10-STA-99-PM R23.9/R25.1
Program Code 800.100
EA 10-0L320K
December 2009

PROJECT STUDY REPORT

To

Request Project Concept Approval and Programming

On Route 99
in Stanislaus County
between 0.4 miles south of Hammett Road Overcrossing
and 0.8 miles north of Hammett Road Overcrossing

APPROVAL RECOMMENDED: _____
CHRISTINA HIBBARD, PROJECT MANAGER

APPROVED: _____ 2/2/2010
ROSS CHITTENDEN *DATE*
DISTRICT DIRECTOR

10-STA-99-PM R23.9/R25.1
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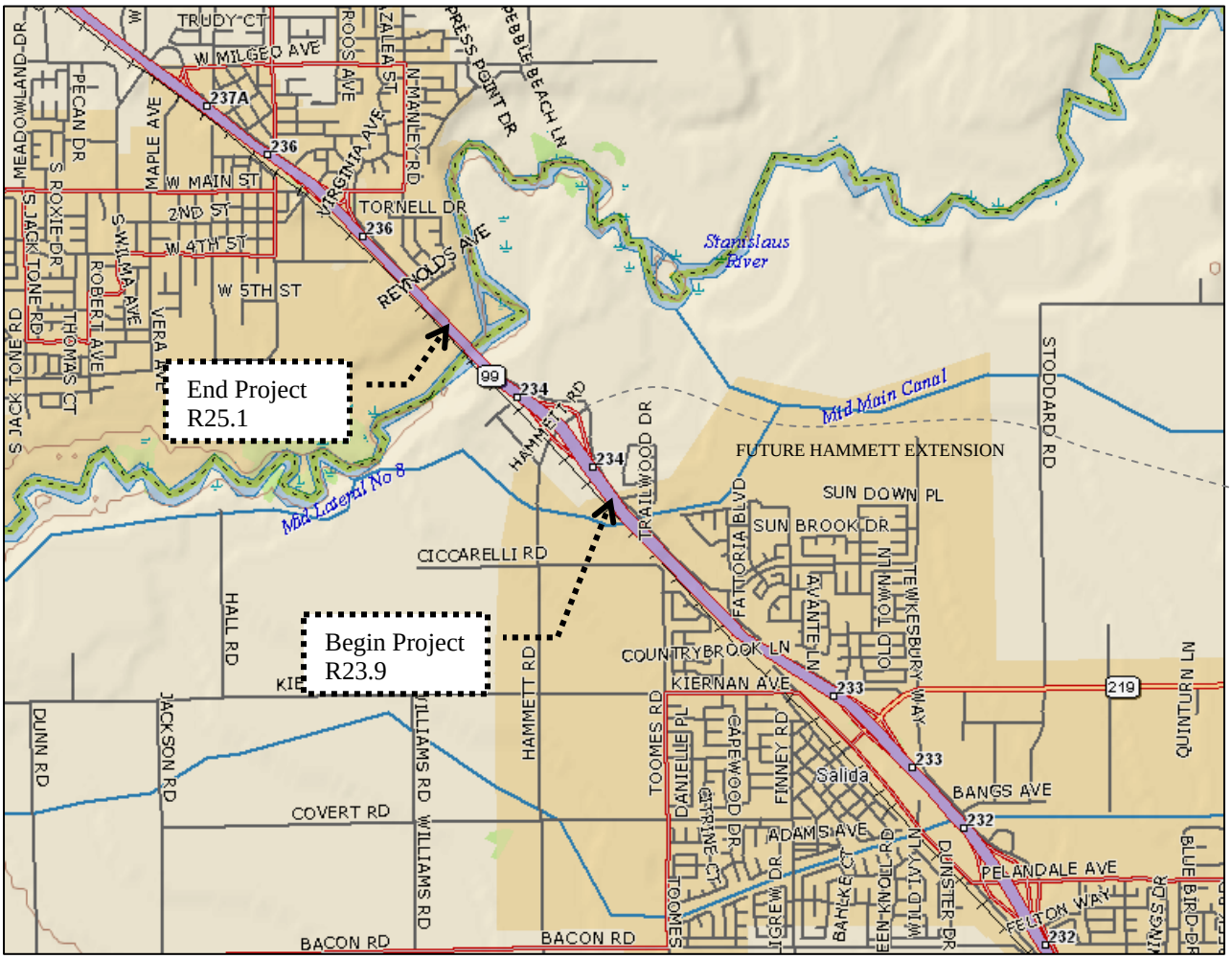
Project Vicinity Map



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This Project Study 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.

December 23, 2009

GAO BO, P.E.
REGISTERED CIVIL ENGINEER
RAJAPPAN & MEYER CONSULTING ENGINEERS, INC.

DATE

Table of Contents

1. Introduction

Stanislaus County, in cooperation with Caltrans District 10, proposes to reconstruct the State Route 99 (SR 99)/Hammett Road interchange in northern Stanislaus County. This project will alleviate forecasted traffic congestion and improve operations at the Hammett Road interchange with SR 99. Extensive residential and commercial development is planned in the interchange vicinity, and a future roadway connection to the eastern communities will introduce new regional traffic volumes.

Two build alternatives and the no-build are proposed for further consideration. The build alternatives range in current cost from $73 to $94 million for construction and right of way. These alternatives and costs will be further refined at the Project Approval and Environmental Document (PA&ED) phase. The project is proposed for funding by a combination of Stanislaus County Public Facilities Fees and STIP funding.

This Project Study Report is prepared for the purpose of providing conceptual approval and for programming of the project. The County has initiated PA/ED phase in March 2009, and plans to initiate design in 2010 and construction in 2011. A Project Report will serve as approval of the "selected" alternative.

The appropriate Project Development Category for this project is Category 3, because it will require modification of existing access control, reconstruction of the existing interchange and local roads, and acquisition of new right of way, but will not require a route adoption.

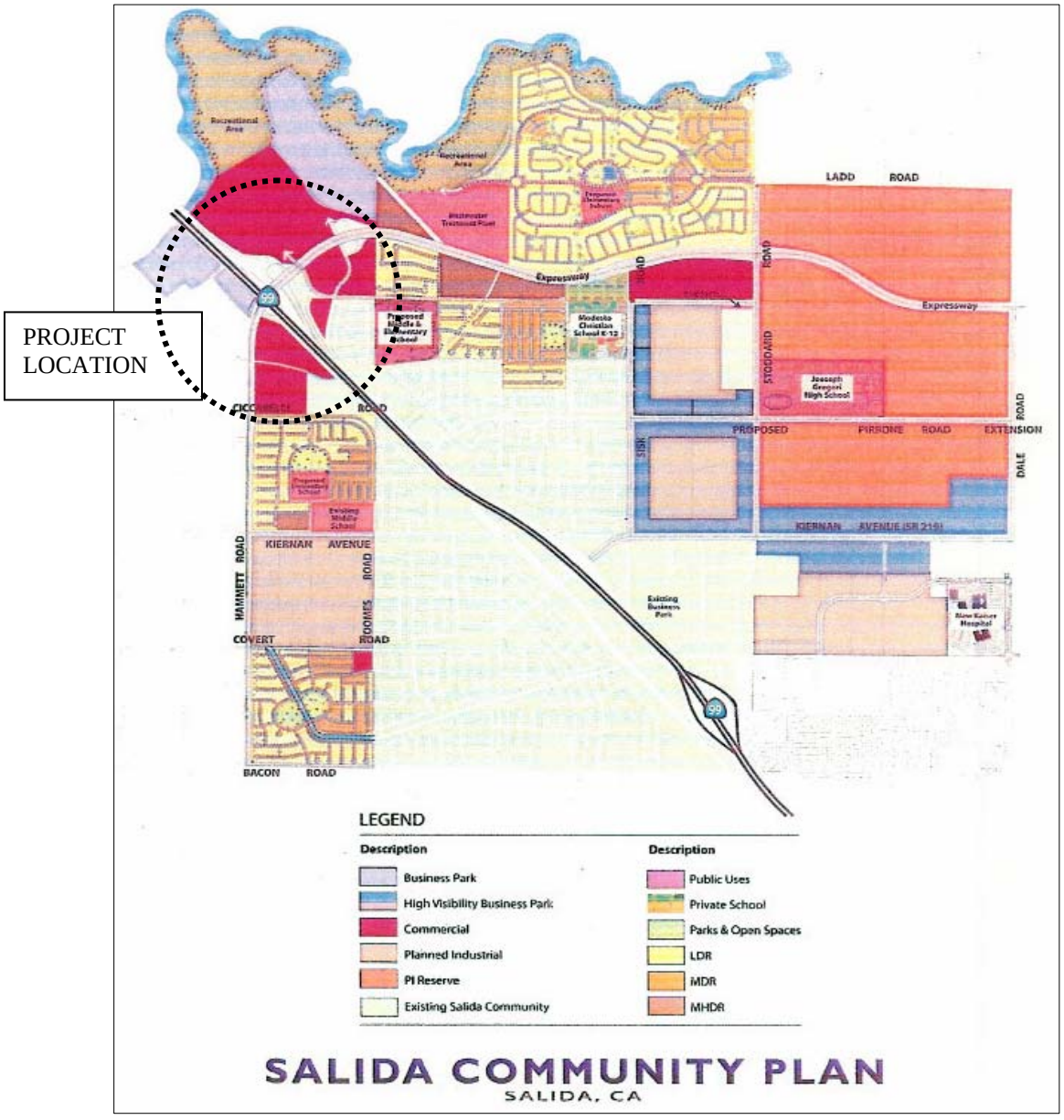
PROJECT INFORMATION:

Project Limits:	10-STA-99-PM R23.9/R25.1
Number of Alternatives:	3
Alternative Recommended for Programming:	Alternative 1 – Wide Diamond Interchange
Capital Construction Costs:	$ 61.0 million (current) (See the Cost estimate in **Attachment D** for specific work items included in this project.)
Capital Right of Way Costs:	$ 11.5 million (current)
Funding Source:	Local
Type of Facility (conventional, expressway, freeway):	Freeway/Local Interchange
Number of Structures:	2
Anticipated Environmental Determination/Document	Initial Study/Negative Declaration (CEQA) Environmental Assessment/FONSI (NEPA)
Project Category	3

2. Background

The SR 99/Hammett Road interchange is located in the north part of Stanislaus County, providing access to commercial and residential properties in the Community of Salida. The Salida area is undergoing rapid commercial and residential development and will result in generating considerable traffic to the interchange.

The Stanislaus County Board of Supervisors adopted the "Salida Now" initiative in August 2007 which provides infrastructure funding for industrial and commercial development. With a population of about 14,000, Salida is the largest town in unincorporated Stanislaus County. Salida's location along SR 99 at the far northern end of the county puts it within long-distance commuting range of the Bay Area. The County has adopted the Salida Community Plan, which will define the growth parameters for the next 20 years of the Salida Area.



Due to projected housing and commercial growth in the Salida area, the existing diamond interchange will not be adequate to accommodate forecasted traffic. Without improvement the level of service is forecasted to be “F” during peak periods.

The proposed interchange improvements include reconstruction of the existing interchange to provide improved operations for turning movements to and from SR 99, as well as associated local road improvements. The Proposed Project consists of reconstruction of interchange at SR 99/ Hammett Road and local road connections.

In addition, Caltrans, Stanislaus County and other local agencies are underway with environmental documentation of the North County Corridor (NCC) Project (EA 10-0S800). This road will provide approximately 24 miles of roadway on new alignment to enhance local traffic circulation and provide regional connectivity starting at the SR 99/Hammett Road Interchange on the west and extending eastward to Ellenwood Road, then northward to SR-120/108.

Attachment A provides the project vicinity map.

3. Purpose and Need Statement

3.1 PURPOSE

The purpose of the proposed project is to meet forecasted traffic demands at the SR 99/Hammett Road interchange.

The interchange ramps and local road connections are proposed to be re-configured and widened to provide improved operations for turning movements to and from SR 99 and for projected through traffic on Hammett Road and the future North County Corridor Project. The proposed bridge structures are to be designed to provide 16.5 feet of minimum vertical clearance over the roadbed of SR 99 and 23.0 feet of minimum vertical clearance over the railroad.

