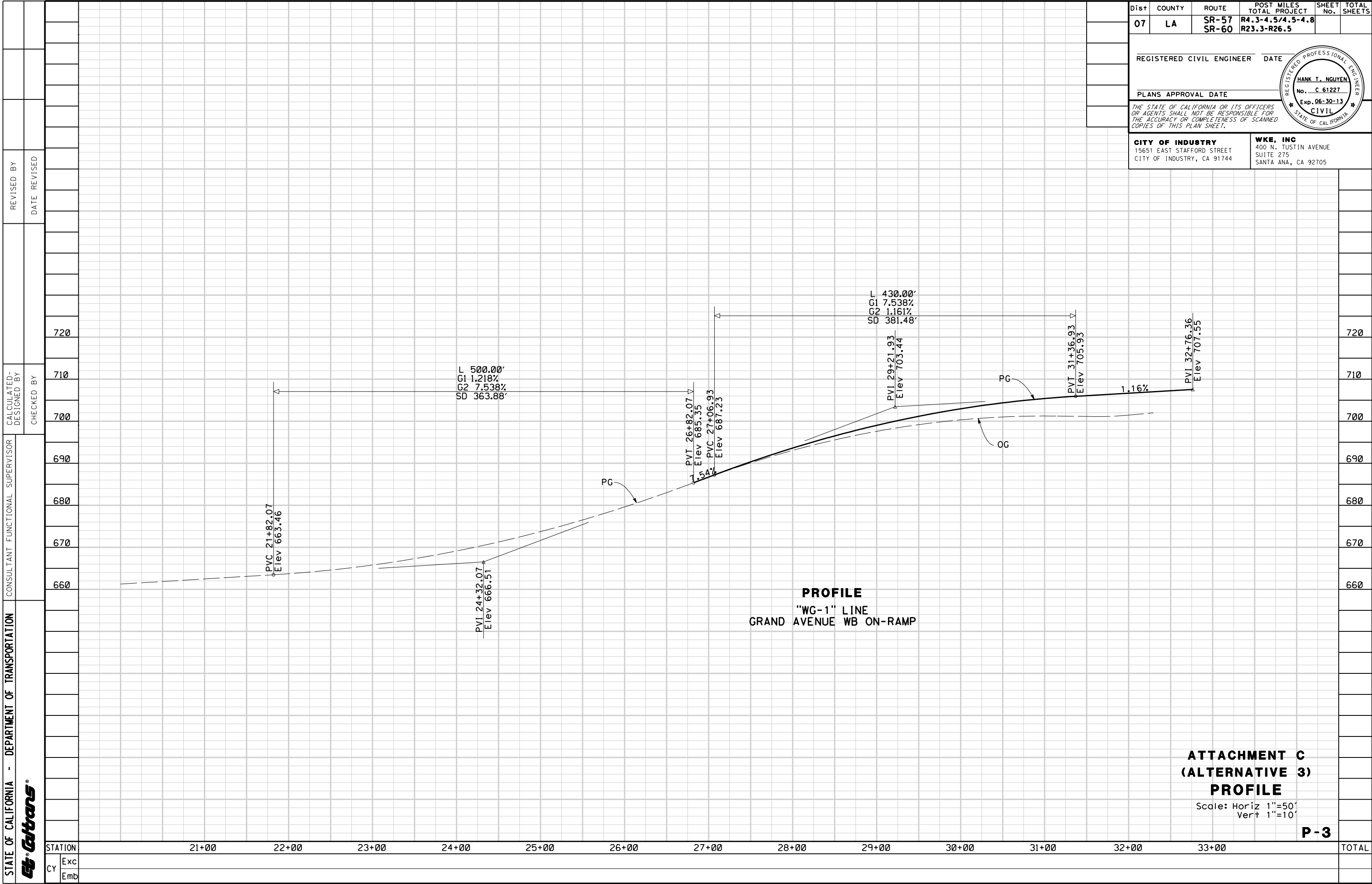
PROFILE
"G" LINE
GRAND AVENUE

ATTACHMENT C
(ALTERNATIVE 3)
PROFILE

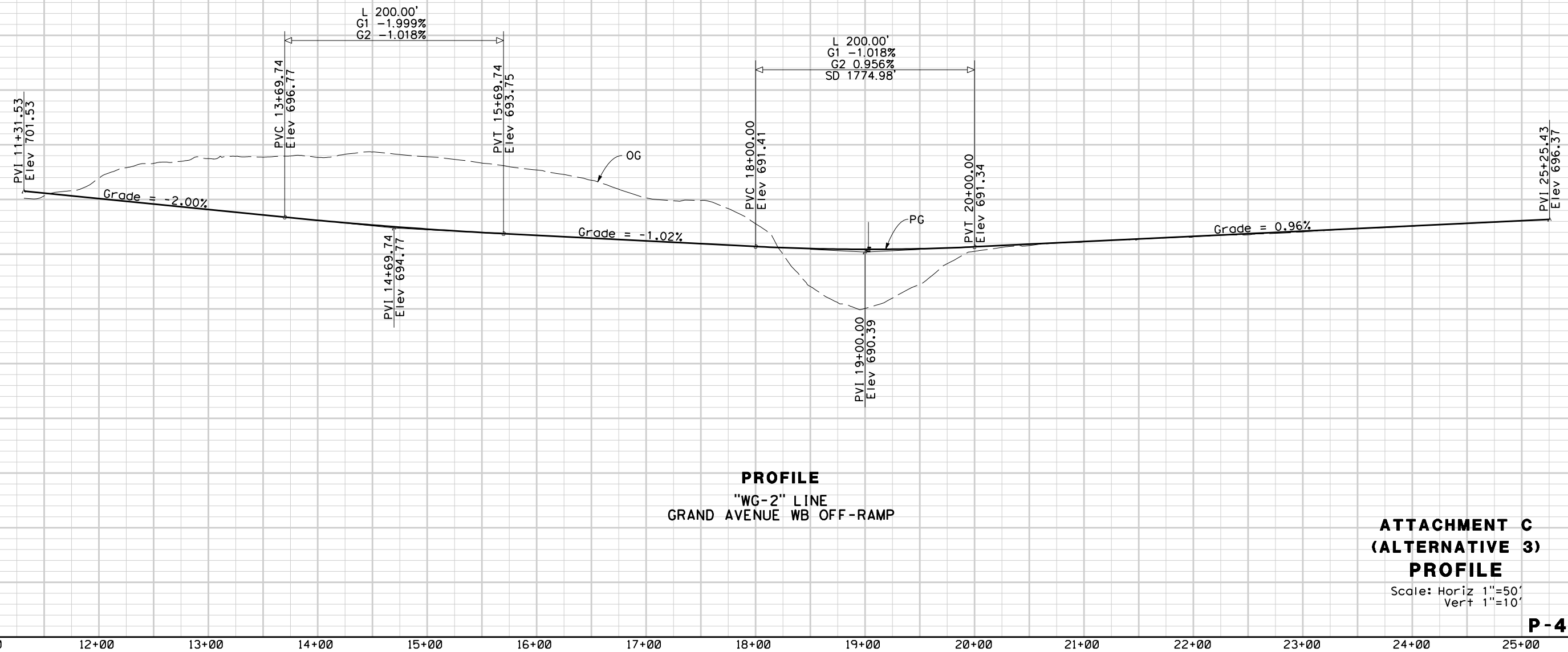
Scale: Horiz 1"=50'
Vert 1"=10'

P-2

LAST REVISION	DATE PLOTTED => \$DATE
00-00-00	TIME PLOTTED => \$TIME



x



PROFILE
"WG-2" LINE
GRAND AVENUE WB OFF-RAMP

**ATTACHMENT C
(ALTERNATIVE 3)
PROFILE**

Scale: Horiz 1"=50'
Vert 1"=10'

P - 4

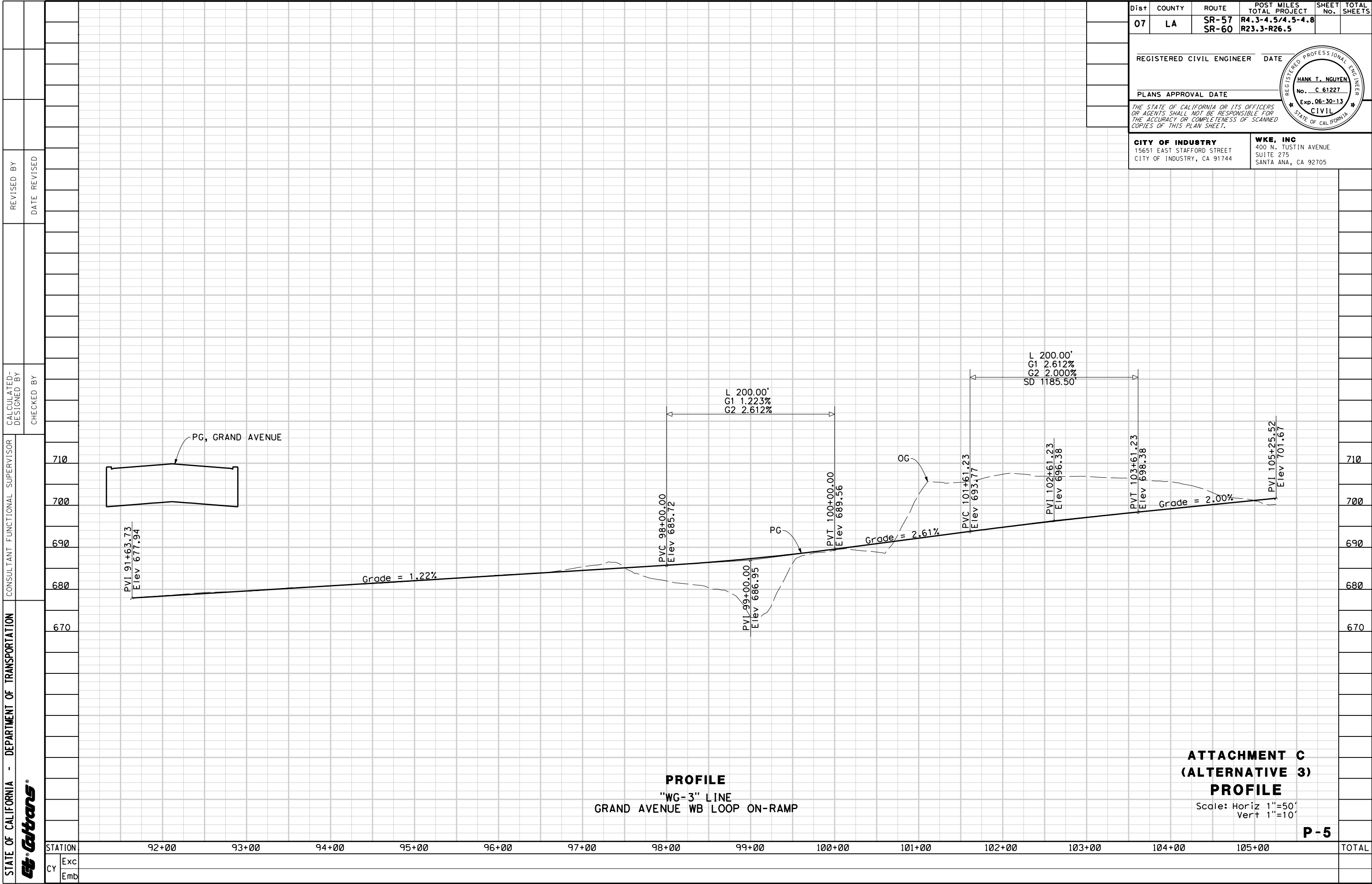
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

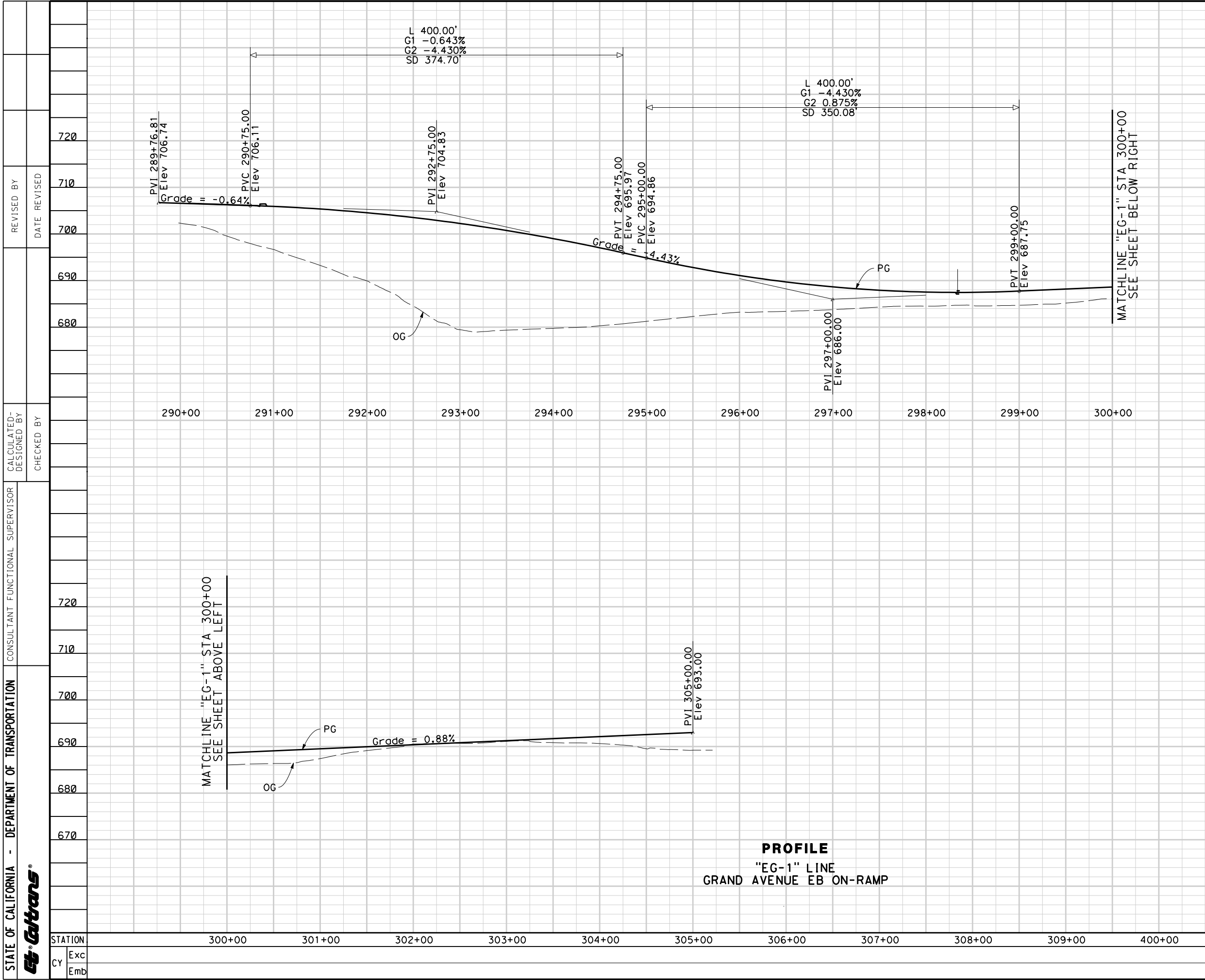
REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

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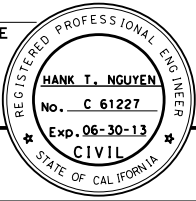
CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
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[illegible]





Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE					
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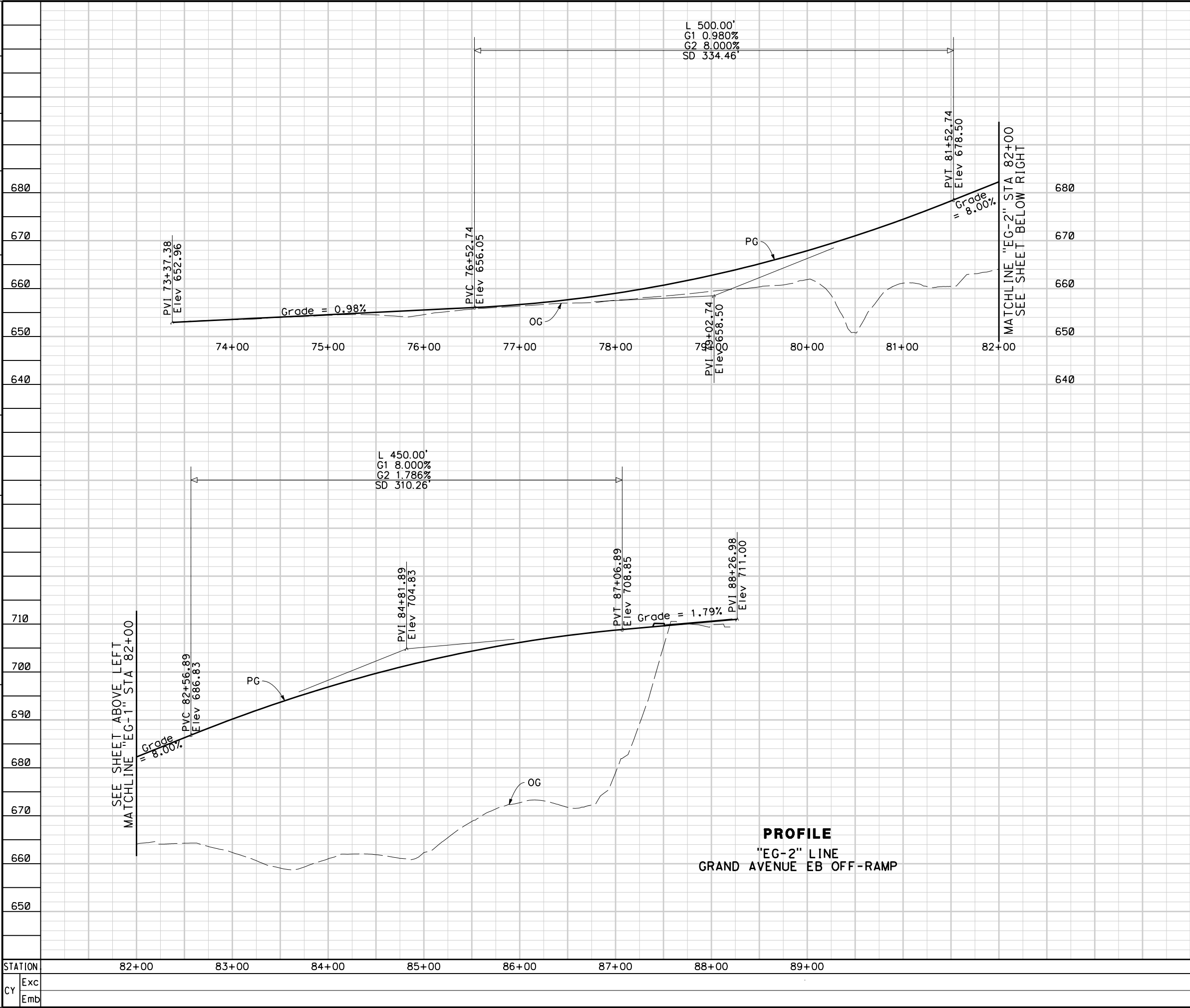


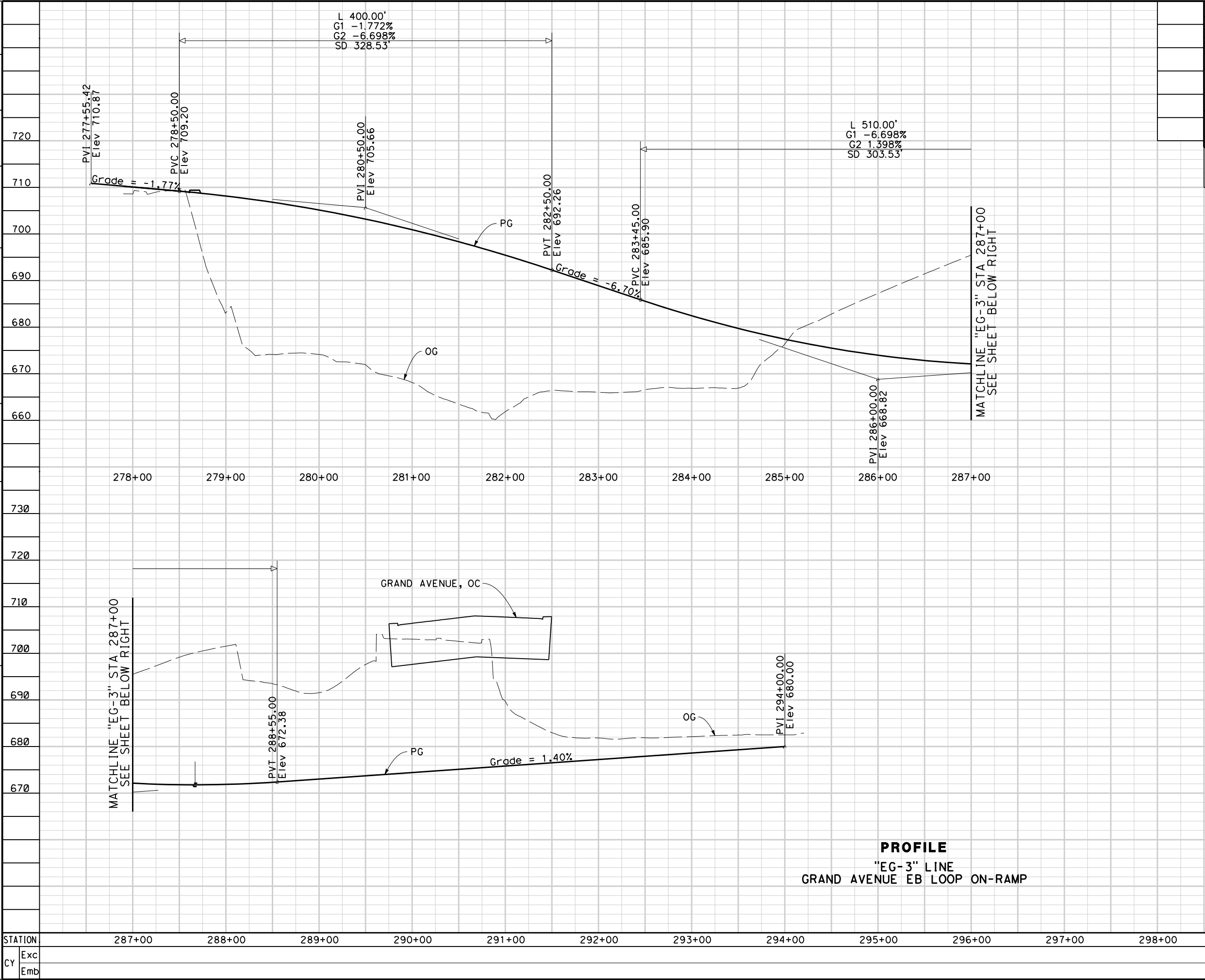
PROFILE
"EG-1" LINE
GRAND AVENUE EB ON-RAMP

ATTACHMENT C
(ALTERNATIVE 3)
PROFILE

Scale: Horiz 1"=50'
Vert 1"=10'

P-6





Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		
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.					
CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705		

ATTACHMENT C
(ALTERNATIVE 3)
PROFILE
Scale: Horiz 1"=50'
Vert 1"=10'

P-8

DATE PLOTTED => \$TIME

00-00-00

DATE PLOTTED => \$DATE

00-00-00

LAST REVISION

00-00-00

DATE PLOTTED => \$DATE

00-00-00

TIME PLOTTED => \$TIME

00-00-00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		CONSULTANT FUNCTIONAL SUPERVISOR		CALCULATED-DESIGNED BY		REVISOR		DATE		REVISION		Dist		COUNTY	ROUTE	POST MILES TOTAL PROJECT		SHEET No.		TOTAL SHEETS	
												07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5						
										REGISTERED CIVIL ENGINEER		DATE		<div><div>REGISTERED PROFESSIONAL ENGINEER</div><div>HANK T. NGUYEN</div><div>No. C 61227</div><div>Exp. 06-30-13</div><div>CIVIL</div><div>STATE OF CALIFORNIA</div></div>		CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744		WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705			
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.																			
PROFILE																					
"EG-4" LINE																					
GRAND AVENUE EB BYPASS OFF-RAMP																					
ATTACHMENT C																					
(ALTERNATIVE 3)																					
PROFILE																					
Scale: Horiz 1"=50'																					
Vert 1"=10'																					
P-9																					

STATION	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	TOTAL
CY	Exc														
	Emb														

PVI 36+23.85
Elev 598.80

Grade = 0.62%

PVC 38+00.00
Elev 599.88

PVI 39+00.00
Elev 600.50

Grade = 2.53%

PVT 40+00.00
Elev 603.03

PVC 40+15.54
Elev 603.42

L 200.00'
G1 0.616%
G2 2.526%
SD 2439.88

L 550.00'
G1 2.526%
G2 -0.741%
SD 473.03

PVI 42+90.54
Elev 610.37

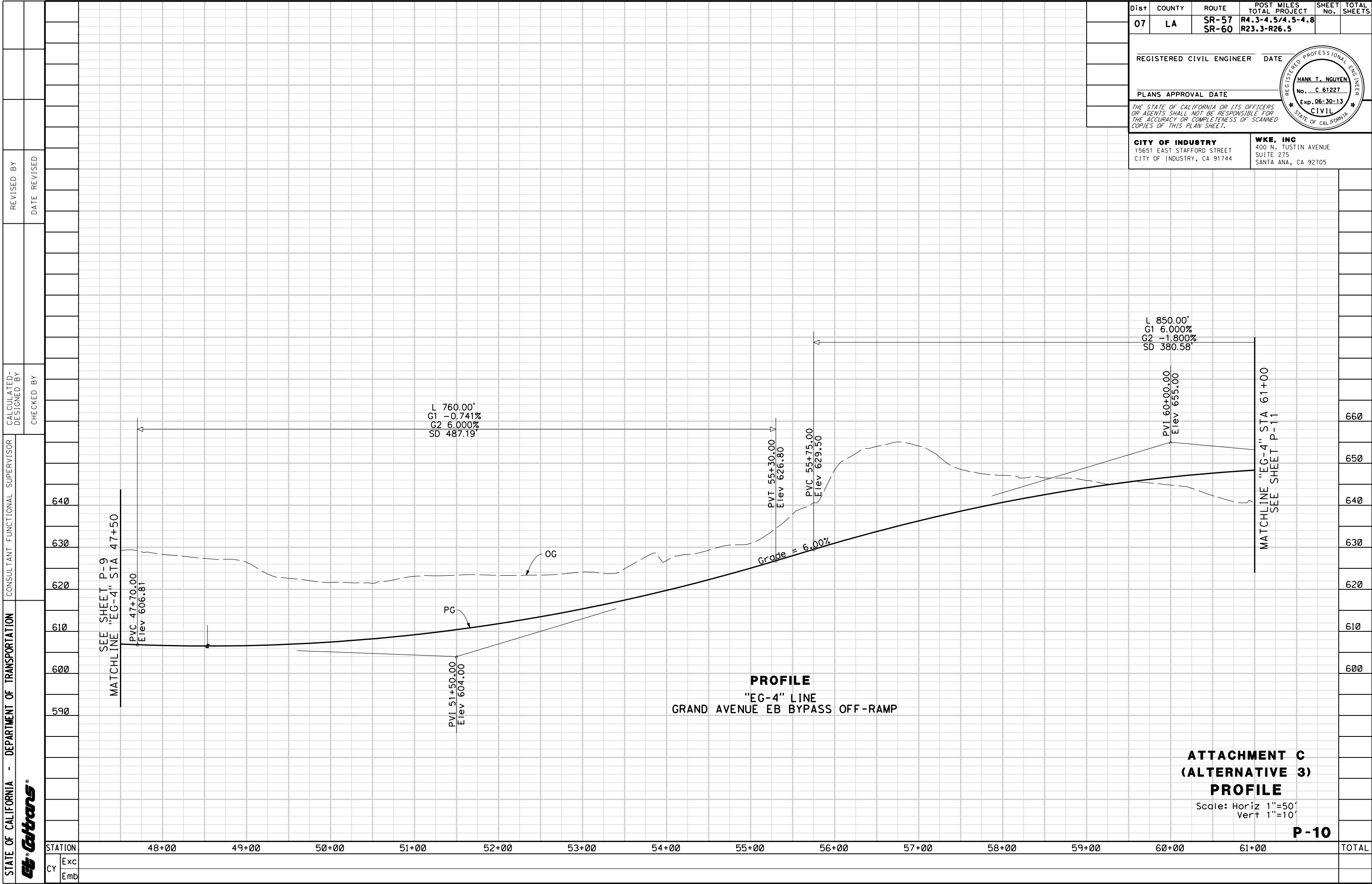
PG

OG

PVI 45+65.54
Elev 608.33

Grade = -0.74%

MATCHLINE "EG-4" STA 47+50
SEE SHEET P-10



[illegible]

[illegible]

[illegible]

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		CONSULTANT FUNCTIONAL SUPERVISOR		CALCULATED-DESIGNED BY		REVISOR		DATE		REVISION	
CY		Exc		Emb		CY		Exc		Emb	

07

LA

SR-57
SR-60

R4.3-4.5/4.5-4.8
R23.3-R26.5

SHEET No.

TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

WKE, INC
400 N. TUSTIN AVENUE
SUITE 275
SANTA ANA, CA 92705

REGISTERED PROFESSIONAL ENGINEER

HANK T. NGUYEN

No. C 61227

Exp. 06-30-13

CIVIL

STATE OF CALIFORNIA

780

770

760

750

740

730

SEE SHEET P-14
MATCHLINE "A-3" STA 39+00

L 1050.00'
G1 3.741%
G2 -3.533%
SD 438.02'

PVT 43+25.00
Elev 756.38

Grade = -3.53%

PVC 45+05.54
Elev 750.01

PG

OG

MIN CLR
17.21'
6'

CL DIAMOND BAR BLVD

PVI 48+30.54
Elev 738.52

23' GORE POINT

PVI 51+55.54
Elev 748.04

MATCHLINE "A-3" STA 52+00
SEE SHEET ABOVE LEFT

SEE SHEET BELOW RIGHT
MATCHLINE "A-3" STA 52+00

L 650.00'
G1 -3.533%
G2 2.929%
SD 442.89'

Grade = 2.93%

PVI 55+09.85
Elev 758.42

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

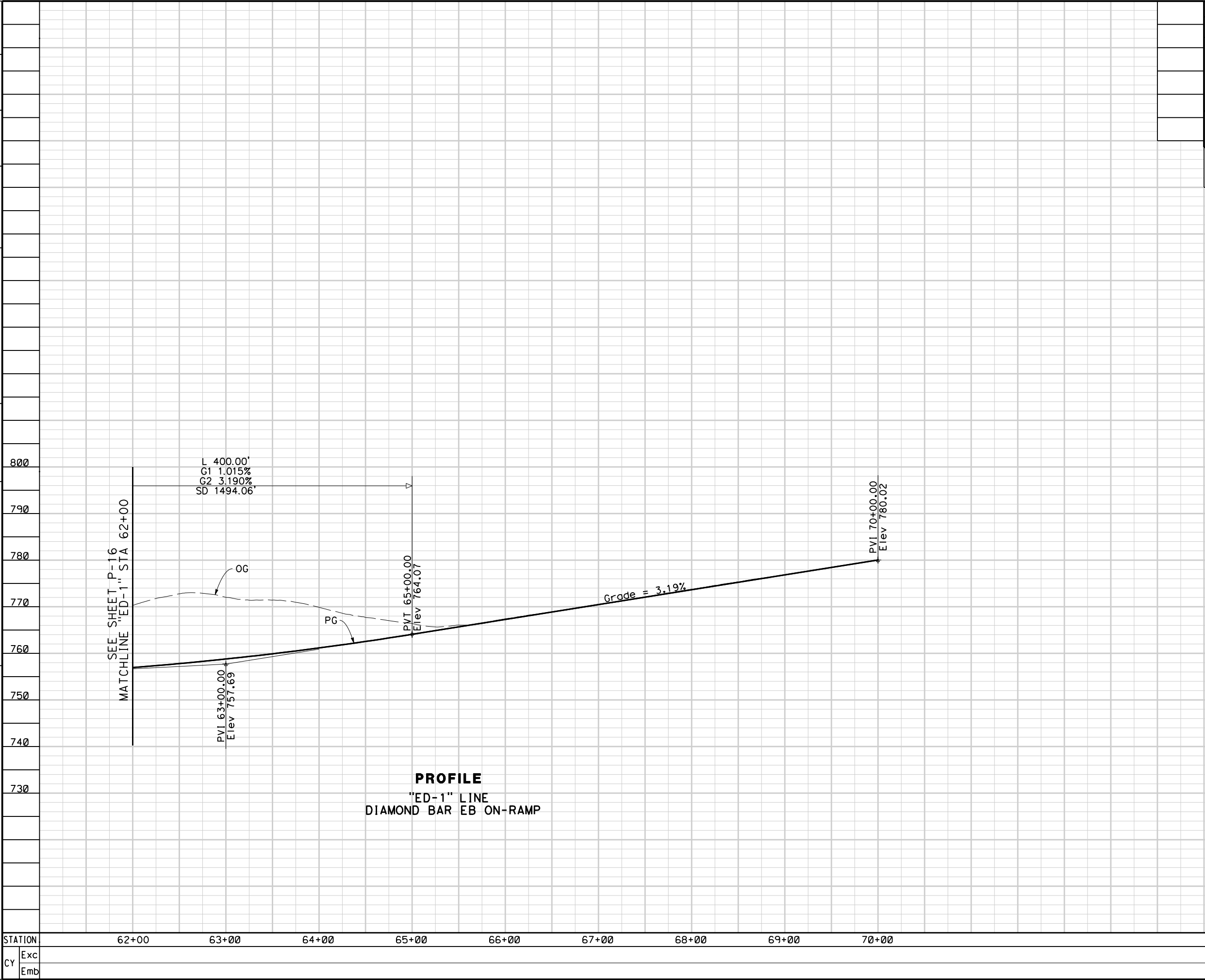
TOTAL

ATTACHMENT C
(ALTERNATIVE 3)
PROFILE

Scale: Horiz 1"=50'
Vert 1"=10'

P-15

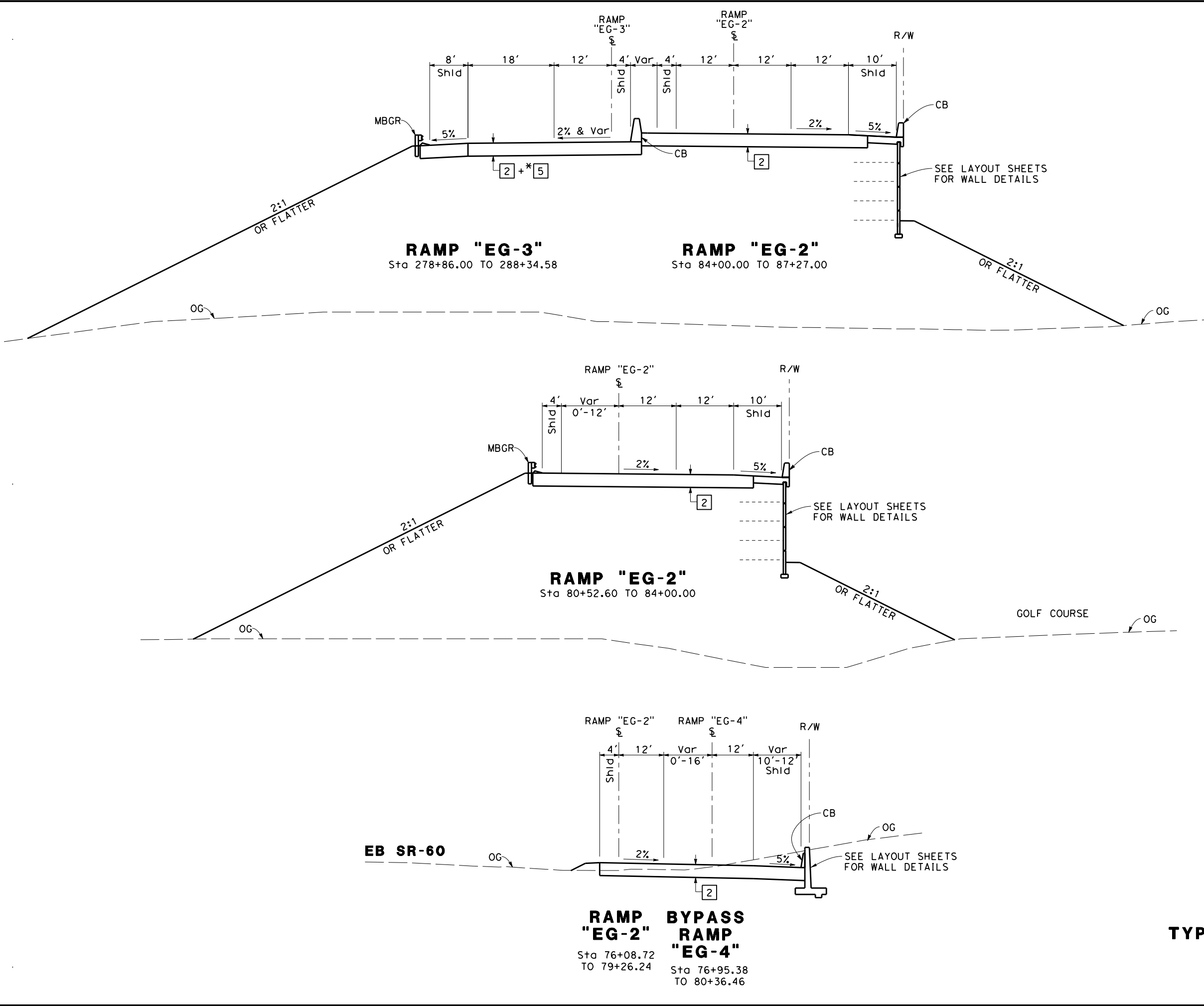
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE			HANK T. NGUYEN No. C 61227 Exp. 06-30-13 CIVIL STATE OF CALIFORNIA		
CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705		