3.2 NEED

The need of the project is due to anticipated congestion and inadequacy of the existing interchange to accommodate future traffic needs.

Without improvement, the future levels of service at the existing ramp intersections would degrade to LOS F. Traffic at the ramp terminals would back up onto the SR 99 freeway exit ramps and cause significant congestion to SR 99 mainline operations.

The storage length available to accommodate forecasted westbound traffic is inadequate, and would result in long queues and congestion in the through lanes on Hammett Road.

3.3 TRAFFIC DATA

Year 2035 traffic forecasts are presented in the report titled "Traffic Forecast Results for: Hammett Road/SR 99 and Kiernan Avenue (SR 219)/SR 99 Project Study Reports", December 28, 2004, updated on April 12, 2007 by Dowling Associates. These traffic forecasts were approved by Caltrans Traffic Forecasting Division in May 2007. The average daily bi-directional traffic volume for SR 99 in the year 2035 is forecasted to be 177,100 between Hammett Road and Kiernan Avenue, and 222,900 between Hammett Road and 2ND Street. The design year 2035 peak hour and Average Daily Traffic (ADT) volumes are provided in **Table 1.**

TABLE 1
DESIGN (YEAR 2035) SR 99 MAINLINE TRAFFIC VOLUMES

Location		AM (vph)	PM (vph)	ADT
NB SR 99	Hammett Rd. to 2nd St.	10,810	10,860	111,450
	Kiernan Ave. to Hammett Rd.	9,600	8,400	88,100
SB SR 99	2nd St. to Hammett Rd.	9,270	12,160	111,450
	Hammett Rd. to Kiernan Ave.	7,300	9,900	89,000

3.4 ACCIDENT HISTORY

Caltrans provided accident data for SR 99 through the study corridor and the interchange ramps as shown in **Table 2**. This data shows that a total of 106 accidents were reported on the mainline during the three-year period from January 1, 2006 to December 31, 2008. At the ramps, a total of 9 accidents were reported. The accident rates are expressed in number of accidents per Million Vehicle Miles (MVM) for main line and Million Vehicles (MV) for intersections and ramps. Accident rates at all locations within the project limits were below the state average for similar facilities.

TABLE 2
ACCIDENT HISTORY

Facility	Number of Accidents			Accident Rate (accidents/MVM or MV)					
				Actual			State Average		
	Total	Fatal	Fatal + Injury	Total	Fatality	Fatal + Injury	Total	Fatality	Fatal + Injury
SR 99 (PM R023.900 to PM R024.749)	106	0	21	0.80	0.0	0.2	0.88	0.015	0.33
NB Off-Ramp to Hammett	1	0	0	1.79	0.0	0.0	1.50	0.005	0.61
SB On-Ramp From Hammett	1	0	0	1.75	0.0	0.0	0.80	0.002	0.32
NB On-Ramp From Hammett	2	0	0	0.77	0.0	0.0	0.80	0.002	0.32
SB Off-Ramp To Hammett	5	0	0	1.85	0.0	0.0	1.15	0.014	0.43

Source: Caltrans District 10 TASAS data between 01/01/2006 and 12/31/2008.

4. Deficiencies

4.1 TRAFFIC AND LEVEL OF SERVICE

The interchange of SR 99 and Hammett Road is an existing diamond interchange providing access to SR 99 from the Salida area of Northern Stanislaus County. In the future, it will be a highly traveled route with connections to Riverbank and Oakdale. Traffic volumes at this interchange are anticipated to increase due to the trips generated by development in the Salida area as well as eventual connection to the North County Corridor, which will access existing and developing areas of the north Modesto area, Oakdale and Riverbank. Traffic congestion does not currently occur at this interchange. Congestion will occur during peak periods with future growth.

Peak hour volume projections were generated by Dowling Associates using a modified Stanislaus Council of Governments (StanCOG) 2030 traffic model and updated to 2035. The future land uses in the vicinity of the subject interchanges include the full River Ranch development and West Salida Specific Plan, the Salida Community Plan. Roadway improvements planned include the connection and widening of Hammett Road to the west and east of SR 99.

Traffic Volumes & Lane Configuration

In the *2035 No Build Condition*, the existing interchange configurations would remain. However, the Hammett Road connection on the east side of SR 99 is planned to be constructed as an 8-lane facility while existing Hammett Road on the west side of SR 99 will be widened as 6-lane facility. The trip generation, trip distribution, trip assignment and traffic volume forecasts for the *2030 No Build Condition* is already approved by Caltrans and Stanislaus County in May 2007. The year 2030 volumes were updated for the year 2035 using approved growth factors. The memo "*2035 Traffic Forecast Results for Hammett Road/SR 99 and Kiernan Avenue/SR 99 Project Study Reports*" dated April 12, 2007 is provided in **Attachment J**.

Evaluation of 2035 No Build Traffic Condition

All analyzed intersections and ramp junctions are forecasted to operate at LOS "F" in the AM and PM peak hours in the *No Build Condition*. **Table 3** presents the summary of the *2035 No Build Condition* intersection level of service for weekday AM and PM peak hours. **Table 4** shows the *2035 No Build Condition* level of service summary for the ramp junctions at the interchange at Route 99 (Hammett Road).

TABLE 3
SR 99/HAMMETT INTERCHANGE
INTERSECTION LEVEL OF SERVICE SUMMARY
NO BUILD CONDITION (Year 2035)

Intersection	Peak Hour	LOS	Delay (sec)	Max v/c
1. Hammett Road and SR 99 SB Off-ramps	A.M.	**F**	**1471.7**	**> 1.0**
	P.M.	**F**	**1761.3**	**> 1.0**
2. Hammett Road and SR 99 NB Off-ramp	A.M.	**F**	**2115.2**	**> 1.0**
	P.M.	**F**	**222149.0**	**> 1.0**

Bold indicates unacceptable level of service and delay

TABLE 4
SR 99/HAMMETT INTERCHANGE
RAMP MERGE & DIVERGE LEVEL OF SERVICE SUMMARY
NO BUILD CONDITION (Year 2035)

Location	Peak Hour	LOS
3. NB SR 99 diverge at Hammett Road off-ramp	A.M.	**F**
	P.M.	**F**
4. NB SR 99 merge at Hammett Road on-ramp	A.M.	**F**
	P.M.	**F**
5. SB SR 99 diverge at Hammett Road off-ramp	A.M.	**F**
	P.M.	**F**
6. SB SR 99 merge at Hammett Road on-ramp	A.M.	**F**
	P.M.	**F**

Bold indicates unacceptable level of service and delay

4.2 EXISTING NONSTANDARD DESIGN ELEMENTS

The current interchange was constructed in 1969, and has several design elements that do not meet current Caltrans highway design standards, as follows:

- *Vertical Clearance*
  The vertical clearance of the Hammett Road Overcrossing of NB SR 99 is 16.1 ft., which is less than the 16.5 feet standard.

5. Corridor and System Coordination

5.1 ROUTE DESCRIPTION

SR 99 is a major freeway in California, serving as an alternate route to Interstate 5 from south of Bakersfield to Red Bluff. It serves almost all of the urbanized areas in the Central Valley. Within Stanislaus County, it is the major north-south transportation corridor and is the major interregional connector to the Bay Area. Stanislaus County, and especially the Salida area, is expected to experience rapid residential, commercial and industrial growth adjacent to SR 99. SR 99 has six lanes through northern Stanislaus and southern San Joaquin Counties. All ramps at the interchange of SR 99 and Hammett Road are single lane ramps. The ramp intersections at Hammett Road are un-signalized.

Hammett Road is currently an arterial that terminates just east of the SR 99 interchange at Pirrone Road, and extends to the southwest to connect with Broadway Avenue in Salida.

Pirrone Road is a local collector street that serves the Salida neighborhood east of SR 99 and north of Kiernan Avenue. It is planned to be widened to 4 lanes in the future.

Ladd Road is a rural two-lane local road that currently terminates at Stoddard Road on its west end.

Sisk Road is a local road that runs in a north-south direction east of SR 99.

5.2 SYSTEM DESIGNATION

SR 99 is a primary route for movement of freight and goods. This route is on the National Network for STAA Trucks, with portions of SR-99 designated as a SHELL route for transporting "Permitted" over dimensional load. Between Bakersfield and Sacramento this route is identified as an Intermodal Corridor of Economic Significance (ICES) as mandated by Assembly Bill 1823, Statues of 1993.

Hammett Road is currently an arterial that terminates just east of the SR 99 interchange at Pirrone Road. A proposed project is planned by Stanislaus County and will extend Hammett Road east from the Hammett Road Interchange to Dale Road and beyond. The new Hammett Road will be arterial road to serve new land developments.

5.3 PLANNING HORIZON

The project location is in an urban area. The existing **SR 99** facility is a 6-lane freeway. The concept Level of Service (LOS) is “C” for rural areas and “D” for the urban areas for SR 99. The Caltrans draft transportation concept report (TCR) for this segment of SR-99 identifies a 20-year planning concept to be an 8-lane freeway to meet a concept LOS “D.”

5.4 PROGRAMMED PROJECTS

The StanCOG RTP Tier 1 Fiscally Constrained list includes a widening project on SR 99 from Ceres to Kiernan Avenue from six lanes to eight lanes to be open to traffic by 2010. There is no current funding for the SR 99 widening.

TABLE 5
PLANNED AND PROGRAMMED PROJECTS IN THE VICINITY

STATUS	Expenditure Authorization	Route – Post Mile	Location	Description	Begin Construction
Programmed / Funded /Partially Funded	0K700	SR 219 – 00.10	SR-99/SR-219	Reconstruct NB/SB off-ramps, relocate maintenance vehicle pullout/modify signals	May 2009
Planned	0L330	SR 219 - 00.10	SR-99/SR-219	Reconstruct SR-99/SR-219 Interchange	August 2011
Planned	0S800	TBD	North County Corridor	4-8 lane highway	TBD
Planned	0L5901		SR-99	Modesto Corridor Tree Project	

There is no project identified in the StanCOG Regional Transportation Plan for widening of SR 99 to eight lanes north of Kiernan Avenue.

Improvements to **Hammett Road** are identified in the Stanislaus Area Regional Transportation Plan (RTP) Long-Range Improvement Program as well as the Regional Expressway Study. The ultimate concept for Hammett Road is a six-lane / eight-lane roadway with limited access.

The StanCOG RTP Tier 2 Fiscally Constrained list includes the **Hammett/SR 99 interchange** project.

Table 5 shows a summary of known programmed projects.

North County Corridor

The North County Corridor (NCC) Project (EA 10-0S800) would provide approximately 24 miles of roadway on new alignment to provide interregional connectivity from SR 99 easterly to approximately 7.7 miles east of the SR 120/108 junction. It is anticipated that the ultimate facility type would be a four to eight lane controlled access highway. The preliminary study limits are defined as starting at the SR 99/Hammett Road Interchange on the west and extending eastward to Ellenwood Road, then northward to SR 120/l08 and ending east of the Oakdale Community. The proposed North County Corridor project is being developed as a replacement for the SR 108 Oakdale Bypass project. The California Transportation Commission (CTC) has funded NCC environmental studies in the STIP. Recently, the NCC alignment and limits has changed, and would start from McHenry Avenue (SR-108) and traverse to the east to SR-120 in Oakdale.

For the purpose of the Hammett Road/SR 99 interchange project alternatives, the NCC is considered a local road project, also known as the “Hammett Road Extension” or the “Salida Expressway.” It is assumed that NCC segments that might meet the CTC’s conditions lie east of McHenry Avenue, or more significantly that the segment connecting to SR 99 would be a local road.

Caltrans has discussed with the County that, if the NCC connects to SR 99, and were proposed for transfer or adoption into the state highway system, a HDM freeway-to-freeway interchange should be assumed. Interchange spacing would then become an issue with both the Kiernan Avenue and Hammett Road interchanges on SR 99 and the Pirrone Road interchange on NCC. Future interchange spacing, interchange removal or modification, or approval of interchange spacing design exceptions would be required, depending on the outcome of NCC environmental studies, NCC project limits, timing, alignment selection and route adoption.

The NCC project information will be updated in the Project Report, PA&ED phase.

5.5 UNION PACIFIC RAILROAD

The **Union Pacific Railroad** traverses north-south through the area, with a grade-separated crossing under Hammett Road west of the SR 99 at the interchange. The average number of trains per day is 19. New railroad grade separation bridges are need for Hammett Road and for the ramps as part of the proposed improvements.

6. Alternatives

6.1 ALTERNATIVES DESCRIPTION

The Project Development Team (PDT) explored a number of viable alternatives at the Hammett Road interchange during the PSR phase. The Traffic Operations Report was submitted with the following two build alternatives for review:

Alternative 1 – Widen exist diamond interchange
Alternative 2 – Reconstruct as new partial cloverleaf interchange

Both alternatives have been approved by District Traffic Operations for inclusion in this PSR and to be studied during PA/ED phase. During the review and approval of the traffic operations report, Caltrans requested that additional alternatives be studied in the PA/ED phase.

NO-BUILD ALTERNATIVE

The **No-Build Alternative** would leave the existing interchange in its current diamond configuration. No new ramp improvements or freeway auxiliary lanes would be constructed with this alternative. Unacceptable levels of service would occur at the ramp junctions and the freeway would not accommodate forecast traffic volumes.

BUILD ALTERNATIVES

Alternative 1 – Widen Exist (Type L-1) Diamond Interchange

Alternative 1 is the Recommended Alternative for the purpose of right of way definition and programming. This alternative would replace the current bridge over SR 99 with a wider bridge with increased vertical clearance over SR 99, thus eliminating an existing nonstandard vertical clearance condition. The existing interchange ramps, intersections and local roads connections would be widened or reconstructed to accommodate forecasted turning movements and though traffic. The NB on-ramp and SB Off-ramp would be reconstructed to provide adequate capacity and storage. The NB off-ramp and SB on-ramp would be modified with additional lanes. Traffic signals would be added to Hammett Road at the termini of the exit ramps. All on-ramps would have ramp metering and HOV bypass lanes. The Hammett Road Bridge over SR 99 would be widened to accommodate the eight-lane planning concept, bike lanes and sidewalks. Utility relocations would include PG&E 12" gas transmission pipeline on private property in an exclusive easement on the east side of SR 99, AT&T direct buried cable on private property in an exclusive easement on the east side of SR 99, MID has an overhead distribution facility on the east side of SR 99 on private property in an exclusive easement. The Geometric Approval Drawings (GADs) and bridge Advance Planning Studies (APS) for Alternative 1 are provided in **Attachment B**. The estimated construction and right of way cost for this alternative in current dollars is as follows:

Total Roadway Items	$ 42,300,000
Total Structure Items	$ 18,700,000
Subtotal Construction Costs	$ 61,000,000
Total Right Of Way Items	$ 11,500,000
Total Project Capital Outlay Costs	**$ 72,500,000**

Alternative 2 - Construct New (Type L-8) Partial Cloverleaf Interchange

This alternative would replace the existing diamond interchange with a modified type L-8 partial cloverleaf interchange with exit loop ramps. The NB on-ramp and SB off-ramp would be reconstructed to provide adequate capacity and storage. The NB off-ramp and SB on-ramp would be modified for additional lanes. Two new loop off-ramps would be built. Also two new traffic signals would be added to Hammett Road at the termini of exit ramps. All on-ramps would have ramp metering and HOV bypass lanes. A new Hammett Bridge over SR 99 would be built to accommodate the eight-lane planning concept, bike lanes and sidewalks. Utility relocations would be the same as Alternative 1. The Geometric Approval Drawings (GADs) and bridge APS for Alternative 2 are provided in **Attachment C**. The estimated construction and right of way cost for this alternative is as follows:

Total Roadway Items	$ 49,600,000
Total Structure Items	$ 32,000,000
Subtotal Construction Costs	$ 81,600,000
Total Right Of Way Items	$ 11,500,000
Total Project Capital Outlay Costs	**$ 93,100,000**

Cost estimates for both alternatives are provided in **Attachment D**. The right of way data sheet is provided in **Attachment E**.

Additional Alternatives to be Studied in PA&ED

Alternative 3 – TYPE L-7 Interchange

Caltrans District 10 Traffic Operations Branch requested that the following be evaluated using Alternative 2 during the PA/ED phase with the following modifications:

- Remove WB left-turn lane to SB On-Ramp and provide WB free right-turn SB On-Ramp loop.
- Remove SB Off-Ramp Loop and provide SB Off-Ramp with triple left-turn lanes at the intersection.
- Remove EB dual left-turn lanes to NB On-Ramp and provide EB free right-turn to NB On-Ramp loop.
- Remove NB Off-Ramp loop and NB free right by providing NB Off-Ramp to the intersection.
- Add NB loop on-ramp.

6.2 DESIGN EXCEPTIONS

The following is the design exception identified for the recommended alternative:

Nonstandard Feature:
Nonstandard Curb Ramps (Advisory Standard): At each corner of the interchange, two curb ramps need to be installed, but there is only one curb ramp at the corner of the intersection for the north side of Hammett Road. The nonstandard curb ramps are located at the intersection of Hammett Court/Hammett Road, southbound off-ramp/Hammett Road and northbound on-ramp/Hammett Road. The fact sheet for the Advisory Design Exception will be submitted in the PA/ED phase.

6.3 STORM WATER DISCUSSION

A Storm Water Data Report was prepared by Rajappan & Meyer Consulting Engineers and was approved by the District 10 Storm Water Coordinator on 5/26/09. The cover sheet of the Storm Water Data Report (SWDR) is provided in **Attachment F**. The proposed project does not change the existing flow pattern, with storm water runoff from new and existing pavement of the interchange ramps and Hammett Road directed into new infiltration basins proposed within the project limits as general purpose permanent treatment devices. The proposed infiltration basins are designed to provide full treatment of storm water runoff within the project area for the Water Quality Flow event. Runoff from the SR 99 mainline will continue to flow to the existing underground drainage system, with an outflow to the Stanislaus River at the north end of the project.

The project would include Design Pollution Prevention BMPs and Temporary Construction Site BMPs as required. Provision is made in the project cost estimates to extend the existing cross drainage structures to convey the storm water discharge. More detailed investigations and studies are required in the initial design phase to confirm the hydraulic and structural adequacy of the existing drainage system.

6.4 TRANSPORTATION MANAGEMENT PLAN

A Transportation Management Plan (TMP) Checklist has been prepared to identify traffic control strategies necessary to reduce vehicle delays during construction. The TMP Checklist is provided in **Attachment G**. It is anticipated that temporary lane closures would be required for setting K-rail and lane width reductions would be required for work zones. Provision is made for changeable message signs, K-rail and temporary traffic screens during construction. The project cost estimate includes $250,000 for TMP and $450,000 for COZEEP. The District 10 Traffic Management Unit would be consulted to develop a concise TMP limits.

6.5 TRAFFIC OPERATIONS

The Traffic Operations Report was prepared by Rajappan & Meyer Consulting Engineers, Inc. and conditionally approved by Caltrans District 10 Traffic Operations Unit on January 13, 2009. Level of service analysis was performed for the study intersections for each build alternative for Year 2035 AM and PM peak hour traffic. All ramp intersections in build Alternatives 1 and 2 operate at LOS “C” or better in the design year, based on Synchro results given in **Table 6**.

TABLE 6
SR 99/HAMMETT INTERCHANGE
INTERSECTION LEVEL OF SERVICE SUMMARY (SYNCHRO) (Year 2035)

Intersection	Peak hour	2035 No-Build			2035 Alternative 1			2035 Alternative 2		
		LOS	Control Delay (Sec)	V/C	LOS	Control Delay (Sec)	V/C	LOS	Control Delay (Sec)	V/C
Hammett Road and SR 99 SB off-ramps	A.M.	**F**	**1471.7**	**-**	C	24.8	0.84	A	8.0	0.49
	P.M.	**F**	**1761.3**	**-**	C	26.6	0.90	B	10.4	0.65
Hammett Road and SR 99 NB off-ramps	A.M.	**F**	**2115.2**	**-**	B	14.0	0.84	A	3.0	0.58
	P.M.	**F**	**2149.0**	**-**	C	14.6	0.80	A	5.5	0.73

- Intersection is not present in Alternative
Bold indicates unacceptable level of service and delay The results are based on the analysis done based on Synchro 7

The SimTraffic software was used to calculate the delay in order to take into account the effects of the adjacent intersections. The SimTraffic results are given in **Table 7.** All ramp intersections in build Alternatives 1 and 2 operate with acceptable delay in the design year.

TABLE 7
SR 99/HAMMETT INTERCHANGE
INTERSECTION LEVEL OF SERVICE SUMMARY (SIMTRAFFIC) (Year 2035)

Intersection	Peak hour	2035 No-Build			2035 Alternative 1			2035 Alternative 2		
		LOS	Delay (Sec)	Density	LOS	Delay (Sec)	Density	LOS	Delay (Sec)	Density
Hammett Road and SR 99 SB off-ramps	A.M.	**F**	**9059.3**	**36**	C	22.8	201	A	7.9	301
	P.M.	**F**	**7823.1**	**35**	C	28.0	146	A	8.9	223
Hammett Road and SR 99 NB off-ramps	A.M.	**F**	**1373.9**	**28**	B	18.4	122	B	10.9	212
	P.M.	**F**	**3473.2**	**36**	B	19.1	124	A	9.3	232

- Intersection is not present in Alternative
Bold indicates unacceptable level of service and delay. The results are based on the analysis done based on SimTraffic 7

The freeway level of service will not be improved by the project. The mainline operations will be at LOS F for both AM and PM design year periods, with the project or with the no-build condition. Mainline improvements needed to achieve a better level of service would include mainline widening, which is outside the scope of the current project.

6.6 RIGHT OF WAY DISCUSSION

A Right of Way Data Sheet was prepared for the Recommended Alternative by Associated Right of Way Services and was approved by Central Region Right of Way on 7/08/09. The proposed project would require acquisition of 19.0 acres of farmland. No displacements would be required to construct the interchange. It is anticipated that San Joaquin County would be responsible for right of way appraisals, acquisition and condemnation, if needed. The County has indicated that 12 months is sufficient time to acquire the right of way after maps are approved.

No permanent right of way is required from the Union Pacific Railroad (UPRR). However, a Construction and Maintenance Agreement will be required to be executed between the County and the UPRR in order to construct the Hammett Road Overhead bridge widening. It is anticipated that the C&M agreement will require 12-18 months to process, starting concurrently with final design tasks.

6.7 VALUE ANALYSIS

The Value Analysis Study will be completed in the PA&ED phase.

7. Community Involvement

Initial public meetings were held in November 2004 to present the scope of interchange improvements. Broad community support was expressed for the interchange modification. No known opposition exists.

Additional public meetings will be held by Stanislaus County during the PA&ED phase. These meetings will provide opportunity for members of the public and other public agencies to comment or request clarification about the proposed project and related documents,

8. Environmental Determination/Document

A Preliminary Environmental Analysis Report (PEAR) was prepared by LSA Associates, approved by Caltrans Central Region Environmental Unit on January 12, 2009, and is provided in **Attachment H**. This section describes the findings of the PEAR document.

8.1 ANTICIPATED ENVIRONMENTAL APPROVAL

The anticipated environmental documentation would be an Initial Study/Mitigated Negative Declaration for the California Environmental Quality Act and Environmental Assessment/Finding of No Significant Impact for the National Environmental Policy Act, should federal or STIP funding be sought by the County. Caltrans would be the lead agency for the purposes of both the California Environmental Quality Act and the National Environmental Policy Act.

8.2 FOCUSED STUDY REQUIREMENTS

Focused studies for each project alternative (Alternatives 1 and 2) during PA/ED will need to include traffic, water quality and erosion, air quality and noise, cultural resources, visual, hazardous waste/materials, farmland conversion, biological resources, climate change, and greenhouse gas discussions in accordance with Caltrans' latest procedures. A number of key environmental issues are associated with these alternatives. Potential effects on resources within the Stanislaus River may occur due to bridge widening on SR 99.