ATTACHMENT C
(ALTERNATIVE 3)
PROFILE
Scale: Horiz 1"=50'
Vert 1"=10'
P-17

00-00-00
LAST REVISION
DATE PLOTTED => \$DATE
TIME PLOTTED => \$TIME



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

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CITY OF INDUSTRY

15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

WKE, INC

400 N. TUSTIN AVENUE
SUITE 275
SANTA ANA, CA 92705

REGISTERED PROFESSIONAL ENGINEER

HANK T. NGUYEN

No. C 61227

Exp. 06-30-13

CIVIL

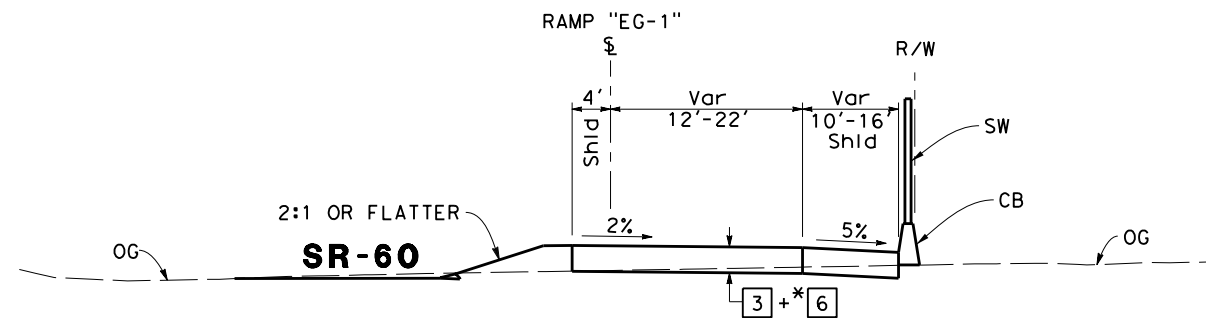
STATE OF CALIFORNIA

Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

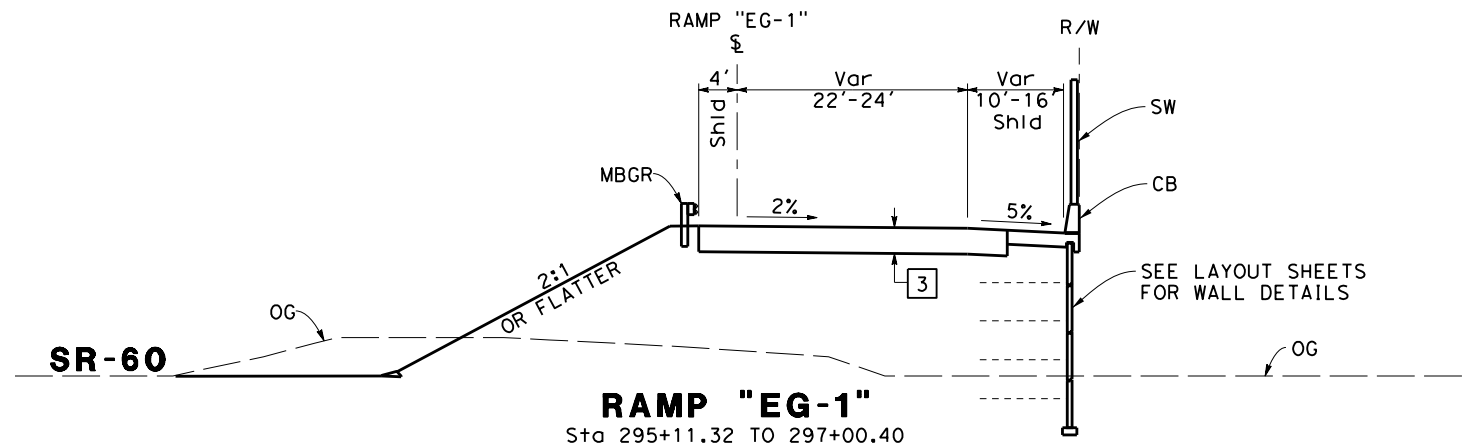
REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

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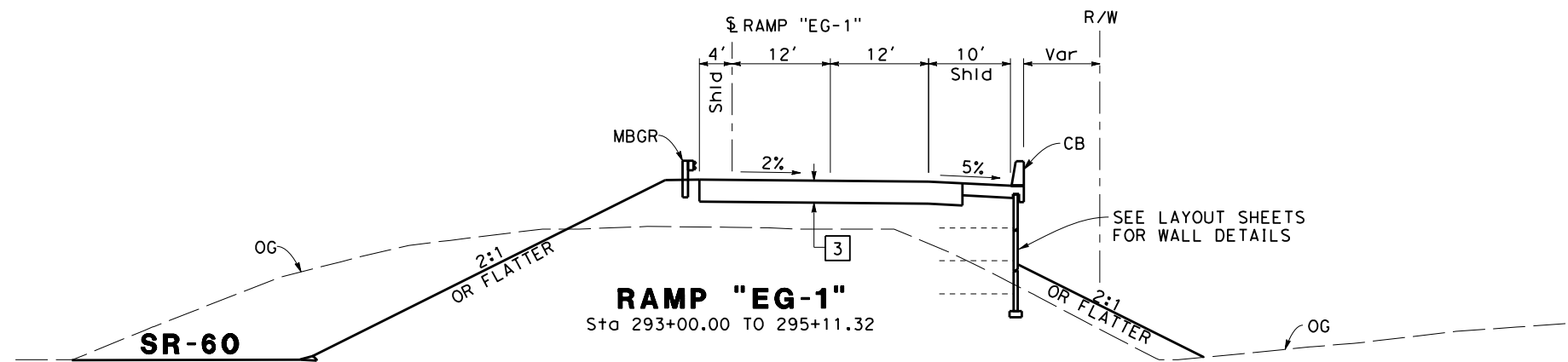
CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
---	---



RAMP "EG-1"
Sta 297+00.40 TO 299+56.30



RAMP "EG-1"
Sta 295+11.32 TO 297+00.40



RAMP "EG-1"
Sta 293+00.00 TO 295+11.32

**ATTACHMENT C
(ALTERNATIVE 3)
TYPICAL CROSS SECTION**

X-3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER

HANK T. NGUYEN

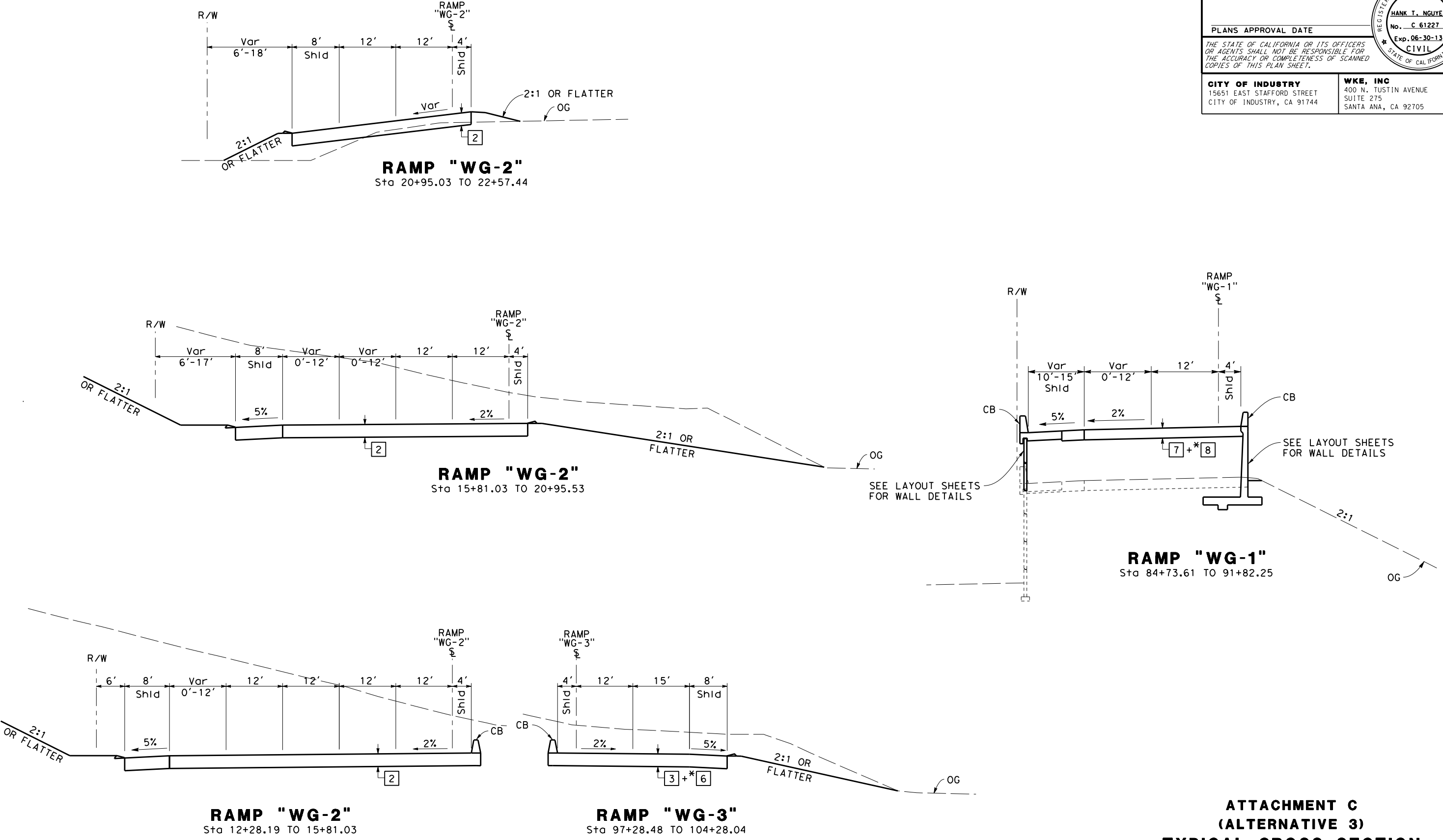
No. C 61227

Exp. 06-30-13

CIVIL

STATE OF CALIFORNIA

CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
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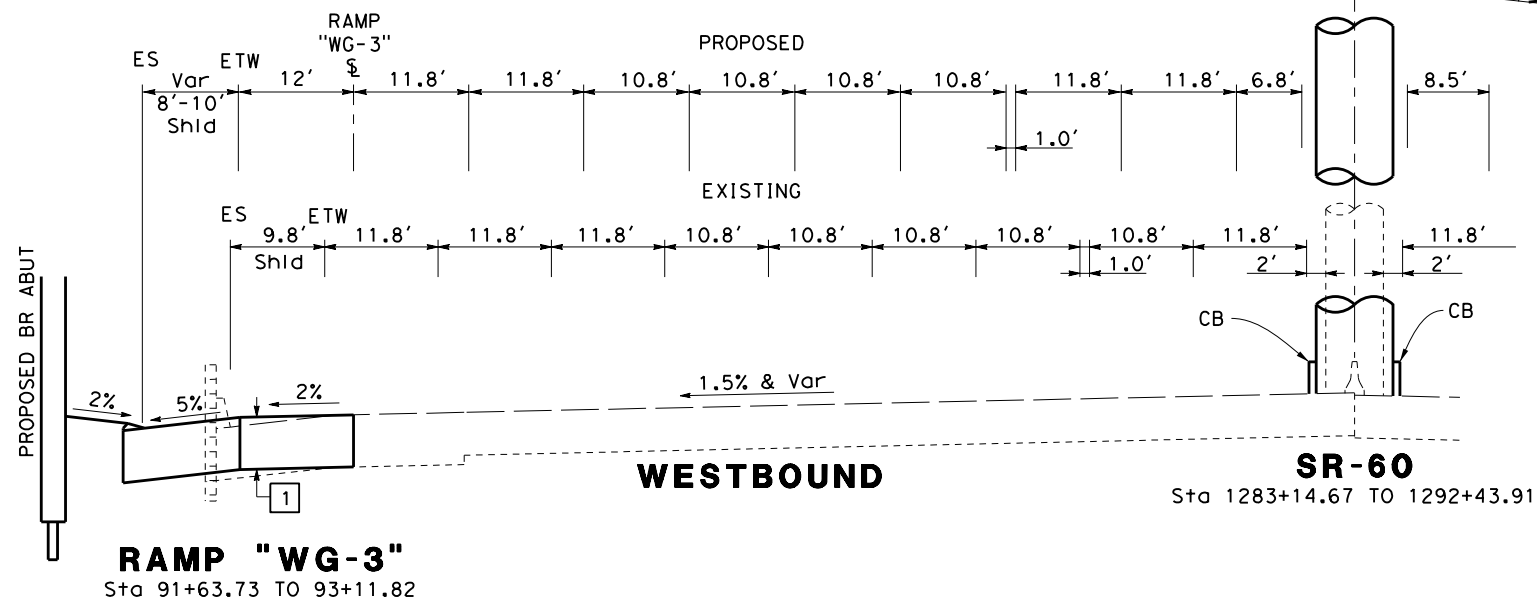
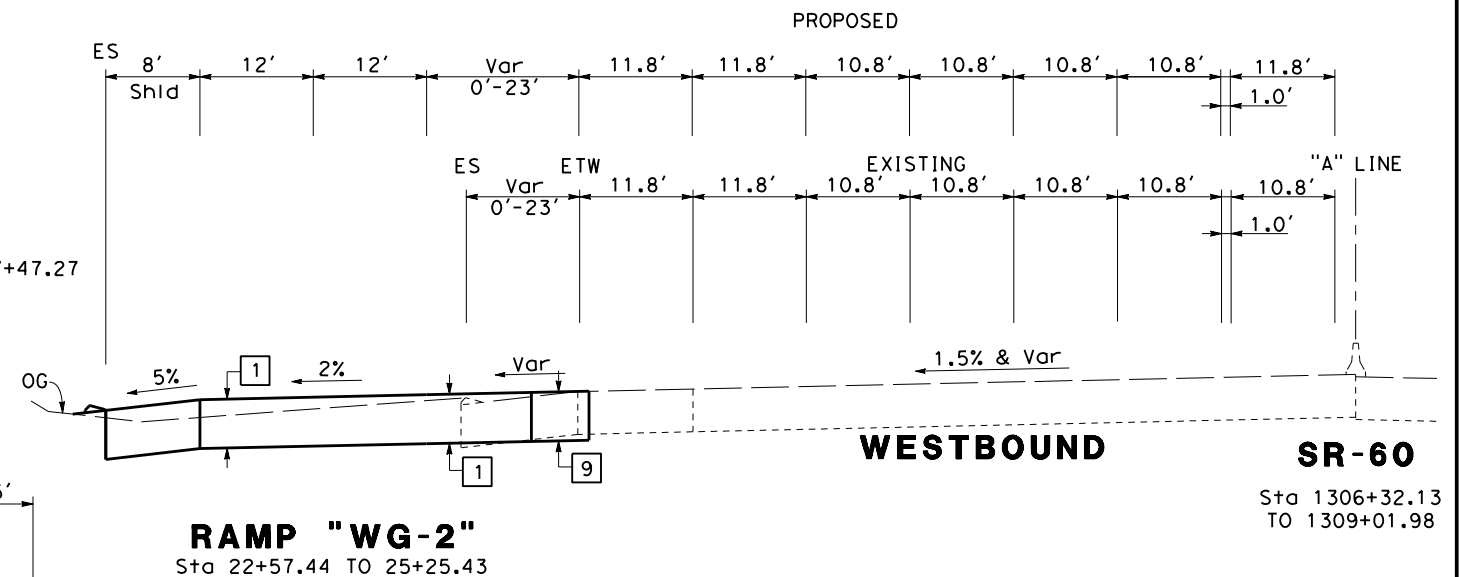
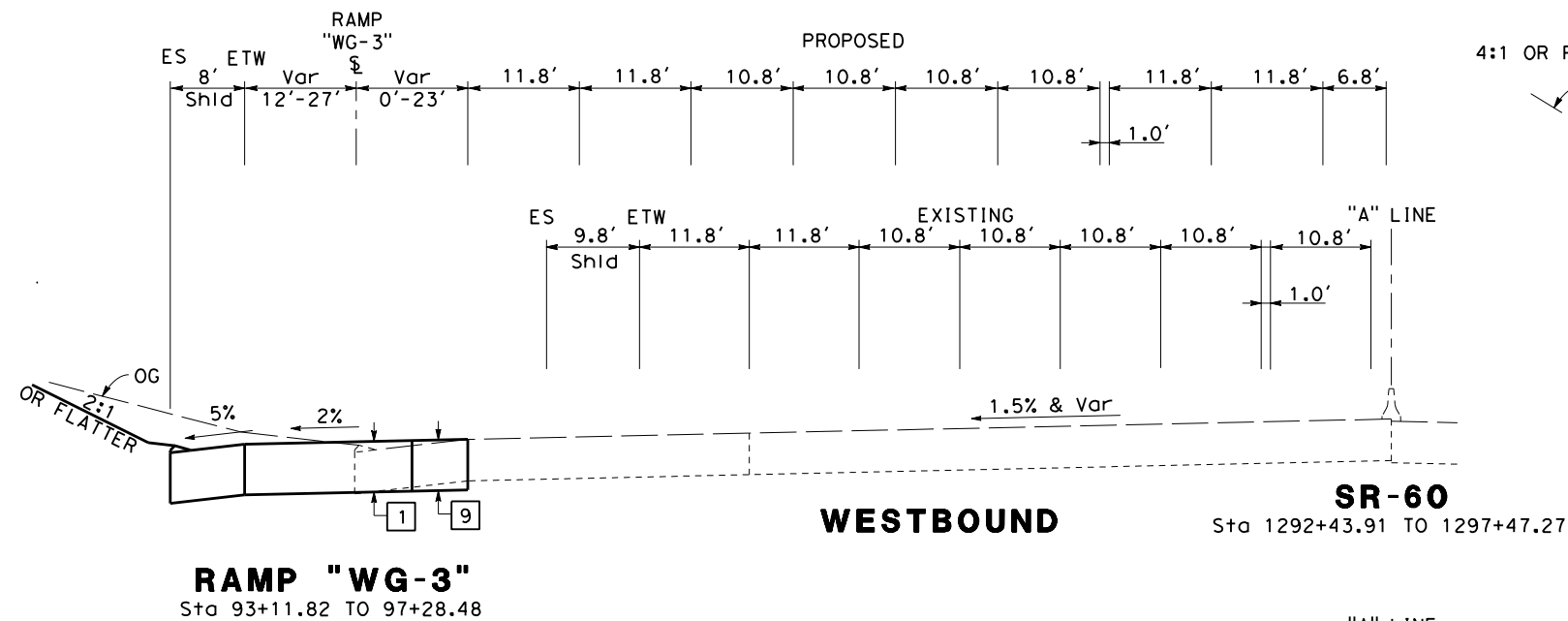
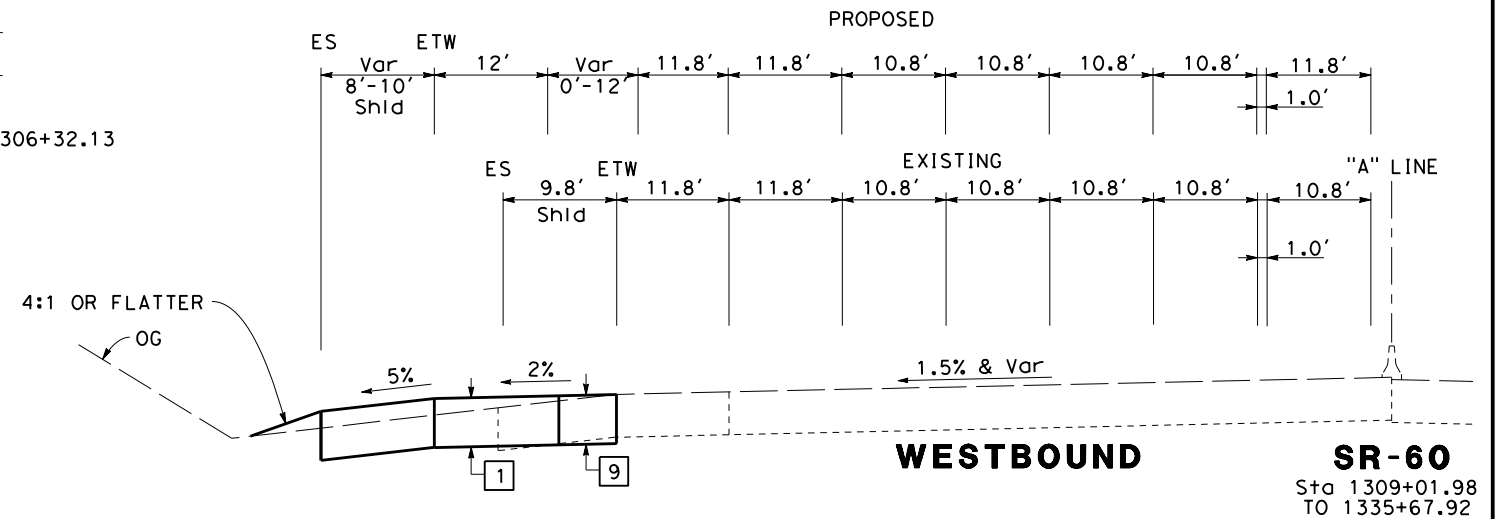
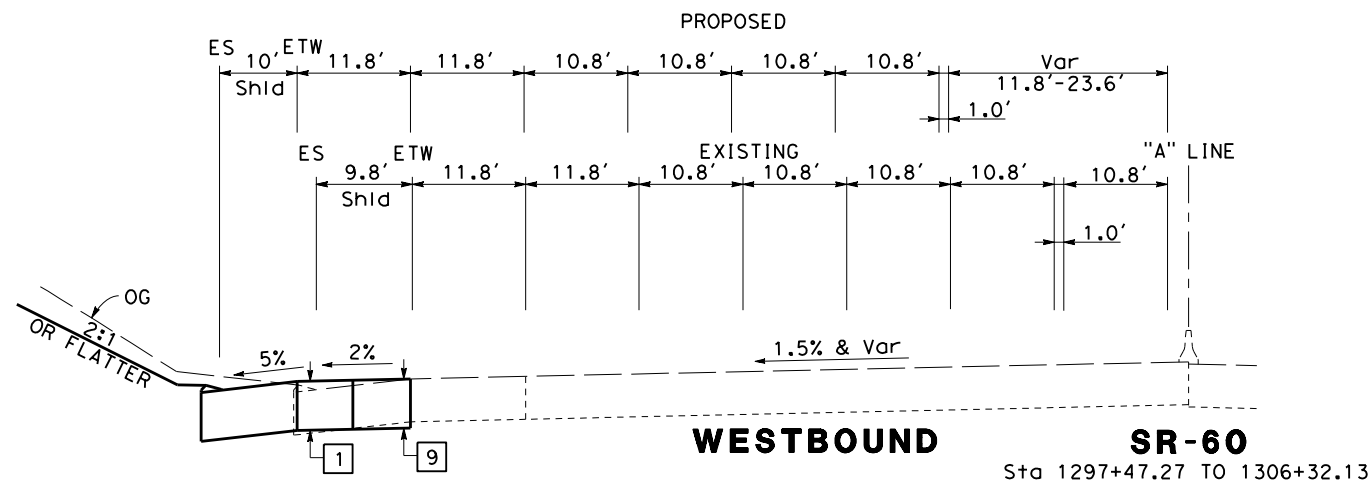
ATTACHMENT C
(ALTERNATIVE 3)
TYPICAL CROSS SECTION
NO SCALE
X-4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

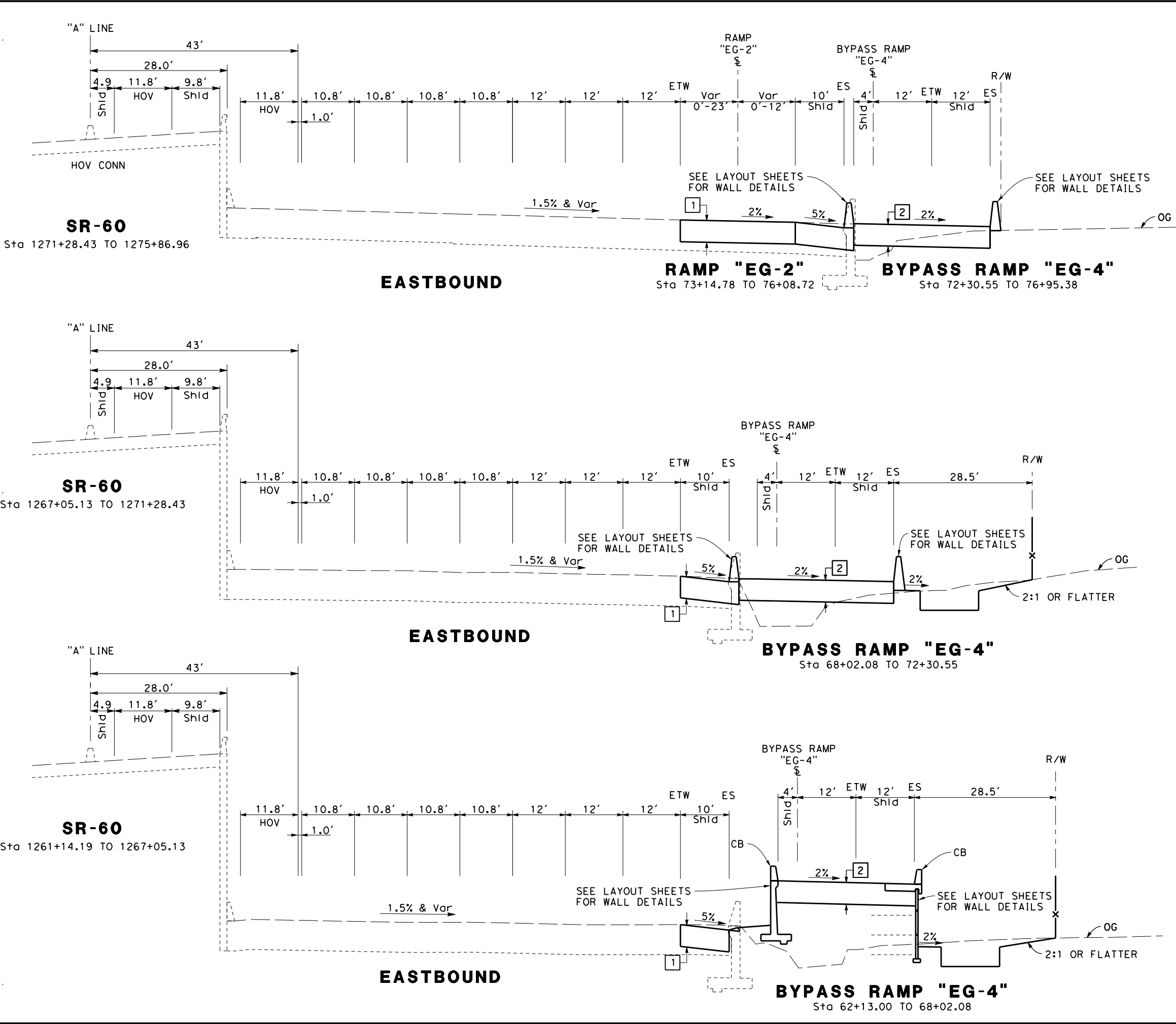
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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744	WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705
---	---



**ATTACHMENT C
(ALTERNATIVE 3)
TYPICAL CROSS SECTION**

X - 5



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

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CITY OF INDUSTRY

15651 EAST STAFFORD STREET

CITY OF INDUSTRY, CA 91744

WKE, INC

400 N. TUSTIN AVENUE

SUITE 275

SANTA ANA, CA 92705

REGISTERED PROFESSIONAL ENGINEER

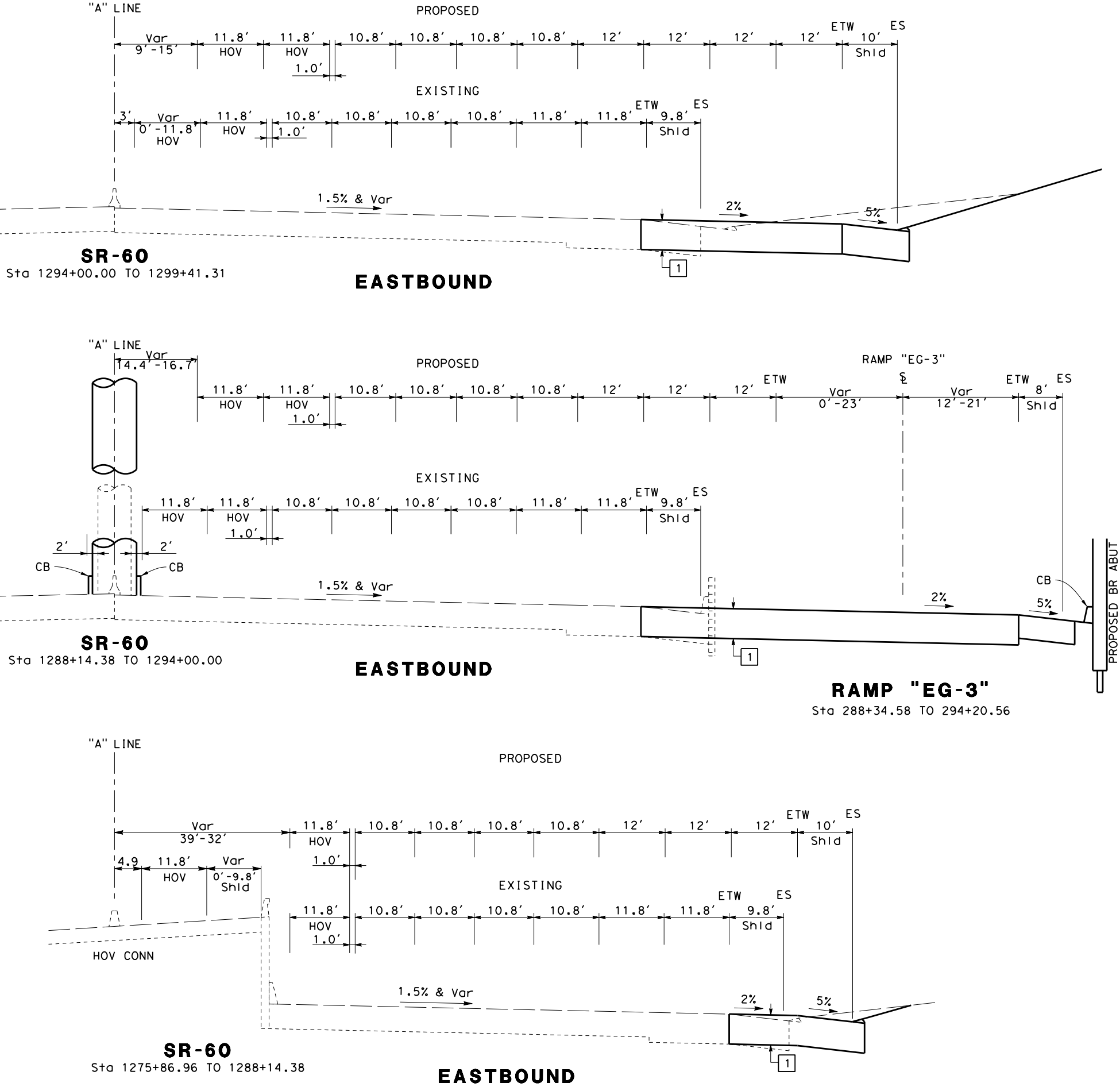
HANK T. NGUYEN

No. C 61227

Exp. 06-30-13

CIVIL

STATE OF CALIFORNIA



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER

DATE

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CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

WKE, INC
400 N. TUSTIN AVENUE
SUITE 275
SANTA ANA, CA 92705

REGISTERED PROFESSIONAL ENGINEER

HANK T. NGUYEN

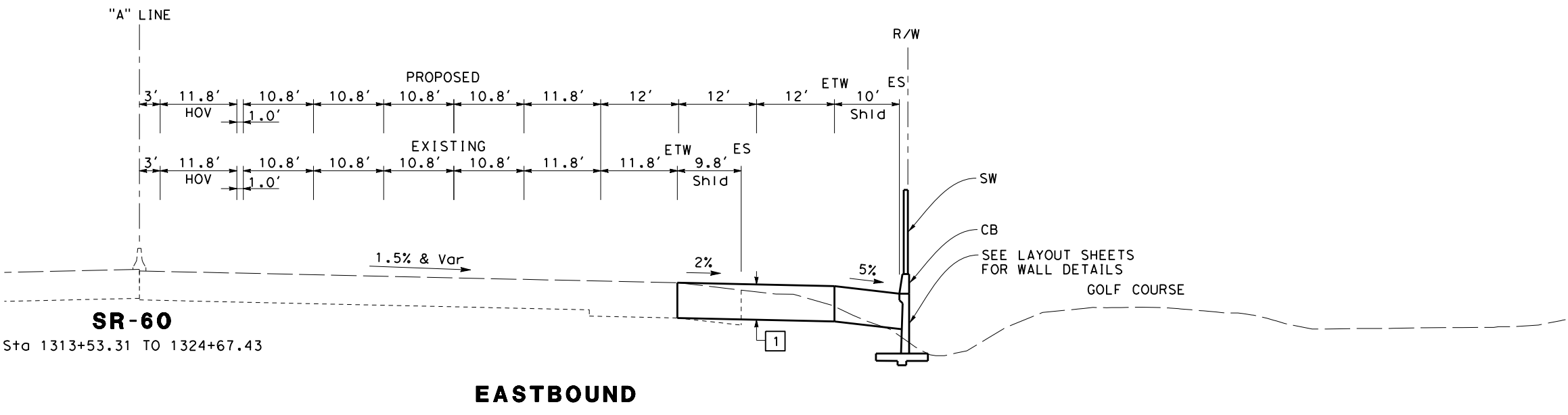
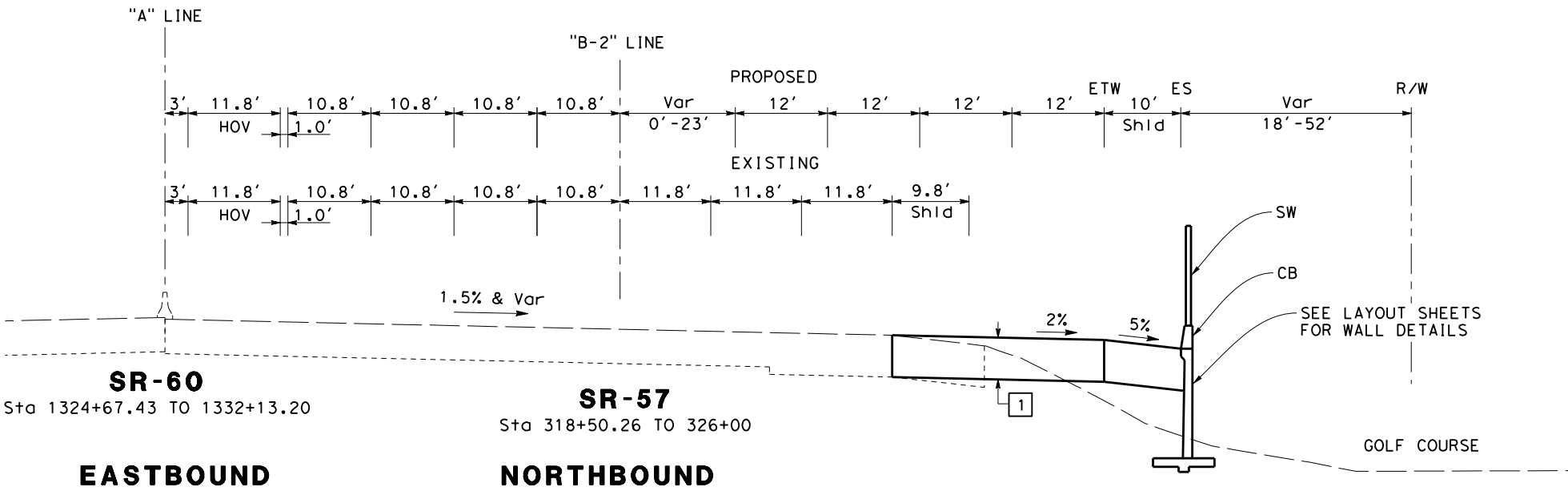
No. C 61227

Exp. 06-30-13

CIVIL

STATE OF CALIFORNIA

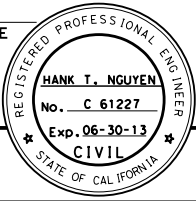
ATTACHMENT C
(ALTERNATIVE 3)
TYPICAL CROSS SECTION
NO SCALE

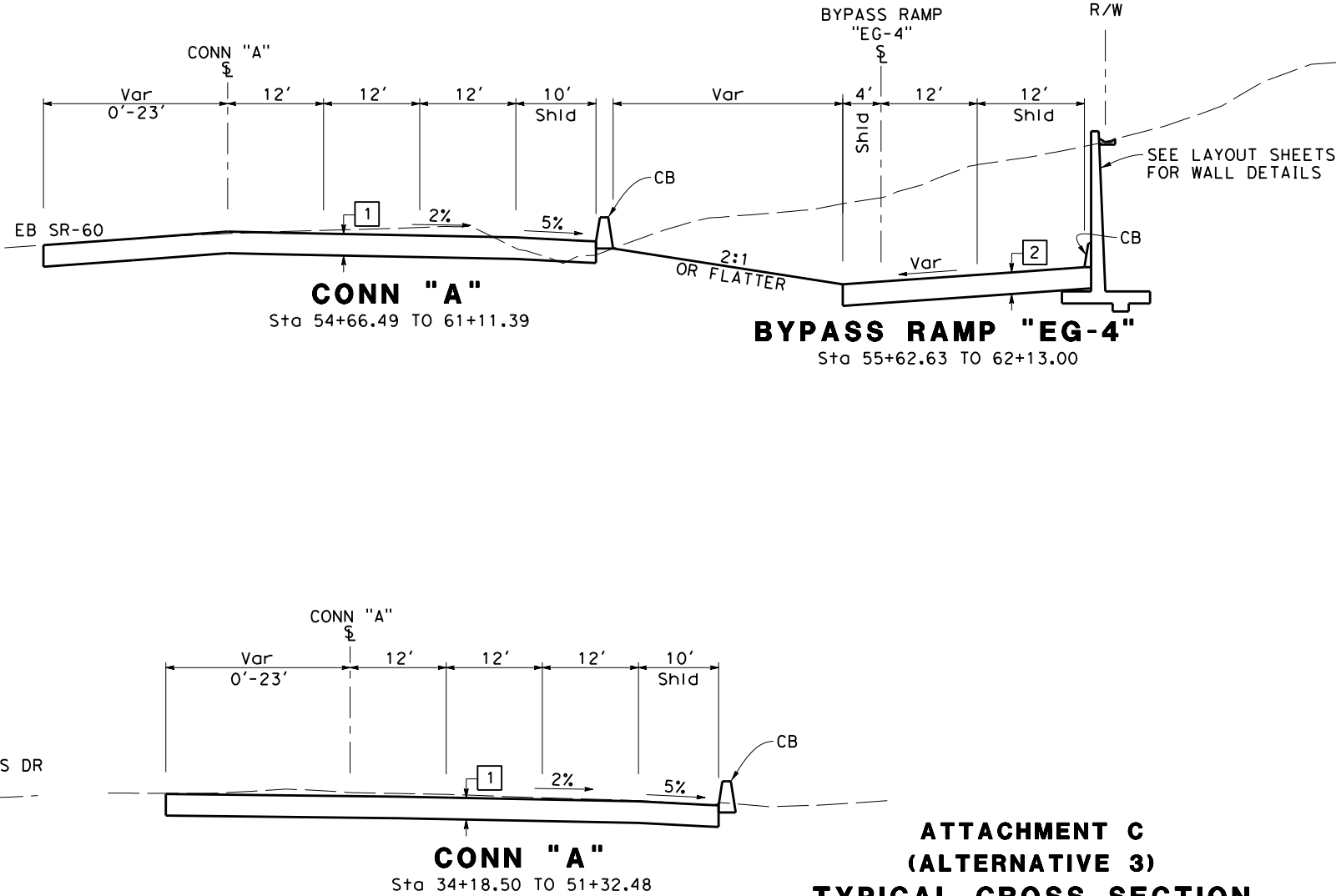
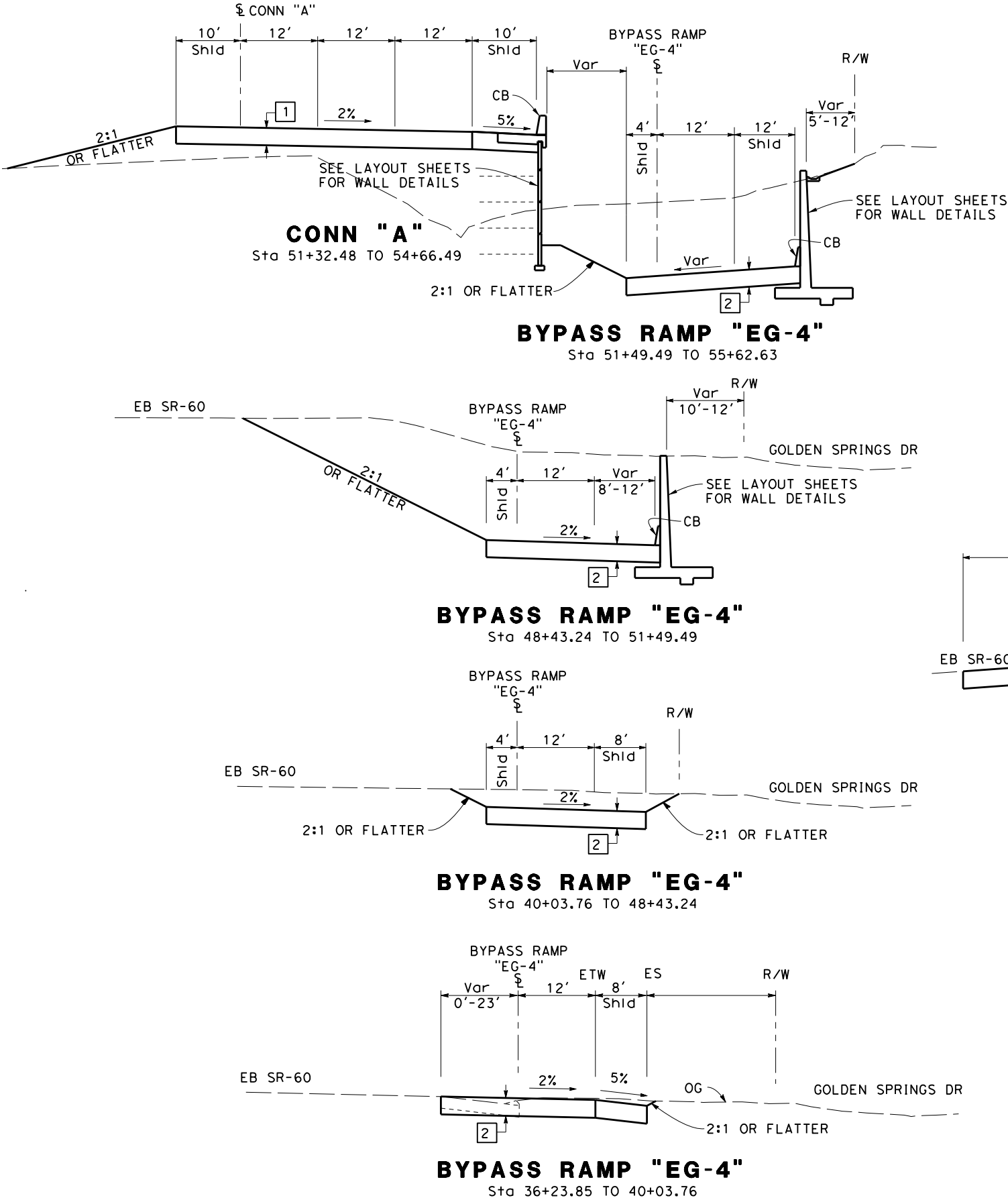