Impacts may occur to sensitive biological species (e.g., anadromous fish, Swainson's hawk, burrowing owl, nesting birds and roosting bats). Studies may be necessary to evaluate habitat potential for burrowing owls, and foraging habitat for raptors. Several trees (including oak trees) along the support roadway network will be removed by interchange improvements. Ultimately, preconstruction surveys may be required to establish presence of sensitive species (e.g., burrowing owl, nesting birds, roosting bats, Swainson's hawk). Valley elderberry longhorn beetle impacts may also occur if project improvements impact adjacent blue elderberry plants.

Mitigation may include elderberry plant compensation, and tree replacement. Resource/regulatory agency permits are anticipated where impacts may occur within or adjacent to the Stanislaus River. Noise from expanding roadways and increase traffic volumes may be a concern to sensitive receptors within or adjacent to the project area. Noise barrier mitigation may be required to protect sensitive receptors. Air quality conformity will be required to determine the potential effects from expanding the support roadway network. Additional testing for hazardous materials/waste contamination may be required, including the potential issues associated with replacing bridge structures within the proposed right-of-way. Further documentation of potentially historic resources, including railroad, canal and farmstead resources, is required to determine potential for eligibility to the National Register of Historic Places, potential project effects and mitigation responsibilities (should impacts to eligible resources occur). Minor agricultural impacts relating to interchange improvements may warrant compensation for loss of row crop lands. Special considerations under these alternatives include potential seasonal constraints. A work window may be enforced as avoidance for fish passage, nesting swallows or other birds (March 1 through October 31). No other special considerations are anticipated under these alternatives.

8.3 POTENTIAL EFFECTS/MITIGATION ESTIMATES

The following paragraphs address mitigation requirements for each focused area to reduce, minimize, or compensate for project losses. Cost estimates are provided for each mitigation measure.

Visual/Aesthetics – Interchange reconstruction is not expected to impact any important aesthetic or scenic resources in light of the urban character of the study area. Nonetheless, existing structures and landscaping must be replaced and the aesthetic value of the oak trees should be mitigated. The mitigation costs are estimated at $225,000 for landscaping and scenic resources.

Water Quality and Erosion – Standard erosion control measures and Best Management Practices will be required to mitigate erosion and water quality during construction. Costs are included in construction estimate and are estimated at $25,000. Drainage basins may be required to store excess runoff. Costs for basins are included in construction estimate and are typical.

Air Quality and Noise - An Air Quality study and a Noise study will be conducted to analyze the possible project related impacts. The project must conform to the Clean Air Act on a regional and project level. Standard dust control measures and compliance with San Joaquin Valley Unified Air Pollution Control District rules and regulations during construction. Costs are included in construction estimate and are typical. Noise barrier attenuation may be required adjacent to existing residential subdivision (southeast interchange quadrant). Costs for noise barriers are estimated at $100,000.

Cultural Resources – Pre-historic and historic resources could be present within the project area and could be impacted by the proposed improvements. Mitigation of cultural resources may be required, if determined eligible for the National Register. Costs are estimated at up to $145,000.

Hazardous Wastes/Materials – Several actions may be required to resolve potential hazardous waste issues including removal of thermoplastic striping, and testing of lead paint on bridge structures. Studies for aerially deposited lead will be conducted prior to construction activities. If Naturally Occurring Asbestos is suspected, testing will also be conducted. Measures will be identified to protect the health and safety of construction workers. Costs are estimated at approximately $50,000.

Biological Resources – Loss of habitat and trees (including oak trees) may occur despite the urban setting of the interchange area. Costs to replace habitat/trees within the project boundaries are estimated at $220,000. Seasonal restrictions for fish passage and nesting birds are anticipated during project construction.

9. Funding and Programming

9.1 CAPITAL COST

Alternative 1 is the **RECOMMENDED ALTERNATIVE**. This alternative would replace the existing diamond interchange with a type L-1 wide diamond . The NB on-ramp and SB off-ramp would each be reconstructed to provide adequate capacity and storage. The NB off-ramp and SB on-ramp would be modified for additional lanes. All on-ramps would have ramp metering and HOV bypass lanes. A new Hammett Road Bridge over SR 99 would be build to accommodate eight vehicle lanes, bike lanes and sidewalk. The estimated construction and right of way cost for this alternative in current dollars is as follows:

Total Roadway Items	$ 42,300,000
Total Structure Items	$ 18,700,000
Subtotal Construction Costs	$ 61,000,000
Total Right Of Way Items	$ 11,500,000
Total Project Capital Outlay Costs	**$ 72,500,000**

The escalated values for all construction, right of way and support costs are provided in the following **Table 10:**

TABLE 10
ESCALATED IMPLEMENTATION COSTS

COMPONENT	PCT	OF	CURRENT DOLLARS	START OF COST	ANNUAL PCT ESCALATION	ESCALATED COST
PS&E	7.0%	CONST	$5,075,000	1/1/2010	0.0%	$5,080,000
R/W Support	5%	R/W	$575,000	9/1/2010	3.5%	$590,000
R/W Capitol	100%	R/W	$11,493,000	9/1/2010	3.5%	$11,790,000
Constr. Support	10.0%	CONST	$7,250,000	12/1/2012	3.5%	$8,040,000
Construction	100%	CONST	$72,500,000	12/1/2012	3.5%	$80,390,000
TOTAL ESCALATED COST			**$96,893,000**			**$105,890,000**

9.2 CAPITAL SUPPORT ESTIMATE FOR PROGRAMMABLE ALTERNATIVE

A cooperative agreement has been executed between Caltrans and Stanislaus County for PA&ED, design and construction of all project locations. Caltrans District 10 would provide environmental and design oversight and approval of the project at reimbursed cost. The Approved Cooperative Agreement is provided in **Attachment I** for the PA&ED phase. Caltrans would provide planning and design oversight. Stanislaus County would prepare the Environmental Document and Project Report for Caltrans approval, and the PS&E package. The County would acquire right of way, advertise and award the project, and administer the construction contract, with Caltrans oversight.

Estimated support costs for the project are shown in **Table 11**. The assumed rate of escalation is 3.5%.

TABLE 11
ESCALATED SUPPORT COSTS

COMPONENT	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	TOTAL
PS&E		$5,080,000				$5,080,000
R/W Support			$590,000			$590,000
Constr. Support					$8,040,000	$8,040,000
TOTAL ESC. COST		# $5,080,000	$590,000		$8,040,000	**$13,710,000**

9.3 FUNDING

The project is anticipated to be funded by a combination of Public Facility Fee (PFF) and future sales tax revenue. Stanislaus County has currently collected some traffic mitigation funds through City/County Transportation Facilities Public Facility Fee (PFF) program. The anticipated collection through the PFF is $50-$100 million for this project.

9.4 AGREEMENTS/PERMITS

The following agreements will be required prior to construction:

1. Executed Cooperative Agreement for PA/ED, Design and Construction.
2. Freeway Maintenance Agreement is required between Stanislaus County and Caltrans for Hammett Road. A draft agreement and exhibit (plans) will be provided when the project is in the PS&E stage/process.
3. UPRR Construction and Maintenance Agreement. This agreement would require 12-18 months to obtain.
4. Caltrans Encroachment Permit (if construction is by County).
5. Utility relocation agreements with PG&E, AT&T and MID.

10. Schedule

Table 12 provides the proposed schedule for delivery of project milestones for the Recommended Alternative:

TABLE 12
PROPOSED MILESTONE SCHEDULE

No.	Milestone	Date
1.	M000 - IDENTIFY NEED	03/01/2004
2.	M010 - APPROVE PID	06/01/2009
3.	M015 - PROGRAM PROJECT	06/01/2009
4.	M020 - BEGIN ENVIRONMENTAL	02/19/2009
5.	M030 - NOTICE OF PREPARATION (NOP)	N.A.
6.	M040 - BEGIN PROJECT REPORT	02/19/2009
7.	M100 - APPROVE DPR	05/02/2010
8.	M120 - CIRCULATE DED	05/09/2010
9.	M160 - APPROVE FED	09/19/2010
10.	M200 - PA & ED	09/26/2010
11.	M210 - BEGIN DESIGN	06/30/2010
12.	M221 - BRIDGE SITE DATA ACCEPTED	11/09/2010
13.	M224 - RIGHT OF WAY MAPS	12/19/2010
14.	M275 - GENERAL PLANS	02/14/2011
15.	M311 - 30% CONST REVIEW COMPLETED	02/14/2011
16.	M313 - 60% CONST REVIEW COMPLETED	07/03/2011
17.	M315 - 95% CONST REVIEW COMPLETED	11/12/2011
18.	M378 - DRAFT STRUCTURES PS&E	12/12/2011
19.	M380 - PROJECT PS&E	03/08/2012
20.	M410 - RIGHT OF WAY CERTIFICATION	12/31/2011
21.	M460 - READY TO LIST	04/08/2012
22.	M480 – COUNTY ADVERTISE	04/09/2012
23.	M495 - AWARD	07/15/2012
24.	M500 - APPROVE CONSTRUCTION CONTRACT	08/12/2012
25.	M600 - CONTRACT ACCEPTANCE	042/24/2015

11. District Contacts

Questions or comments regarding this Project Study Report may be directed to:

Caltrans - District 10
1976 East Martin Luther King Jr. Blvd, Stockton, California 95205

- Christina Hibbard, District Project Manager (209) 948-1345
- Vu Nguyen, District Traffic Operations (209) 603-5126
- Jose Huerta, District Design Oversight (209) 948-7902

Stanislaus County
1716 Morgan Road, Modesto, CA 95358

- Matt Machado, Public Works Director (209) 525-7581
- Chris Brady, Senior Engineer

Rajappan & Meyer Consulting Engineers, Inc. (Management, Civil and Structural)
1038 Leigh Avenue, San Jose, CA 95126

- Keith Meyer, Principal (408) 280-2772
- Bo Gao, Design Manager
- Kianoush Harirsaz, Structural Design Manager

Dowling Associates (Traffic)
180 Grand Avenue, Suite 250, Oakland, California USA 94612

- Joe Holland, Principal (925) 284-3200

LSA Associates, Inc. (Environmental)
4200 Rocklin Road, Suite 11B, Rocklin, California 95667

- Bill Mayer, Principal (916) 630-4600
  Edward Heming, Environmental Manager

12. Project Reviews

Traffic Forecasts Approved	Date	April 12, 2007
Traffic Operations Report Approved	Date	January 13, 2009
PEAR Document Approved	Date	January 12, 2009
Design Exception Fact Sheets Approved	Date	To be approved in PA/ED
Right of Way Data Sheet Approved	Date	July 8, 2009
District Maintenance Review	Date	July 09, 2008
District Safety Review	Date	May 20, 2009
Constructability Review	Date	May 20, 2009
HQ Geometric Design Review	Date	February 10, 2009
Storm Water Data Report Approved	Date	May 26, 2009

13. Attachments

Attachment A – Vicinity Map
Attachment B – Geometric Approval Drawings (Alternative 1)
Attachment C – Geometric Approval Drawings (Alternative 2)
Attachment D – Cost Estimates
Attachment E – Right of Way Data Sheet (RWDS)
Attachment F – Storm Water Data Report (SWDR) Cover Sheet
Attachment G – TMP Checklist
Attachment H – PEAR Document
Attachment I – Cooperative Agreement
Attachment J – Approved Traffic Forecasts

Attachment A – Vicinity Map

10-STA-99-PM R23.9/R25.1
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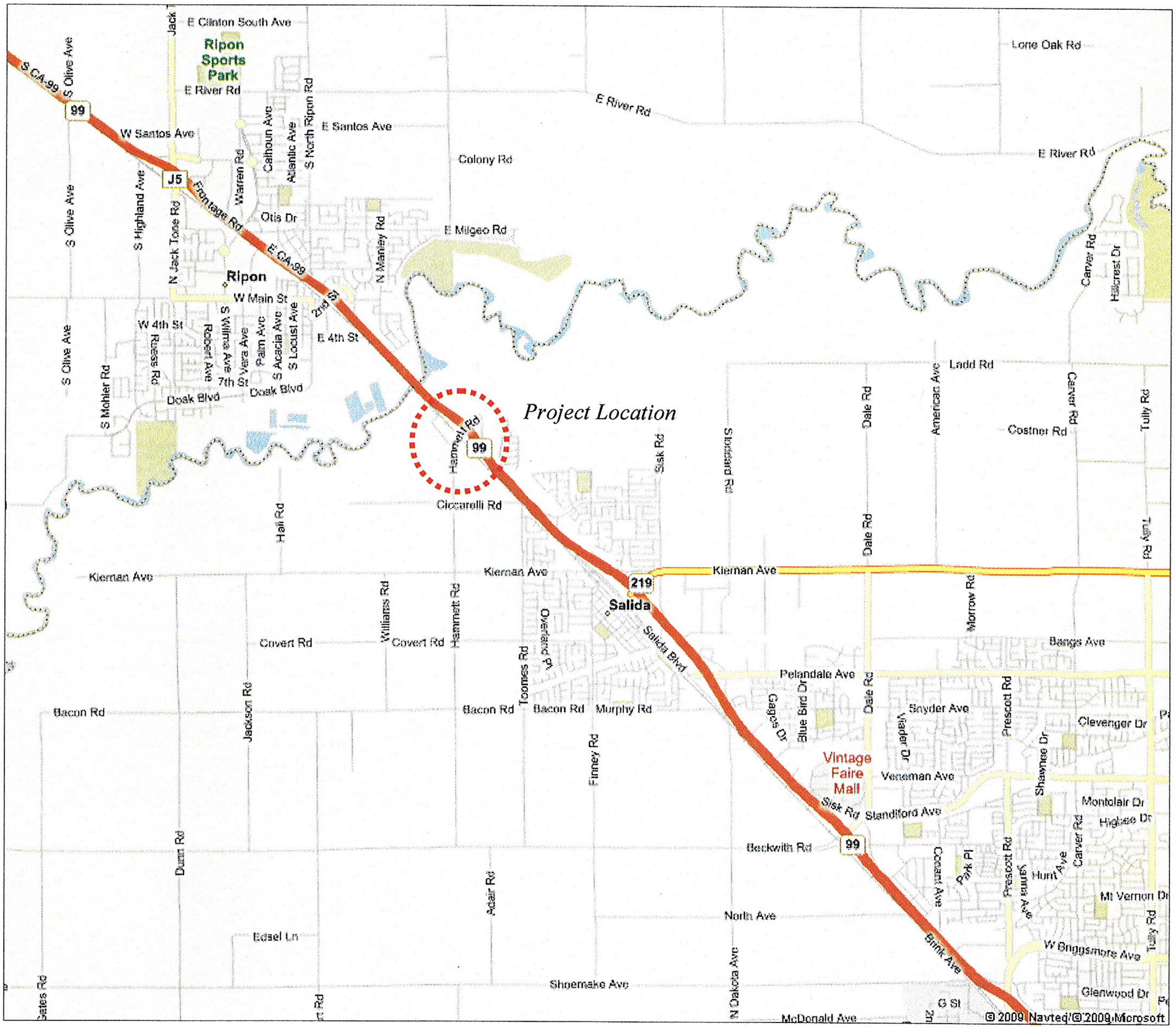
Hammett Road/Route 99 Interchange Reconstruction Project

Vicinity Map



Attachment B – Geometric Approval Drawings (Alternative 1)

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10	STA	99	23.9/25.1		

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN STANISLAUS
FROM 0.4 MILE SOUTH OF HAMMETT ROAD OC
TO 0.8 MILES NORTH OF HAMMETT ROAD OC

To be suplemented by Standard Plans dated May 2006

INDEX OF SHEETS

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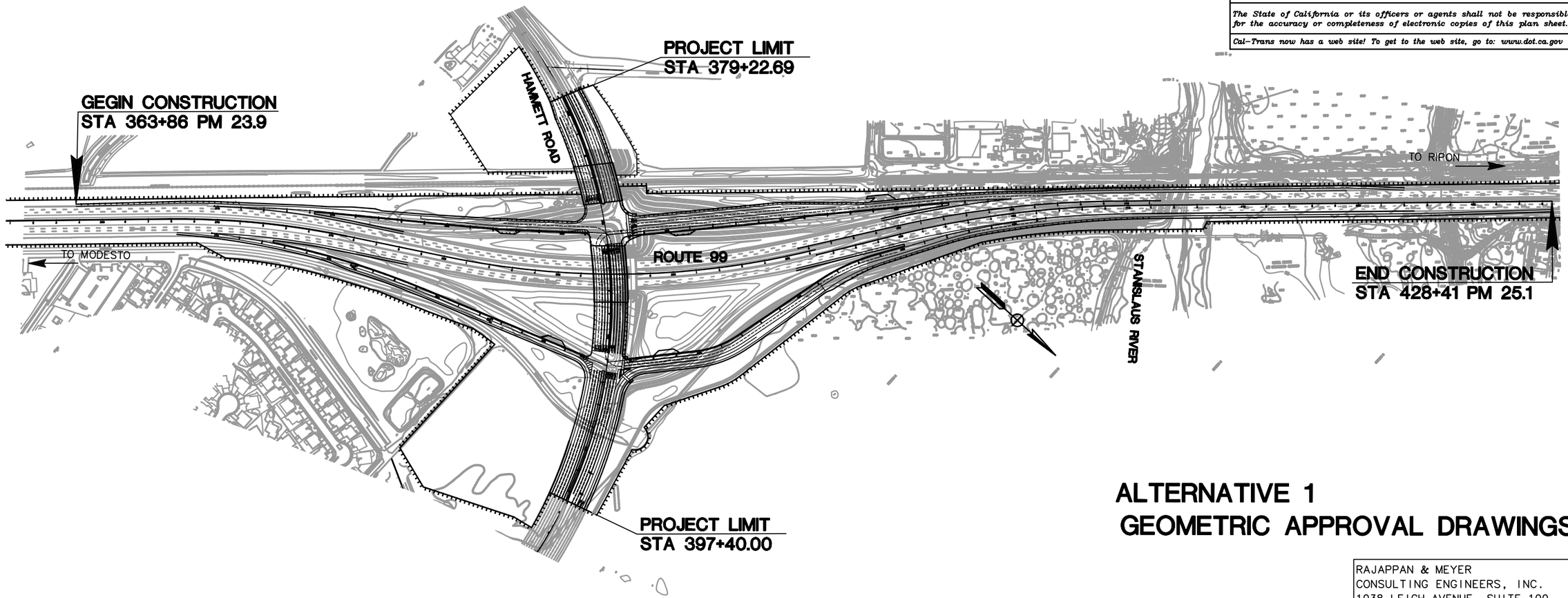

ALTERNATIVE 1
GEOMETRIC APPROVAL DRAWINGS

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

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2. SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAMS.

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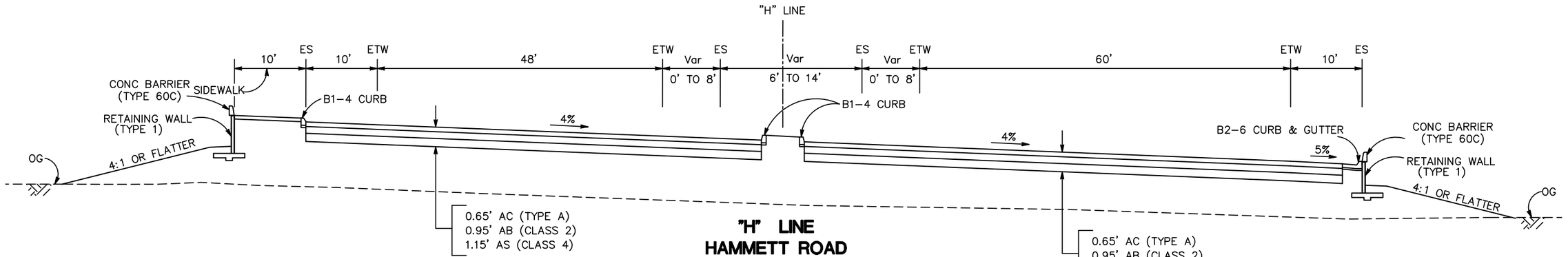

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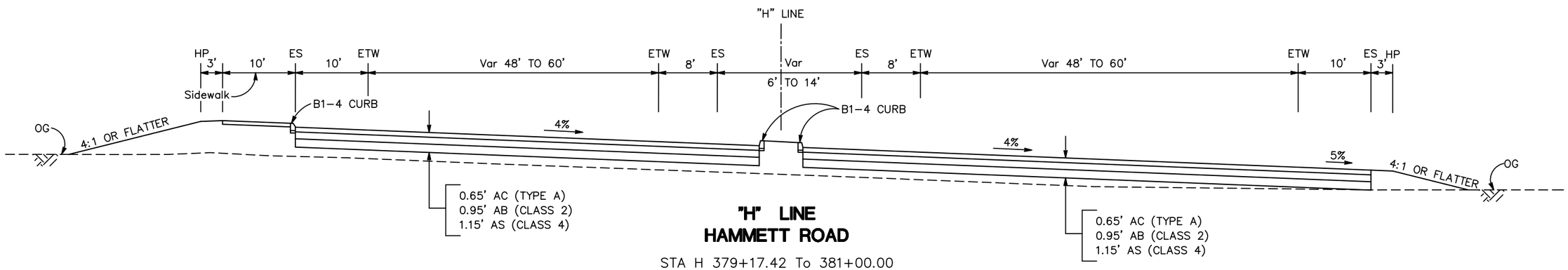

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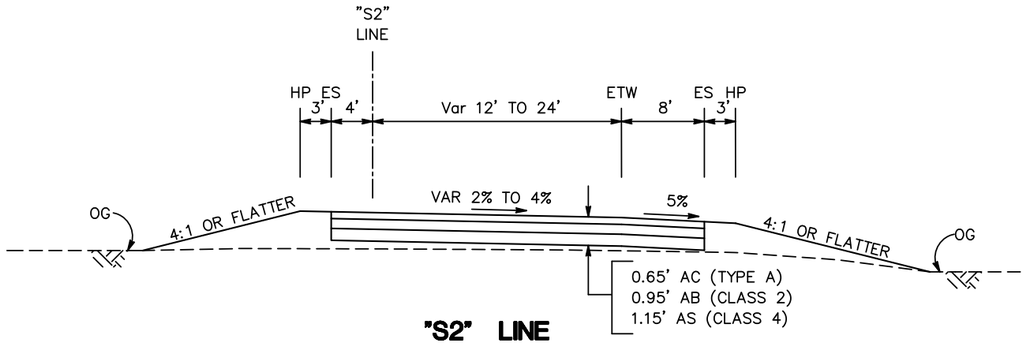

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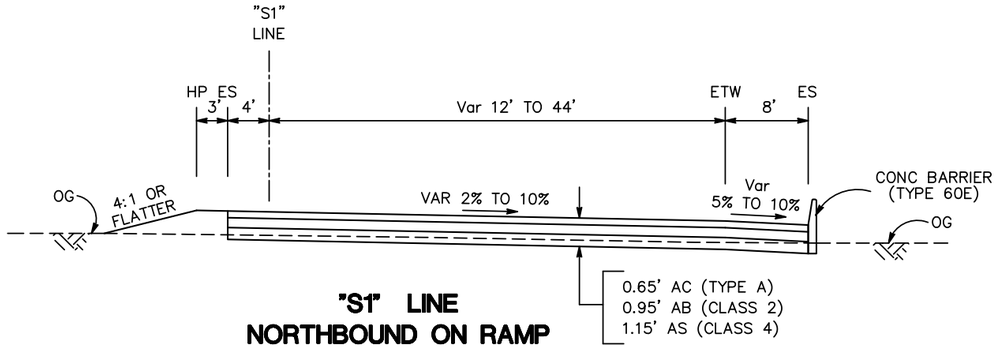