ATTACHMENT C
(ALTERNATIVE 3)
TYPICAL CROSS SECTION
NO SCALE

X-9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE					
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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			WKE, INC 400 N. TUSTIN AVENUE SUITE 275 SANTA ANA, CA 92705		





ATTACHMENT C
(ALTERNATIVE 3)
TYPICAL CROSS SECTION
NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

WKE, INC
400 N. TUSTIN AVENUE
SUITE 275
SANTA ANA, CA 92705

HANK T. NGUYEN
No. C 61227
Exp. 06-30-13
CIVIL
STATE OF CALIFORNIA

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER

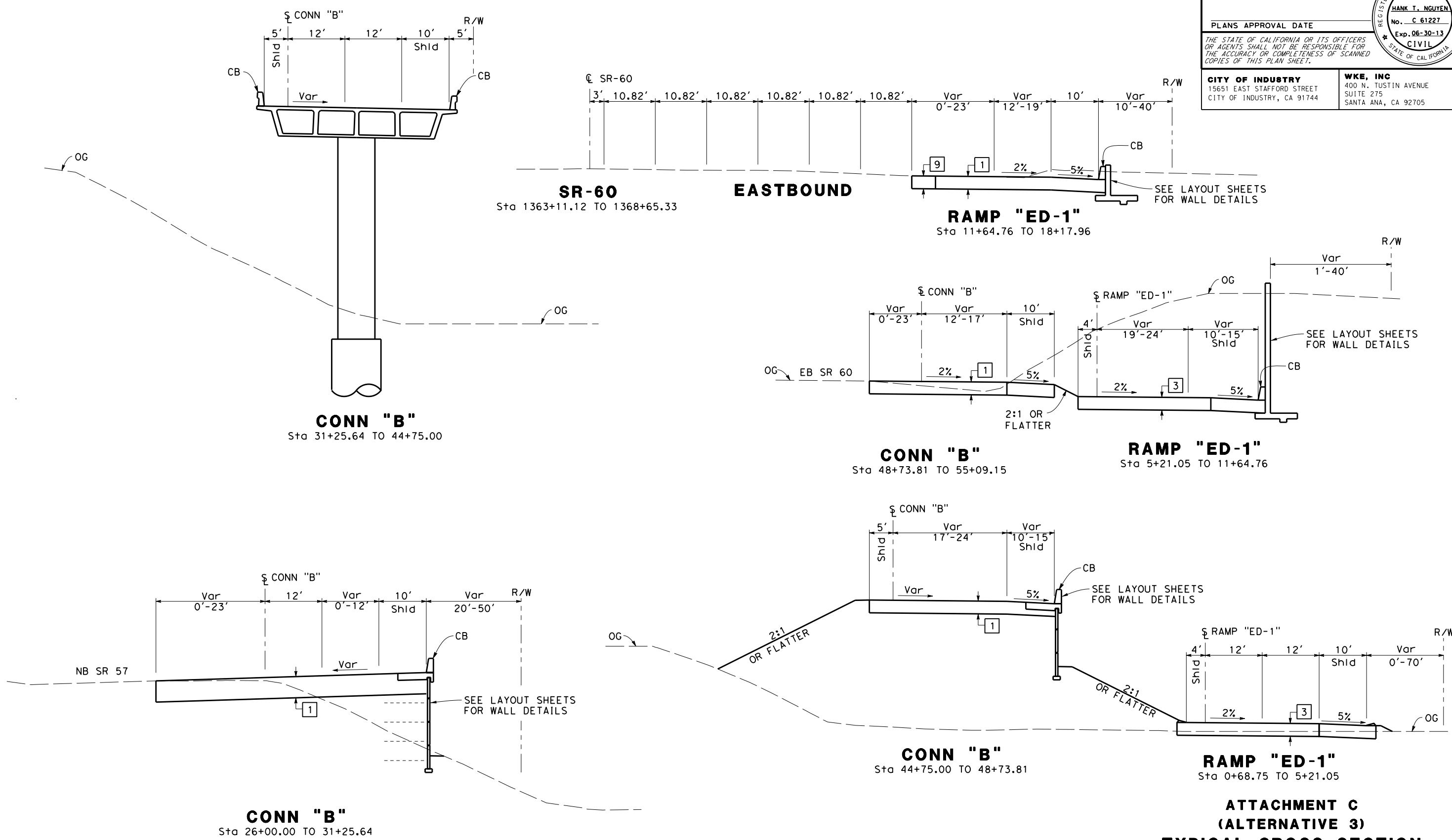
DATE

PLANS APPROVAL DATE

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CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

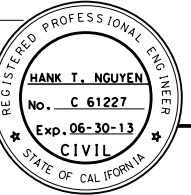
WKE, INC
400 N. TUSTIN AVENUE
SUITE 275
SANTA ANA, CA 92705



ATTACHMENT C
(ALTERNATIVE 3)
TYPICAL CROSS SECTION
NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3-4.5/4.5-4.8 R23.3-R26.5		

REGISTERED CIVIL ENGINEER DATE / /

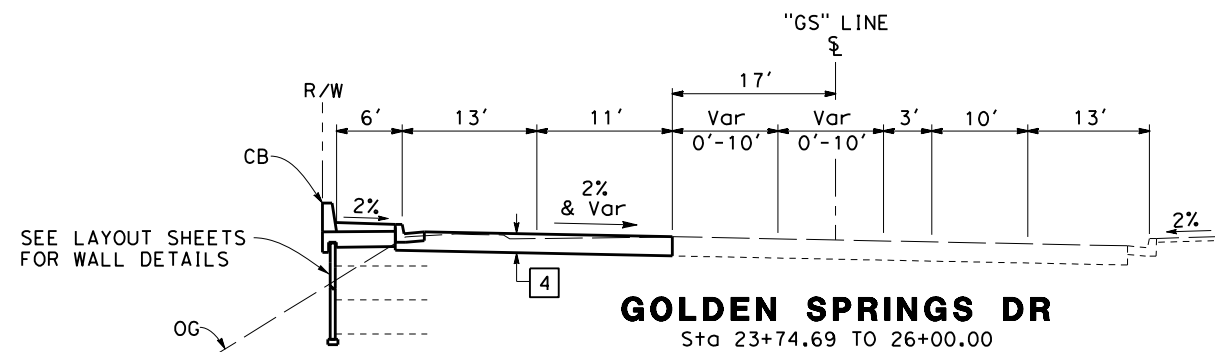
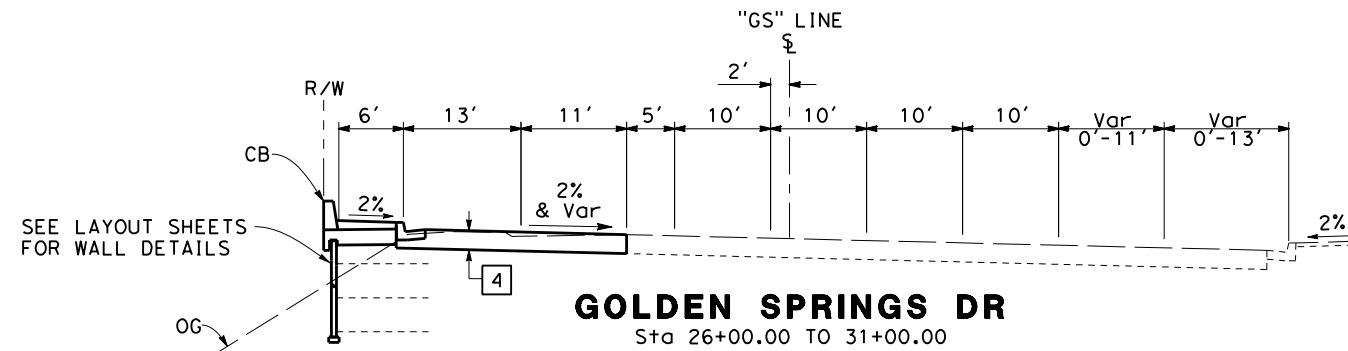
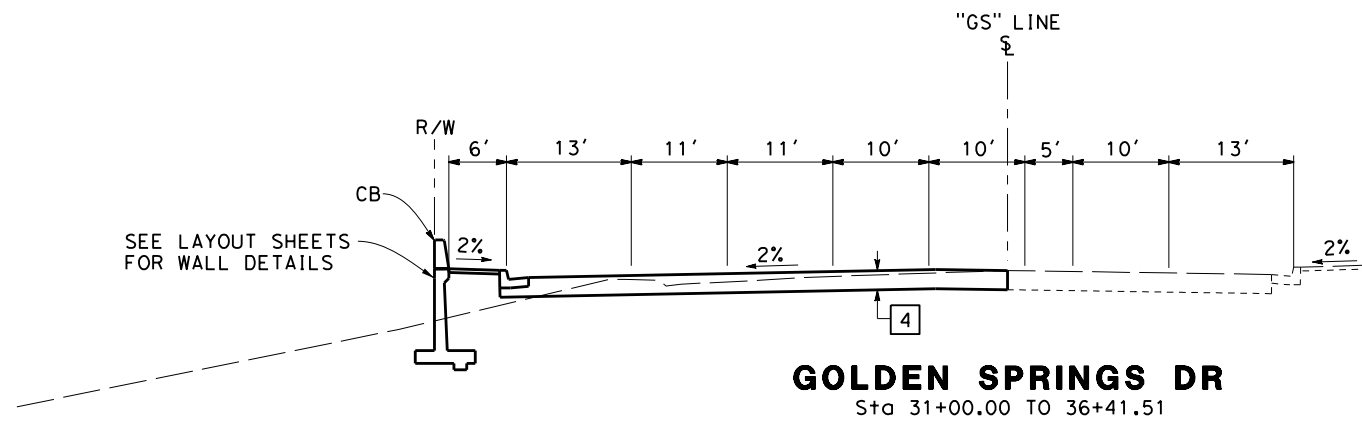


PLANS APPROVAL DATE

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CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

WKE, INC
400 N. TUSTIN AVENUE
SUITE 275
SANTA ANA, CA 92705



**ATTACHMENT C
(ALTERNATIVE 3)
TYPICAL CROSS SECTION**

NO SCALE

X-12

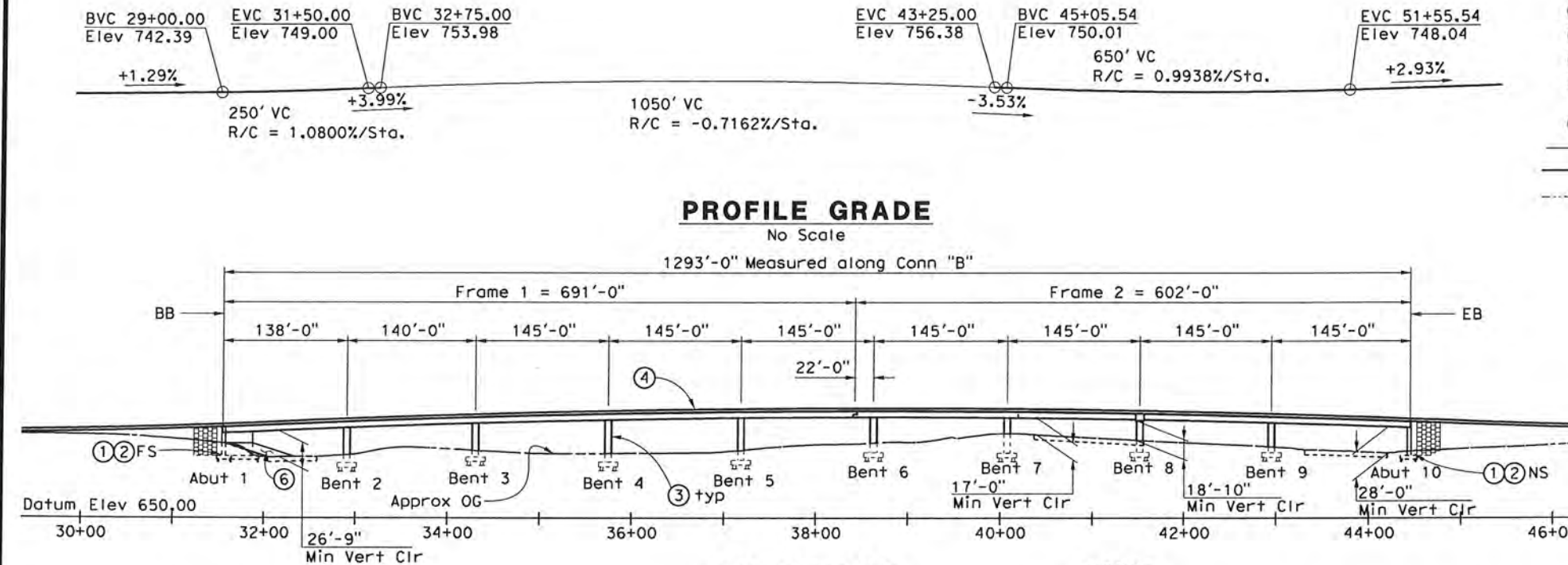
Attachment D – Advanced Planning Studies

LEGEND

- ① Paint "Bridge No." and year Constructed
 - ② Paint "Bridge Name"
 - ③ Paint "Bent Number"
 - ④ Concrete Barrier Type 736 (Mod)
 - ⑤ Structure Approach Type N(30S)
 - ⑥ Slope Paving
 - ⑦ Future Utility Opening
 - ⑧ Retaining Wall (Type I)
 - ⑨ MSE Wall
- Point of Minimum Vertical Clearance
 → Direction of Traffic
 — Indicates New Structure
 - - - Indicates Existing Structure

DIST.	COUNTY	ROUTE	POST MILES
07	LA	60	TOTAL PROJECT

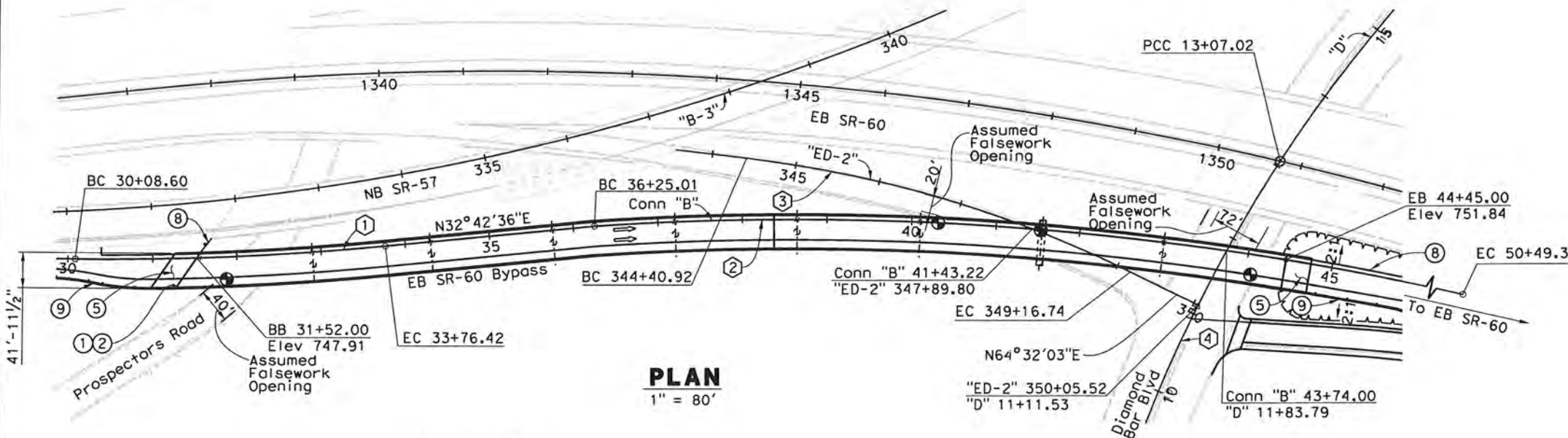
City of Industry
 15625 East Stafford Street
 City of Industry, CA 91744
 WKE, Inc.
 400 N. Tustin Ave, Ste 285
 Santa Ana, CA 92705



ELEVATION
1" = 80'

NOTE:

1. Traffic will pass through construction. 15'-0" minimum vertical clearance required under falsework.



CURVE DATA

① Conn "B" Line	② Conn "B" Line	③ "ED-2" Line	④ "D" Line
R = 3500.01'	R = 3500.01'	R = 1399.98'	R = 1649.92'
Δ = 06°01'16"	Δ = 23°19'02"	Δ = 19°28'24"	Δ = 14°29'20"
T = 184.08'	T = 722.18'	T = 240.23'	T = 209.73'
L = 367.82'	L = 1424.36'	L = 475.82'	L = 417.23'

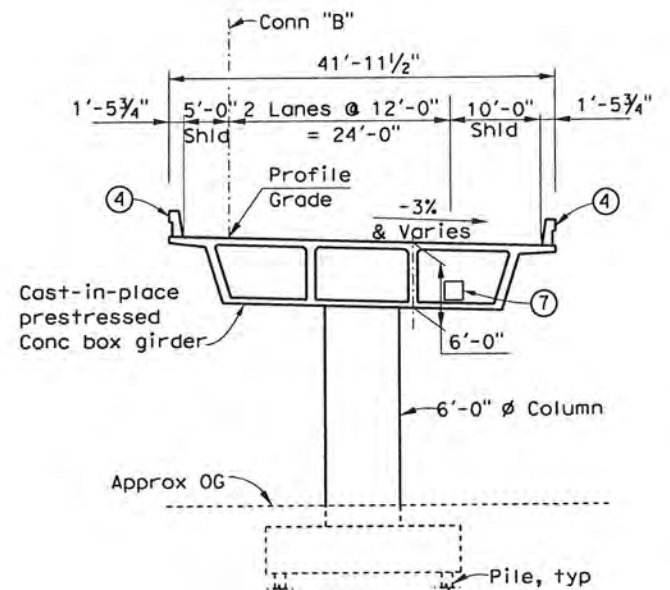
Note:
The Contractor shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material

Richard Hartnell
DESIGN OVERSIGHT
24 JULY 2012
SIGN OFF DATE

DESIGNED BY	V. Trinh	DATE	03/2012
DRAWN BY	Y. Arai	DATE	03/2012
CHECKED BY	D. Weddell	DATE	07/2012
APPROVED	D. Weddell	DATE	07/2012

V. Trinh
PROJECT ENGINEER

PLANNING STUDY	
SR-60 EB BYPASS CONN	
BRIDGE NO. 53-XXXX	UNIT: 1823
SCALE: As Noted	PROJECT NUMBER & PHASE: 07-0000543



DATE OF ESTIMATE

DATE OF ESTIMATE	OCT 2011
STRUCTURE DEPTH	= 6.00 ft
LENGTH	= 1293.00 ft
WIDTH	= 41.96 ft
AREA	= 54,254.00 ft ²
STRUCTURE	= \$10,558,000
COST/ft ² INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= \$194.60
BRIDGE REMOVAL	= NA
TOTAL COST	= \$10,558,000

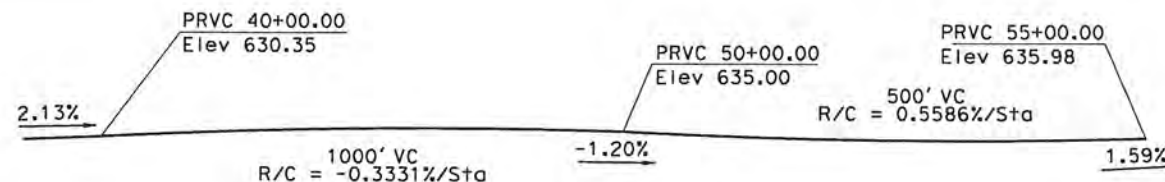
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
7	LA	60	

City of Industry
15625 East Stafford Street
City of Industry, CA 91744

WKE, Inc.
400 N. Tustin Ave, Suite 275
Santa Ana, CA 92705

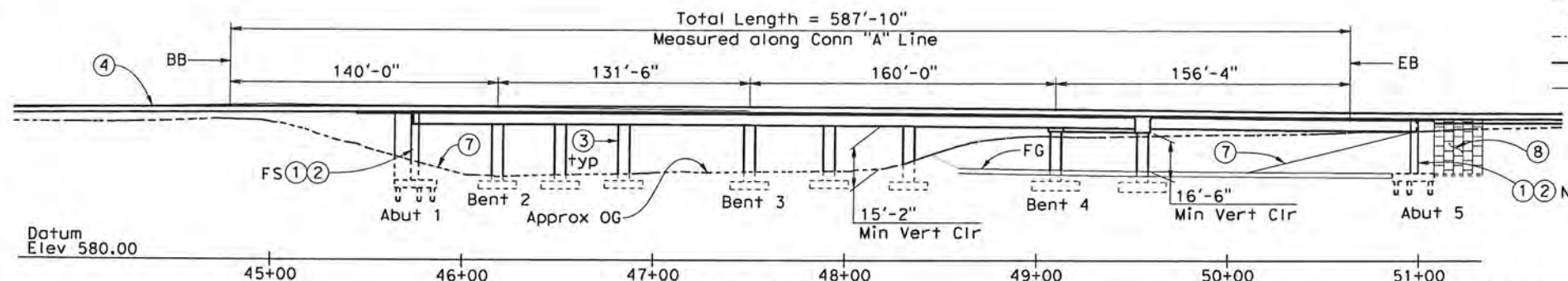
LEGEND

- ① Paint "Bridge No." and year constructed
- ② Paint "Bridge Name"
- ③ Paint "Bent Number"
- ④ Concrete Barrier Type 736
- ⑤ Temporary Railing, Type K, see "Road Plans"
- ⑥ Structure Approach Type N(30S)
- ⑦ Slope Paving
- ⑧ MSE Wall
- ⑨ Retaining Wall (Type 1)
- [A] Opening for communication line and water supply line
- [B] Future utility opening
- [Hatched] Stage I bridge removal
- Point of Minimum Vertical Clearance
- Indicates Exist Structure
- Indicates New Structure
- Direction of Traffic



PROFILE GRADE

No Scale

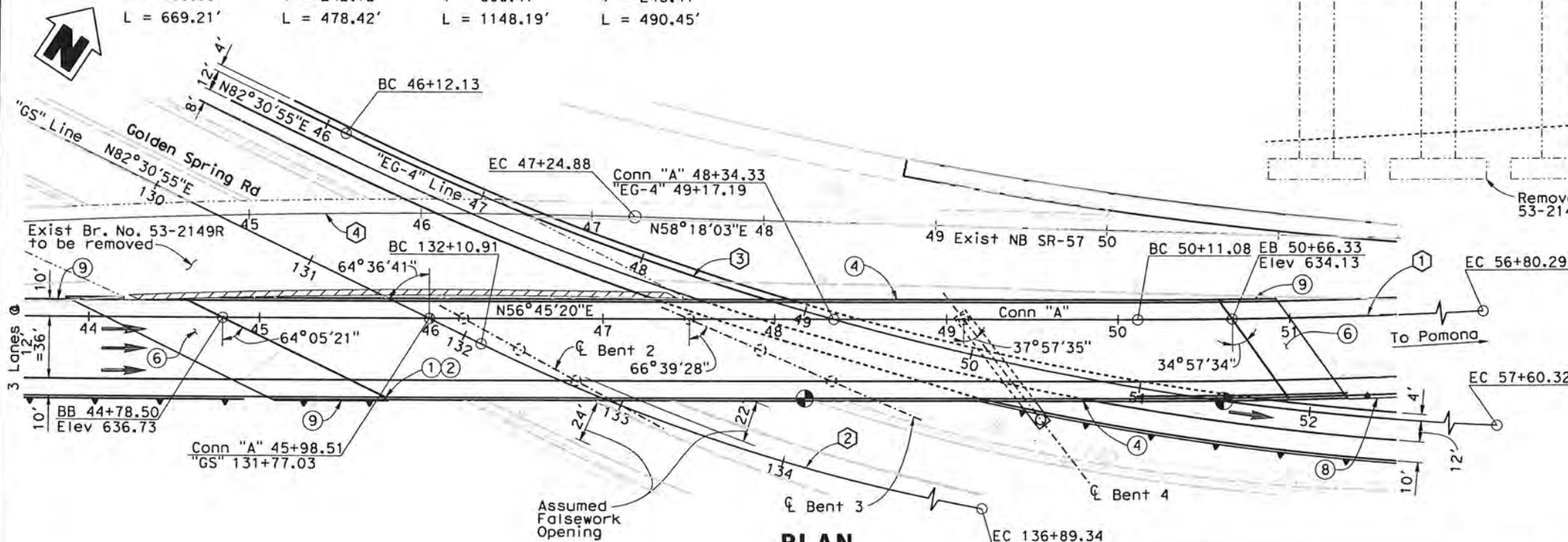


CURVE DATA

① Conn "A" Line	② "GS" Line	③ "EG-4" Line	④ Exist NB SR-57
R = 4000.00'	R = 1150.00'	R = 1720.00'	R = 4502.80'
Δ = 9°35'09"	Δ = 23°50'10"	Δ = 38°14'52"	Δ = 06°14'27"
T = 335.39'	T = 242.72'	T = 596.41'	T = 245.47'
L = 669.21'	L = 478.42'	L = 1148.19'	L = 490.45'

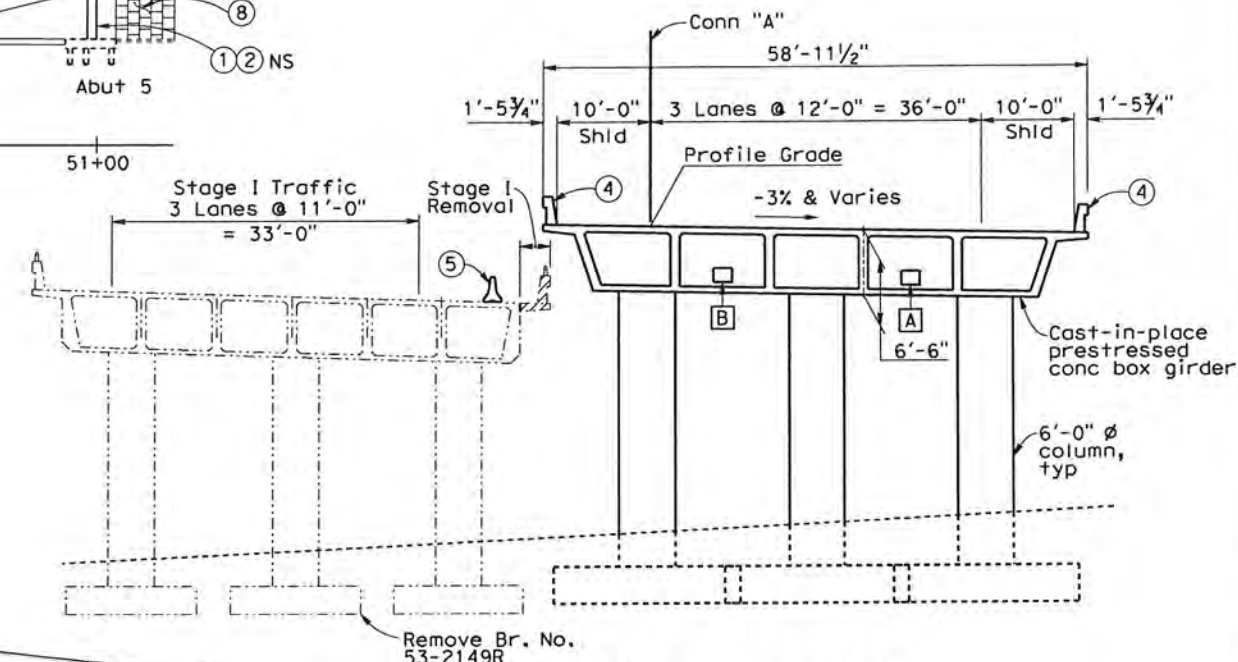
ELEVATION

1" = 40'



PLAN

1" = 40'



TYPICAL SECTION

1" = 10'

DATE OF ESTIMATE	5-10-2012
STRUCTURE DEPTH	= 6.50 ft
LENGTH	= 587.83 ft
WIDTH	= 58.96 ft
AREA	= 34,658 ft ²
STRUCTURE COST	= \$7,566,000
COST/ft ² INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= \$218.30
BRIDGE REMOVAL	= \$200,000
TOTAL COST	= \$7,766,000

NOTE:

1. Traffic will pass through construction. 15'-0" minimum vertical clearance required under falsework.

RICHARD HARTZEN
DESIGN OVERSIGHT
24 JULY 2012
SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 06-01-09)

DESIGNED BY	V. Trinh	DATE	07/2012
DRAWN BY	K. Coates	DATE	07/2012
CHECKED BY	D. Weddell	DATE	07/2012
APPROVED	D. Weddell	DATE	07/2012

V. Trinh
PROJECT ENGINEER

PLANNING STUDY	
GOLDEN SPRING DR UC (REPLACE)	
BRIDGE NO. 53-XXXX	UNIT: 1823
SCALE: As Noted	PROJECT NUMBER & PHASE: 07-00000543

FILE => ...Golden Spring-APS.dgn

CONTRACT NO.: 07-279100

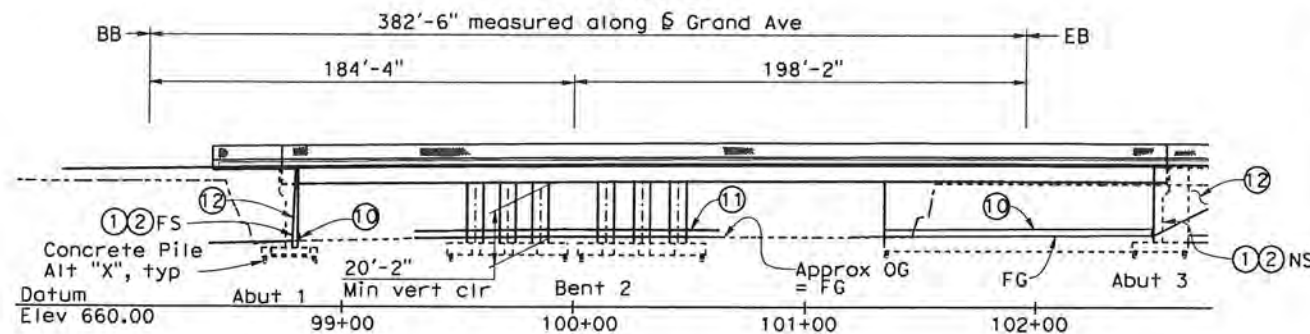
BVC 98+00.00
Elev 706.80
1.36%

L = 800.00
R/C = -0.00399% / Sta

EVC 106+00.00
Elev 704.92
-1.83%

PROFILE GRADE

No Scale



ELEVATION

1" = 40'

NOTES:

- Traffic will pass through construction. 15'-0" minimum vertical clearance required under falsework. Specially designed falsework is required.
- Stage construction is required.

UTILITY OPENING

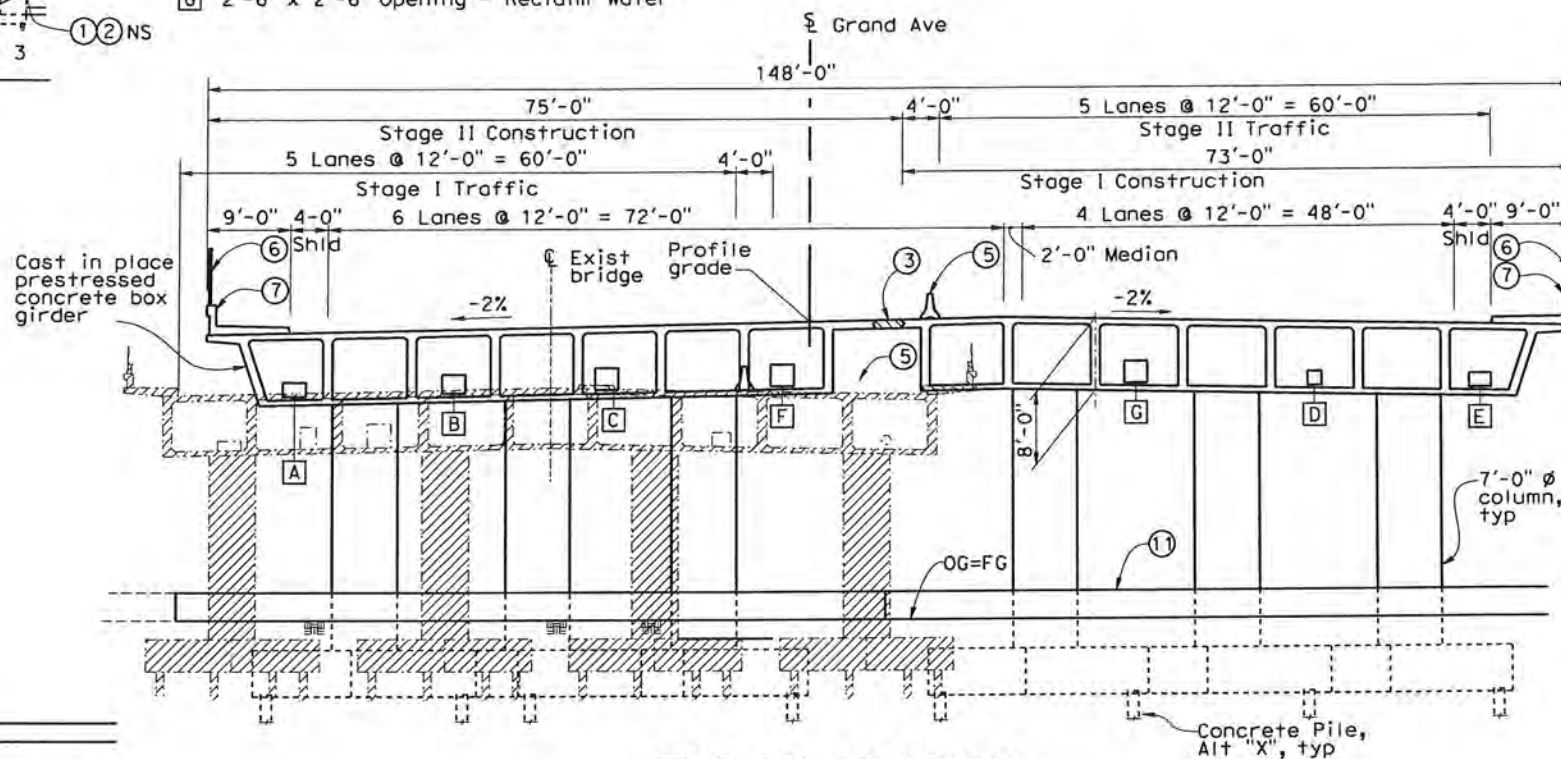
- A 2'-6" x 1'-6" Future Opening
- B 2'-6" x 2'-0" Opening - Telephone
- C 2'-6" x 2'-4" Opening - SCE
- D 1'-6" x 1'-6" Opening - Gas Company
- E 2'-6" x 1'-6" Future Opening
- F 2'-6" x 2'-6" Opening - Water
- G 2'-6" x 2'-6" Opening - Reclaim Water

DATE OF ESTIMATE	MAR 2012
STRUCTURE DEPTH	= 8.00 ft
LENGTH	= 382.50 ft
WIDTH	= 148.00 ft
AREA	= 56,610 ft ²
STRUCTURE COST	= \$12,244,000
COST/ft ² INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= \$216.29
BRIDGE REMOVAL	= \$350,000
TOTAL COST	= \$12,594,000

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
7	LA	60	

City of Industry
15625 East Stafford Street
City of Industry, CA 91744

WKE, Inc.
400 N. Tustin Ave, Suite 275
Santa Ana, CA 92705



TYPICAL SECTION

1" = 10'

LEGEND

- ① Paint "Bridge No." and year constructed
- ② Paint "Bridge Name"
- ③ Closure Pour
- ⑤ Temporary Railing, Type K, see "Road Plans"
- ⑥ Chain Link Railing
- ⑦ Concrete Barrier Type 26 (Mod)
- ⑧ Exist tieback wall to be removed in stages
- ⑨ Structure Approach Type N(30S)
- ⑩ Concrete Barrier Type 60D
- ⑪ Concrete Barrier Type 60E
- ⑫ Retaining Wall

- Bridge Removal
- Closure Pour
- Point of Minimum Vertical Clearance
- Indicates Exist Structure
- Indicates New Structure
- Direction of Traffic

ALTERNATIVE 2

PLANNING STUDY

GRAND AVE OC (REPLACE)

BRIDGE NO. 53-XXXX	UNIT: 1823
SCALE: As Noted	PROJECT NUMBER & PHASE: 07-00000543

DESIGNED BY	V. Trinh	DATE	07/2012
DRAWN BY	Y. Arai	DATE	07/2012
CHECKED BY	D. Weddell	DATE	07/2012
APPROVED	D. Weddell	DATE	07/2012

V. Trinh
PROJECT ENGINEER

FILE => ...Grand Ave-APS_CIP-Ait-2.dgn

CONTRACT NO.: 07-279100

NOTE:
THE CONTRACTOR SHALL VERIFY ALL
CONTROLLING FIELD DIMENSIONS BEFORE
ORDERING OR FABRICATING ANY MATERIAL.