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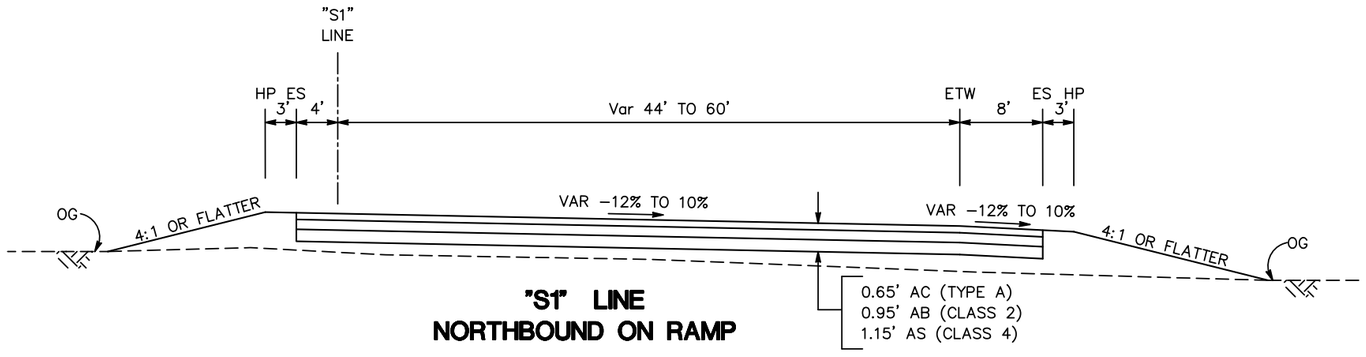

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TYPICAL CROSS SECTIONS

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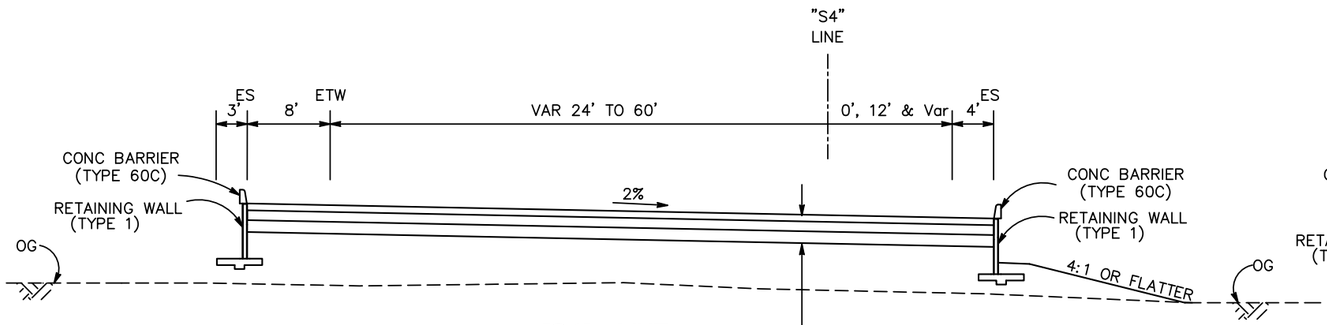

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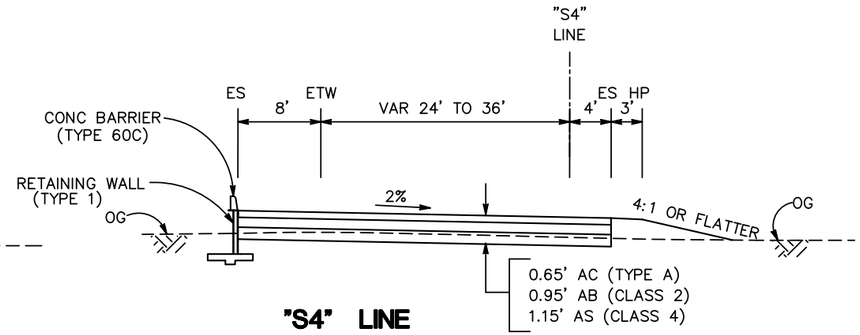

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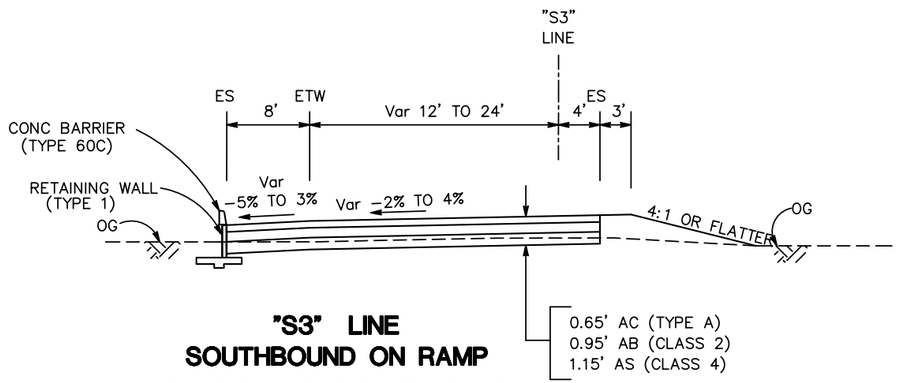

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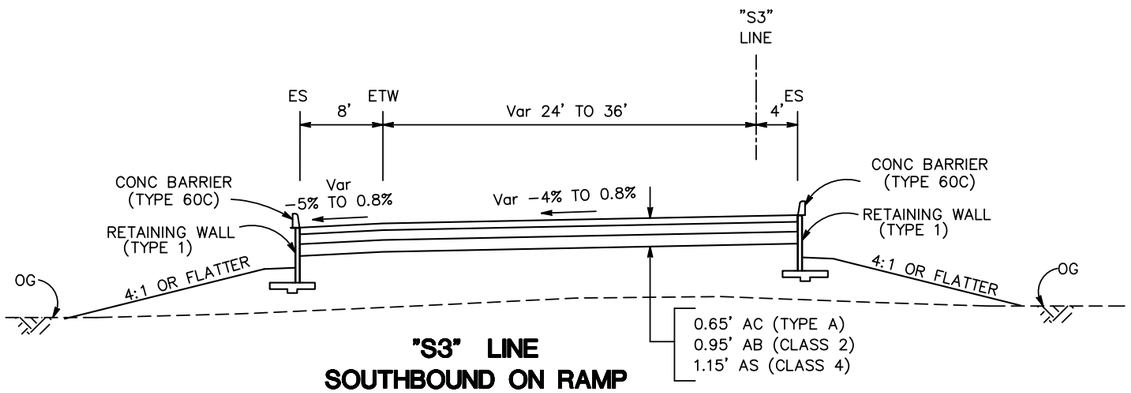

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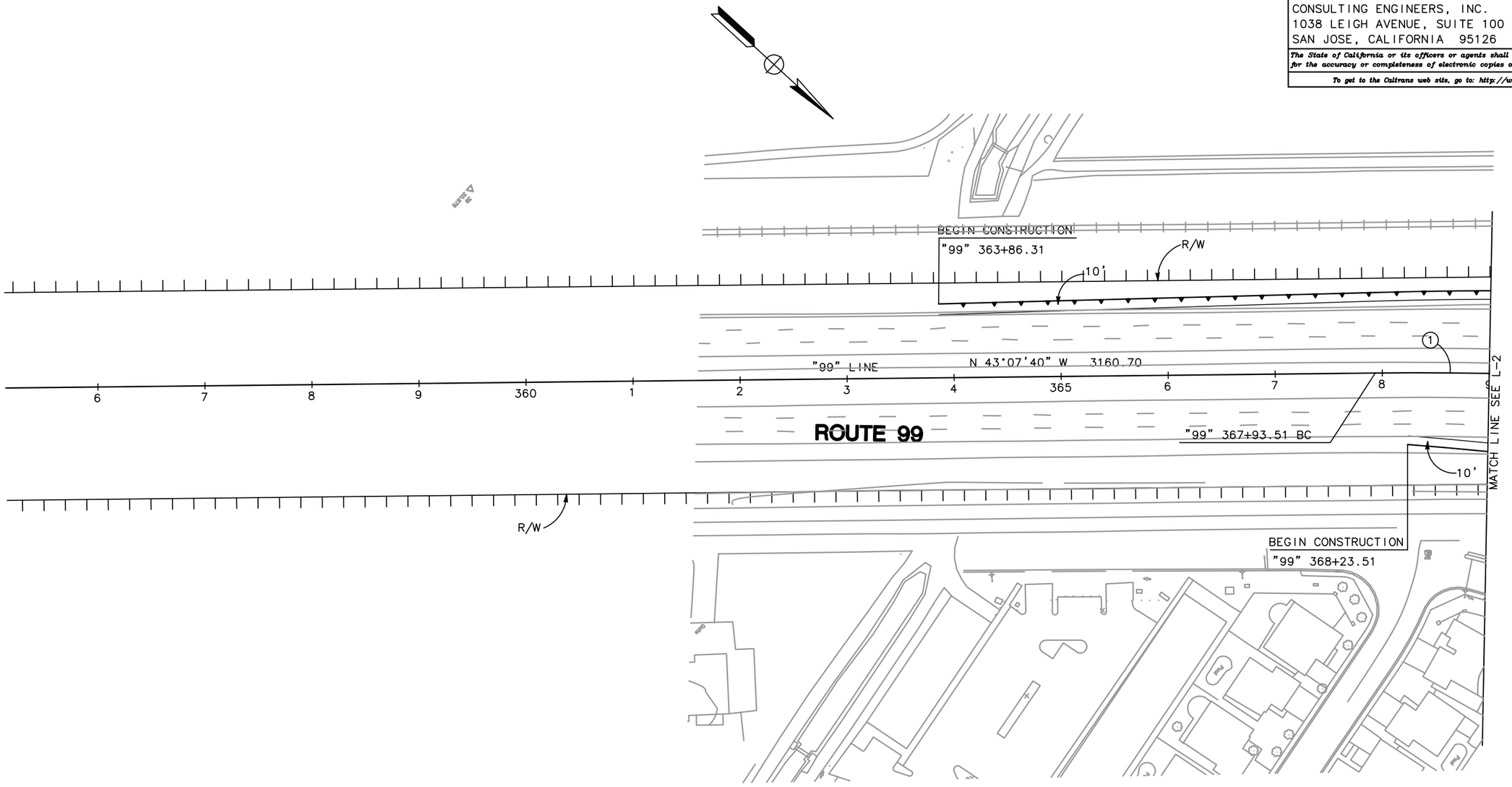

ROUTE 99 / HAMMETT ROAD
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LAYOUT

SCALE 1"=50'

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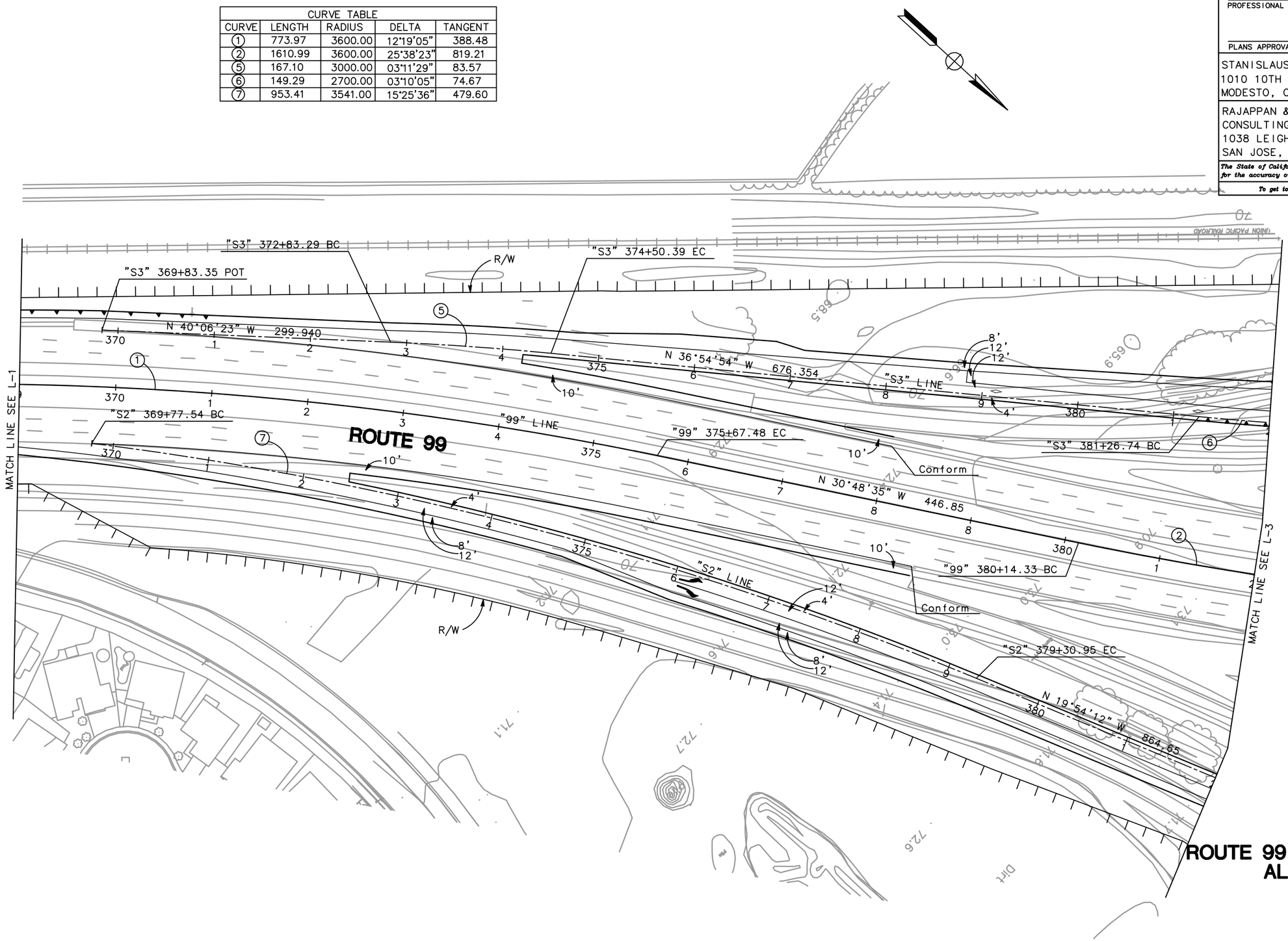
⑤	167.10	3000.00	03°11'29"	83.57
⑥	149.29	2700.00	03°10'05"	74.67
⑦	953.41	3541.00	15°25'36"	479.60



ROUTE 99 / HAMMETT ROAD
ALTERNATIVE 1
LAYOUT

SCALE 1"=50'

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CURVE TABLE				
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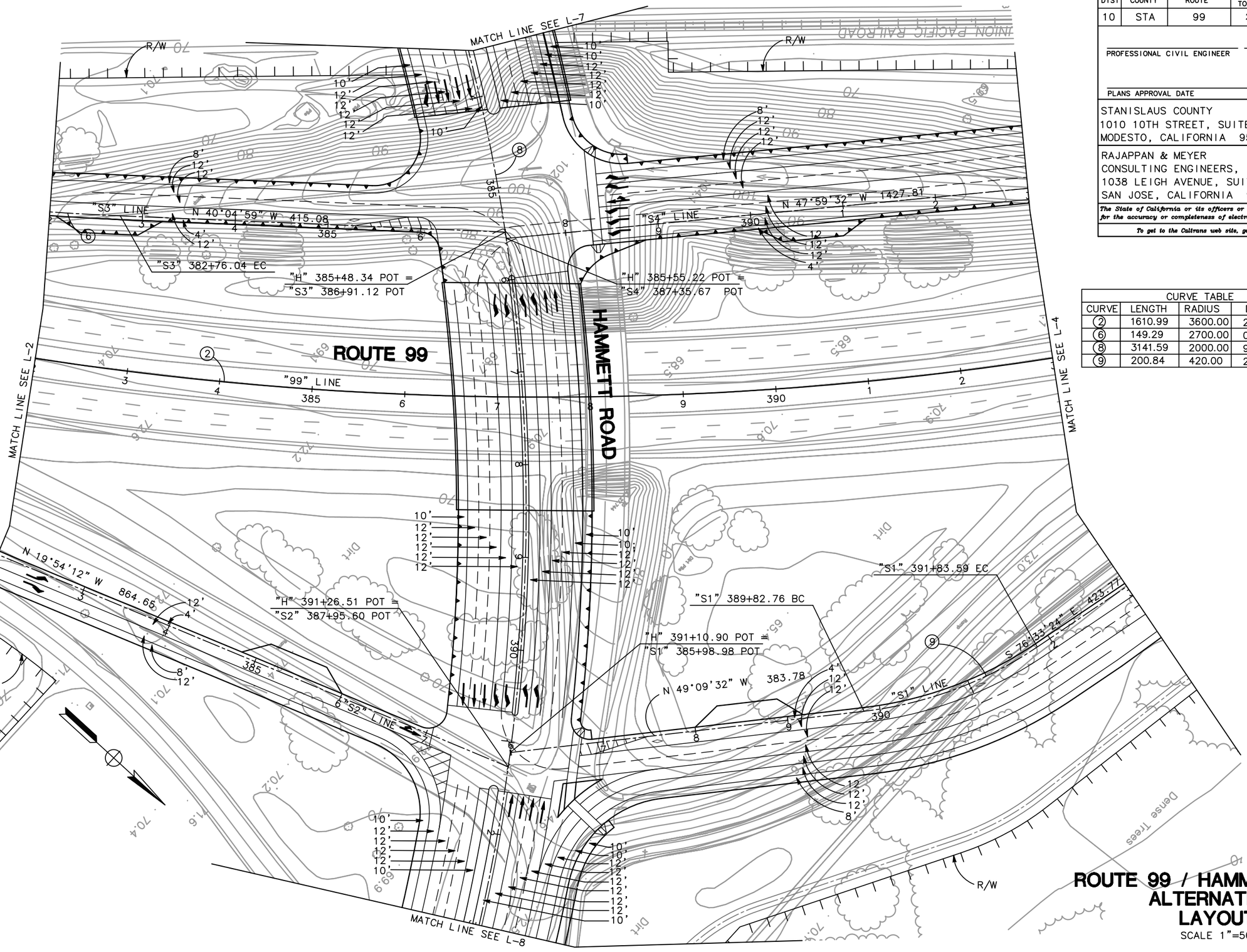
⑥	149.29	2700.00	03°10'05"	74.67
⑧	3141.59	2000.00	90°00'00"	2000.00
⑨	200.84	420.00	27°23'52"	102.38



ROUTE 99 / HAMMETT ROAD ALTERNATIVE 1 LAYOUT

SCALE 1"=50'

L-3

DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

CALCULATED/DESIGNED BY

CHECKED BY

DATE	REVISED BY	DATE REVISED

$REQUEST

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DGN FILE => $REQUEST

CU

EA 10-0L320K

LAST REVISION 00-00-00

DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

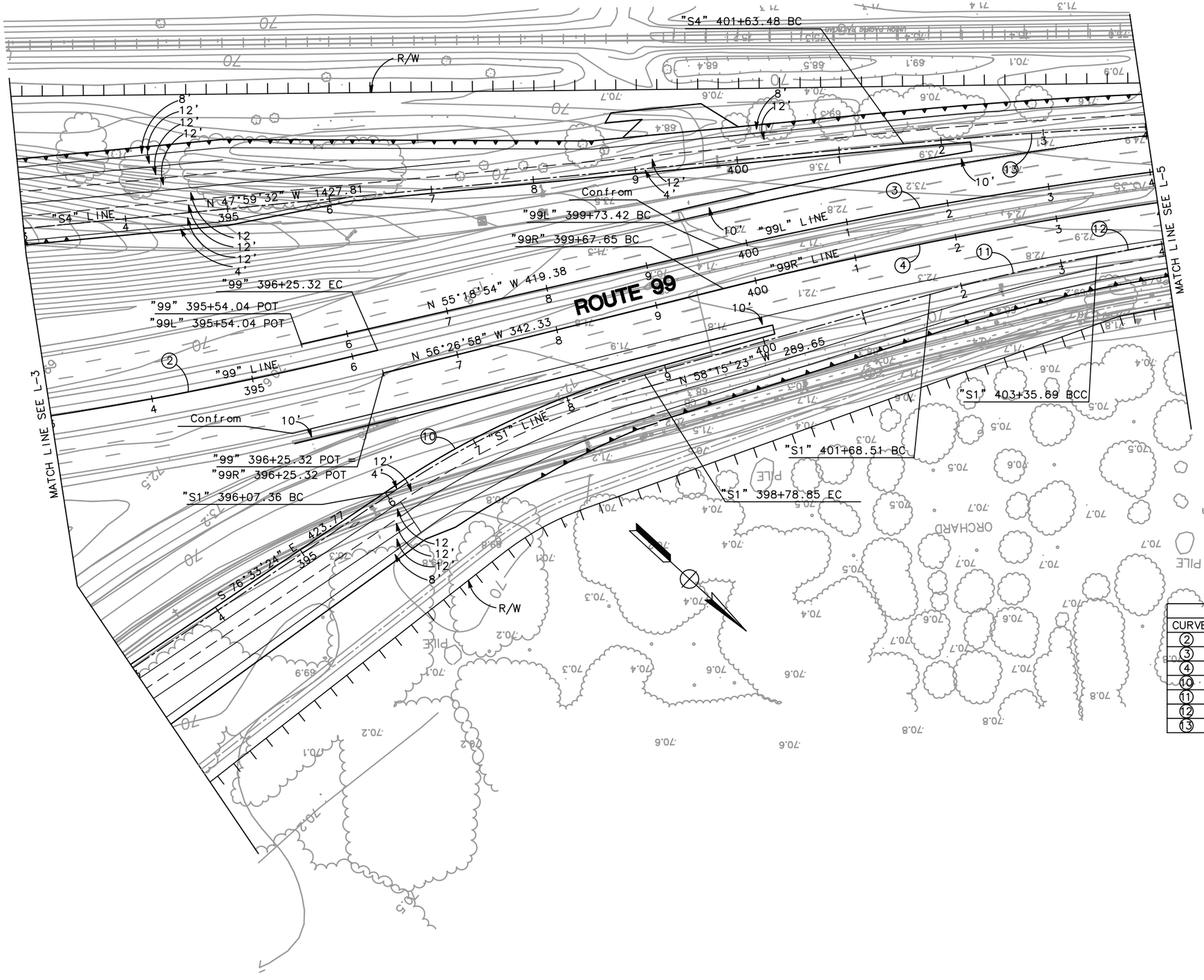
PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

STANISLAUS COUNTY
1010 10TH STREET, SUITE 3500
MODESTO, CALIFORNIA 95354

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
②	1610.99	3600.00	25°38'23"	819.21
③	962.77	4500.00	12°15'30"	483.23
④	1051.87	4500.00	13°23'34"	528.34
⑩	271.49	850.00	18°18'01"	136.91
⑪	167.18	1800.00	05°19'18"	83.65
⑫	302.53	4464.00	03°52'59"	151.32
⑬	336.14	4536.00	04°14'45"	168.15

ROUTE 99 / HAMMETT ROAD
ALTERNATIVE 1
LAYOUT

SCALE 1"=50'

L-4

DATE	REVISED BY	DATE REVISED

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DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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DGN FILE => $REQUEST