RICHARD HARTZEL
DESIGN OVERSIGHT
24 JULY 2012
SIGN OFF DATE

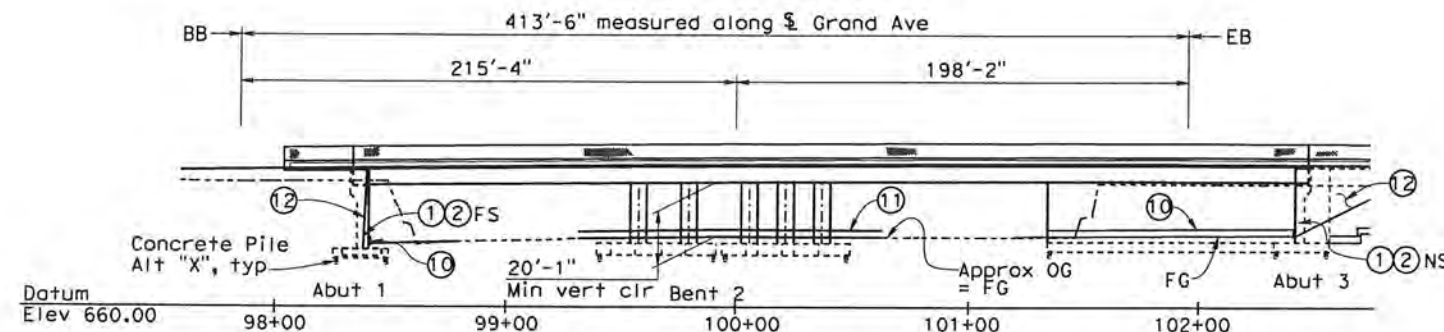
ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 06-01-09)

TIME PLOTTED => 7/24/2012 11:21:02 AM
DATE PLOTTED => 7/24/2012
USERNAME => VTR/1717

BVC 98+00.00 Elev 707.55 1.36% L = 800.00 R/C = -0.00399% / Sta EVC 106+00.00 Elev 705.67 -1.83%

PROFILE GRADE

No Scale



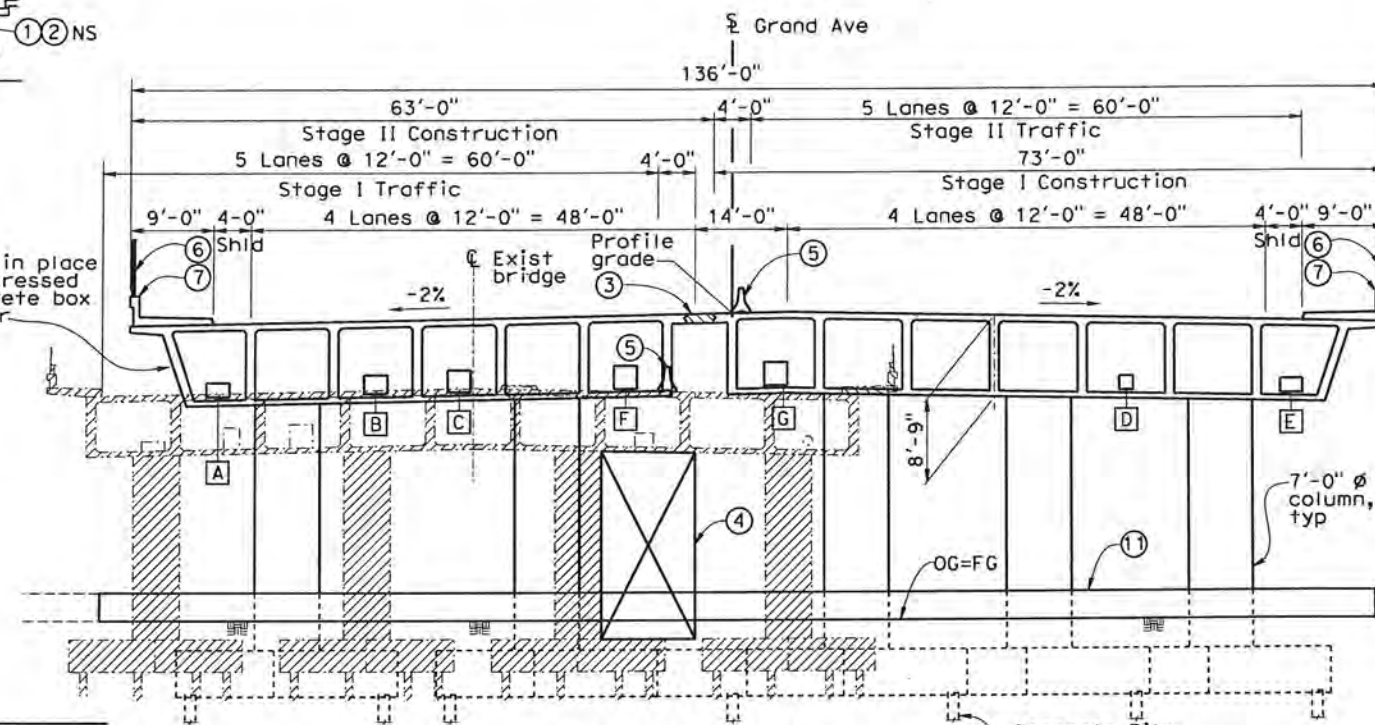
ELEVATION

1" = 40'

UTILITY OPENING

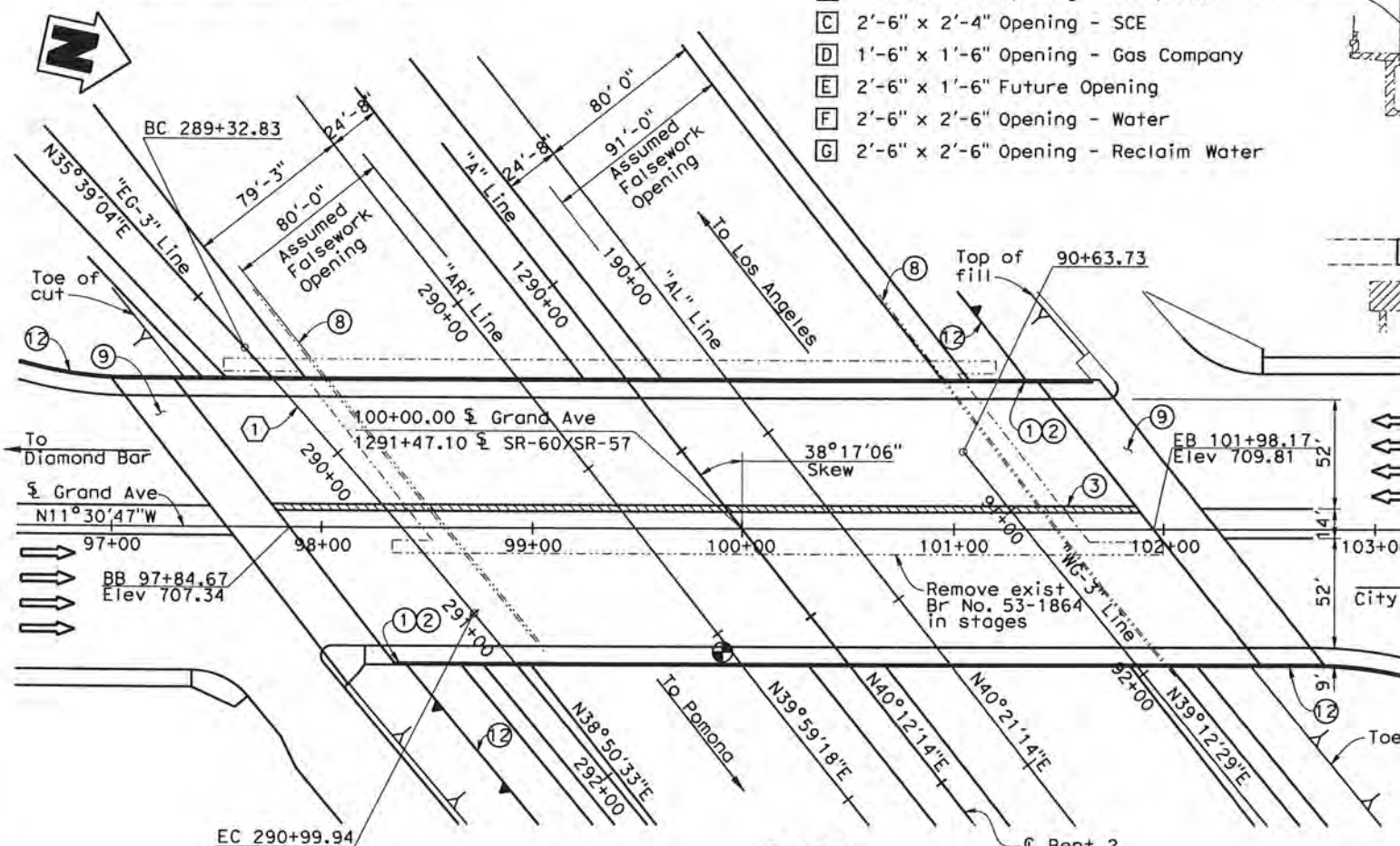
- A 2'-6" X 1'-6" Future Opening
- B 2'-6" X 2'-0" Opening - Telephone
- C 2'-6" X 2'-4" Opening - SCE
- D 1'-6" X 1'-6" Opening - Gas Company
- E 2'-6" X 1'-6" Future Opening
- F 2'-6" X 2'-6" Opening - Water
- G 2'-6" X 2'-6" Opening - Reclaim Water

Cast in place prestressed concrete box girder



TYPICAL SECTION

1" = 10'



PLAN

1" = 40'

CURVE DATA

- 1 "EG-3" Line
- R = 3,000.00'
- Δ = 3°11'30"
- L = 167.11'
- T = 83.58'

LEGEND

- 1 Paint "Bridge No." and year constructed
- 2 Paint "Bridge Name"
- 3 Closure Pour
- 4 Temporary Support
- 5 Temporary Railing, Type K, see "Road Plans"
- 6 Chain Link Railing
- 7 Concrete Barrier Type 26 (Mod)
- 8 Exist tieback wall to be removed in stages
- 9 Structure Approach Type N(30S)
- 10 Concrete Barrier Type 60D
- 11 Concrete Barrier Type 60E
- 12 Retaining Wall

- Bridge Removal
- Closure Pour
- Point of Minimum Vertical Clearance
- Indicates Exist Structure
- Indicates New Structure
- Direction of Traffic

ALTERNATIVE 3

PLANNING STUDY

GRAND AVE OC (REPLACE)

BRIDGE NO. 53-XXXX UNIT: 1823
SCALE: As Noted PROJECT NUMBER & PHASE: 07-0000543

DESIGNED BY	V. Trinh	DATE	07/2012
DRAWN BY	K. Coates	DATE	07/2012
CHECKED BY	D. Weddell	DATE	07/2012
APPROVED	D. Weddell	DATE	07/2012

V. Trinh
PROJECT ENGINEER

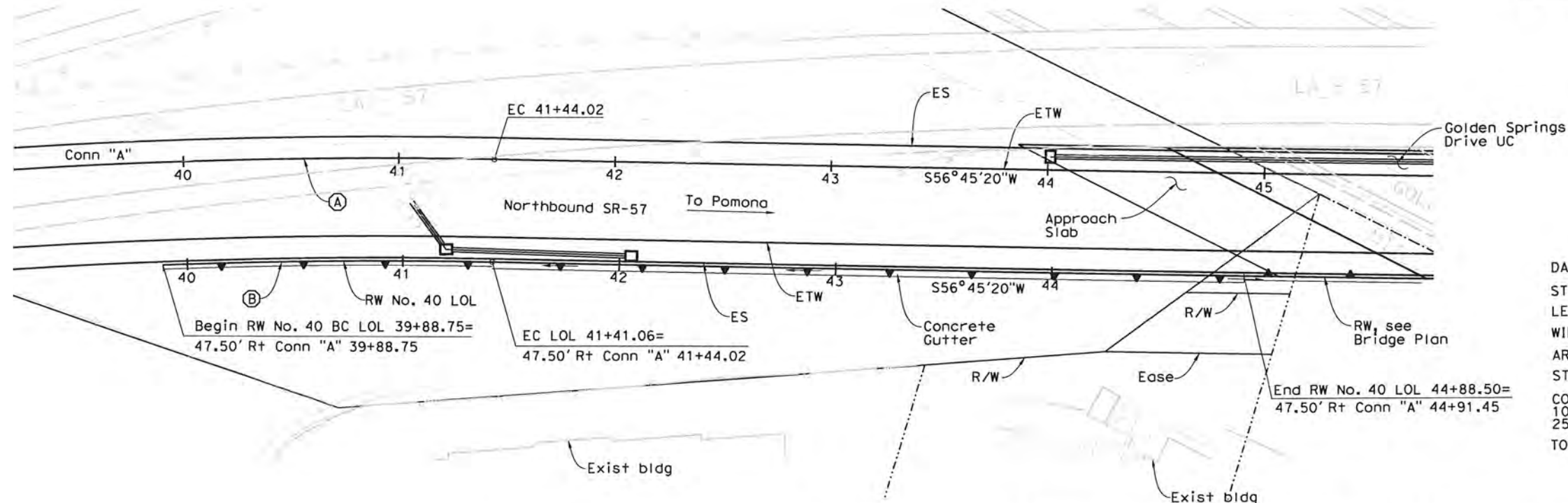
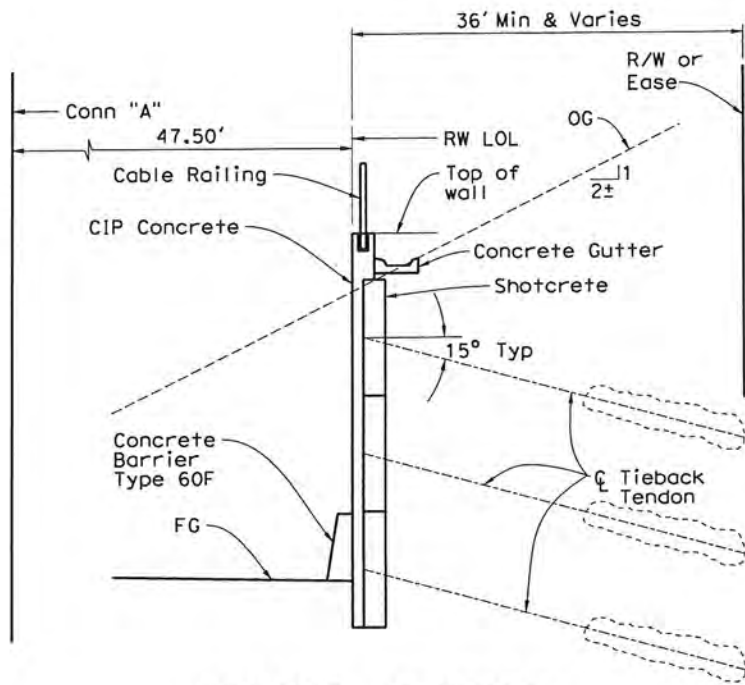
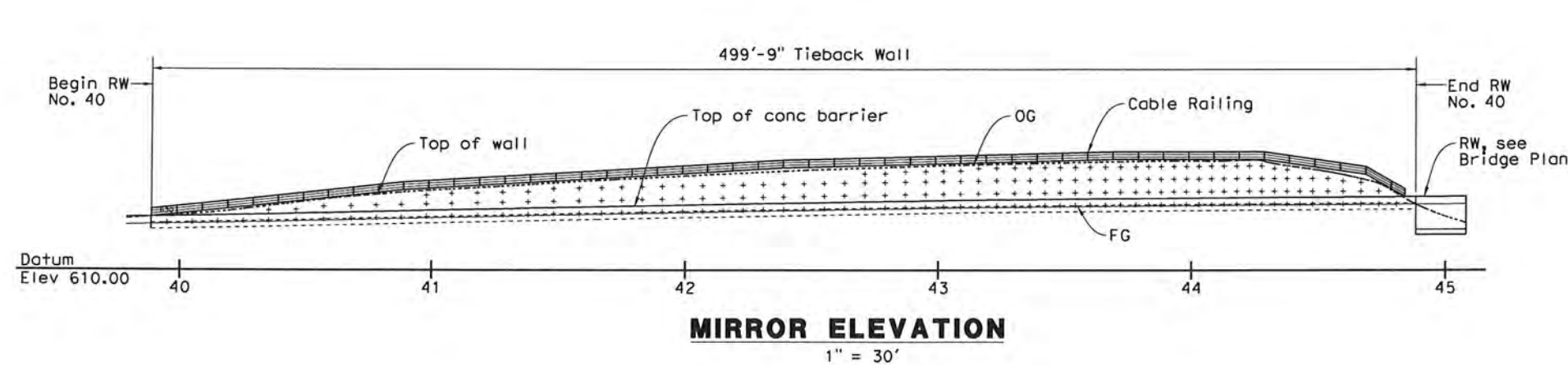
NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

RICHARD HARTZEL
DESIGN OVERSIGHT
24 JULY 2012
SIGN OFF DATE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
07	LA	57 60	R4.3/R4.8 R23.6/R26.5

CITY OF INDUSTRY
15625 East Stafford Street
City of Industry, CA 91744

WKE, INC.
400 N. Tustin Ave, Suite 285
Santa Ana, CA 92705



DATE OF ESTIMATE	5/10/2012
STRUCTURE DEPTH	= NA ft
LENGTH	= 499.75 ft
WIDTH	= NA ft
AREA	= 7913 ft ²
STRUCTURE	= \$1,815,000
COST/ft ² INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= \$229.32
TOTAL COST	= \$1,815,000

CURVE DATA				
No.	R	Δ	T	L
(A)	2500.00'	16°37'43"	365.35'	725.56'
(B)	2452.50'	3°33'18"	76.11'	152.16'

PLAN
1" = 30'

DESIGNED BY	V. Trinh	DATE	07/2012
DRAWN BY	H. Tong	DATE	07/2012
CHECKED BY	D. Weddell	DATE	07/2012
APPROVED	D. Weddell	DATE	07/2012

PLANNING STUDY	
RETAINING WALL NO. 40	
BRIDGE NO. 53E-XXXX	UNIT: 1823
SCALE: As Noted	PROJECT NUMBER & PHASE: 07-0000543

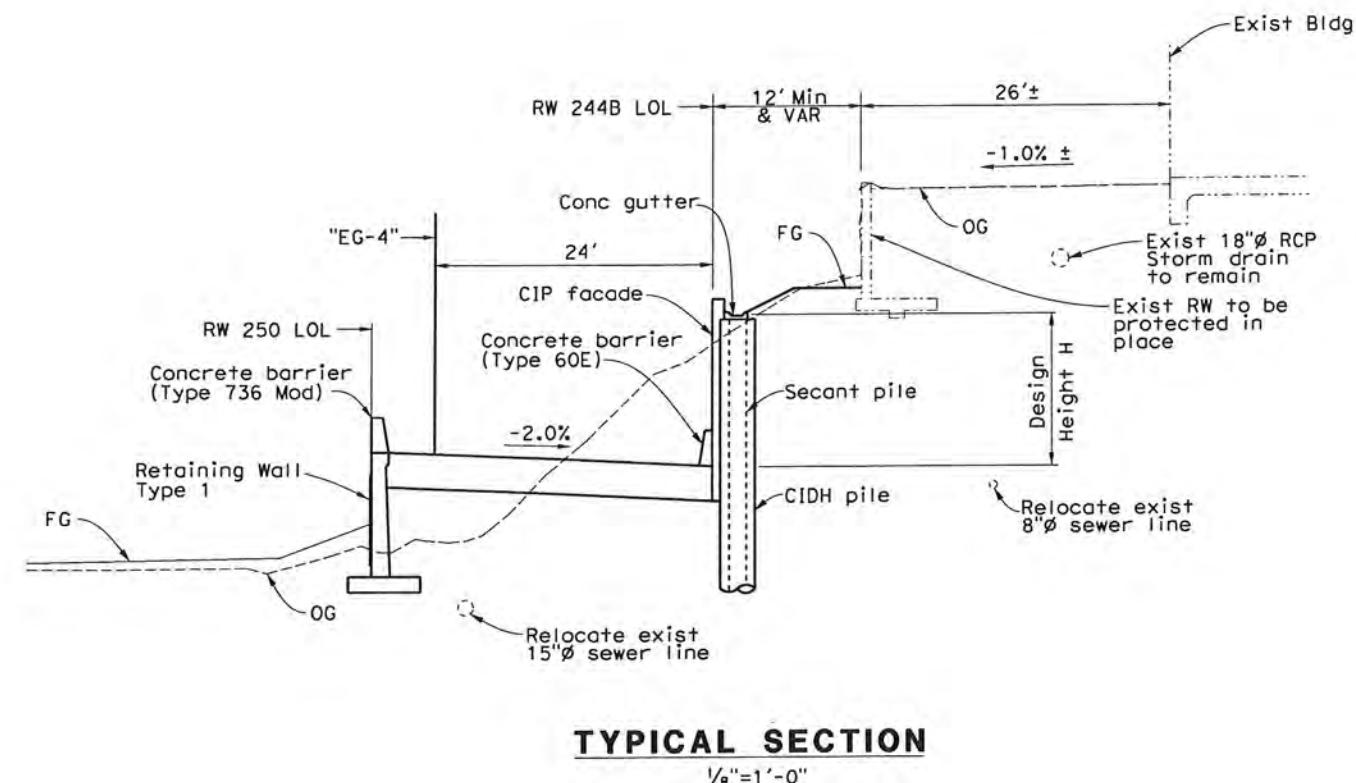
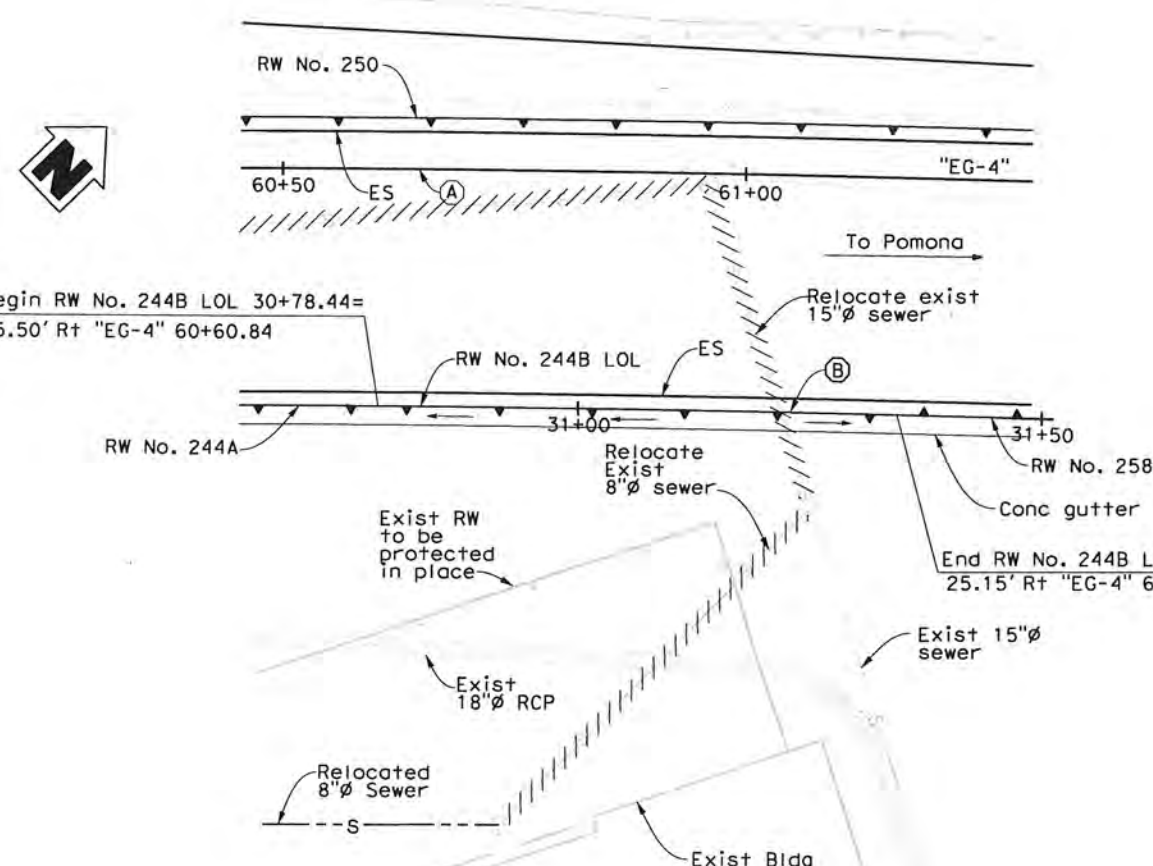
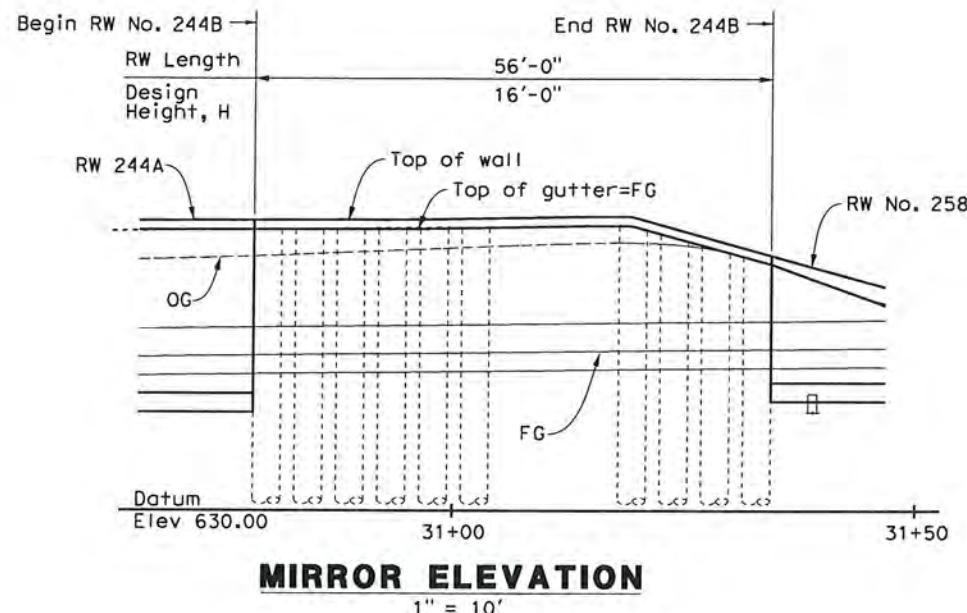
Richard Hartley
DESIGN OVERSIGHT
24 JULY 2012
SIGN OFF DATE

DIST	COUNTY	ROUTE	POST MILES
07	LA	57	R4.3/R4.8
		60	R23.6/R26.5

CITY OF INDUSTRY
15625 East Stafford Street
City of Industry, CA 91744

WKE, INC.
400 N. Tustin Ave, Suite 285
Santa Ana, CA 92705

CURVE DATA				
No.	R	Δ	T	L
(A)	3000.00'	03°42'26"	97.09'	194.12'
(B)	2974.50'	01°04'43"	28.00'	56.00'



DATE OF ESTIMATE	5-10-2012
STRUCTURE DEPTH	= NA ft
LENGTH	= 56.00 ft
WIDTH	= NA ft
AREA	= 775 ft ²
STRUCTURE	= \$278,000
COST/ft ² INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= \$358.82
TOTAL COST	= \$278,000

RICHARD HARTZELL
DESIGN OVERSIGHT
24 JULY 2012
SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 7/16/10)

DESIGNED BY	V. Trinh	DATE	07/2012
DRAWN BY	H. Tong	DATE	07/2012
CHECKED BY	D. Weddell	DATE	07/2012
APPROVED	D. Weddell	DATE	07/2012

PLANNING STUDY	
RETAINING WALL NO. 244B	
BRIDGE NO. 53E-XXXX	UNIT: 1823
SCALE: As Noted	PROJECT NUMBER & PHASE: 07-00000543

FILE => ...Sheet\RW APS\RW 244B GP.dgn

CONTRACT NO.: 07-279100

Attachment E – Project Cost Estimate

PROJECT REPORT COST ESTIMATE

DIST-CO-RTE	07-LA-60
PM	R23.3/R26.5
EA	279100
Program Code:	HE-12

Project Description:

Limits: Between SR-57/60 south junction and Diamond Bar Blvd on-ramp in the City of Industry/Diamond Bar

Proposed Improvement (Scope): SR-57/SR-60 Confluence - Grand Ave Interchange Improvement
Grand Ave EB Bypass off-ramp, reconstruct Grand Ave Interchange with EB tight diamond, add
EB bypass connector at north/east SR-57 interchange.

Alternate: Alternative 2

SUMMARY OF PROJECT COST ESTIMATES

TOTAL ROADWAY ITEMS (Year 2013)	<u>\$105,000,000</u>
TOTAL STRUCTURE ITEMS (Year 2013)	<u>\$46,600,000</u>
SUBTOTAL CONSTRUCTION COSTS (Year 2013)	<u>\$151,600,000</u>
TOTAL RIGHT OF WAY ITEMS (Year 2017)	<u>\$35,152,107</u>
TOTAL PROJECT CAPITAL OUTLAY COSTS	<u>\$186,752,107</u>

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Roadway Excavation	220,715	CY	\$40.00	\$8,828,600	
Clearing & Grubbing	1	LS	\$150,000.00	\$150,000	
Remove Concrete (Pavement, Curb, Sidewalk, Barrier)	266,100	SF	\$5.65	\$1,503,465	
Roadway Excavation for contaminated soil (ADL, Type Z-2)	14,800	CY	\$180.00	\$2,664,000	
				Subtotal Earthwork	\$13,146,065

[illegible]

(X- Drains, oversize, etc.)

Subtotal Drainage	\$4,171,120
-------------------	-------------

<u>Section 4 Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Retaining Walls **	1	LS	\$11,100,000.00	\$11,100,000	
Noise Barriers	1	LS	\$933,000.00	\$933,000	
Barriers and Guard Rails	1	LS	\$162,400.00	\$162,400	
Water Pollution Control (Include Treatment BMP)	1	LS	\$2,790,000.00	\$2,790,000	
Concentrated Flow Conveyance Systems	1	LS	\$69,800.00	\$69,800	
Lead Compliance Plan (ADL Handling, Traffic Stripe/Marking Removal)	1	LS	\$5,000.00	\$5,000	
Manage contaminated groundwater (contingency)	1	LS	\$100,000.00	\$100,000	
Asbestos Abatement (contingency)	1	LS	\$20,000.00	\$20,000	
Resident Engineer Office Fund	1	LS	\$352,000.00	\$352,000	
TRO	1	LS	\$5,344,000.00	\$5,344,000	
** Cost of wall is not included in the Structures Items (Sheet 6 of 7)					
			Subtotal Specialty Items		\$20,876,200

<u>Section 5 Traffic Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Striping Removal	1	LS	\$350,000.00	\$350,000	
Striping Installation	1	LS	\$476,000.00	\$476,000	
Transportation Management Plan	1	LS	\$1,448,500.00	\$1,448,500	
Chain link Fence	12,600	LF	\$21.00	\$264,600	
Remove Metal Beam Guard Railing	1	LS	\$110,000.00	\$110,000	
Temporary Signing	1	LS	\$150,000.00	\$150,000	
K-Rail	25,500	LF	\$13.00	\$331,500	
Traffic Control System	1	LS	\$1,000,000.00	\$1,000,000	
Roadside Sign	1	LS	\$360,000.00	\$360,000	
Temporary Crash Cushions	1	LS	\$262,000.00	\$262,000	
Overhead Sign	1	LS	\$2,620,000.00	\$2,620,000	
Modify traffic signal and lighting systems	1	LS	\$1,020,000.00	\$1,020,000	
Ramp metering Systems	5	EA	\$100,000.00	\$500,000	
Modify Highway Lighting Sign Illumination				\$0	
Highway Lighting Sign Illumination	1	LS	\$580,000.00	\$580,000	
Temporary traffic signal and lighting systems	69	EA	\$5,000.00	\$345,000	
Modify Ramp Metering Systems				\$0	
Modify Communication System (Fiber Optics)	1	LS	\$1,600,000.00	\$1,600,000	
			Subtotal Traffic Items		\$11,417,600

<u>Section 6 Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Highway Planting	1,146,500	SF	\$4.00	\$4,586,000	
Replacement Planting				\$0	
Irrigation Modification				\$0	
Relocate Existing Irrigation				\$0	
Facilities					
Irrigation Crossovers	4	EA	\$2,500.00	\$10,000	
Subtotal Planting and Irrigation Section					\$4,596,000

<u>Section 7: Roadside Management and Safety Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Vegetation Control Treatments	600	SQYD	\$36.00	\$21,600	
Gore Area Pavement	770	CY	\$80.00	\$61,600	
Pavement beyond the gore area				\$0	
Miscellaneous Paving				\$0	
Erosion Control					
Slope Protection				\$0	
Side Slopes/Embankment Slopes				\$0	
Maintenance Vehicle Pullouts					
Off-Freeway Access (gates, stairways, etc.)***					
Roadside Facilities (Vista Points, Transit, Park and Ride, etc.)				\$0	
Relocating roadside facilities/features				\$0	
Subtotal Roadside Management and Safety Section					\$83,200

SUBTOTAL SECTIONS 1-7 \$67,894,135

COMMENTS:

*** Access Gate included herein. Maintenance Pullout included in retaining wall and paving costs.

Section 8 Minor Items

<u>\$67,894,135</u>	X	<u>10.00%</u> = <u>\$6,789,414</u>
(Subtotal Sections 1-7)		(5% - 10%)

TOTAL MINOR ITEMS \$6,789,414

Section 9 Roadway Mobilization

<u>\$74,683,549</u>	X	<u>10.00%</u> = <u>\$7,468,355</u>
(Subtotal Sections 1-8)		

TOTAL ROADWAY MOBILIZATION \$7,468,355

Section 10 Roadway Additions

Supplemental Work

<u>\$74,683,549</u>	X	<u>10.00%</u> = <u>\$7,468,355</u>
(Subtotal Sections 1-8)		(5% - 10%)

Contingencies

<u>\$74,683,549</u>	X	<u>20.00%</u> <u>\$14,936,710</u>
(Subtotal Sections 1-8)		

TOTAL ROADWAY ADDITIONS \$22,405,065

TOTAL ROADWAY ITEMS \$104,556,968
(Subtotal Sections 1 thru 10)

USE 105,000,000

Estimate Prepared By Hank Nguyen
(Print Name)

Phone # (714) 953-1015 Date 8/20/2013

Estimate Checked By Daniel Weddell
(Print Name)

Phone # (714) 953-1020 Date 8/23/2013

II. STRUCTURES ITEMS

STRUCTURE

	<u>No. 1</u>	<u>No. 2</u>	<u>No. 3</u>	<u>No. 4</u>	<u>No. 5</u>
Structure Name	Golden Springs UC (Conn A)	Grand Ave OC	Diamond Bar UC (Conn B)	Golf Course Tunnel	Architectural Treatment
Structure Type			CIP PS Box Girder		
Widening Width - (ft)					
Span Lengths - (ft)					
Total Area - (sf)					
Footing Type (Pile/Spread)					
Total Cost for Structure	\$7,766,000	\$12,594,000	\$10,558,000	\$2,000,000	\$443,000
Removal Cost					

	No. 6	No. 7	No. 8	No.9	No.10
Structure Name	Retaining Wall	Retaining Wall	Retaining Wall	Retaining Wall	Retaining Wall
	No. 40	No. 244B	No. 250	No. 258	No. 280
Structure Type	Tie Back	Secant Pile	MSE	MSE	MSE
Widening Width - (ft)					
Span Lengths - (ft)					
Total Area - (sf)	6,400	34,000	4,600	14,000	12,000
Footing Type (Pile/Spread)					
Total Cost for Structure	\$1,815,000	\$278,000	\$411,000	\$2,006,000	\$1,367,000
Removal Cost					

	No.11	No.12	No.13	No.14	
Structure Name	Retaining Wall No. 282	Retaining Wall No. 287	Retaining Wall No. 288	Retaining Wall No. 352	
Structure Type	MSE	MSE	MSE	MSE	
Widening Width - (ft)					
Span Lengths - (ft)					
Total Area - (sf)	30,000	3,600	22,000	4,600	
Footing Type (Pile/Spread)					
Total Cost for Structure	\$3,482,000	\$440,000	\$3,057,000	\$417,000	
Removal Cost					

		SUBTOTAL STRUCTURES ITEMS	\$46,634,000
Railroad Related Costs			\$0
		SUBTOTAL RAILROAD ITEMS	\$0
		TOTAL STRUCTURES ITEMS	\$46,634,000
COMMENTS:		USE	\$46,600,000
Estimate Prepared By	Vinh Trinh	(714) 953-1019	7/24/2012
	Print Name	Phone #	Date

III. RIGHT OF WAY

	Current Values (Future Use)	Escalation Rates	Escalated Values* (5 Years)
A. Acquisition, including excess lands, damages to remainder(s), and Goodwill	\$20,915,776	7.00%	\$29,335,459
B. Acquisition of Offset Mitigation	\$0	0.00%	\$0
C. Utility Relocation	\$3,789,500	8.00%	\$5,568,019
D. Relocation Assistance	\$0	3.00%	\$0
E. Clearance/Demolition	\$0	3.00%	\$0
F. Title and Escrow Fees	\$214,469	3.00%	\$248,629
G. Project Permit Fees	\$0	3.00%	\$0
H. Condemnation Cost	\$0	3.00%	\$0
I. 'TOTAL RIGHT OF WAY (CURRENT VALUES)	\$24,919,745	TOT. ESC. R/W	\$35,152,107
			\$35,153,000

Use

*Escalated to assumed year of advertising of 2017

Estimate Prepared By	<u>Ray Armstrong</u>	<u>(562) 304-2000</u>	<u>5/22/2013</u>
	(Print Name)	Phone #	Date

(If appropriate, attach additional pages and backup)

PROJECT REPORT COST ESTIMATE

DIST-CO-RTE	07-LA-60
PM	R23.3/R26.5
EA	279100
Program Code:	HE-12

Project Description:

Limits: Between SR-57/60 south junction and Diamond Bar Blvd on-ramp in the City of Industry/Diamond Bar

Proposed SR-57/SR-60 Confluence - Grand Ave Interchange Improvement

Improvement (Scope): Grand Ave EB Bypass off-ramp, reconstruct Grand Ave Interchange with EB loop on ramp, add EB bypass connector at north/east SR-57 interchange.

Alternate: Alternative 3

SUMMARY OF PROJECT COST ESTIMATES

TOTAL ROADWAY ITEMS (Year 2013)	<u>\$110,000,000</u>
TOTAL STRUCTURE ITEMS (Year 2013)	<u>\$45,800,000</u>
SUBTOTAL CONSTRUCTION COSTS (Year 2013)	<u>\$155,800,000</u>
TOTAL RIGHT OF WAY ITEMS (Year 2017)	<u>\$38,752,888</u>
TOTAL PROJECT CAPITAL OUTLAY COSTS	<u>\$194,552,888</u>

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Roadway Excavation	254,575	CY	\$40.00	\$10,183,000	
Clearing & Grubbing	1	LS	\$150,000.00	\$150,000	
Remove Concrete (Pavement, Curb, Sidewalk, Barrier)	291,400	SF	\$5.65	\$1,646,410	
Roadway Excavation for contaminated soil (ADL, Type Z-2)	14,800	CY	\$175.00	\$2,590,000	
				Subtotal Earthwork	\$14,569,410

[illegible]

<u>Section 3 Drainage</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Large Drainage Facilities					
Storm Drains				\$0	
Pumping Plants				\$0	
Drainage	1	LS	\$4,171,120.00	\$4,171,120	

Subtotal Drainage	\$4,171,120
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<u>Section 4 Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Retaining Walls **	1	LS	\$11,100,000.00	\$11,100,000	
Noise Barriers	1	LS	\$933,000.00	\$933,000	
Barriers and Guard Rails	1	LS	\$331,000.00	\$331,000	
Water Pollution Control (Include Treatment BMP)	1	LS	\$2,790,000.00	\$2,790,000	
Concentrated Flow Conveyance Systems	1	LS	\$69,800.00	\$69,800	
Lead Compliance Plan (ADL Handling, Traffic Stripe/Marking Removal)	1	LS	\$5,000.00	\$5,000	
Manage contaminated groundwater (contingency)	1	LS	\$100,000.00	\$100,000	
Asbestos Abatement (contingency)	1	LS	\$20,000.00	\$20,000	
Resident Engineer Office Fund	1	LS	\$352,000.00	\$352,000	
TRO	1	LS	\$5,700,000.00	\$5,700,000	
** Cost of wall is not included in the Structures Items (Sheet 6 of 7)					
			Subtotal Specialty Items		\$21,400,800

<u>Section 5 Traffic Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Striping Removal	1	LS	\$380,000.00	\$380,000	
Striping Installation	1	LS	\$485,000.00	\$485,000	
Transportation Management Plan	1	LS	\$1,432,100.00	\$1,432,100	
Chain link Fence	14,000	LF	\$21.00	\$294,000	
Remove Metal Beam Guard Railing	1	LS	\$110,200.00	\$110,200	
Temporary Signing	1	LS	\$150,000.00	\$150,000	
K-Rail	30,000	LF	\$13.00	\$390,000	
Traffic Control System	1	LS	\$1,000,000.00	\$1,000,000	
Roadside Sign	1	LS	\$400,000.00	\$400,000	
Temporary Crash Cushions	1	LS	\$300,000.00	\$300,000	
Overhead Sign	1	LS	\$2,620,000.00	\$2,620,000	
Modify traffic signal and lighting systems	1	LS	\$1,020,000.00	\$1,020,000	
Ramp metering Systems	6	EA	\$100,000.00	\$600,000	
Modify Highway Lighting Sign Illumination				\$0	
Highway Lighting Sign Illumination	1	LS	\$640,000.00	\$640,000	
Temporary traffic signal and lighting systems	69	EA	\$5,000.00	\$345,000	
Modify Ramp Metering Systems				\$0	
Modify Communication System (Fiber Optics)	1	LS	\$1,600,000.00	\$1,600,000	
			Subtotal Traffic Items		\$11,766,300

<u>Section 6 Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Highway Planting	1,261,500	SF	\$4.00	\$5,046,000	
Replacement Planting				\$0	
Irrigation Modification				\$0	
Relocate Existing Irrigation Facilities				\$0	
Irrigation Crossovers	4	EA	\$2,500.00	\$10,000	
Subtotal Planting and Irrigation Section					\$5,056,000

<u>Section 7: Roadside Management and Safety Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Vegetation Control Treatments	600	SQYD	\$36.00	\$21,600	
Gore Area Pavement	840	CY	\$80.00	\$67,200	
Pavement beyond the gore area				\$0	
Miscellaneous Paving				\$0	
Erosion Control					
Slope Protection				\$0	
Side Slopes/Embankment Slopes				\$0	
Maintenance Vehicle Pullouts					
Off-Freeway Access (gates, stairways, etc.)***					
Roadside Facilities (Vista Points, Transit, Park and Ride, etc.)				\$0	
Relocating roadside facilities/features				\$0	
Subtotal Roadside Management and Safety Section					\$88,800

SUBTOTAL SECTIONS 1-7 \$71,324,030

COMMENTS:

*** Access Gate included herein. Maintenance Pullout included in retaining wall and paving costs.

Section 8 Minor Items

<u>\$71,324,030</u>	X	<u>10.00%</u>	=	<u>\$7,132,403</u>
(Subtotal Sections 1-7)		(5% - 10%)		

TOTAL MINOR ITEMS \$7,132,403

Section 9 Roadway Mobilization

<u>\$78,456,433</u>	X	<u>10.00%</u>	=	<u>\$7,845,643</u>
(Subtotal Sections 1-8)				

TOTAL ROADWAY MOBILIZATION \$7,845,643

Section 10 Roadway Additions

Supplemental Work

<u>\$78,456,433</u>	X	<u>10.00%</u>	=	<u>\$7,845,643</u>
(Subtotal Sections 1-8)		(5% - 10%)		

Contingencies

<u>\$78,456,433</u>	X	<u>20.00%</u>	=	<u>\$15,691,287</u>
(Subtotal Sections 1-8)				

TOTAL ROADWAY ADDITIONS \$23,536,930

TOTAL ROADWAY ITEMS \$109,839,006
(Subtotal Sections 1 thru 10)

USE 110,000,000

Estimate Prepared By Hank Nguyen
(Print Name)

Phone # (714) 953-1015 Date 8/20/2013

Estimate Checked By Daniel Weddell
(Print Name)

Phone # (714) 953-1020 Date 8/23/2013

II. STRUCTURES ITEMS

STRUCTURE

	<u>No. 1</u>	<u>No. 2</u>	<u>No. 3</u>	<u>No. 4</u>	<u>No. 5</u>
Structure Name	Golden Springs UC (Conn A)	Grand Ave OC	Diamond Bar UC (Conn B)	Golf Course Tunnel	Architectural Treatment
Structure Type			CIP PS Box Girder		
Widening Width - (ft)					
Span Lengths - (ft)					
Total Area - (sf)					
Footing Type (Pile/Spread)					
Total Cost for Structure	\$7,766,000	\$12,189,000	\$10,558,000	\$3,500,000	\$443,000
Removal Cost					

	No. 6	No. 7	No. 8	No.9	No.10
Structure Name	Retaining Wall	Retaining Wall	Retaining Wall	Retaining Wall	Retaining Wall
	No. 40	No. 244B	No. 250	No. 258	No. 280
Structure Type	Tie Back	Secant Pile	MSE	MSE	MSE
Widening Width - (ft)					
Span Lengths - (ft)					
Total Area - (sf)	6,400	34,000	4,600	14,000	12,000
Footing Type (Pile/Spread)					
Total Cost for Structure	\$1,815,000	\$278,000	\$411,000	\$2,006,000	\$1,059,000
Removal Cost					

	<u>No.11</u>	<u>No.12</u>	<u>No.13</u>	<u>No.14</u>	
Structure Name	Retaining Wall No. 282	Retaining Wall No. 287	Retaining Wall No. 288	Retaining Wall No. 352	
Structure Type	MSE	MSE	MSE	MSE	
Widening Width - (ft)					
Span Lengths - (ft)					
Total Area - (sf)	30,000	3,600	22,000	4,600	
Footing Type (Pile/Spread)					
Total Cost for Structure	\$2,755,000	\$440,000	\$2,138,000	\$417,000	
Removal Cost					

		SUBTOTAL STRUCTURES ITEMS	\$45,775,000
Railroad Related Costs			\$0
		SUBTOTAL RAILROAD ITEMS	\$0
		TOTAL STRUCTURES ITEMS	\$45,775,000
COMMENTS:		USE	\$45,800,000
Estimate Prepared By	Vinh Trinh	(714) 953-1019	7/24/2012
	Print Name	Phone #	Date

III. RIGHT OF WAY

	Current Values (Future Use)	Escalation Rates	Escalated Values* (5 Years)
A. Acquisition, including excess lands, damages to remainder(s), and Goodwill	\$23,145,934	7.00%	\$32,463,370
B. Acquisition of Offset Mitigation	\$0	0.00%	\$0
C. Utility Relocation	\$4,102,000	8.00%	\$6,027,184
D. Relocation Assistance	\$0	3.00%	\$0
E. Clearance/Demolition	\$0	3.00%	\$0
F. Title and Escrow Fees	\$222,898	3.00%	\$258,400
G. Project Permit Fees	\$0	3.00%	\$0
H. Condemnation Cost	\$0	3.00%	\$0
I. 'TOTAL RIGHT OF WAY (CURRENT VALUES)	\$27,470,832	TOT. ESC. R/W	\$38,748,954
Use			\$38,749,000

*Escalated to assumed year of advertising of 2017

Estimate Prepared By	<u>Ray Armstrong</u>	<u>(562) 304-2000</u>	<u>5/22/2013</u>
	(Print Name)	Phone #	Date

(If appropriate, attach additional pages and backup)

Attachment F – Right-of-Way Data Sheet

RIGHT OF WAY DATA SHEET

(Form #)

EXHIBIT

4-EX-1 (REV 3/2004)

Page 1 of 4

To: Andrew Nierenberg Date May 21, 2013
 Attention: Linda Tong Dist 07 Co LA Rte 57, 60 P/M R4.3/R4.8 ; R23.3/R26.5
 EA 279100
 Project Description Reconstruct Grand Avenue Interchange
 Subject: Right of Way Data
 Alternate No. 2 (No Soundwalls)

This Alternate meets the criteria for a Design/Build Project: Yes ☐ No ☒

1. Right of Way Cost Estimate: To be entered into PMCS COST RW1-5 Screens

	Current Value Future Use	Escalation Rate	Escalated Value (5 Years)
A. Total Acquisition Cost			\$ <u>29,335,458</u>
Acquisition, including Excess Lands, Damages, and Goodwill (includes 25% contingency)	\$ <u>20,915,776</u>	<u>7</u> %	\$ <u>29,335,459</u>
Project Permit Fees.			\$ <u>0</u>
B. Utility Relocation (City Share) (includes 25% contingency)	\$ <u>3,789,500</u>	<u>8</u> %	\$ <u>5,568,019</u>
C. Relocation Assistance	\$ <u>0</u>	<u>3</u> %	\$ <u>0</u>
D. Clearance/Demolition	\$ <u>0</u>	<u>3</u> %	\$ <u>0</u>
E. Title and Escrow (includes 25% contingency)	\$ <u>214,469</u>	<u>3</u> %	\$ <u>248,629</u>
F. Total Estimated Cost	\$ <u>24,919,745</u>		\$ <u>35,152,107</u>
G. Construction Contract Work	\$ <u>0</u>	(These are construction costs that are to be included in the projects PS&E)	

2. Current Date of Right of Way Certification January 30, 2015**3. Parcel Data:** To be entered into PMCS EVNT RW Screen

Type	Dual/Appr	Utilities	RR Involvements	
X		U4-1 <u>12</u>	None	<u>X</u>
A		-2	C&M Agrmt	
B <u>25</u>	<u>2</u>	-3	Svc Contract	
C <u>1</u>	<u>1</u>	-4	Design	
D		U5-7	Const.	
E XXXX		-8	Lic/RE/Clauses	
F XXXX		-9 <u>12</u>		
Misc R/W Work				
Total	<u>29</u>		RAP Displ	<u>0</u>
			Clear/Demo	<u>0</u>
			Const Permits	<u>0</u>
			Condemnation	<u>1</u>
			Excess	<u>0</u>
Areas: R/W (Caltrans Takes)		<u>409,494 sf</u>	No. Excess	<u>0</u>
R/W (City of Industry Takes)		<u>34,122 sf</u>	Pcls:	<u>0</u>
R/W (City of Diamond Bar Takes)		<u>41,855 sf</u>		<u>0</u>
Transfer to Caltrans (City of Industry)		<u>17,566 sf</u>		<u>0</u>
Transfer to Caltrans (City of D.B.)		<u>3,078 sf</u>		<u>0</u>

Entered PCMS Screens ___/___/___ by
 Entered AGRE Screen (Railroad data only) ___/___/___ by

ATTACHMENT F

RIGHT OF WAY DATA SHEET

(Form #)

EXHIBIT

4-EX-1 (REV 3/2004)

Page 2 of 4

4. Are there any major items of construction contract work?
Yes ☐ No ☒ (If yes, explain.)
5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.) No right of way required ☐

In addition to the below project information, please see attached cost estimate identifying parcel impacts and per parcel costs (Right of Way Data Sheet Cost Estimate).

All acquisitions described herein are identified by ID number, which is located and described in the Right-of-Way Estimate Worksheet.

Various easements - Temporary construction easements (TCE), footing easements, Los Angeles County Sewer Department (LACSD) easements, public utility easement (PUE), and aerial easements are required for the construction of the project.

Acquisitions consisting of privately held commercial property owned by Oak Creek must be made and transferred to Caltrans (ID# 1a & 1b). Partial takes of APN# 8293-050-032 and APN# 8293-050-003 are required. The land affected is currently landscaped and is likely covered by the existing slope easement for the freeway.

An acquisition consisting of privately held commercial property owned by Ayres Holdings (ID# 2) must be made and transferred to Caltrans. A partial take of APN# 8717-001-085 is required. The land affected is currently landscaped and is likely covered by the existing slope easement for the freeway.

An acquisition consisting of public property owned by Los Angeles County must be made and transferred to Caltrans (ID# 3a, 3b & 3d) and the City of Diamond Bar (ID# 3c & 3e). Partial takes of APN# 8717-001-907, APN# 8717-001-908 and APN# 8717-002-905 are required. The land affected impacts active areas of the Diamond Bar Golf Course and other supporting improvements to be reconstructed to preserve play as determined by a Golf Course architect.

A property absorption under California Streets and Highway Code-83 must be made and transferred to Caltrans (ID# 4). The land affected consists of a portion of Grand Avenue located within the City of Diamond Bar.

Acquisitions consisting of undeveloped property owned by the Industry Urban Development Agency must be made and transferred to Caltrans (ID# 5a, 5b & 5d) and the City of Industry (ID# 5c & 5e). Partial takes of APN# 8719-007-907, APN# 8719-007-917, and APN# 8719-007-922 are required. This acquisition is considered a transfer because there is no cost.

An acquisition consisting of privately held commercial property owned by AP Diamond Bar, LLC must be made and transferred to Caltrans (ID# 8). A partial take of APN# 8281-024-053 is required. The land affected consists of undeveloped slope area and a 30-foot double illuminated marquis sign advertising a business.

A property absorption under California Streets and Highway Code-83 must be made and transferred to Caltrans (ID# 9). The land affected consists of a portion of Grand Avenue located within the City of Industry.

An acquisition consisting of privately held commercial property owned by Perasso Tommy Family T&M must be made and transferred to the City of Diamond Bar (ID# 10). A partial take of APN# 8293-045-131 is required. The land affected consists of sidewalk and landscaping for Chili's Bar and Grill Restaurant.

RIGHT OF WAY DATA SHEET

(Form #)

EXHIBIT

4-EX-1 (REV 3/2004)

Page 3 of 4

6. Is there an effect on assessed valuation? Yes ☐ Not significant ☐ No ☒ (If yes, explain.)

7. Are utility facilities or rights of way affected? Yes ☒ No ☐

(If yes, attach Utility Information Sheet Exhibit 4-EX-5)

The following checked items may seriously impact lead time for utility relocation:

☐ Longitudinal policy conflict(s)

☐ Environmental concerns impacting acquisition of potential easements

☒ Power lines operating in excess of 50 KV and substations

(See attached Exhibit 4-EX-5 for explanation)

8. Are Railroad facilities or rights of way affected?

Yes ☐ No ☒ (If yes, attach Utility Information Sheet Exhibit 4-EX-6)

9. Were any previously unidentified sites with hazardous waste and/or material found?

Yes ☐ None Evident ☒ (If yes, attach memorandum per R/W Manual, Chapter 4, Section 4.01.10.00.)

10. Are RAP displacements required Yes ☐ No ☒ (If yes, provide the following information.)

No. of single family _____

No. of business/nonprofit _____

No. of multi-family _____

No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated N/A, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

11. Are there material borrow and/or disposal sited required? Yes ☐ No ☒ (If yes, explain.)

12. Are there potential relinquishments and/or abandonments? Yes ☐ No ☒ (If yes, explain.)

13. Are there any existing and/or potential airspace sites? Yes ☐ No ☒ (If yes, explain.)

14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if district proposes less than PMCS lead time and/or if significant pressures for project advancement are anticipated).

Based on R/W requirements on Page 1 of this Data Sheet, R/W will require a lead time of 18 months from the date regular appraisals can begin to project certification.

In any event, RW Maps will require 15 months from Final Maps to project certification.

15. Is it anticipated that CALTRANS staff will perform all Right of Way work? Yes ☒ No ☐
(If no, discuss.)

A qualified appraiser and specialty FF&E/ Goodwill appraisers will be retained by the City of Industry. It is anticipated that Caltrans staff will perform appraisal review, acquisition services and project certification.

RIGHT OF WAY DATA SHEET


(Form #)

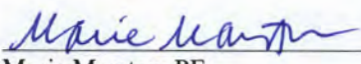
EXHIBIT

4-EX-1 (REV 3/2004)

Page 4 of 4

Evaluation Prepared By:

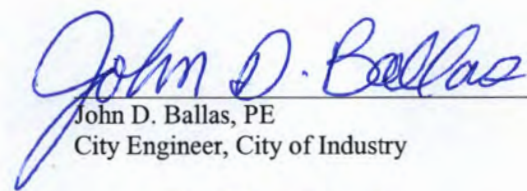
Right of Way Name  Date May 22, 2013
Ray Armstrong, SR/WA
Overland, Pacific & Cutler, Inc.

Utilities Name  Date 5-22-13
Maric Marston, PE
Civil Works Engineers

Recommended for Approval:

 Date 5-22-13
Daniel S. Weddell, PE
WKE, Inc.

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and I find this Data Sheet complete and current.


John D. Ballas, PE
City Engineer, City of Industry
Date 5-24-2013

UTILITY INFORMATION SHEET

(Form #)

-
1. Name of the utility companies involved in project:
 - a. *Los Angeles County Sanitation District (LACSD)*
 - b. *Southern California Edison (SCE)*
 - c. *Verizon Telephone*
 - d. *Walnut Valley Water District (WVWD)*
 2. Type of facilities and agreements required:
 - a. **Sanitation District of Los Angeles County (LACSD)**
 - i. *1350' of 15" vitrified clay pipe (VCP) sewer and manholes located between Golden Springs Drive and the SR-57/SR-60 freeway – to be relocated south of EB SR-60 Grand Avenue off-ramp. VCP will be replaced with polyvinyl chloride (PVC) pipe.*
 - ii. *150' of 12" LACSD VCP sewer (in encasement) crossing SR-57/SR-60 freeway and manhole located south of freeway – line to be extended southward and manhole relocated to accommodate new EB SR-60 Grand Avenue off-ramp.*
 - b. **Southern California Edison (SCE)**
 - i. *66kv overhead transmission pole located south of freeway west of Grand Avenue interchange - To be relocated because of proposed EB SR-60 Grand Avenue off-ramp.*
 - ii. *800' of underground 12 kV distribution along SB Grand Avenue - To be relocated for Grand Avenue bridge construction.*
 - iii. *650' of underground 12 kV distribution along Grand Avenue located north of WB freeway ramps - To be relocated to edge of Grand Avenue.*
 - iv. *1550' underground 12 kV distribution located south of EB SR-57/SR-60 Grand Avenue on-ramp, along northbound Grand Avenue south of the interchange, and along westbound Golden Springs Drive – to be relocated to the edge of proposed roadway.*
 - v. *2700' overhead distribution located south of EB SR-57/SR-60 Grand Avenue on-ramp – to be relocated south outside of Caltrans right of way.*
 - vi. *800' overhead distribution located south of freeway west of Diamond Bar Boulevard interchange – to be relocated because of proposed bypass connector to SR-60.*
 - vii. *900' overhead distribution located south of freeway east of Diamond Bar Boulevard interchange – to be relocated because of proposed bypass connector to SR-60.*
 - c. **Verizon Telephone**
 - i. *800' of communication line along SB Grand Avenue - To be relocated for bridge reconstruction.*
 - d. **Walnut Valley Water District**

Fire hydrants and water meters located on local streets to be relocated where appropriate

 - i. *800' of 12" ACP water line in 20" steel casing – Line to be relocated for Grand Avenue bridge construction. ACP will be replaced with PVC in relocated line.*
 - ii. *700' of 12" PVC water line in 20" steel casing and 2000' of 12" PVC reclaimed water line in 20" steel casing – Line to be relocated for Grand Avenue bridge construction.*

UTILITY INFORMATION SHEET

(Form #)

EXHIBIT

4-EX-5

Page 2 of 2

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

Existing SCE power poles and overhead facilities are located near the right of way adjacent to the WB Bypass Connector. For an approximate length of 650 feet, the overhead facilities may cross portions of the right of way.

Disposition of longitudinal encroachment(s):

- ☐ Relocation required.
☐ Exception to policy needed.
☒ Other. Explain.

No longitudinal utility encroachment will be required for this project. It is expected the facilities are actually outside the right of way. During the final PS&E phase, the exact location of the power poles and overhead facilities will be determined by survey and the locations will be updated. If the facilities are within the state right of way, they will be relocated as part of the project. The proposed project improvements will not otherwise impact these poles or require relocations.

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 City's obligation for utility relocation on this project: \$ _____

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

Utility Involvements

U4-1	12	U5-7	
-2		-8	
-3		-9	12
-4			

Prepared By:

Marie Marston
 Marie Marston, PE
 Civil Works Engineers

5-22-13
 Date

RIGHT OF WAY DATA SHEET

(Form #)

EXHIBIT

4-EX-1 (REV 3/2004)

Page 1 of 4

To: Andrew Nierenberg Date May 21, 2013
 Dist 07 Co LA Rte 57, 60 P/M R4.3/R4.8 ; R23.3/R26.5
 Attention: Linda Tong EA 279100
 Project Description Reconstruct Grand Avenue Interchange
 Subject: Right of Way Data
 Alternate No. 3 (No Soundwalls)

This Alternate meets the criteria for a Design/Build Project: Yes ☐ No ☒

1. Right of Way Cost Estimate: To be entered into PMCS COST RW1-5 Screens

	Current Value Future Use	Escalation Rate	Escalated Value (5 Years)
A. Total Acquisition Cost			\$ <u>32,463,370</u>
Acquisition, including Excess Lands, Damages, and Goodwill (includes 25% contingency)	\$ <u>23,145,934</u>	<u>7</u> %	\$ <u>32,463,370</u>
Project Permit Fees.			\$ <u>0</u>
B. Utility Relocation (City Share) (includes 25% contingency)	\$ <u>4,102,000</u>	<u>8</u> %	\$ <u>6,027,184</u>
C. Relocation Assistance	\$ <u>0</u>	<u>3</u> %	\$ <u>0</u>
D. Clearance/Demolition	\$ <u>0</u>	<u>3</u> %	\$ <u>0</u>
E. Title and Escrow (includes 25% contingency)	\$ <u>222,898</u>	<u>3</u> %	\$ <u>258,400</u>
F. Total Estimated Cost	\$ <u>27,470,832</u>		\$ <u>38,748,954</u>
G. Construction Contract Work	\$ <u>0</u>	(These are construction costs that are to be included in the projects PS&E)	

2. Current Date of Right of Way Certification January 30, 2015**3. Parcel Data:** To be entered into PMCS EVNT RW Screen

Type	Dual/Appr	Utilities	RR Involvements	
X		U4-1 <u>12</u>	None	<u>X</u>
A		-2	C&M Agrmt	
B <u>26</u>	<u>2</u>	-3	Svc Contract	
C <u>1</u>	<u>1</u>	-4	Design	
D		U5-7	Const.	
E XXXX		-8	Lic/RE/Clauses	
F XXXX		-9 <u>12</u>		
Total	<u>31</u>		Misc R/W Work	
			RAP Displ	<u>0</u>
			Clear/Demo	<u>0</u>
			Const Permits	<u>0</u>
			Condemnation	<u>1</u>
			Excess	<u>0</u>
Areas: R/W (Caltrans Takes)		<u>554,697 sf</u>	No. Excess	<u>0</u>
R/W (City of Industry Takes)		<u>34,122 sf</u>	Pcls:	<u>0</u>
R/W (City of Diamond Bar Takes)		<u>36,951 sf</u>		<u>0</u>
Transfer to Caltrans (City of Industry)		<u>17,566 sf</u>		<u>0</u>
Transfer to Caltrans (City of D.B.)		<u>40,404 sf</u>		<u>0</u>

Entered PCMS Screens ___/___/___ by
 Entered AGRE Screen (Railroad data only) ___/___/___ by

RIGHT OF WAY DATA SHEET

(Form #)

EXHIBIT

4-EX-1 (REV 3/2004)

Page 2 of 4

4. Are there any major items of construction contract work?
Yes ☐ No ☒ (If yes, explain.)
5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.) No right of way required ☐

In addition to the below project information, please see attached cost estimate identifying parcel impacts and per parcel costs (Right of Way Data Sheet Cost Estimate).

All acquisitions described herein are identified by ID number, which is located and described in the Right-of-Way Estimate Worksheet.

Various easements - Temporary construction easements (TCE), footing easements, Los Angeles County Sewer Department (LACSD) easements, public utility easement (PUE), and aerial easements are required for the construction of the project.

Acquisitions consisting of privately held commercial property owned by Oak Creek must be made and transferred to Caltrans (ID# 1a & 1b). Partial takes of APN# 8293-050-032 and APN# 8293-050-003 are required. The land affected is currently landscaped and is likely covered by the existing slope easement for the freeway.

An acquisition consisting of privately held commercial property owned by Ayres Holdings (ID# 2) must be made and transferred to Caltrans. A partial take of APN# 8717-001-085 is required. The land affected is currently landscaped and is likely covered by the existing slope easement for the freeway.

An acquisition consisting of public property owned by Los Angeles County must be made and transferred to Caltrans (ID# 3a, 3b & 3d) and the City of Diamond Bar (ID# 3c & 3e). Partial takes of APN# 8717-001-907, APN# 8717-001-908 and APN# 8717-002-905 are required. The land affected impacts active areas of the Diamond Bar Golf Course and other supporting improvements to be reconstructed to preserve play as determined by a Golf Course architect.

A property absorption under California Streets and Highway Code-83 must be made and transferred to Caltrans (ID# 4). The land affected consists of a portion of Grand Avenue located within the City of Diamond Bar.

Acquisitions consisting of undeveloped property owned by the Industry Urban Development Agency must be made and transferred to Caltrans (ID# 5a, 5b & 5d) and the City of Industry (ID# 5c & 5e). Partial takes of APN# 8719-007-907, APN# 8719-007-917, and APN# 8719-007-922 are required. This acquisition is considered a transfer because there is no cost.

An acquisition consisting of privately held commercial property owned by AP Diamond Bar, LLC must be made and transferred to Caltrans (ID# 8). A partial take of APN# 8281-024-053 is required. The land affected consists of undeveloped slope area and a 30-foot double illuminated marquis sign advertising a business.

A property absorption under California Streets and Highway Code-83 must be made and transferred to Caltrans (ID# 9). The land affected consists of a portion of Grand Avenue located within the City of Industry.

An acquisition consisting of privately held commercial property owned by Perasso Tommy Family T&M must be made and transferred to the City of Diamond Bar (ID# 10). A partial take of APN# 8293-045-131 is required. The land affected consists of sidewalk and landscaping for Chili's Bar and Grill Restaurant.

RIGHT OF WAY DATA SHEET

(Form #)

EXHIBIT

4-EX-1 (REV 3/2004)

Page 3 of 4

6. Is there an effect on assessed valuation? Yes ☐ Not significant ☐ No ☒ (If yes, explain.)

7. Are utility facilities or rights of way affected? Yes ☒ No ☐

(If yes, attach Utility Information Sheet Exhibit 4-EX-5)

The following checked items may seriously impact lead time for utility relocation:

☐ Longitudinal policy conflict(s)

☐ Environmental concerns impacting acquisition of potential easements

☒ Power lines operating in excess of 50 KV and substations

(See attached Exhibit 4-EX-5 for explanation)

8. Are Railroad facilities or rights of way affected?

Yes ☐ No ☒ (If yes, attach Utility Information Sheet Exhibit 4-EX-6)

9. Were any previously unidentified sites with hazardous waste and/or material found?

Yes ☐ None Evident ☒ (If yes, attach memorandum per R/W Manual, Chapter 4, Section 4.01.10.00.)

10. Are RAP displacements required Yes ☐ No ☒ (If yes, provide the following information.)

No. of single family _____

No. of business/nonprofit _____

No. of multi-family _____

No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated N/A, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

11. Are there material borrow and/or disposal sited required? Yes ☐ No ☒ (If yes, explain.)

12. Are there potential relinquishments and/or abandonments? Yes ☐ No ☒ (If yes, explain.)

13. Are there any existing and/or potential airspace sites? Yes ☐ No ☒ (If yes, explain.)

14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if district proposes less than PMCS lead time and/or if significant pressures for project advancement are anticipated).

Based on R/W requirements on Page 1 of this Data Sheet, R/W will require a lead time of 18 months from the date regular appraisals can begin to project certification.

In any event, RW Maps will require 15 months from Final Maps to project certification.

15. Is it anticipated that CALTRANS staff will perform all Right of Way work? Yes ☒ No ☐
(If no, discuss.)

A qualified appraiser and specialty FF&E / Goodwill appraisers will be retained by the City of Industry. It is anticipated that Caltrans staff will perform appraisal review, acquisition services and project certification.

ATTACHMENT F

RIGHT OF WAY DATA SHEET

(Form #)

EXHIBIT

4-EX-1 (REV 3/2004)

Page 4 of 4

Evaluation Prepared By:

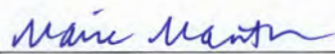
Right of Way

Name

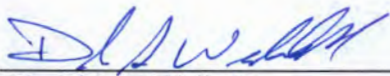
Date May 22, 2013Ray Armstrong, SR/WA
Overland, Pacific & Cutler, Inc.

Utilities

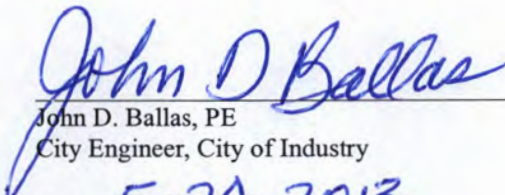
Name

Date 5-22-13Marie Marston, PE
Civil Works Engineers

Recommended for Approval:

Date 5-22-13Daniel S. Weddell, PE
WKE, Inc.

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and I find this Data Sheet complete and current.

John D. Ballas, PE
City Engineer, City of IndustryDate 5-24-2013

1. Name of the utility companies involved in project:

- a. *Los Angeles County Sanitation District (LACSD)*
- b. *Southern California Edison (SCE)*
- c. *Verizon Telephone*
- d. *Walnut Valley Water District (WVWD)*

2. Type of facilities and agreements required:

a. Sanitation District of Los Angeles County (LACSD)

- i. *1350' of 15" vitrified clay pipe (VCP) sewer and manholes located between Golden Springs Drive and the SR-57/SR-60 freeway – to be relocated south of EB SR-60 Grand Avenue off-ramp. VCP will be replaced with polyvinyl chloride (PVC) pipe.*
- ii. *150' of 12" LACSD VCP sewer (in encasement) crossing SR-57/SR-60 freeway and manhole located south of freeway – line to be extended southward and manhole relocated to accommodate new EB SR-60 Grand Avenue off-ramp.*

b. Southern California Edison (SCE)

- i. *66kv overhead transmission pole located south of freeway west of Grand Avenue interchange - To be relocated because of proposed EB SR-60 Grand Avenue off-ramp.*
- ii. *800' of underground 12 kV distribution along SB Grand Avenue - To be relocated for Grand Avenue bridge construction.*
- iii. *650' of underground 12 kV distribution along Grand Avenue located north of WB freeway ramps - To be relocated to edge of Grand Avenue.*
- iv. *1550' underground 12 kV distribution located south of EB SR-57/SR-60 Grand Avenue on-ramp, along northbound Grand Avenue south of the interchange, and along westbound Golden Springs Drive – to be relocated to the edge of proposed roadway.*
- v. *2700' overhead distribution located south of EB SR-57/SR-60 Grand Avenue on-ramp – to be relocated south outside of Caltrans right of way.*
- vi. *800' overhead distribution located south of freeway west of Diamond Bar Boulevard interchange – to be relocated because of proposed bypass connector to SR-60.*
- vii. *900' overhead distribution located south of freeway east of Diamond Bar Boulevard interchange – to be relocated because of proposed bypass connector to SR-60.*

c. Verizon Telephone

- i. *800' of communication line along SB Grand Avenue - To be relocated for bridge reconstruction.*

d. Walnut Valley Water District

Fire hydrants and water meters located on local streets to be relocated where appropriate

- i. *800' of 12" ACP water line in 20" steel casing – Line to be relocated for Grand Avenue bridge construction. ACP will be replaced with PVC in relocated line.*
- ii. *700' of 12" PVC water line in 20" steel casing and 2000' of 12" PVC reclaimed water line in 20" steel casing – Line to be relocated for Grand Avenue bridge construction.*

UTILITY INFORMATION SHEET

(Form #)

EXHIBIT

4-EX-5

Page 2 of 2

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

Existing SCE power poles and overhead facilities are located near the right of way adjacent to the WB Bypass Connector. For an approximate length of 650 feet, the overhead facilities may cross portions of the right of way.

Disposition of longitudinal encroachment(s):

- ☐ Relocation required.
☐ Exception to policy needed.
☒ Other. Explain.

No longitudinal utility encroachment will be required for this project. It is expected the facilities are actually outside the right of way. During the final PS&E phase, the exact location of the power poles and overhead facilities will be determined by survey and the locations will be updated. If the facilities are within the state right of way, they will be relocated as part of the project. The proposed project improvements will not otherwise impact these poles or require relocations.

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 City's obligation for utility relocation on this project: \$ _____

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

Utility Involvements

U4-1	12	U5-7	
-2		-8	
-3		-9	12
-4			

Prepared By:


Marie Marston

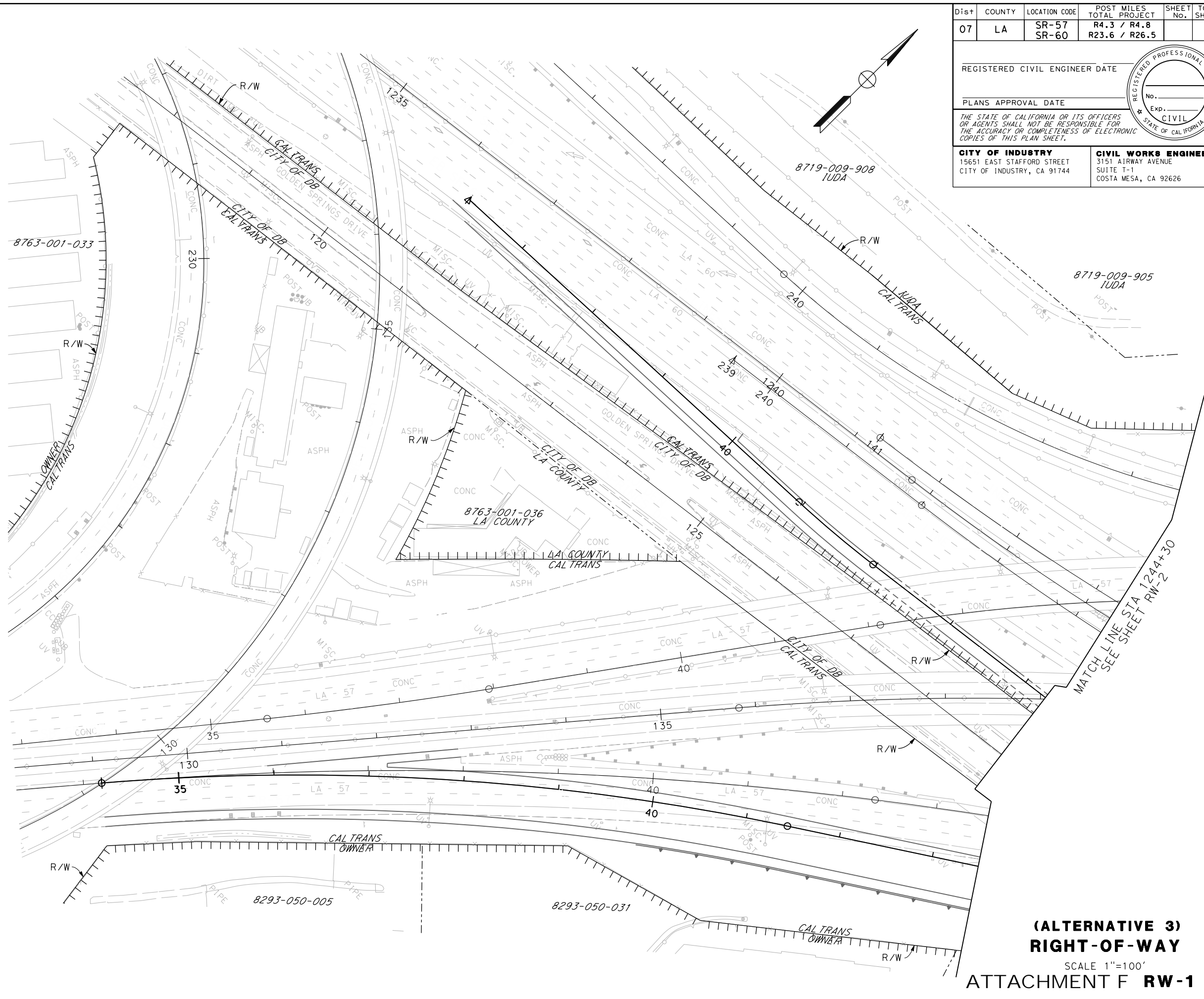
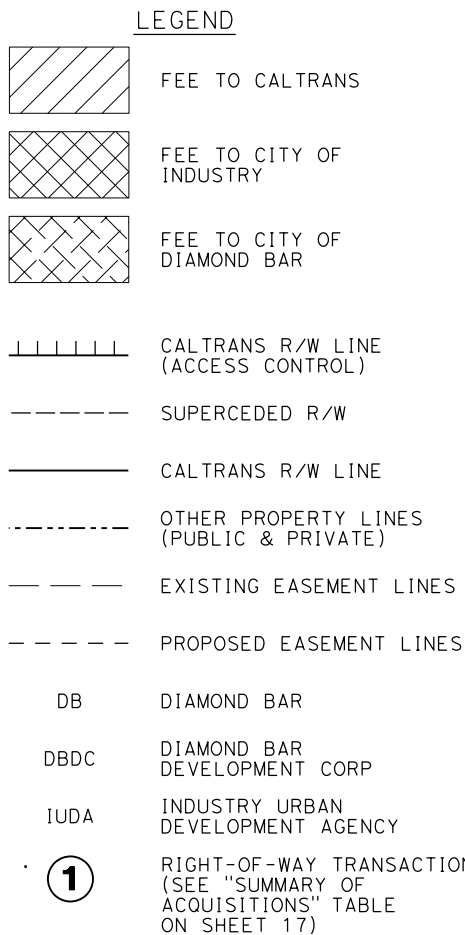
Marie Marston, PE
Civil Works Engineers

5-22-13


Date

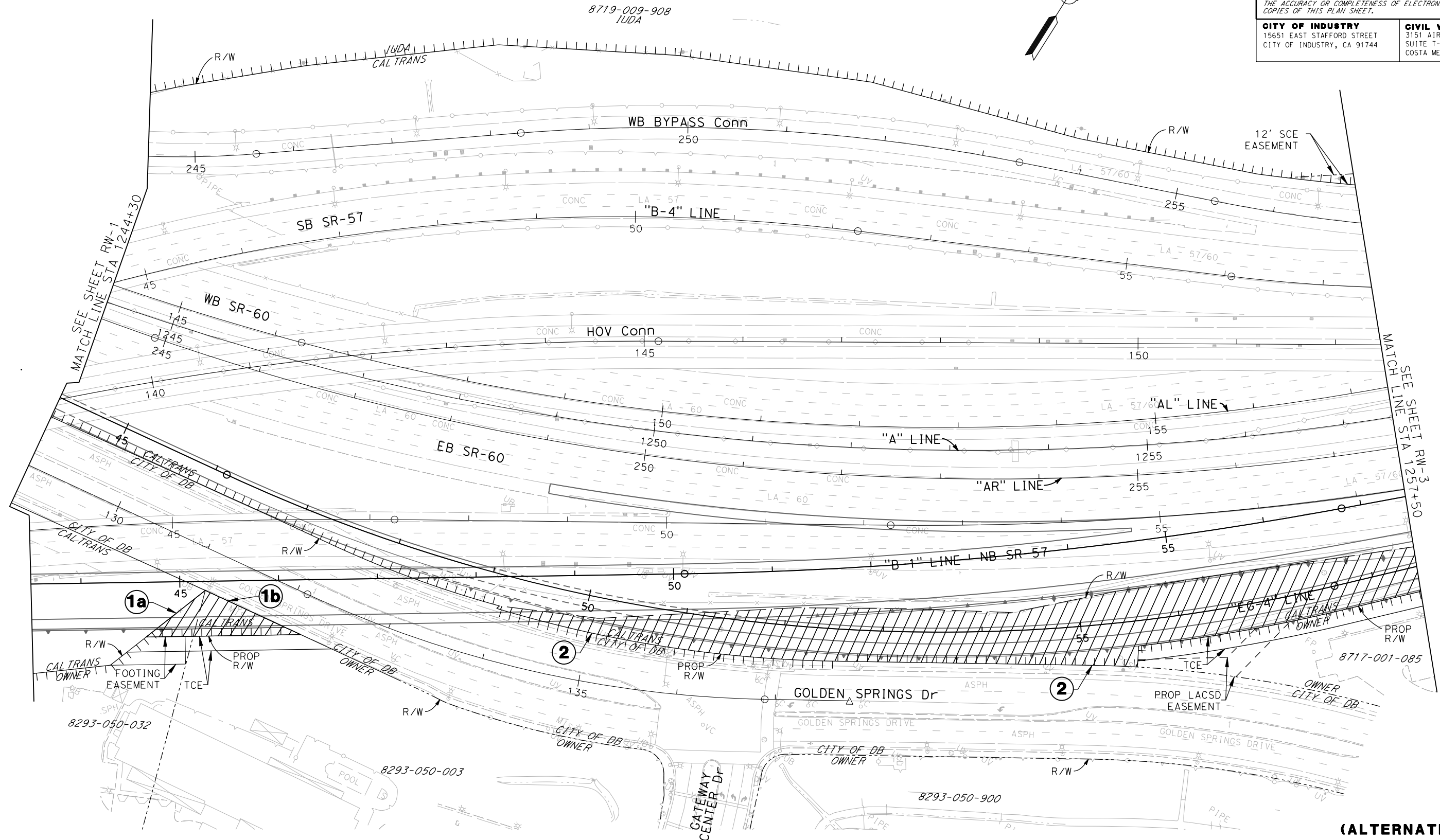
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ST Caltrans							
			CHECKED BY	DATE REVISED			

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3 / R4.8 R23.6 / R26.5		
REGISTERED CIVIL ENGINEER DATE _____					
PLANS APPROVAL DATE _____					
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(ALTERNATIVE 3)
RIGHT-OF-WAY
SCALE 1"=100'
ATTACHMENT F RW-1

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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ATTACHMENT F RW-2

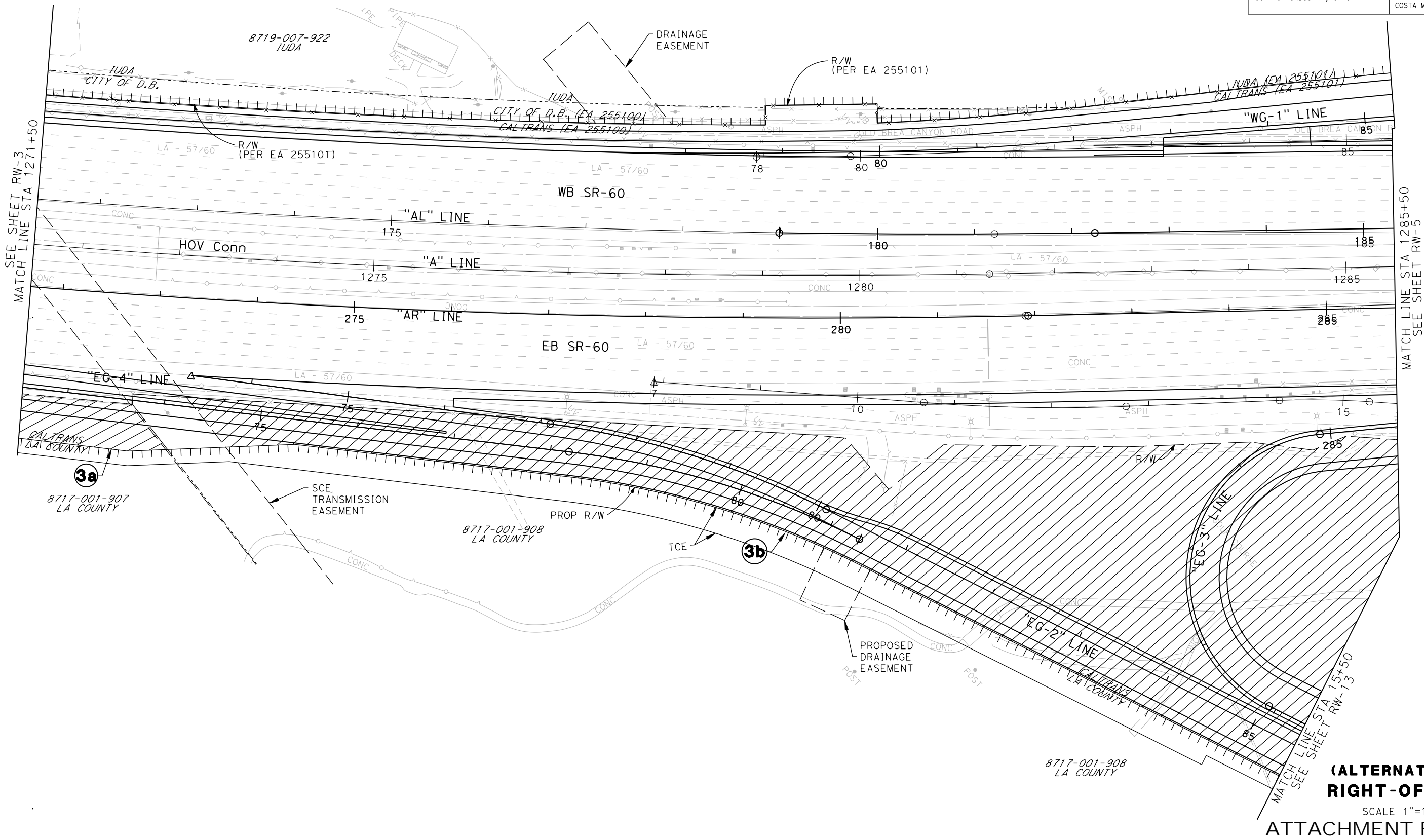
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SCALE 1"=100'

CU 00000	EA 279100
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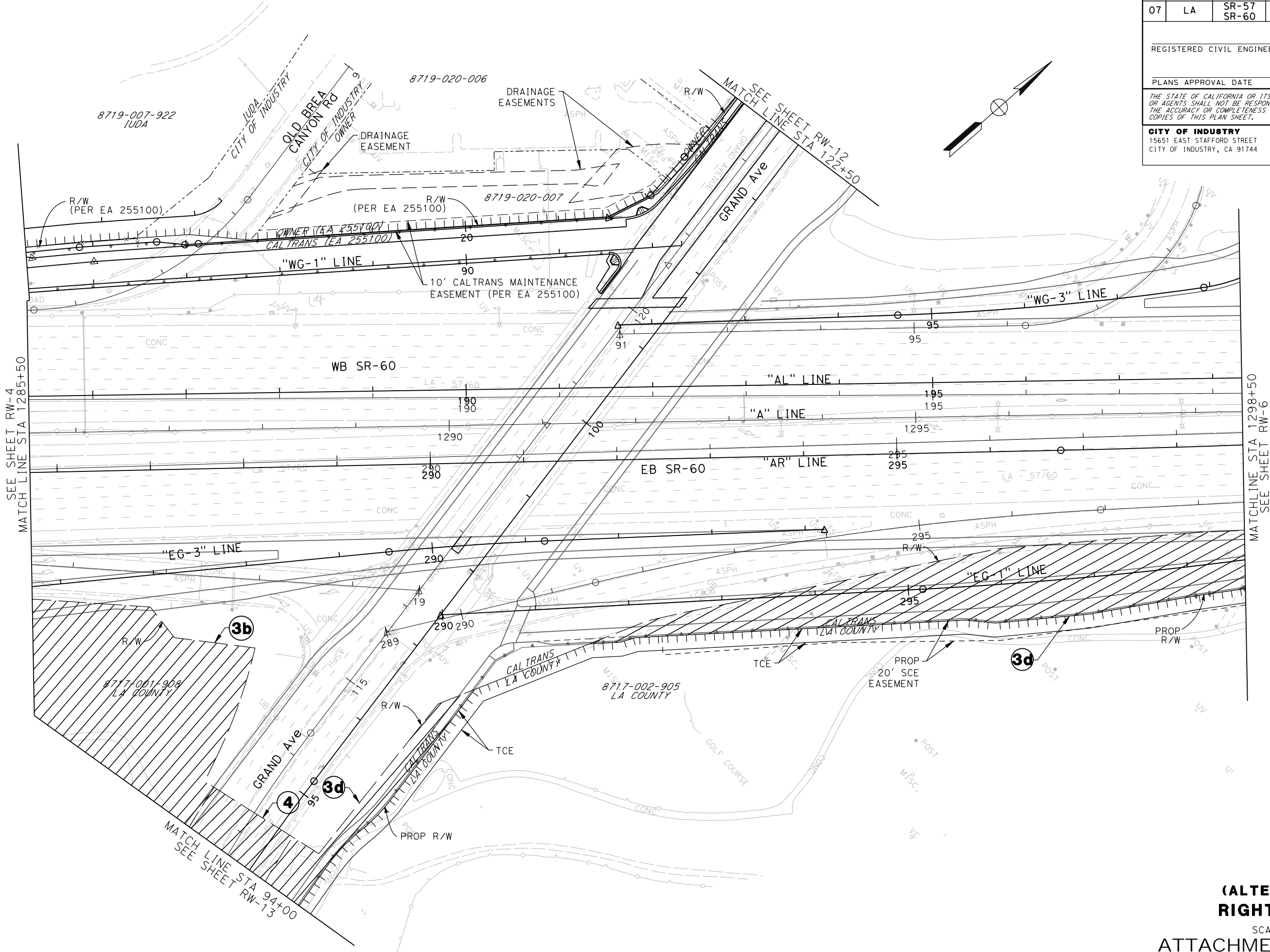
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SUITE T-1
COSTA MESA, CA 92626



(ALTERNATIVE 3)
RIGHT-OF-WAY
SCALE 1"=100'
ATTACHMENT F RW-5

BORDER L.



MATCH LINE STA 1325+50
SEE SHEET RW-8

(ALTERNATIVE 3)
RIGHT-OF-WAY
SCALE 1"=100'
ATTACHMENT F RW-7

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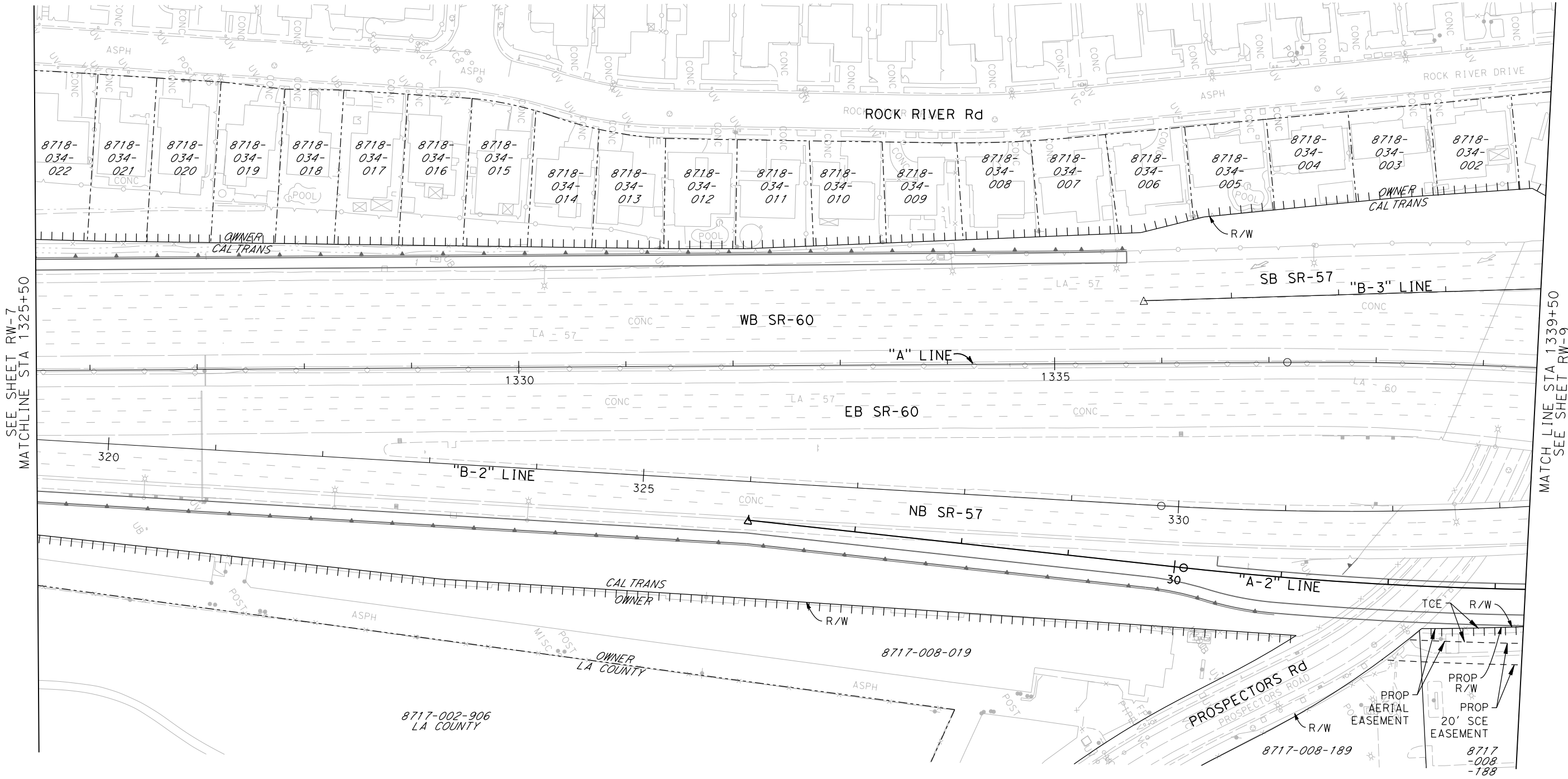
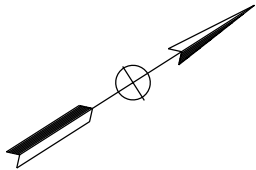
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COSTA MESA, CA 92626

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



(ALTERNATIVE 3)
RIGHT-OF-WAY
SCALE 1"=100'
ATTACHMENT F RW-8

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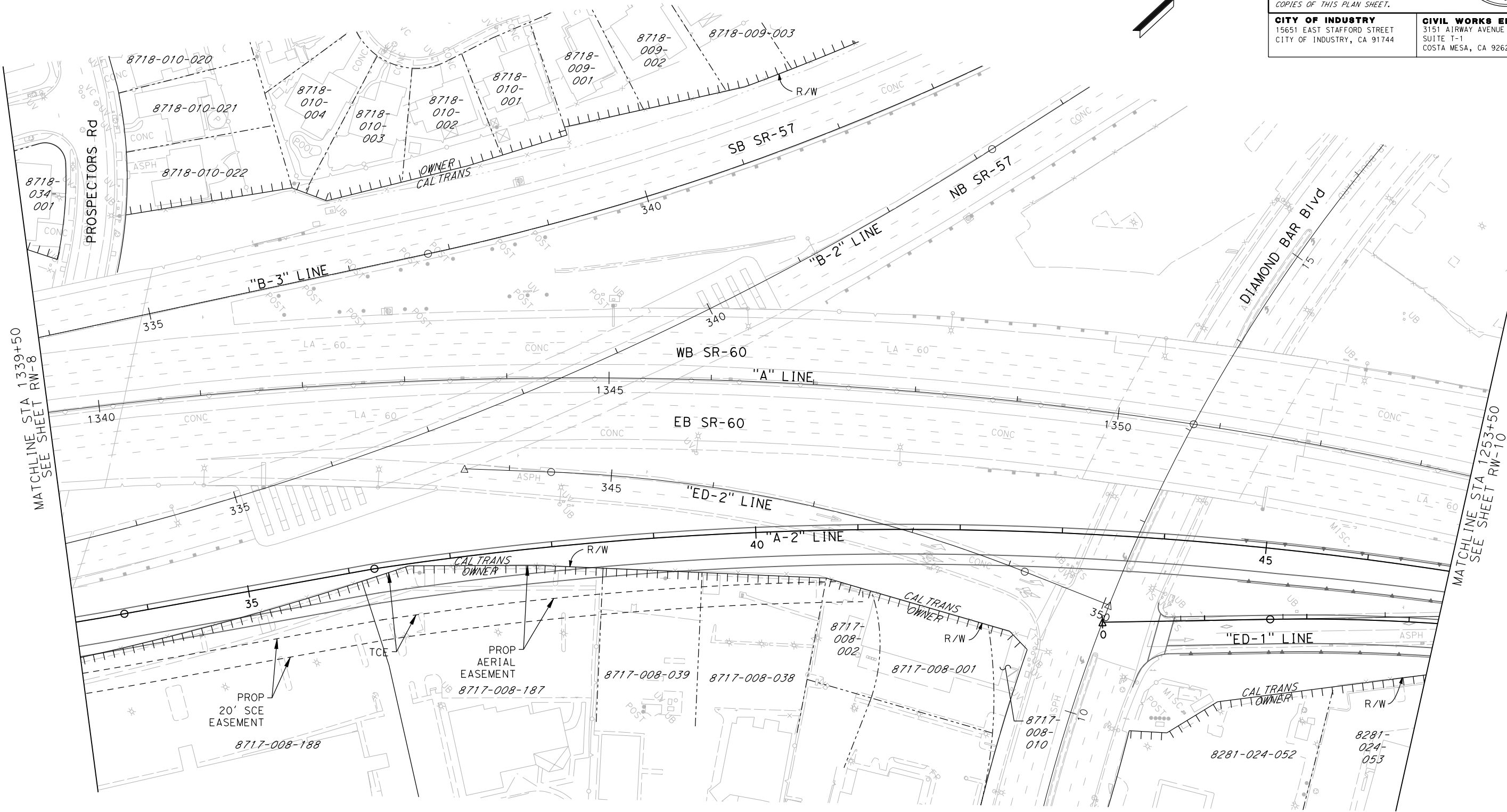
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PLANS APPROVAL DATE

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COSTA MESA, CA 92626



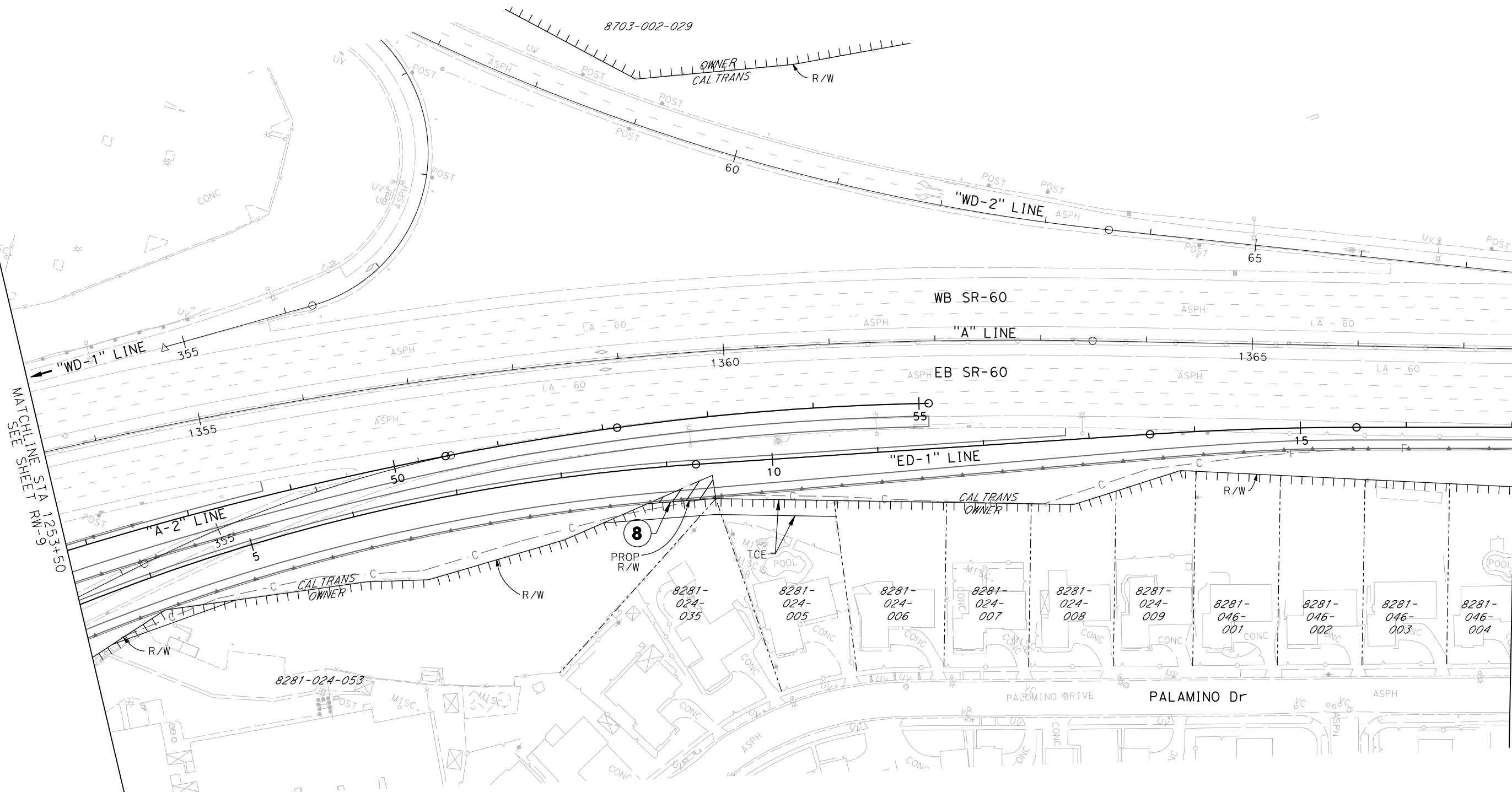
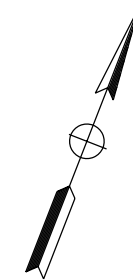
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SCALE 1"=100'
ATTACHMENT F RW-9

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(ALTERNATIVE 3)
RIGHT-OF-WAY
SCALE 1"=100'
ATTACHMENT F RW-10

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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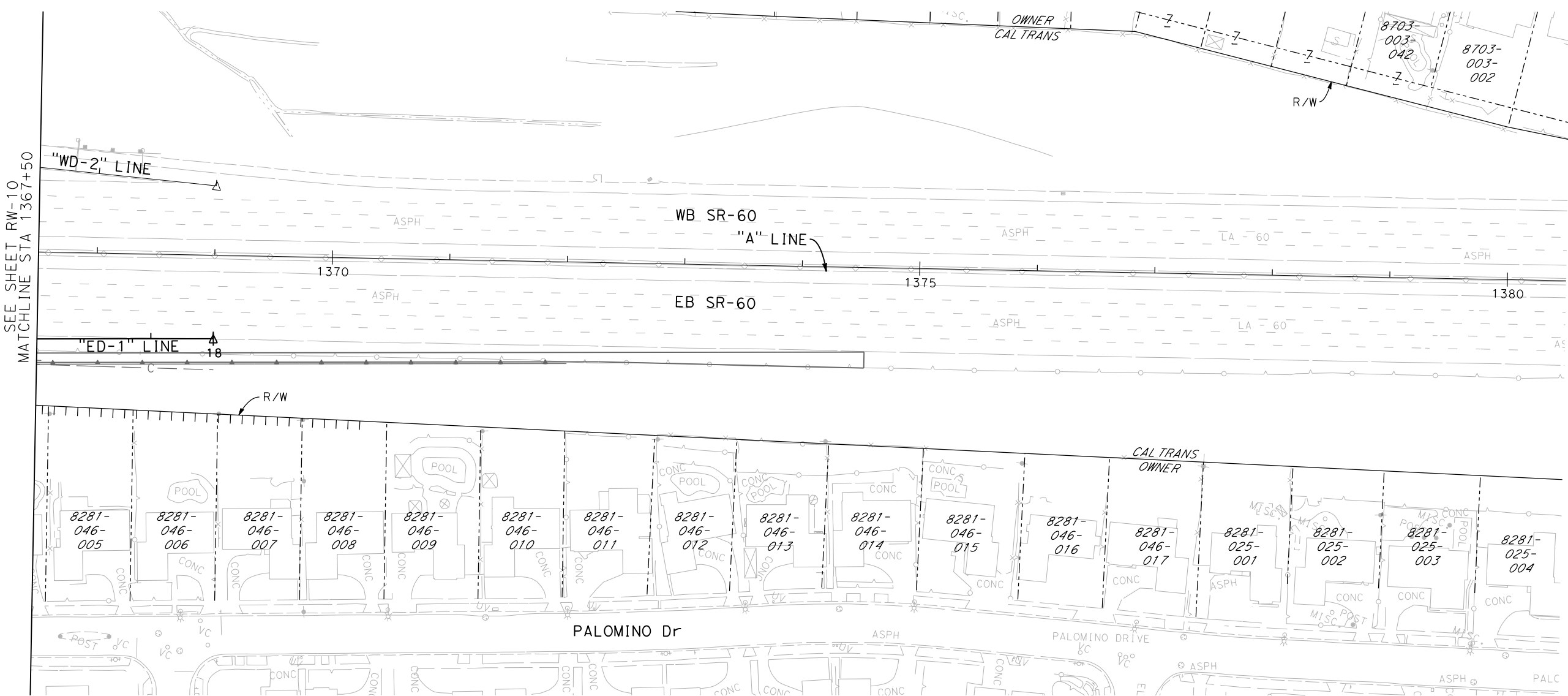
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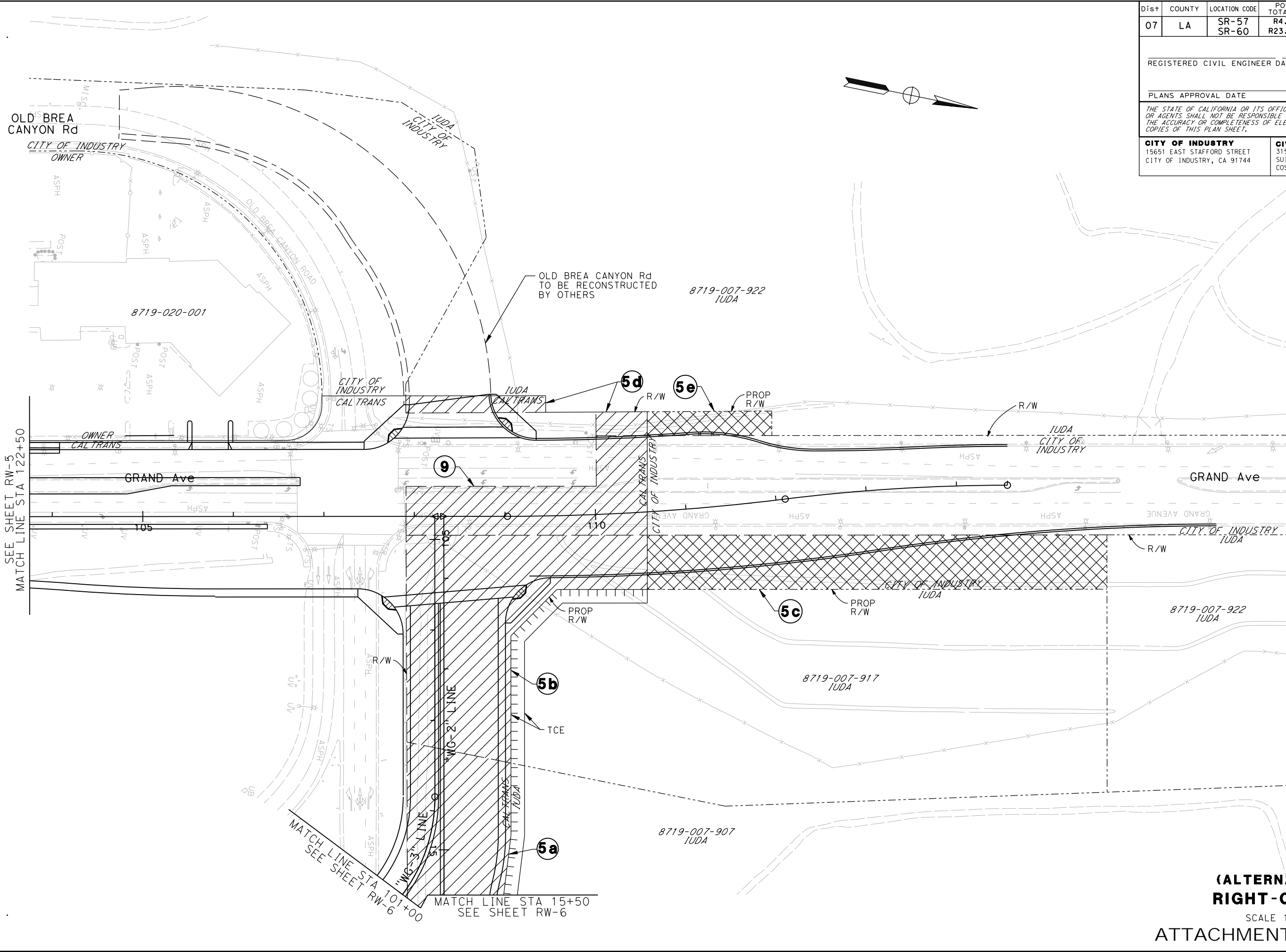
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15651 EAST STAFFORD STREET
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SUITE T-1
COSTA MESA, CA 92626

REGISTERED PROFESSIONAL ENGINEER
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CIVIL
STATE OF CALIFORNIA



(ALTERNATIVE 3)
RIGHT-OF-WAY
SCALE 1"=100'
ATTACHMENT F RW-11



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REGISTERED PROFESSIONAL ENGINEER

No. _____

Exp. _____

CIVIL

STATE OF CALIFORNIA

(ALTERNATIVE 3)
RIGHT-OF-WAY
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ATTACHMENT F **RW-12**

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RELATIVE BORDER SCALE
IS IN INCHES


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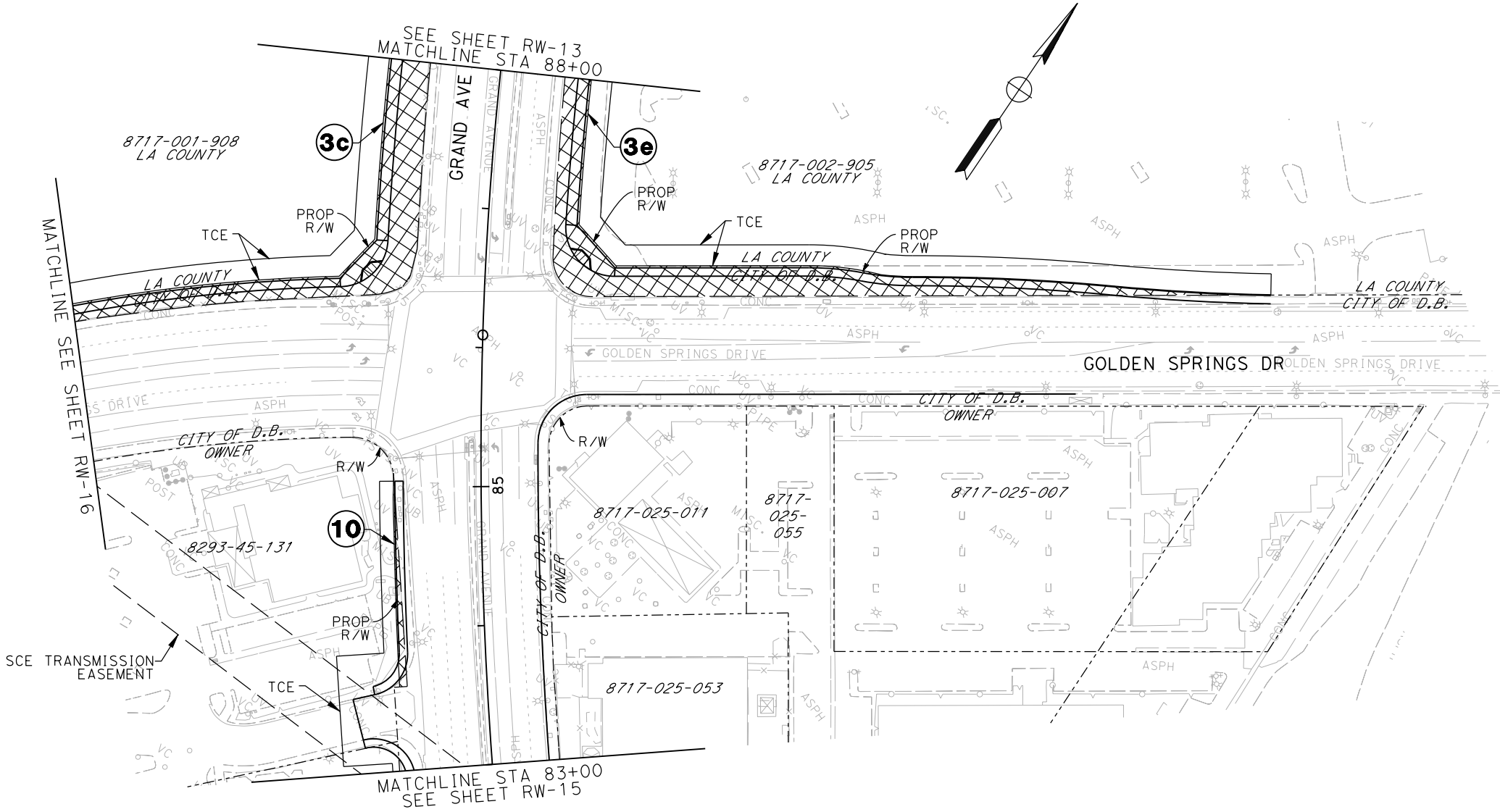
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			CHECKED BY		DATE REVISED	



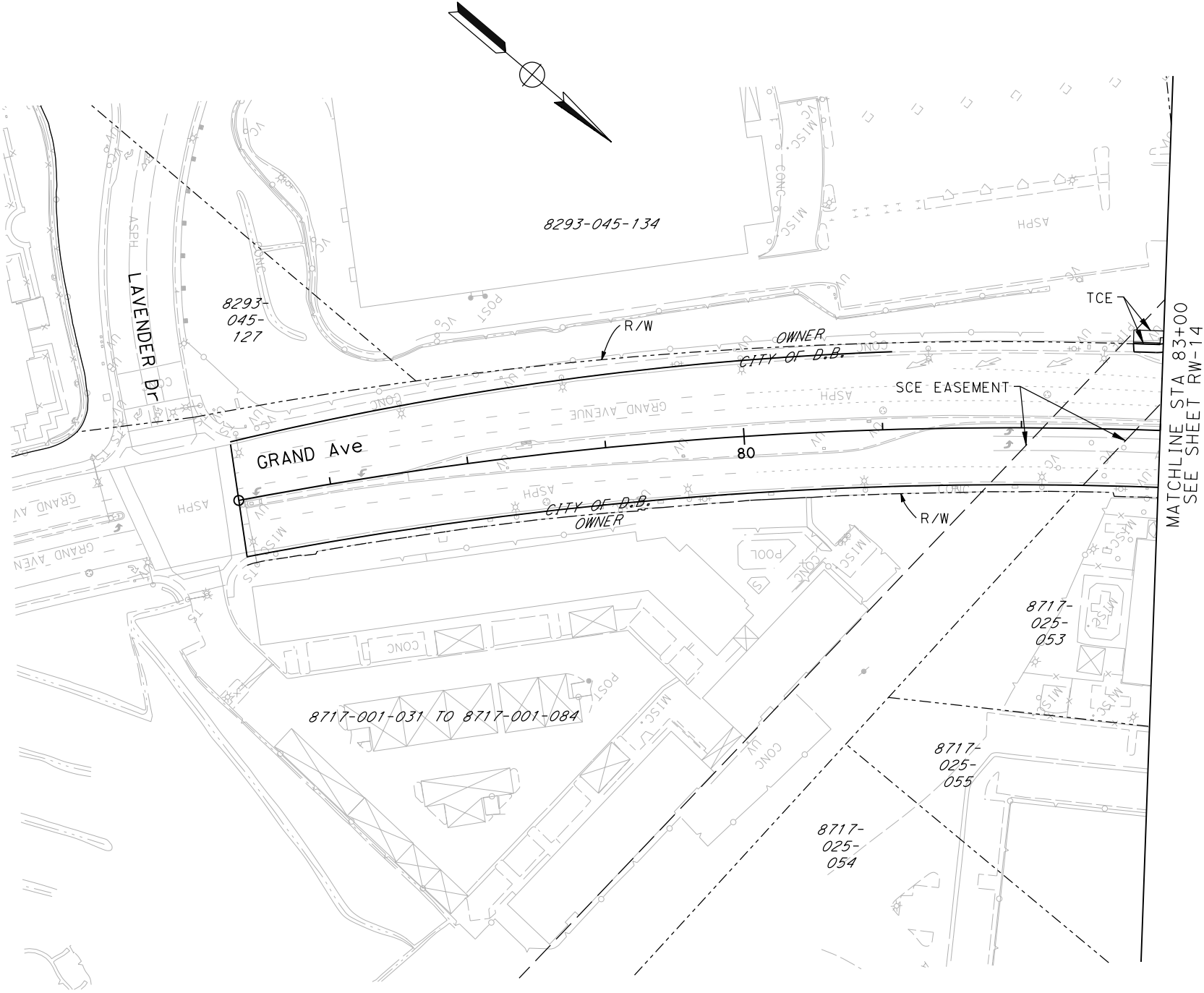
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REGISTERED PROFESSIONAL ENGINEER
No. _____
Exp. _____
CIVIL
STATE OF CALIFORNIA

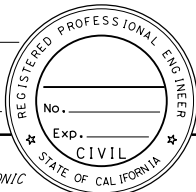
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SCALE 1"=100'
ATTACHMENT F **RW-14**

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Caltrans			CHECKED BY	DATE REVISED		

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REGISTERED CIVIL ENGINEER DATE					
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(ALTERNATIVE 3)
RIGHT-OF-WAY
SCALE 1"=100'
ATTACHMENT F RW-15

RELATIVE BORDER SCALE
IS IN INCHES



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DGN FILE => \$REQUEST

CU 00000

EA 279100

LAST REVISION | DATE PLOTTED => \$DATE
00-00-00 | TIME PLOTTED => \$TIME

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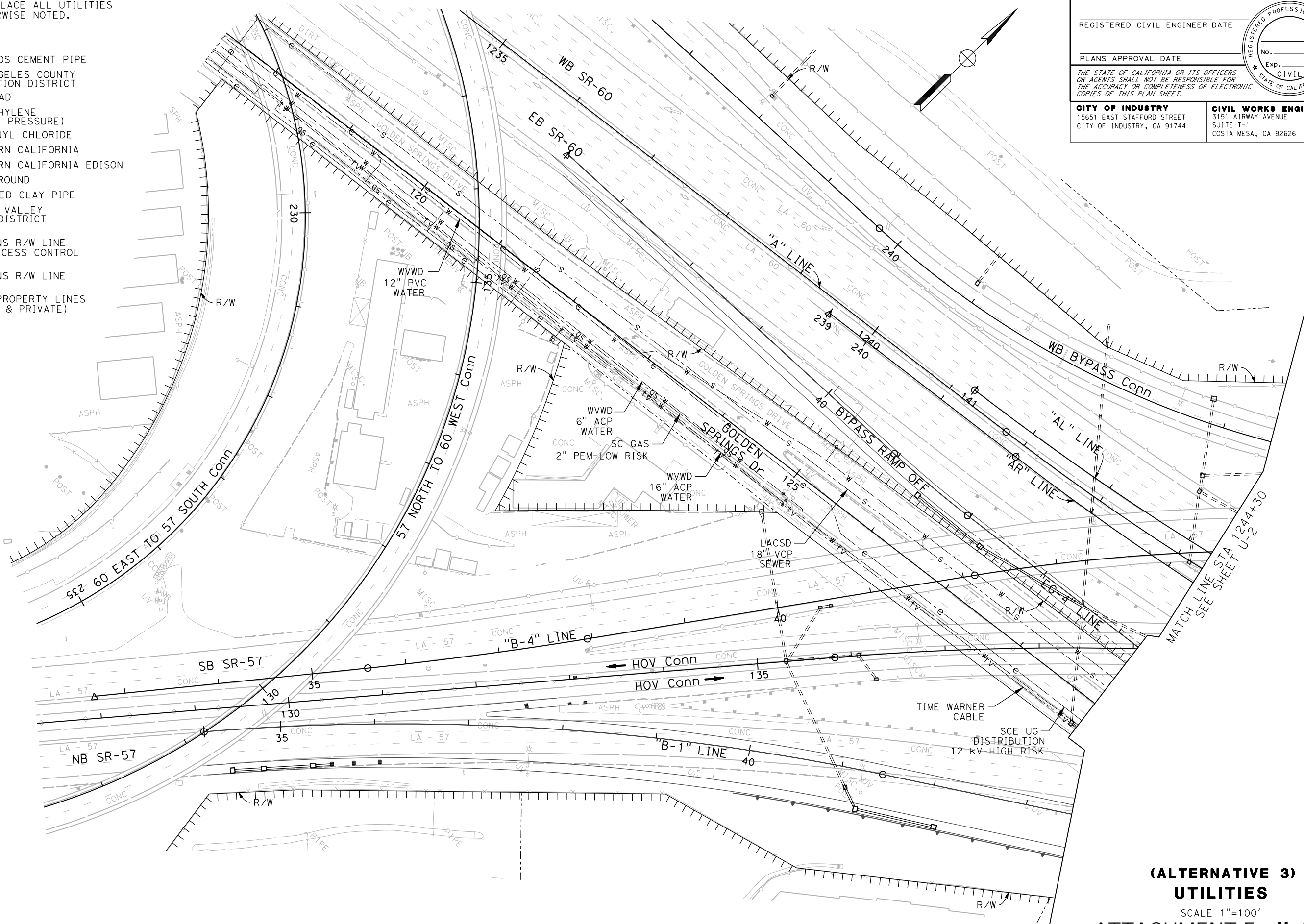
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00-00-00	TIME PLOTTED => \$TIME

NOTE: PROTECT IN PLACE ALL UTILITIES UNLESS OTHERWISE NOTED.

LEGEND

- ACP - ASBESTOS CEMENT PIPE
LACSD - LOS ANGELES COUNTY SANITATION DISTRICT
OH - OVERHEAD
PEM - POLYETHYLENE (MEDIUM PRESSURE)
PVC - POLYVINYL CHLORIDE
SC - SOUTHERN CALIFORNIA
SCE - SOUTHERN CALIFORNIA EDISON
UG - UNDERGROUND
VCP - VITRIFIED CLAY PIPE
WVWD - WALNUT VALLEY WATER DISTRICT

- CALTRANS R/W LINE WITH ACCESS CONTROL
———— CALTRANS R/W LINE
- - - - - OTHER PROPERTY LINES (PUBLIC & PRIVATE)



(ALTERNATIVE 3)
UTILITIES
SCALE 1"=100'
ATTACHMENT F U-1

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3 / R4.8 R23.6 / R26.5		

REGISTERED CIVIL ENGINEER DATE


PLANS APPROVAL DATE

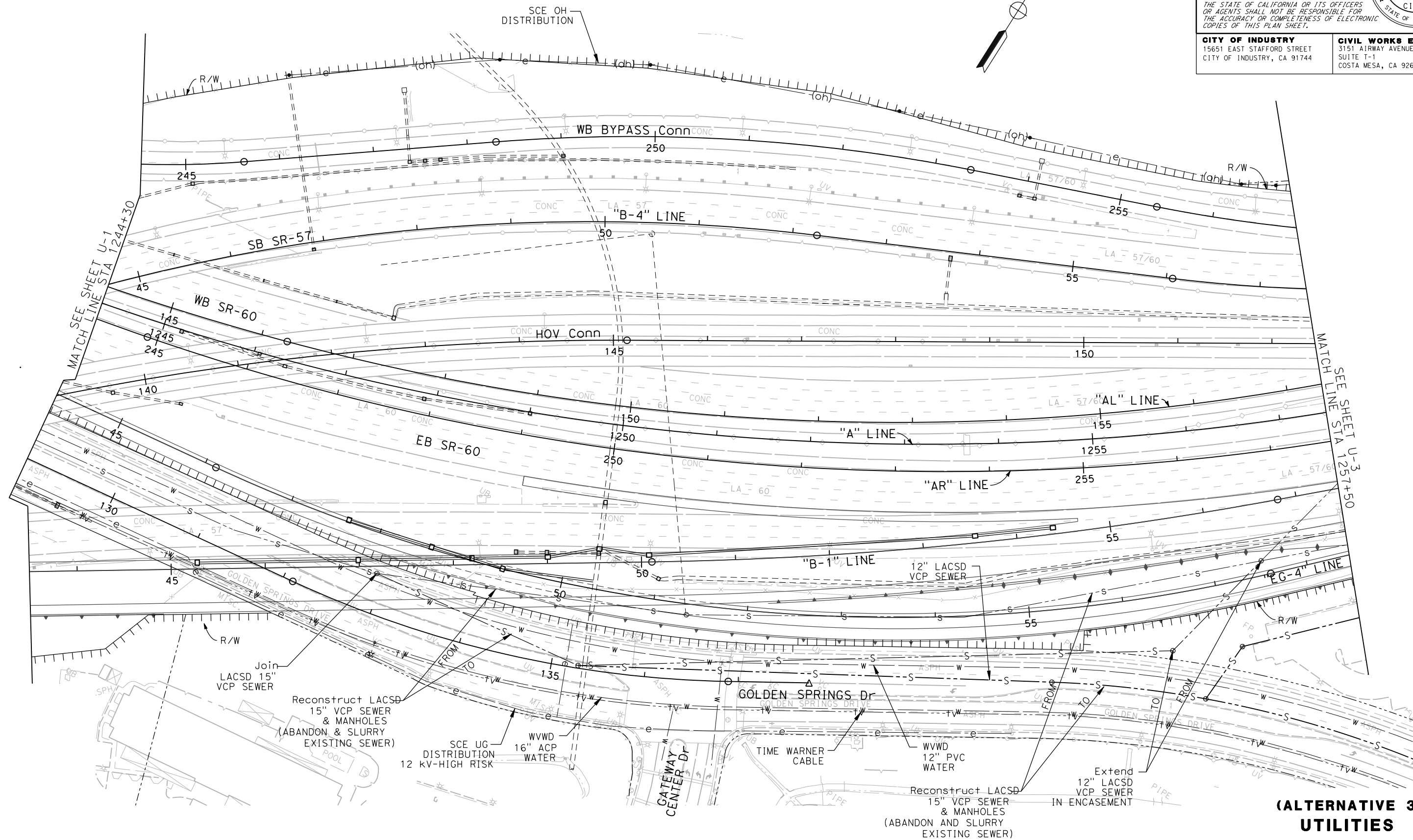
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			CHECKED BY	DATE REVISED		

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PLANS APPROVAL DATE _____					
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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			CIVIL WORKS ENGINEERS 3151 AIRWAY AVENUE SUITE T-1 COSTA MESA, CA 92626		



(ALTERNATIVE 3)
UTILITIES
SCALE 1"=100'
ATTACHMENT F U-2

Dist 07

COUNTY LA

LOCATION CODE SR-57
SR-60

POST MILES
TOTAL PROJECT R4.3 / R4.8
R23.6 / R26.5

SHEET No. 1

TOTAL SHEETS 1

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 ELECTRONIC COPIES OF THIS PLAN SHEET.

CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

CIVIL WORKS ENGINEERS
3151 AIRWAY AVENUE
SUITE T-1
COSTA MESA, CA 92626

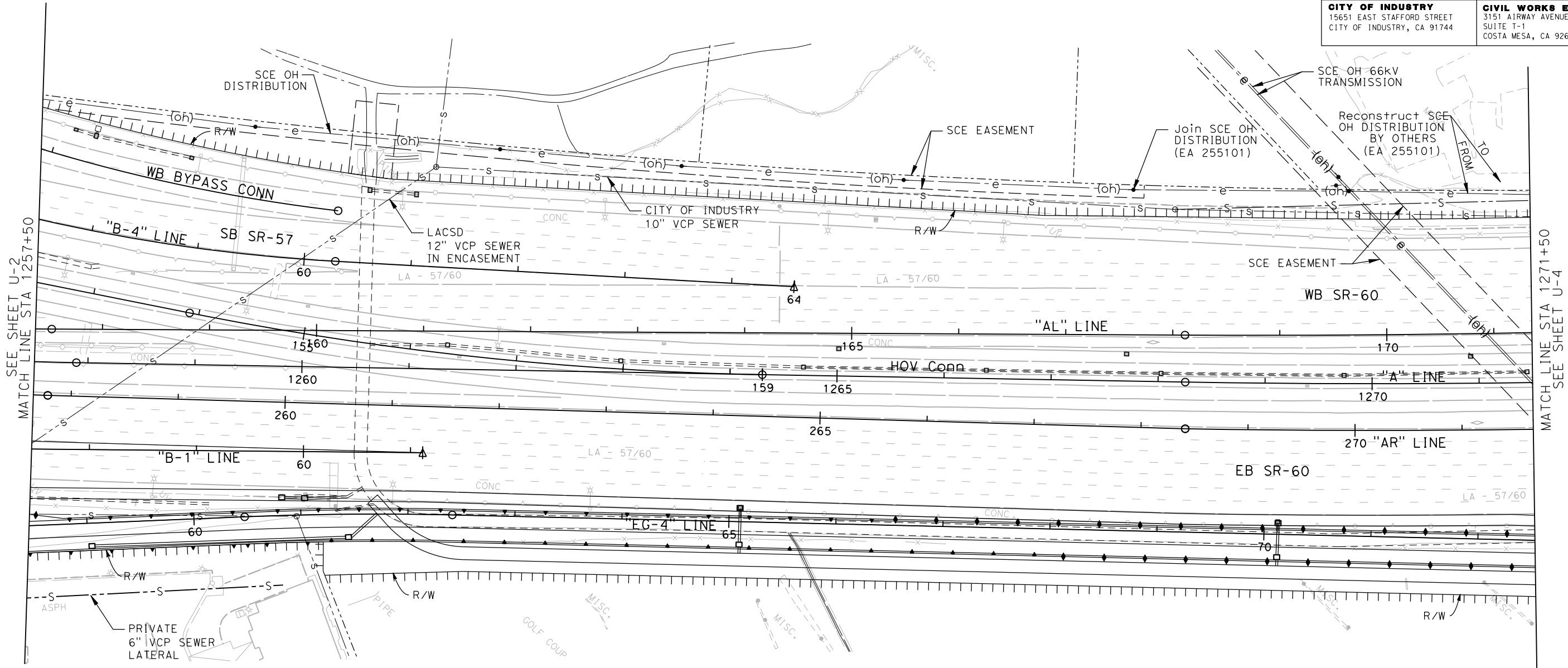
REGISTERED PROFESSIONAL ENGINEER

No. 1

Exp. 12/31/2010

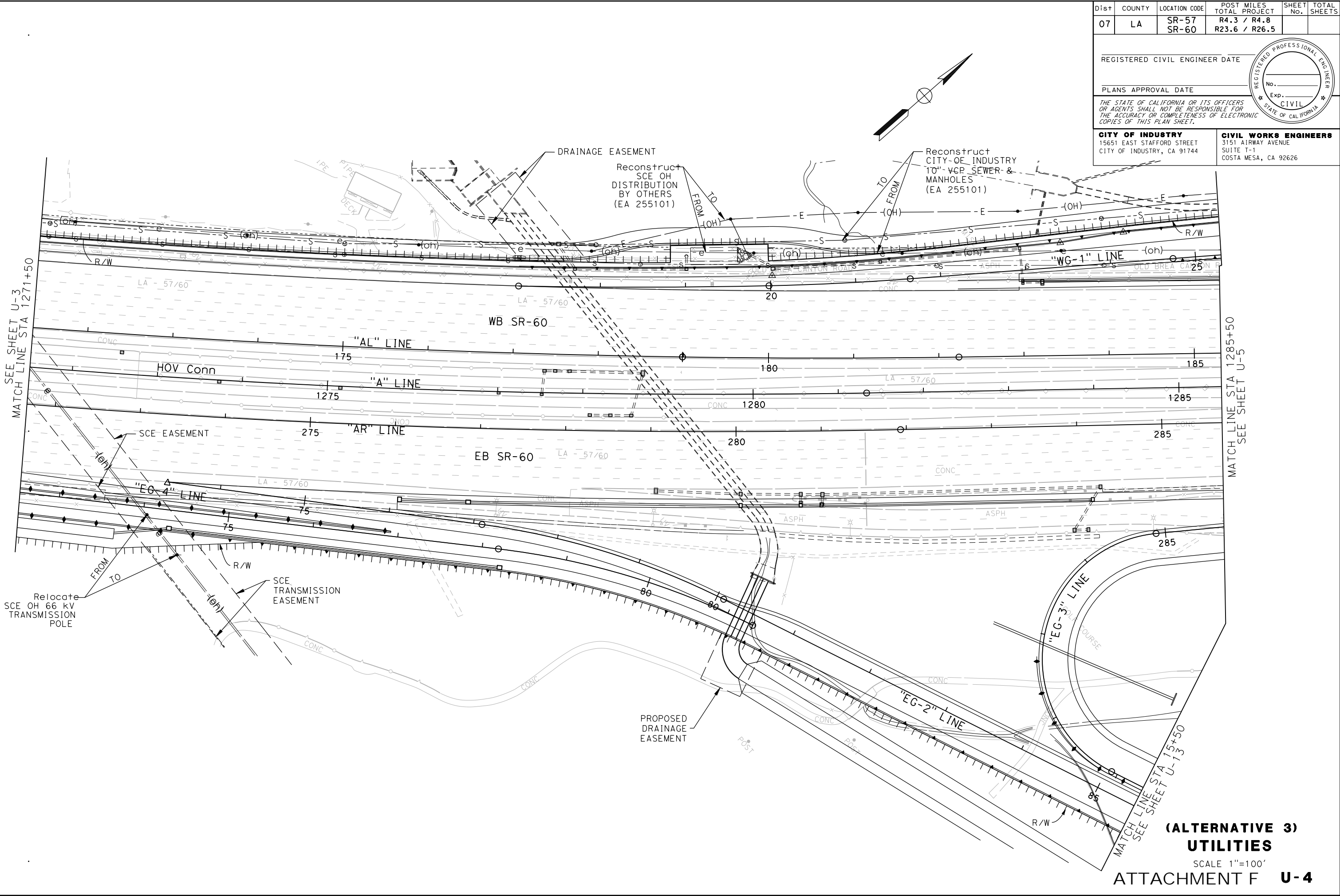
CIVIL

STATE OF CALIFORNIA



(ALTERNATIVE 3)
UTILITIES
SCALE 1"=100'
ATTACHMENT F U-3





Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3 / R4.8 R23.6 / R26.5		

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 ELECTRONIC COPIES OF THIS PLAN SHEET.

CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

CIVIL WORKS ENGINEERS
3151 AIRWAY AVENUE
SUITE T-1
COSTA MESA, CA 92626

REGISTERED PROFESSIONAL ENGINEER

No. _____

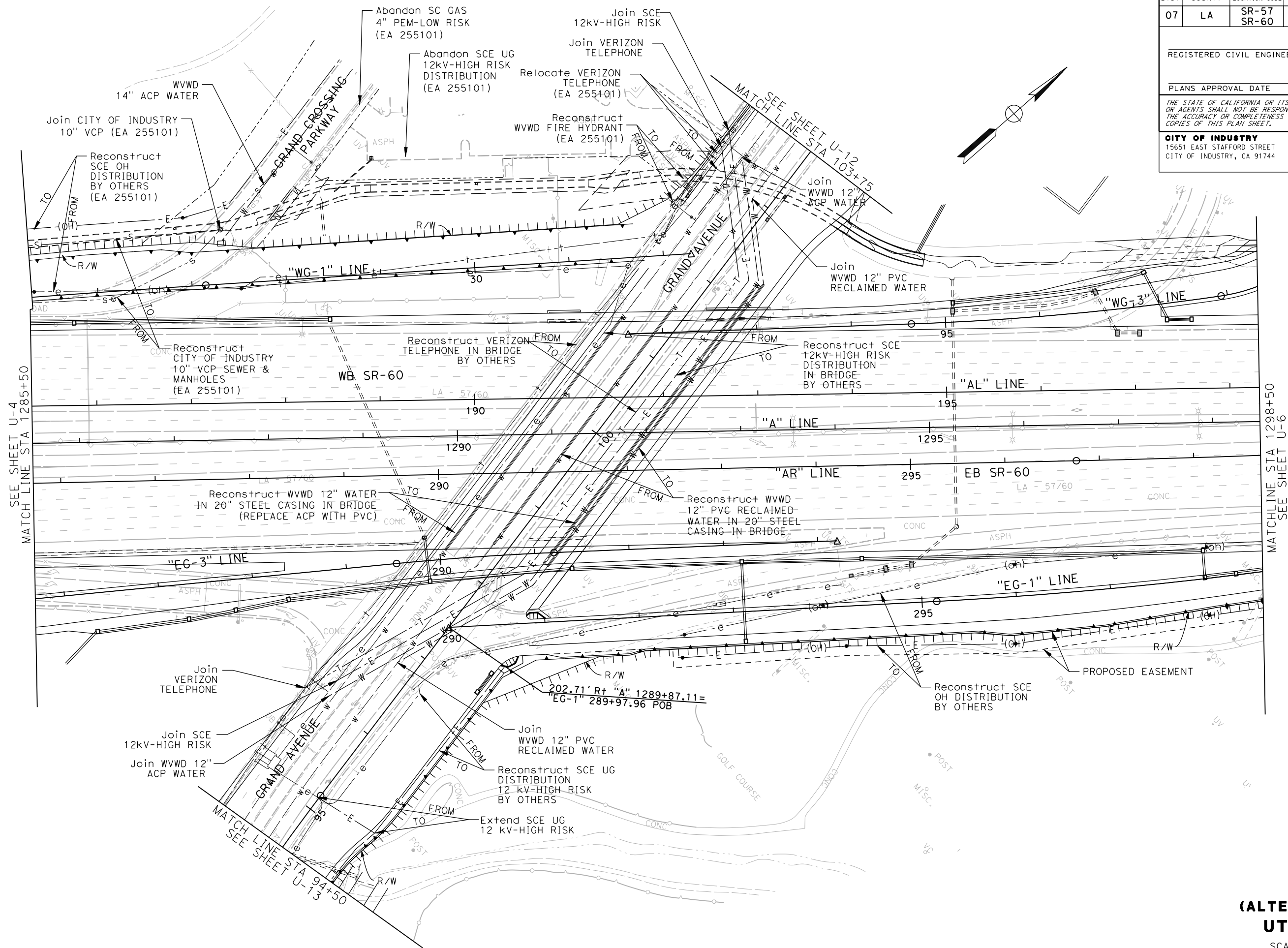
Exp. _____


CIVIL

STATE OF CALIFORNIA

(ALTERNATIVE 3)
UTILITIES
SCALE 1"=100'
ATTACHMENT F U-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY		
ST Caltrans		CHECKED BY	DATE REVISED		




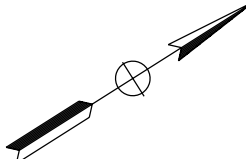
Dist	COUNTY	LOCATION CODE	TOTAL MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3 / R4.8 R23.6 / R26.5		
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CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			CIVIL WORKS ENGINEERS 3151 AIRWAY AVENUE SUITE T-1 COSTA MESA, CA 92626		

(ALTERNATIVE 3)
UTILITIES
SCALE 1"=100'
ATTACHMENT F U - 5

BORDER L.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY		
Caltrans		CHECKED BY	DATE	REVISED	

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3 / R4.8 R23.6 / R26.5		
REGISTERED CIVIL ENGINEER DATE _____ PLANS APPROVAL DATE _____					
<i>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.</i>					
CITY OF INDUSTRY 3151 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			CIVIL WORKS ENGINEERS 3151 AIRWAY AVENUE SUITE T-1 COSTA MESA, CA 92626		



MATCH LINE STA 1325+50
SEE SHEET U-8

(ALTERNATIVE 3)

SCALE 1"=100'

ATTACHMENT F U-7

BORDER L.



CU 00000	EA 279100
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Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3 / R4.8 R23.6 / R26.5		

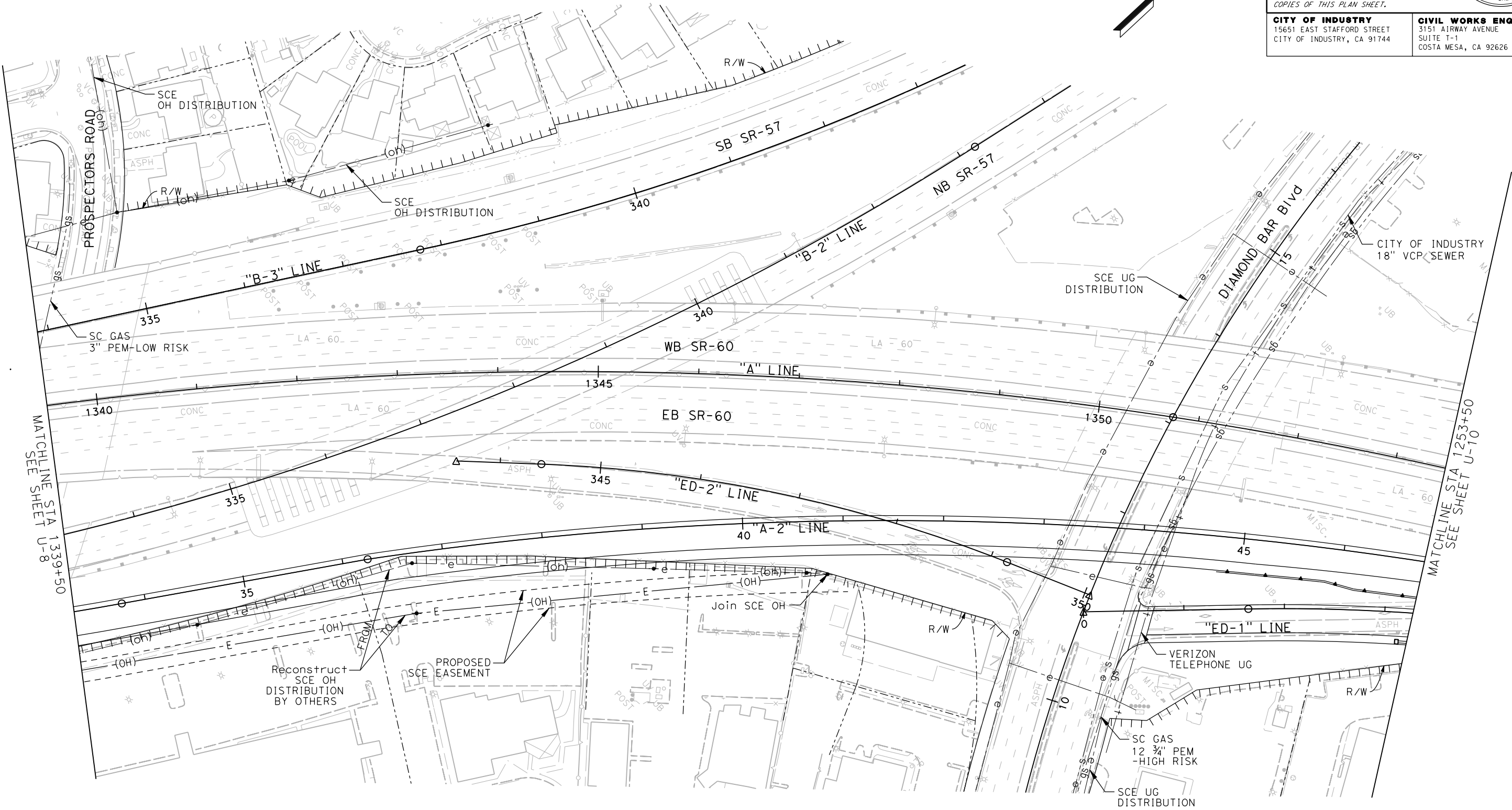
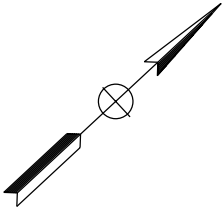
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE


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

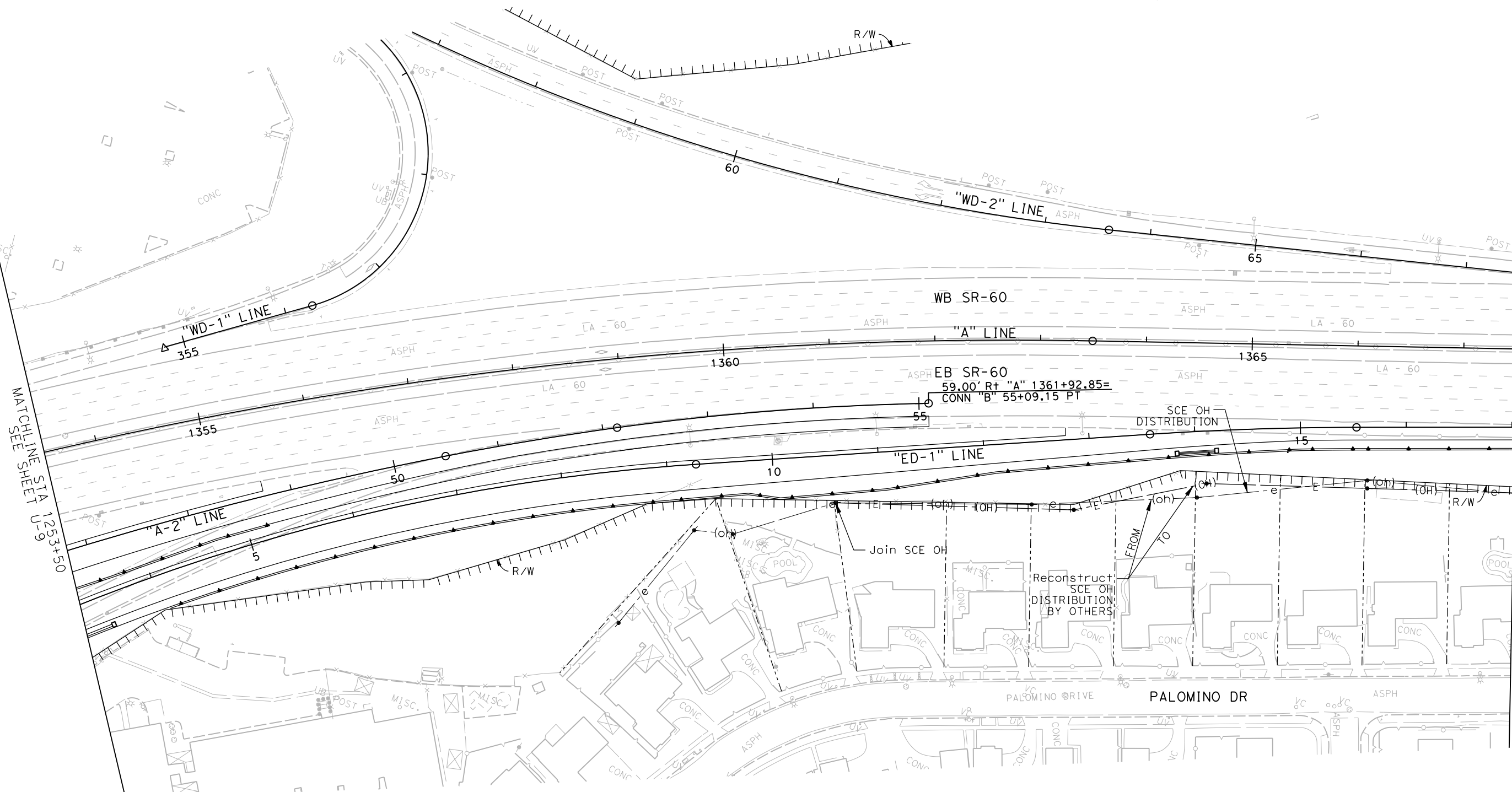
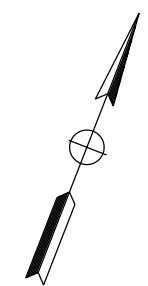
CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

CIVIL WORKS ENGINEERS
3151 AIRWAY AVENUE
SUITE T-1
COSTA MESA, CA 92626



(ALTERNATIVE 3)
UTILITIES
SCALE 1"=100'
ATTACHMENT F U-9

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3 / R4.8 R23.6 / R26.5		
REGISTERED CIVIL ENGINEER DATE _____					
PLANS APPROVAL DATE _____					
<p><i>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.</i></p>					
CITY OF INDUSTRY 15651 EAST STAFFORD STREET CITY OF INDUSTRY, CA 91744			CIVIL WORKS ENGINEERS 3151 AIRWAY AVENUE SUITE T-1 COSTA MESA, CA 92626		



MATCHLINE STA 1253+50
SEE SHEET U-9

MATCH LINE STA 1367+50
SEE SHEET U-11

(ALTERNATIVE 3)
UTILITIES
SCALE 1"=100'
ATTACHMENT F U-10

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3 / R4.8 R23.6 / R26.5		

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 ELECTRONIC
COPIES OF THIS PLAN SHEET.

CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

CIVIL WORKS ENGINEERS
3151 AIRWAY AVENUE
SUITE T-1
COSTA MESA, CA 92626

(ALTERNATIVE 3)
UTILITIES
SCALE 1"=100'
ATTACHMENT F U-11

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE
IS IN INCHES

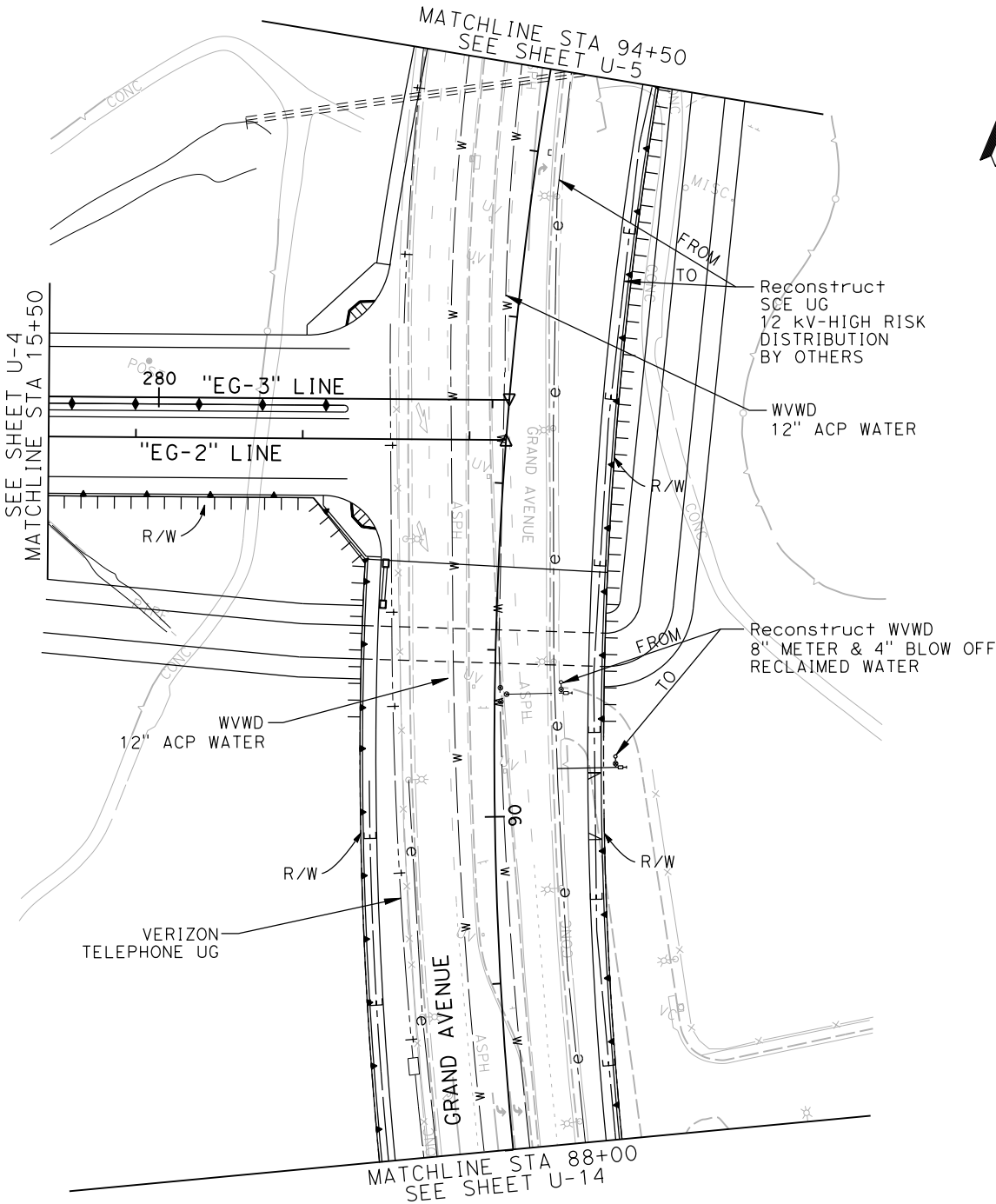
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CU 00000

EA 279100

LAST REVISION DATE PLOTTED => \$DATE
00-00-00 TIME PLOTTED => \$TIME



Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3 / R4.8 R23.6 / R26.5		


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 ELECTRONIC
COPIES OF THIS PLAN SHEET.

CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

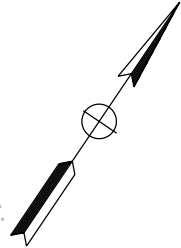
CIVIL WORKS ENGINEERS
3151 AIRWAY AVENUE
SUITE T-1
COSTA MESA, CA 92626



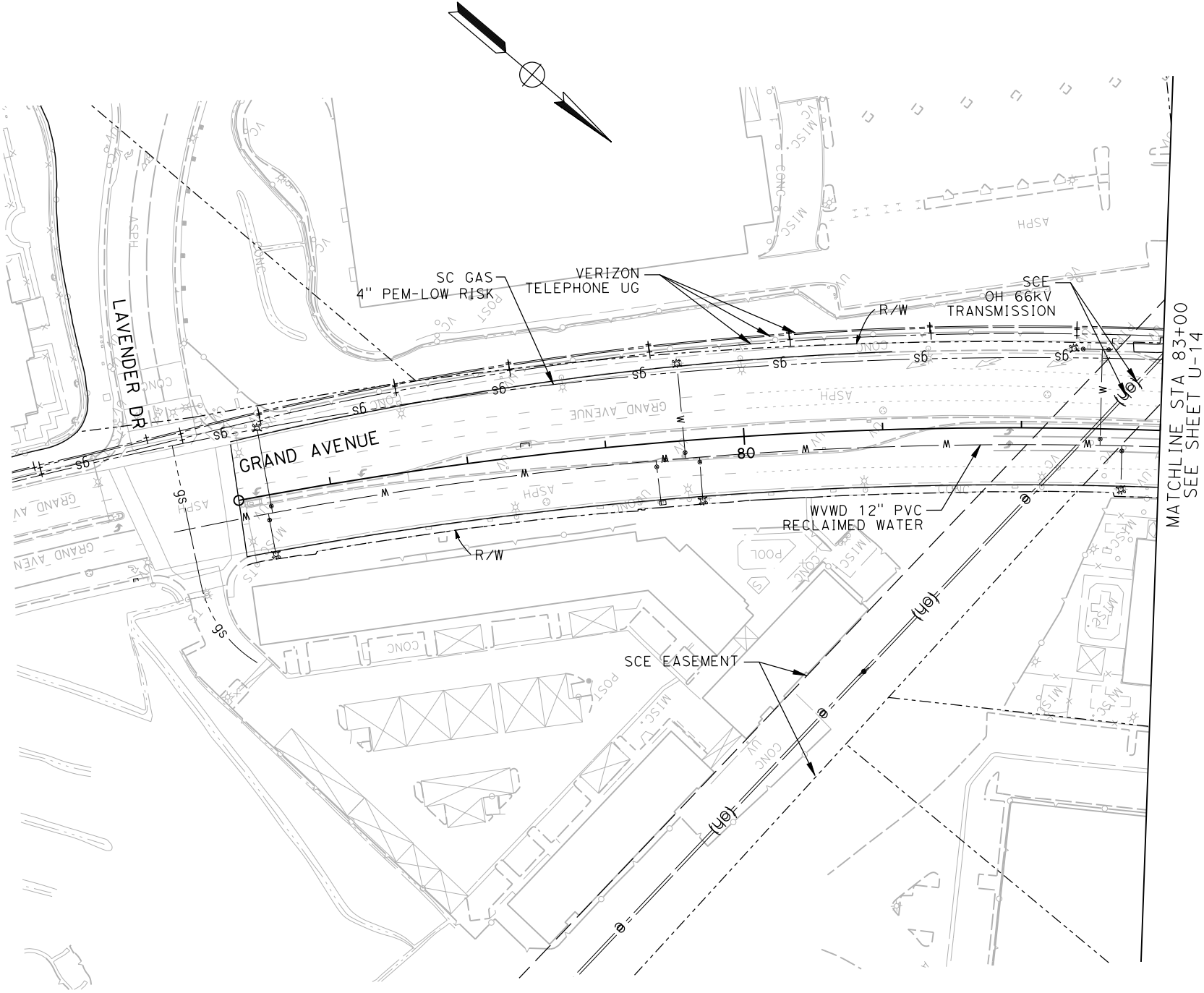
(ALTERNATIVE 3)
UTILITIES
SCALE 1"=100'
ATTACHMENT F U-13

X

Subaru



ATTACHMENT F U-14



Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	SR-57 SR-60	R4.3 / R4.8 R23.6 / R26.5		

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 ELECTRONIC
COPIES OF THIS PLAN SHEET.

CITY OF INDUSTRY
15651 EAST STAFFORD STREET
CITY OF INDUSTRY, CA 91744

CIVIL WORKS ENGINEERS
3151 AIRWAY AVENUE
SUITE T-1
COSTA MESA, CA 92626

REGISTERED PROFESSIONAL ENGINEER

No. _____

Exp. _____

CIVIL

STATE OF CALIFORNIA

(ALTERNATIVE 3)
UTILITIES
SCALE 1"=100'
ATTACHMENT F U-15

X

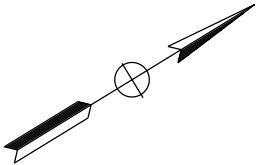
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IS IN INCHES

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EA 279100



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00-00-00	TIME PLOTTED => \$TIME

Attachment G – TASAS

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540204

Request Name: SHAW #603

Ref Date: 05/30/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 057 R004.160 - 07 LA 057 R004.161	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 504985 Accidents Table B Request SHAW #603 Submitted by T7GTRAN
07 LA 057 R 4.16 - 07 LA 057 R 4.161 07/01/2008 TO 06/30/2011

OTM22130
05/30/2013
04:11 PM

California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540204

Location Description	Rate Group (RUS)	No. of Accidents / Significance								Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Actual				Average					
07 LA 057 R004.160 057/NBOFF TO WB 60/BREA CY 0001-0001 2008-07-01 2011-06-30 36 mo.	R 06 U	14	0	3	3	6	2	5	0 3	20.2 0	22.06 +	0.000	.14	.64	0.004	.16	.49	

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540312

Request Name: SHAW #604

Ref Date: 05/31/2013

Request- & Line	L O C	D I R	L S C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	H	N	I	07 LA 057 R004.160 - 07 LA 057 R004.520	01-JUL-08	30-JUN-11	N	L						N	N	Y
1 2	H	S	I	07 LA 057 R004.160 - 07 LA 057 R004.520	01-JUL-08	30-JUN-11	N	L						N	N	Y

Event Log:

Job id is : 505023 Accidents Table B Request SHAW #604 Submitted by T7GTRAN
07 LA 057 R 4.16 - 07 LA 057 R 4.52 07/01/2008 TO 06/30/2011
07 LA 057 R 4.16 - 07 LA 057 R 4.52 07/01/2008 TO 06/30/2011

OTM22130
05/31/2013
01:14 PM

California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540312

Location Description				Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
					Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Actual		Average			
07 LA 057 R004.160 - 07 LA 057 R004.519 0001-0001 2008-07-01 2011-06-30				.360 MI H 36 mo. NORTH U	99 H99	0	21 H99	21 H99	91	3	29 H99	0 25	63.0	24.83	0.000	.85	3.99	0.003	.24	.77
07 LA 057 R004.160 - 07 LA 057 R004.519 0001-0002 2008-07-01 2011-06-30				.360 MI H 36 mo. SOUTH U	19	0	5	5	15	0	3	0 8	63.0	24.83	0.000	.20	.77	0.004	.25	.82

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

ATTACHMENT G

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540448

Request Name: SHAW #605

Ref Date: 05/31/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	H	T	I	07 LA 057 R004.450 R - 07 LA 057 R004.518 R	01-JUL-08	30-JUN-11	N	L						N	N	Y
1 2	H	T	I	07 LA 057 R004.450 L - 07 LA 057 R004.518 L	01-JUL-08	30-JUN-11	N	L						N	N	Y
1 3	H	N	I	07 LA 057 R004.518 - 07 LA 057 005.273	01-JUL-08	30-JUN-11	N	L						N	N	Y
1 4	H	S	I	07 LA 057 R004.518 - 07 LA 057 005.273	01-JUL-08	30-JUN-11	N	L						N	N	Y

Event Log:

Job id is : 505102 Accidents Table B Request SHAW #605 Submitted by T7GTRAN
07 LA 057 R 4.45R - 07 LA 057 R 4.518R 07/01/2008 TO 06/30/2011
07 LA 057 R 4.45L - 07 LA 057 R 4.518L 07/01/2008 TO 06/30/2011
07 LA 057 R 4.518 - 07 LA 057 5.273 07/01/2008 TO 06/30/2011
07 LA 057 R 4.518 - 07 LA 057 5.273 07/01/2008 TO 06/30/2011

California Department of Transportation
Table B - Selective Accident Rate Calculation

Location Description	Rate Group (RUS)	No. of Accidents / Significance								Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark					Actual		Average			
07 LA 057 R004.450 R- 07 LA 057 R004.517 R 0001-0001 2008-07-01 2011-06-30	.068 MI H U 36 mo.	24 H99	0	5 H95	5 H95	18	2	14 H99	0 5		99.8	7.43	0.000	.67	3.23	0.004	.24	.79
07 LA 057 R004.450 L- 07 LA 057 R004.517 L 0001-0002 2008-07-01 2011-06-30	.068 MI H 64 U 36 mo.	3	0	0	0	3	0	0	0 0		99.8	7.43	0.000	.00	.40	0.004	.24	.79
07 LA 057 R004.518 - 07 LA 057 005.272 0001-0003 2008-07-01 2011-06-30	.755 MI H NORTH U 36 mo.	32	0	11	11	19	1	14	0 15		67.2	55.58	0.000	.20	.58	0.004	.26	.82
07 LA 057 R004.518 - 07 LA 057 005.272 0001-0004 2008-07-01 2011-06-30	.755 MI H SOUTH U 36 mo.	72 H99	0	20 H90	20 H90	56	10 H97	30 H99	0 26		67.2	55.58	0.000	.36	1.30	0.004	.26	.82

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540431

Request Name: SHAW #606

Ref Date: 05/31/2013

Request- & Line	L D L O I S			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
	C	R	C						Rate	Inj%	Fat%	Main	Cross			
1 1	H	W	I	07 LA 060 R023.173 - 07 LA 060 R026.528	01-JUL-08	30-JUN-11	N	L						N	N	Y
1 2	H	E	I	07 LA 060 R023.173 - 07 LA 060 R026.528	01-JUL-08	30-JUN-11	N	L						N	N	Y

Event Log:

Job id is : 505092 Accidents Table B Request SHAW #606 Submitted by T7GTRAN
07 LA 060 R 23.173 - 07 LA 060 R 26.528 07/01/2008 TO 06/30/2011
07 LA 060 R 23.173 - 07 LA 060 R 26.528 07/01/2008 TO 06/30/2011

OTM22130
05/31/2013
04:06 PM

California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540431

Location Description	Rate Group (RUS)	No. of Accidents / Significance								Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates				
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark					Actual		Average		Tot
07 LA 060 R023.173 - 07 LA 060 R026.527 0001-0001 2008-07-01 2011-06-30	36 mo. WEST U	921 H99	2	238 H99	240 H99	826	54	245 H95	2 355		145.9	535.84	0.004	.45	1.72	0.004	.32 1.07
07 LA 060 R023.173 - 07 LA 060 R026.527 0001-0002 2008-07-01 2011-06-30	36 mo. EAST U	496	4	135	139	419	25	180	4 197		145.9	535.84	0.007	.26	.93	0.004	.32 1.07

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

ATTACHMENT G

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540442

Request Name: SHAW #607

Ref Date: 05/31/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R023.252 - 07 LA 060 R023.253	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505098 Accidents Table B Request SHAW #607 Submitted by T7GTRAN
07 LA 060 R 23.252 - 07 LA 060 R 23.253 07/01/2008 TO 06/30/2011

OTM22130
05/31/2013
04:25 PM

California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540442

Location Description				Rate Group (RUS)	No. of Accidents / Significance					Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates							
					Tot	Fat	Inj	F+I	Multi Veh				Wet	Dark	Actual		Average			
													Fat	F+I	Tot	Fat	F+I	Tot		
07 LA 060 R023.252 060/EB OFF TO SB RTE 57				R 62	19	0	7	7	3	4	9	0	19.1	20.92 +	0.000	.33	.91	0.005	.13	.38
0001-0001 2008-07-01 2011-06-30				U	H99		H97	H97		H97	H99	7	.0							

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that **Million Vehicles** (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

ATTACHMENT G

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540445

Request Name: SHAW #608

Ref Date: 05/31/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R023.708 - 07 LA 060 R023.709	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505100 Accidents Table B Request SHAW #608 Submitted by T7GTRAN
07 LA 060 R 23.708 - 07 LA 060 R 23.709 07/01/2008 TO 06/30/2011

OTM22130
05/31/2013
04:30 PM

California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540445

Location Description				Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
					Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Actual		Average			
														Fat	F+I	Tot	Fat	F+I	Tot	
07 LA 060 R023.708 060/EB ON FR NB RTE 57				R 64	16	0	5	5	14	0	4	0	79.0	86.51 +	0.000	.06	.19	0.003	.11	.32
0001-0001	2008-07-01	2011-06-30	36 mo.	U							5	.0								

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540880

Request Name: SHAW #609

Ref Date: 06/04/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R024.277 - 07 LA 060 R024.278	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505418 Accidents Table B Request SHAW #609 Submitted by T7GTRAN
07 LA 060 R 24.277 - 07 LA 060 R 24.278 07/01/2008 TO 06/30/2011

OTM22130
06/04/2013
02:45 PM

California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540880

Location Description	Rate Group (RUS)	No. of Accidents / Significance									Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Actual		Accident Rates Average			
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark						Fat	F+I	Tot	Fat	F+I	Tot
07 LA 060 R024.277 060/EB OFF GRAND AVE 0001-0001 2008-07-01 2011-06-30 36 mo.	R 10 U	35 H99	0	4	4	32	2	10		0	4	10.1 .0	11.06 +	0.000	.36	3.17	0.003	.35	1.01

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540900

Request Name: SHAW #610

Ref Date: 06/04/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R024.551 - 07 LA 060 R024.552	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505430 Accidents Table B Request SHAW #610 Submitted by T7GTRAN
07 LA 060 R 24.551 - 07 LA 060 R 24.552 07/01/2008 TO 06/30/2011

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California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540900

Location Description	Rate Group (RUS)	No. of Accidents / Significance								Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Actual				Average					
													Fat	F+I	Tot	Fat	F+I	Tot
07 LA 060 R024.551 060/WB ON GRAND AVE 0001-0001 2008-07-01 2011-06-30	R 24 U	6	0	1	1	6	0	1	0 1	9.9 .0	10.84 +	0.000	.09	.55	0.003	.24	.72	

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that **Million Vehicles** (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540904

Request Name: SHAW #611

Ref Date: 06/04/2013

Request- & Line	L O C	D I R	L S C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R024.552 - 07 LA 060 R024.553	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505433 Accidents Table B Request SHAW #611 Submitted by T7GTRAN
07 LA 060 R 24.552 - 07 LA 060 R 24.553 07/01/2008 TO 06/30/2011

Location Description					Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates				
						Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Actual		Average		Tot
07 LA 060 R024.552 060/EB ON GRAND AVE					R 12	22	0	1	1	22	1	4	0	12.5	13.69 +	0.000	.07	1.61	0.002	.22
0001-0001 2008-07-01 2011-06-30	36 mo.				U	H99							3	.0						.63

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540914

Request Name: SHAW #612

Ref Date: 06/04/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R024.712 - 07 LA 060 R024.713	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505439 Accidents Table B Request SHAW #612 Submitted by T7GTRAN
07 LA 060 R 24.712 - 07 LA 060 R 24.713 07/01/2008 TO 06/30/2011

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California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540914

Location Description					Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Actual		Accident Rates Average			
						Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Fat	F+I	Tot	Fat	F+I	Tot
07 LA 060 R024.712 060/WB OFF GRAND AVE					R 10	17	0	3	3	14	2	8	0	10.4	11.39 +	0.000	.26	1.49	0.003	.35	1.01
0001-0001 2008-07-01 2011-06-30				36 mo.	U	H90						H90	3	.0							

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

ATTACHMENT G

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540917

Request Name: SHAW #613

Ref Date: 06/04/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R025.157 - 07 LA 060 R025.158	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505441 Accidents Table B Request SHAW #613 Submitted by T7GTRAN
07 LA 060 R 25.157 - 07 LA 060 R 25.158 07/01/2008 TO 06/30/2011

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06/04/2013
04:02 PM

California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540917

Location Description	Rate Group (RUS)	No. of Accidents / Significance									Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark						Actual		Average			Tot
07 LA 060 R025.157 060/EB OFF TO NB RTE 57 0001-0001 2008-07-01 2011-06-30 36 mo.	R 06 U	9	0	1	1	7	2	2		0 2		63.0 .0	68.97 +	0.000	.01	.13	0.004	.16	.49

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that **Million Vehicles** (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540922

Request Name: SHAW #614

Ref Date: 06/04/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R025.372 - 07 LA 060 R025.373	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505444 Accidents Table B Request SHAW #614 Submitted by T7GTRAN
07 LA 060 R 25.372 - 07 LA 060 R 25.373 07/01/2008 TO 06/30/2011

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04:08 PM

California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540922

Location Description					Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates				
						Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Actual		Average		Tot
07 LA 060 R025.372 060/WBON FR SB RTE 57					R 64	4	0	1	1	3	0	2	0	67.0	73.37 +					
0001-0001 2008-07-01 2011-06-30	36 mo.				U								2	.0		0.000	.01	.06	0.003	.11
																				.32

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that **Million Vehicles** (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540925

Request Name: SHAW #615

Ref Date: 06/04/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R025.440 - 07 LA 060 R025.441	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505446 Accidents Table B Request SHAW #615 Submitted by T7GTRAN
07 LA 060 R 25.44 - 07 LA 060 R 25.441 07/01/2008 TO 06/30/2011

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California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540925

Location Description	Rate Group (RUS)	No. of Accidents / Significance								Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark					Fat	Actual F+I	Tot	Average Fat	Average F+I	Tot
07 LA 060 R025.440 060/EB OFF DIAMOND BAR BLVD 0001-0001 2008-07-01 2011-06-30 36 mo.	R 10 U	6	0	1	1	6	0	3	0	1	5.1 .0	5.59 +	0.000	.18	1.07	0.003	.35	1.01

Accident Rates expressed as: **# of accidents / Million vehicle miles**

+ denotes that **Million Vehicles** (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540928

Request Name: SHAW #616

Ref Date: 06/04/2013

Request- & Line	L O C	D I R	L S C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R025.659 - 07 LA 060 R025.660	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505448 Accidents Table B Request SHAW #616 Submitted by T7GTRAN
07 LA 060 R 25.659 - 07 LA 060 R 25.66 07/01/2008 TO 06/30/2011

California Department of Transportation
Table B - Selective Accident Rate Calculation

Location Description					Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates				
						Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Actual		Average		
07 LA 060 R025.659 060/WB ON DIAMOND BAR BLVD					R 24	11	0	0	0	9	2	3	0	5.2	5.69 +	0.000	.00	1.93	0.003	.24
0001-0001 2008-07-01 2011-06-30 36 mo.					U	H99				H90			0	.0					.72	

Accident Rates expressed as: **# of accidents / Million vehicle miles**

+ denotes that **Million Vehicles (MV)** used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540931

Request Name: SHAW #617

Ref Date: 06/04/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R025.706 - 07 LA 060 R025.707	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505450 Accidents Table B Request SHAW #617 Submitted by T7GTRAN
07 LA 060 R 25.706 - 07 LA 060 R 25.707 07/01/2008 TO 06/30/2011

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California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3540931

Location Description	Rate Group (RUS)	No. of Accidents / Significance								Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Actual		Accident Rates Average			
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark					Fat	F+I	Tot	Fat	F+I	Tot
07 LA 060 R025.706 060/EB ON DIAMOND BAR BLVD 0001-0001 2008-07-01 2011-06-30 36 mo.	R 12 U	12 H90	0	0	0	10	0	5		0 0	11.1 .0	12.16 +	0.000	.00	.99	0.002	.22	.63

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that **Million Vehicles** (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3540936

Request Name: SHAW #618

Ref Date: 06/04/2013

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R025.876 - 07 LA 060 R025.877	01-JUL-08	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 505453 Accidents Table B Request SHAW #618 Submitted by T7GTRAN
07 LA 060 R 25.876 - 07 LA 060 R 25.877 07/01/2008 TO 06/30/2011

Location Description				Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
					Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Actual		Average			
														Fat	F+I	Tot	Fat	F+I	Tot	
07 LA 060 R025.876 060/WB OFF DIAMOND BAR BLVD				R 10	21	0	8	8	20	0	6	0	12.1	13.25 +	0.000	.60	1.59	0.003	.35	1.01
0001-0001 2008-07-01 2011-06-30 36 mo.				U	H95							10	.0							

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 3552831

Request Name: PATRICIA #663

Ref Date: 06/20/2013

Request- & Line	L O C	D I R	L S C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	07 LA 060 R023.884 - 07 LA 060 R023.885	01-JUL-08	30-JUN-11	N	L						N	N	N
1 2	R	T	I	07 LA 060 R023.884 - 07 LA 060 R023.885	01-JUL-08	30-JUN-09	N	L						N	N	N
1 3	R	T	I	07 LA 060 R023.884 - 07 LA 060 R023.885	01-JUL-09	30-JUN-10	N	L						N	N	N
1 4	R	T	I	07 LA 060 R023.884 - 07 LA 060 R023.885	01-JUL-10	30-JUN-11	N	L						N	N	N

Event Log:

Job id is : 507566 Accidents Table B Request PATRICIA #663 Submitted by T7YSFAIL
 07 LA 060 R 23.884 - 07 LA 060 R 23.885 07/01/2008 TO 06/30/2011
 07 LA 060 R 23.884 - 07 LA 060 R 23.885 07/01/2008 TO 06/30/2009
 07 LA 060 R 23.884 - 07 LA 060 R 23.885 07/01/2009 TO 06/30/2010
 07 LA 060 R 23.884 - 07 LA 060 R 23.885 07/01/2010 TO 06/30/2011

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California Department of Transportation
Table B - Selective Accident Rate Calculation

Page# 1
Event ID: 3552831

Location	Description	Rate Group (RUS)	No. of Accidents / Significance									Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Actual		Accident Rates Average			Tot
			Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Fat	F+I				Tot	Fat	F+I			
07 LA 060 R023.884 0001-0001	060/SEG WB OFF TO SB 57 2008-07-01 2011-06-30	36 mo. R 06 U	32	0	7	7	24	0	5	0	10	80.0 .0	87.60 +	0.000	.08	.37	0.004	.16	.49	
07 LA 060 R023.884 0001-0002	060/SEG WB OFF TO SB 57 2008-07-01 2009-06-30	12 mo. R 06 U	8	0	2	2	5	0	1	0	3	80.0 .0	29.20 +	0.000	.07	.27	0.004	.16	.49	
07 LA 060 R023.884 0001-0003	060/SEG WB OFF TO SB 57 2009-07-01 2010-06-30	12 mo. R 06 U	12	0	4	4	9	0	1	0	6	80.0 .0	29.20 +	0.000	.14	.41	0.004	.16	.49	
07 LA 060 R023.884 0001-0004	060/SEG WB OFF TO SB 57 2010-07-01 2011-06-30	12 mo. R 06 U	12	0	1	1	10	0	3	0	1	80.0 .0	29.20 +	0.000	.03	.41	0.004	.16	.49	

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

Attachment H – Transportation Management Plan Data Sheet

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

(Preliminary TMP Elements and Costs)

Co/Rte/PM 07-LA-60 PM-R24.5/R30.4 EA 279100 Alternative No. 3

Project Limit _____

Project Description SR-57/SR-60 Confluence @ Grand Avenue

1) Public Information

<input checked="" type="checkbox"/> a. Brochures and Mailers	\$ _____
<input checked="" type="checkbox"/> b. Press Release	_____
<input checked="" type="checkbox"/> c. Paid Advertising	\$ _____
<input type="checkbox"/> d. Public Information Center/Kiosk	\$ _____
<input checked="" type="checkbox"/> e. Public Meeting/Speakers Bureau	_____
<input checked="" type="checkbox"/> f. Telephone Hotline	_____
<input checked="" type="checkbox"/> g. Internet	_____
<input checked="" type="checkbox"/> h. Others <u>Total cost for Public Information</u>	<u>\$185,000</u>

2) Motorists Information Strategies

<input checked="" type="checkbox"/> a. Changeable Message Signs (Fixed)	<u>\$Use existing</u>
<input checked="" type="checkbox"/> b. Changeable Message Signs (Portable)	<u>\$361,200</u>
<input checked="" type="checkbox"/> c. Ground Mounted Signs	<u>\$39,500</u>
<input type="checkbox"/> d. Highway Advisory Radio	<u>\$</u>
<input checked="" type="checkbox"/> e. Caltrans Highway Information Network (CHIN)	_____
<input type="checkbox"/> f. Others _____	<u>\$</u>

3) Incident Management

<input checked="" type="checkbox"/> a. Construction Zone Enhanced Enforcement Program (COZEEP)	<u>\$251,400</u>
<input checked="" type="checkbox"/> b. Freeway Service Patrol	<u>\$210,000</u>
<input type="checkbox"/> c. Traffic Management Team	_____
<input type="checkbox"/> d. Helicopter Surveillance	<u>\$</u>
<input type="checkbox"/> e. Traffic Surveillance Stations (Loop Detector and CCTV)	<u>\$</u>
<input type="checkbox"/> f. Others _____	<u>\$</u>

4) Construction Strategies

<input checked="" type="checkbox"/> a. Lane Closure Chart	
<input type="checkbox"/> b. Reversible Lanes	
<input type="checkbox"/> c. Total Facility Closure	
<input type="checkbox"/> d. Contra Flow	
<input type="checkbox"/> e. Truck Traffic Restrictions	\$
<input type="checkbox"/> f. Reduced Speed Zone	\$
<input type="checkbox"/> g. Connector and Ramp Closures	
<input type="checkbox"/> h. Incentive and Disincentive	\$
<input type="checkbox"/> i. Moveable Barrier	\$
<input type="checkbox"/> j. Others	\$

5) Demand Management

<input type="checkbox"/> a. HOV Lanes/Ramps (New or Convert)	\$
<input type="checkbox"/> b. Park and Ride Lots	\$
<input type="checkbox"/> c. Rideshare Incentives	\$
<input type="checkbox"/> d. Variable Work Hours	
<input type="checkbox"/> e. Telecommute	
<input type="checkbox"/> f. Ramp Metering (Temporary Installation)	\$
<input type="checkbox"/> g. Ramp Metering (Modify Existing)	\$
<input checked="" type="checkbox"/> h. Others Rideshare information	\$Included in (1)

6) Alternative Route Strategies

<input type="checkbox"/> a. Add Capacity to Freeway Connector	\$
<input checked="" type="checkbox"/> b. Street Improvement (widening, traffic signal... etc)	\$175,000
<input checked="" type="checkbox"/> c. Traffic Control Officers	\$210,000
<input type="checkbox"/> d. Parking Restrictions	
<input type="checkbox"/> e. Others	\$

7) Other Strategies

<input type="checkbox"/> a. Application of New Technology	\$
<input type="checkbox"/> b. Others	\$

TOTAL ESTIMATED COST OF TMP ELEMENTS =

\$1,432,100

Project Notes:

1. Caltrans will be responsible for developing and implementing the public awareness campaign, with input from Caltrans Office of Media Relations and Public Affairs.

2(b): Cost of portable CMS: 4 PCMS for 31 months @ \$1200/month + 8 PCMS for 21 months @ \$1200/month + 3 PCMS for 3 months @ \$1200/month = \$361,200

2(c): Detour ground mounted signs: 79 signs @ \$500/sign = \$39,500

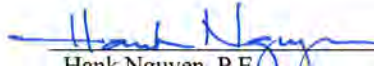
3(a): COZEEP: 1 unit @ 12 nights and 17 weekend closures @ 8 hour night and 36 hour weekend shift + 2 units @ 11 nights and 11 weekend closures @ 8 hour night and 36 hour weekend shift @ \$150/hour = \$251,400

3(b): Extra hour of FSP: 700 weekdays @ 4 hours/day @ \$75/hour = \$210,000

6(b): Street Improvement: 7 intersection to be improved @ \$25,000/intersection = \$175,000


6(c): Traffic control officers: 35 months @ 40 hours/month @ \$150/hour = \$210,000

PREPARED BY


Hank Nguyen, P.E.
WKE, Inc.

DATE 1/5/12

APPROVAL RECOMMENDED BY


Martin Oregel, TMP Coordinator,
North Area

DATE 1/5/12

APPROVED BY


John Yang,
District Traffic Manager

DATE 1/18/12

Attachment I – Storm Water Data Report (Cover Page)

Long Form - Storm Water Data Report



Dist-County-Route: 07-LA-60 ; 07-LA-57
Post Mile Limits: R23.3/R26.5; R4.3/R4.8
Project Type: Interchange Improvement
Project ID (or EA): 279100
Program Identification: HE12
Phase: ☐ PID
☒ PA/ED
☐ PS&E

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

Is the Project required to consider Treatment BMPs?

Yes ☒ No ☐

If yes, can Treatment BMPs be incorporated into the project?

Yes ☒ No ☐

If No, a Technical Data Report must be submitted to the RWQCB
at least 30 days prior to the projects RTL date.

List RTL Date: _____

Total Disturbed Soil Area: 42.1 Acres (38.9 Acres Within Caltrans ROW) Risk Level: 2

Estimated: Construction Start Date: 4/22/14 Construction Completion Date: 10/24/16

Notice of Intent (NOI) Date to be submitted: 3/22/14

Erosivity Waiver

Yes ☐

Date: _____ No ☒

Notification of ADL reuse (if Yes, provide date)

Yes ☐

Date: T.B.D. No ☐

Separate Dewatering Permit (if yes, permit number)

Yes ☐

Permit # T.B.D. 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.

Marie Marston 11-26-12
Marie Marston, P.E. Date
Registered Project Engineer

Godfrey Nzeogu 11/29/2012
Godfrey Nzeogu, P.E. Date
Caltrans Designated Oversight Representative

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

Jiwanjit S. Palaha 11/29/2012
Jiwanjit S. Palaha, Project Manager Date

Roger Castillo 12-04-12
Roger Castillo, Designated Maintenance Representative Date

Ron Russak 12-04-12
Ron Russak, Designated Landscape Architect Representative Date

Shirley Pak 12/4/2012
[Stamp Required for PS&E only] Shirley Pak, District/Regional Design SW Coordinator or Designee Date



Caltrans Storm Water Quality Handbooks
Project Planning and Design Guide
July 2010

ATTACHMENT I

Attachment J – Life-Cycle Cost Analysis for Pavement

Life Cycle Cost Analysis Form

Alternative 1 (Preferred Alternative)

Mainline EB SR-60 40-Year Rigid Pavement (1.10' JPCP/0.50' LCB/0.70' AB)

Pavement Design Life: <u>40</u> Years		
Initial Construction Costs:	\$	1,917,779
Initial Project Support Costs:	\$	0
Future Maintenance & Rehabilitation Costs: *	\$	42,661
TOTAL AGENCY COSTS:	\$	1,960,440
USER COSTS:	\$	170
TOTAL LIFE-CYCLE COSTS:	\$	1,960,610

Alternative 2:

Mainline EB SR-60 20-Year Rigid Pavement (1.00' JPCP/0.50' LCB/0.70' AB)

Pavement Design Life: <u>20</u> Years		
Initial Construction Costs:	\$	1,798,155
Initial Project Support Costs:	\$	0
Future Maintenance & Rehabilitation Costs: *	\$	304,005
TOTAL AGENCY COSTS:	\$	2,102,160
USER COSTS:	\$	1,800
TOTAL LIFE-CYCLE COSTS:	\$	2,103,960

Reason that this is not Alternative 1:

Initial Construction Cost, Future Maint Costs, and User Costs greater than Alt 1.

* Includes both future maintenance, construction, and project support costs.
Note: All costs are adjusted to 2017 costs using 3% inflation rate.

Life Cycle Cost Analysis Form

Alternative 1 (Preferred Alternative)

Mainline WB SR-60 40-Year Rigid Pavement (1.10' JPCP/0.50' LCB/0.70' AB)

Pavement Design Life: <u>40</u> Years		
Initial Construction Costs:	\$	2,567,852
Initial Project Support Costs:	\$	0
Future Maintenance & Rehabilitation Costs: *	\$	57,318
TOTAL AGENCY COSTS:	\$	2,625,170
USER COSTS:	\$	240
TOTAL LIFE-CYCLE COSTS:	\$	2,625,410

Alternative 2:

Mainline WB SR-60 20-Year Rigid Pavement (1.00' JPCP/0.50' LCB/0.70' AB)

Pavement Design Life: <u>20</u> Years		
Initial Construction Costs:	\$	2,407,606
Initial Project Support Costs:	\$	0
Future Maintenance & Rehabilitation Costs: *	\$	408,434
TOTAL AGENCY COSTS:	\$	2,816,040
USER COSTS:	\$	2,660
TOTAL LIFE-CYCLE COSTS:	\$	2,818,700

Reason that this is not Alternative 1:

Initial Construction Cost, Future Maint Costs, and User Costs greater than Alt 1.

* Includes both future maintenance, construction, and project support costs.
Note: All costs are adjusted to 2017 costs using 3% inflation rate.

Life Cycle Cost Analysis Form

Alternative 1 (Preferred Alternative)

EG-1 On-Ramp 40-Year Flexible Pavement without Trucks (0.20' RHMA/0.35'
HMA/0.55' LCB/1.05' AB)

Pavement Design Life: <u>40</u> Years		
Initial Construction Costs:	\$	839,038
Initial Project Support Costs:	\$	0
Future Maintenance & Rehabilitation Costs: *	\$	162,002
TOTAL AGENCY COSTS:	\$	1,001,040
USER COSTS:	\$	80
TOTAL LIFE-CYCLE COSTS:	\$	1,001,120

Alternative 2:

EG-1 On-Ramp 20-Year Flexible Pavement without Trucks (0.20' RHMA/0.30'
HMA/0.50' LCB/0.90' AB)

Pavement Design Life: <u>20</u> Years		
Initial Construction Costs:	\$	781,659
Initial Project Support Costs:	\$	0
Future Maintenance & Rehabilitation Costs: *	\$	212,221
TOTAL AGENCY COSTS:	\$	993,880
USER COSTS:	\$	260
TOTAL LIFE-CYCLE COSTS:	\$	994,140

Reason that this is not Alternative 1:

Difference in LCC is less than 1% of the whole project, and the 40 year option would require 70% less user delay.

* Includes both future maintenance, construction, and project support costs.
Note: All costs are adjusted to 2017 costs using 3% inflation rate.

Life Cycle Cost Analysis Form

Alternative 1 (Preferred Alternative)

WG-2 Off-Ramp 40-Year Flexible Pavement with Trucks(0.20'
RHMA/0.50HMA/0.70' LCB/1.40' AB)

Pavement Design Life: <u>40</u> Years	
Initial Construction Costs:	<u>\$ 1,051,984</u>
Initial Project Support Costs:	<u>\$ 0</u>
Future Maintenance & Rehabilitation Costs: *	<u>\$ 224,306</u>
TOTAL AGENCY COSTS:	<u>\$ 1,276,290</u>
USER COSTS:	<u>\$ 540</u>
TOTAL LIFE-CYCLE COSTS:	<u>\$ 1,276,830</u>

Alternative 2:

WG-2 Off-Ramp 20-Year Flexible Pavement with Trucks(0.20'
RHMA/0.40HMA/0.65' LCB/1.25' AB)

Pavement Design Life: <u>20</u> Years	
Initial Construction Costs:	<u>\$ 954,494</u>
Initial Project Support Costs:	<u>\$ 0</u>
Future Maintenance & Rehabilitation Costs: *	<u>\$ 293,846</u>
TOTAL AGENCY COSTS:	<u>\$ 1,248,340</u>
USER COSTS:	<u>\$ 1,810</u>
TOTAL LIFE-CYCLE COSTS:	<u>\$ 1,250,150</u>

Reason that this is not Alternative 1:

Difference in total LCC is less around 2% of the paving, the 40 year RHMA would increase the total project by less than 0.1%, and would reduce future user delay by 70%.

* Includes both future maintenance, construction, and project support costs.
Note: All costs are adjusted to 2017 costs using 3% inflation rate.

Attachment K – Initial Site Assessment (ISA) Checklist



Initial Site Assessment (ISA) Checklist

Project Information

District 07 County Los Angeles Route SR-57/SR-60 Confluence at Grand Avenue

Description: The project will replace the existing 4-lane overcrossing with a wider overcrossing on Grand Avenue that will meet the travel and turn lane needs of the interchange. The bridge will also be lengthened to accommodate a potential six (6) mixed-flow lanes and two (2) HOV lanes in each direction on the freeway confluence. The project will include features that will enhance operations and safety as well as reduce mainline weaving and congestion along the State Route 57 (SR-57)/State Route 60 (SR-60) mainline.

One (1) No Build and three (3) Build Alternatives are under consideration for the modification of the SR-57/SR-60 Confluence at the Grand Avenue Overcrossing within the Cities of Industry and Diamond Bar (refer to Phase I Initial Site Assessment). The Build Alternatives include additional features to the east and west of the Grand Avenue Interchange that will alleviate main line weaving across the lanes that serve SR-57 in order to use lanes that serve SR-60. Currently the Grand Avenue Interchange is a Type L-7 configuration to the north of the confluence and a type L-1 configuration to the south of the confluence. The three (3) build alternatives are considered to be reasonable feasible alternatives for the project.

Is the project on the HW Study Minimal-Risk Projects List (HW1)? NO

Project Manager Mr. Richard Beck, REA phone # 949/855-3687

Project Engineer _____ phone # _____

Project Screening

Attach the project location map to this checklist to show location of all known and/or potential HW sites identified.

1. Project Features: New R/W? YES Excavation? YES Railroad Involvement? NO

Structure demolition/modification? YES (bridges) Subsurface utility relocation? POTENTIALLY

2. Project Setting SR-57/SR-60 Confluence at Grand Avenue, Cities of Diamond Bar and Industry

Rural or Urban Urban

Current land uses Transportation and Vacant Land

Adjacent land uses Transportation, Residential, Commercial, and Recreation

3. Check federal, State, and local environmental and health regulatory agency records as necessary, to see if any known hazardous waste site is in or near the project area. If a known site is identified, show its location on the attached map and attach additional sheets, as needed, to provide pertinent information for the proposed project.

4. Conduct Field Inspection. Date 2-13-2007, 8-15-2007, 4-8-2008
Use the attached map to locate potential or known HW sites.

STORAGE STRUCTURES / PIPELINES:

Underground tanks	<u>YES</u>	Surface tanks	<u>YES</u>
Sumps	<u>NO</u>	Ponds	<u>NO</u>
Drums	<u>NO</u>	Basins	<u>NO</u>
Transformers	<u>YES</u>	Landfill	<u>NO</u>
Other	<u>NO</u>		

CONTAMINATION: (spills, leaks, illegal dumping, etc.)

Surface staining	<u>NONE</u>	Oil sheen	<u>NONE</u>
Odors	<u>NONE</u>	Vegetation damage	<u>NONE</u>
Other <u>Three (3) spills reported on-site; all reported spills considered to be <i>de minimus</i>.</u>			
<u>Reported contamination to groundwater from off-site properties.</u>			

HAZARDOUS MATERIALS: (asbestos, lead, etc.)

Buildings	<u>NONE</u>	Spray-on fireproofing	<u>NONE</u>
Pipe wrap	<u>NONE</u>	Friable tile	<u>NONE</u>
Acoustical plaster	<u>NONE</u>	Serpentine	<u>NONE</u>
Paint <u>Potential LBPs in traffic striping</u>			
<u>materials and thermoplastic traffic stripes</u> Other <u>Potential LBPs and ACMs in bridge</u>			
<u>structures; and potential for aerially</u>			
<u>deposited lead in State right-of-way</u>			
<u>(R/W).</u>			

5. Additional record search, as necessary, of subsequent land uses that could have resulted in a hazardous waste site. Use the attached map to show the location of potential hazardous waste sites.
6. Other comments and/or observations: None.

ISA Determination

Does the project have potential hazardous waste involvement? YES If there is known or potential hazardous waste involvement, is additional ISA work needed before task orders can be prepared for the Investigation? NO If "YES," explain; then give an estimate of additional time required:

A brief memo should be prepared to transmit the ISA conclusions to the Project Manager and Project Engineer.

ISA Conducted by


Mr. Richard Beck, REA No. 08065

Date 01-12-2009

Attachment L – FHWA Air Quality Project Level Conformity Letter



U.S. Department
of Transportation
**Federal Highway
Administration**

California Division

June 26, 2013

650 Capitol Mall, Suite 4-100
Sacramento, CA 95814
(916) 498-5001
(916) 498-5008 (fax)

In Reply Refer To:
HDA-CA

Mr. Michael Miles
District Director
California Department of Transportation
District 7
100 South Main Street, Suite 100
Los Angeles, CA 90012-3606

Attention: Andrew Yoon, Senior Transportation Engineer

SUBJECT: Project-Level Conformity Determination for the State Route 57/ State Route 60
Confluence at Grand Avenue Project

Dear Mr. Miles:

On June 4, 2013 the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a request for the project-level conformity determination for the State Route 57/ State Route 60 Confluence at Grand Avenue Project in Los Angeles County pursuant to 23 U.S.C. 327(a)(2)(B)(ii)(1). The project is in an area that is designated nonattainment for ozone (O₃), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}) and maintenance for carbon monoxide (CO) and nitrogen dioxide (NO₂).

The project-level conformity analysis submitted by Caltrans indicates that the project-level transportation conformity requirements of 40 C.F.R. Part 93 have been met. The project is included in the Southern California Association of Government's (SCAG) currently conforming *2012-2035 Regional Transportation Plan (RTP)/ Sustainable Communities Strategy (SCS)*, and the *2013 Federal Transportation Improvement Program (FTIP)*. The latest conformity determination for the 2012-2035 RTP/SCS and for the 2013 FTIP was approved by FHWA and the Federal Transit Administration (FTA) on December 14, 2012. The design concept and scope of the preferred alternative have not changed significantly from those assumed in the regional emissions analysis.

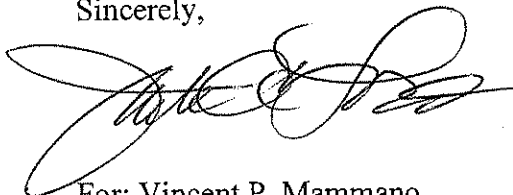
As required by 40 C.F.R. 93.116 and 93.123, the localized CO and PM analyses are included in the documentation. The CO hotspot analysis was performed with the Caltrans' *Transportation Project-Level Carbon Monoxide Protocol*. The analyses demonstrate that the project will not create any new violation of the standards or increase the severity or number of existing violations. Based on the information provided, FHWA finds that the project-level conformity determination for the State Route 57/ State Route 60 Confluence at Grand Avenue Project in Los

ATTACHMENT L

Angeles County conforms to the State Implementation Plan (SIP) in accordance with 40 C.F.R. Part 93.

If you have any questions pertaining to this conformity finding, please contact Stew Sonnenberg, FHWA Air Quality Specialist, at (916) 498-5889 or by email at Stew.Sonnenberg@dot.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Vincent P. Mammano', with a large, stylized flourish at the end.

For: Vincent P. Mammano
Division Administrator

Attachment M – Final Environmental Impact
Report/Finding of No Significant Impact
(EIR/FONSI) and Section 4(f) Evaluation Cover Sheet

Improve the State Route 57 and State Route 60 Confluence at Grand Avenue, (State Route 60 postmile R23.3 to postmile R26.5 and State Route 57 postmile R4.3 to postmile R4.5, postmile R4.5 to postmile R4.8)

FINAL ENVIRONMENTAL IMPACT REPORT/FINDING OF NO SIGNIFICANT IMPACT and SECTION 4(f) EVALUATION

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)
and 49 USC 303

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 USC 327.

The City of Industry
and
THE STATE OF CALIFORNIA
Department of Transportation

Date of Approval

John D. Ballas
City Engineer
City of Industry
Responsible/Local Agency

Date of Approval

Agustin Barajas
Associate Environmental Planner
Division of Environmental Planning District 7
California Department of Transportation
NEPA and CEQA Lead Agency

The following persons may be contacted for additional information concerning this document:

Dawn Kukla
Senior Environmental Planner
California Department of Transportation – District 7
100 S. Main Street
Los Angeles, CA 90012
(213) 897-7665

John D. Ballas
City Engineer
City of Industry
15651 E. Stafford St., #100
Industry, CA 91744
(626) 333-2211

Individuals who require special accommodation (American Sign Language interpreter, accessible seating, documentation in alternative formats, etc.) are requested to contact Caltrans' District 7 Public Affairs Office at (213) 897-3656 at least 21 days prior to the scheduled public meeting. TDD users may use the California Relay Service TDD line at 1 (800) 735-2929 or voice line at 1 (800) 735-2922.