CU

EA 10-0L320K

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

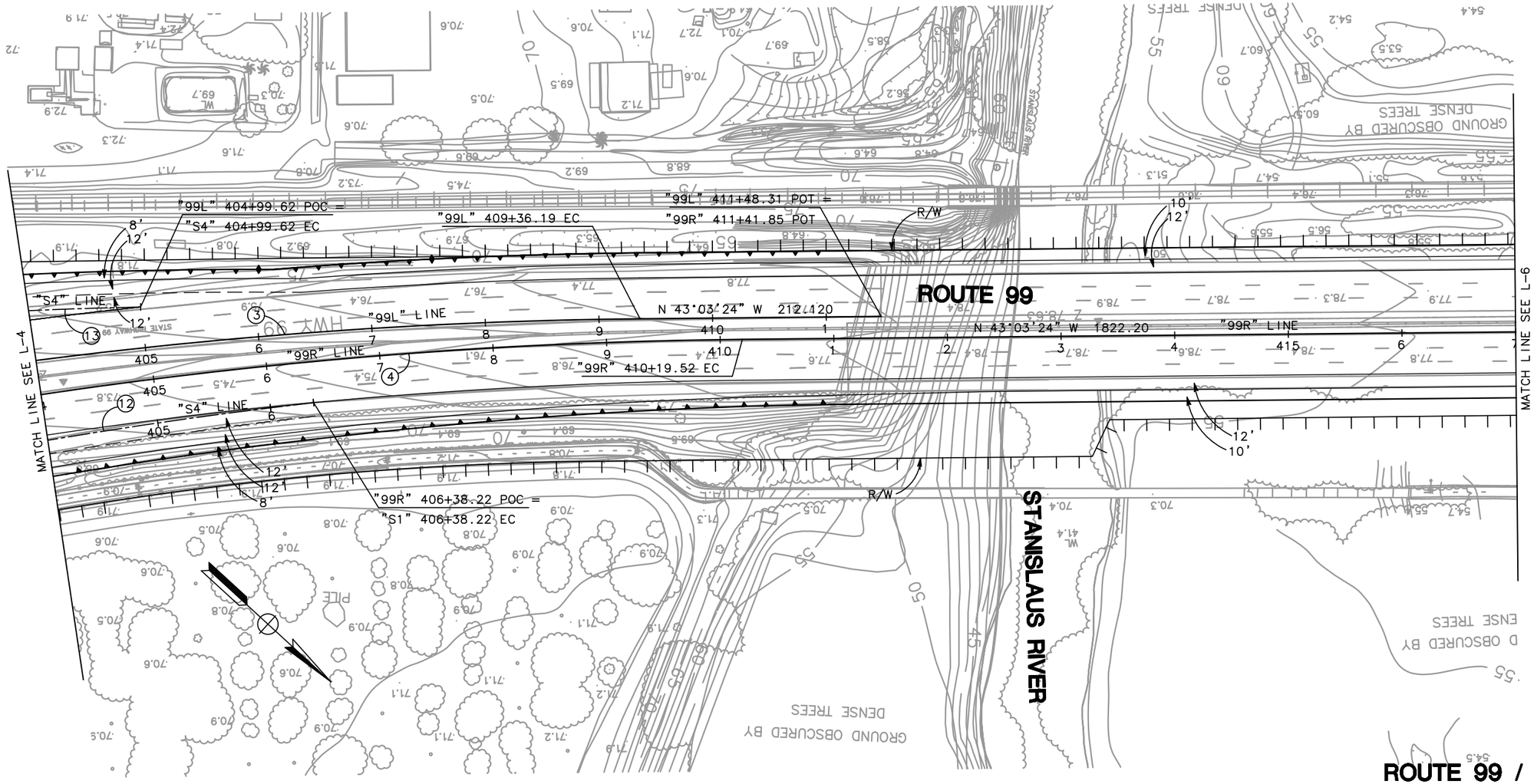
PLANS APPROVAL DATE

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

STANISLAUS COUNTY
1010 10TH STREET, SUITE 3500
MODESTO, CALIFORNIA 95354

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
③	962.77	4500.00	12°15'30"	483.23
④	1051.87	4500.00	13°23'34"	528.34
⑫	302.53	4464.00	03°52'59"	151.32
⑬	336.14	4536.00	04°14'45"	168.15



ROUTE 99 / HAMMETT ROAD
ALTERNATIVE 1
LAYOUT

SCALE 1"=50'

L-5

DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

Caltrans

$REQUEST

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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DGN FILE => $REQUEST

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EA 10-0L320K

DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

LAST REVISION 00-00-00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

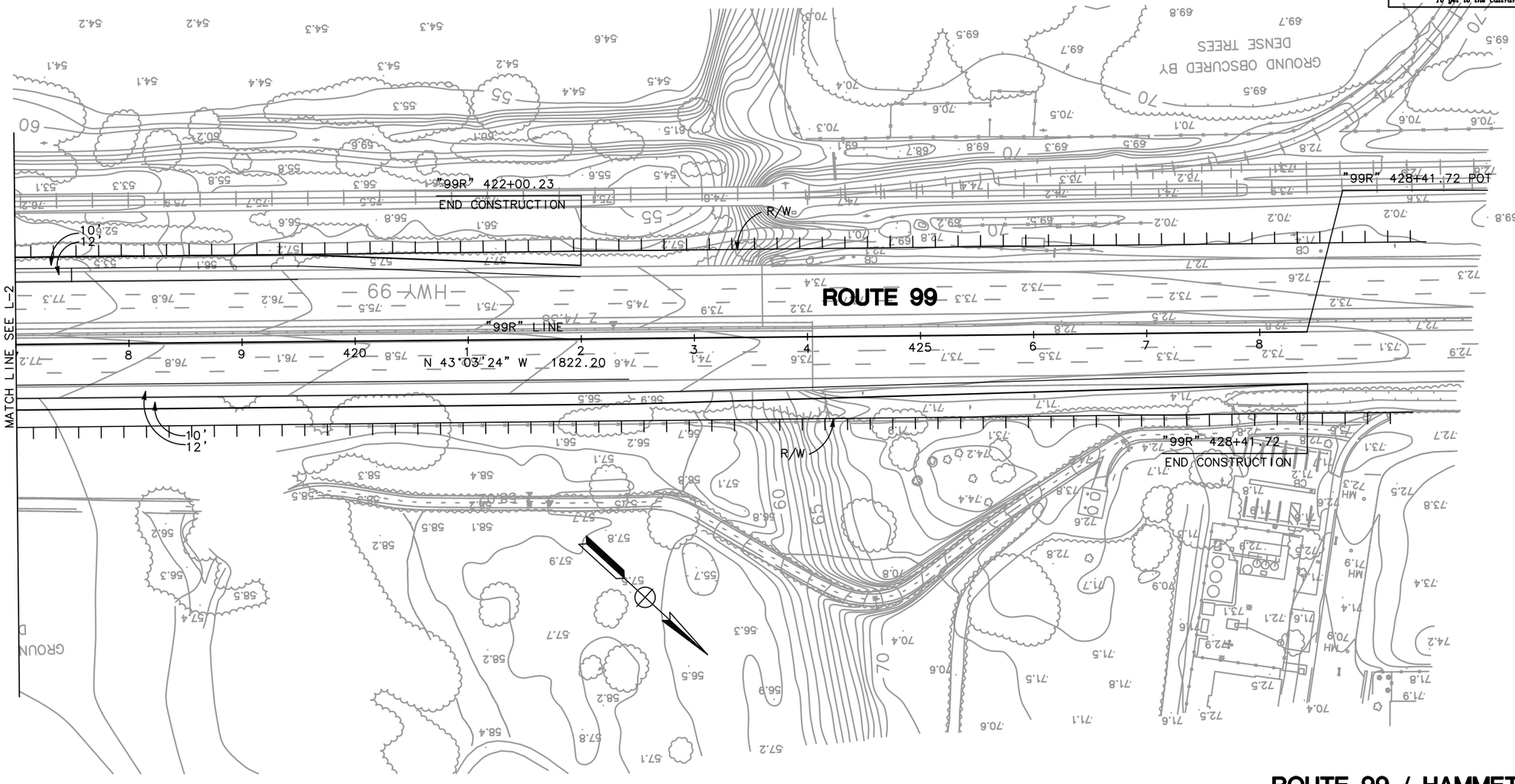
PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

STANISLAUS COUNTY
1010 10TH STREET, SUITE 3500
MODESTO, CALIFORNIA 95354

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



ROUTE 99 / HAMMETT ROAD
ALTERNATIVE 1
LAYOUT

SCALE 1"=50'

L-6

REVISED BY | DATE REVISED
DATE
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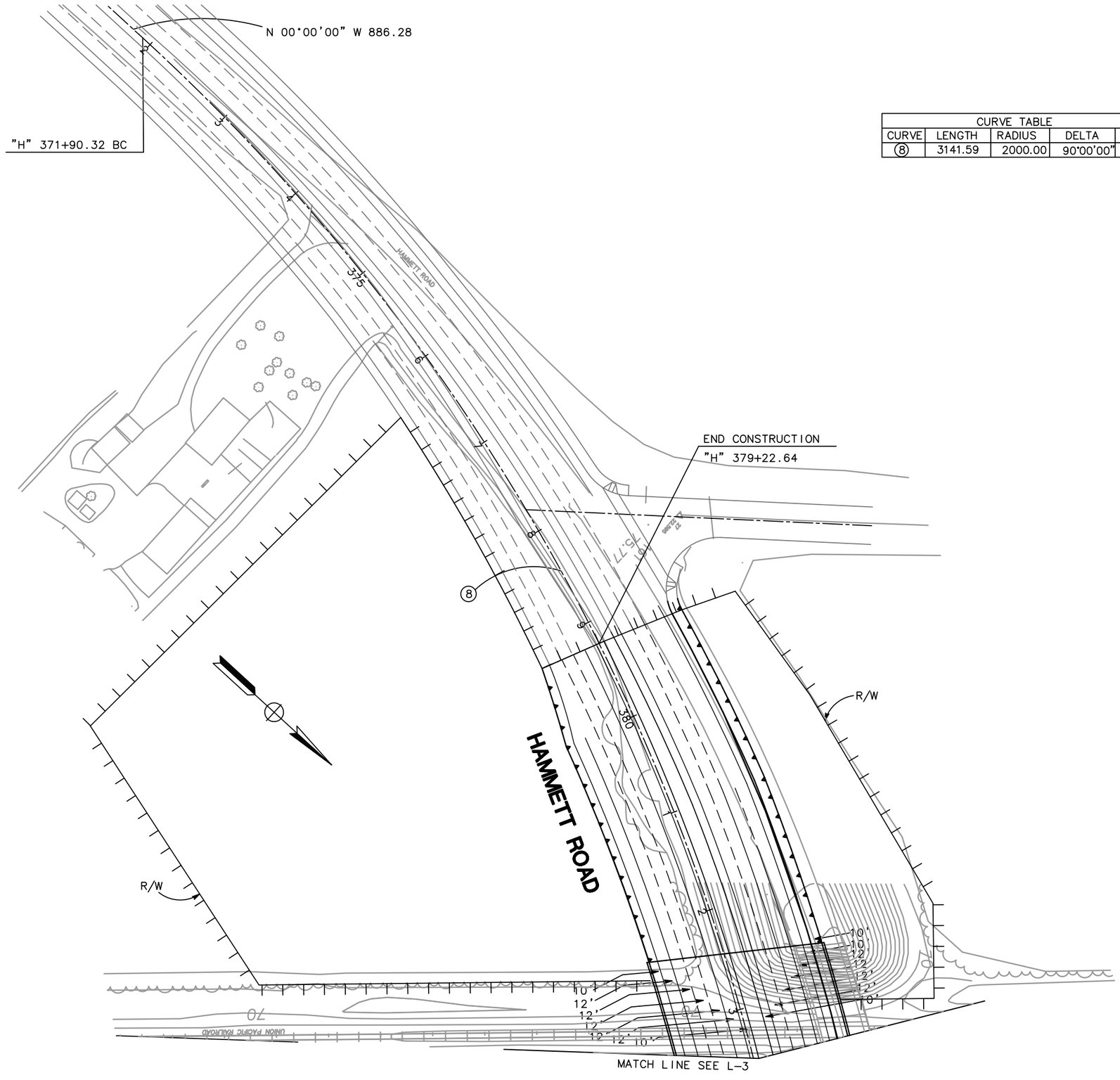
EA 10-0L320K



CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
⑧	3141.59	2000.00	90°00'00"	2000.00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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STANISLAUS COUNTY
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MODESTO, CALIFORNIA 95354

RAJAPPAN & MEYER
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ROUTE 99 / HAMMETT ROAD ALTERNATIVE 1 LAYOUT

SCALE 1"=50'

L-7

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DATE PLOTTED => $DATE
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DGN FILE => $REQUEST

CU

EA 10-0L320K

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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Exp.
CIVIL
STATE OF CALIFORNIA

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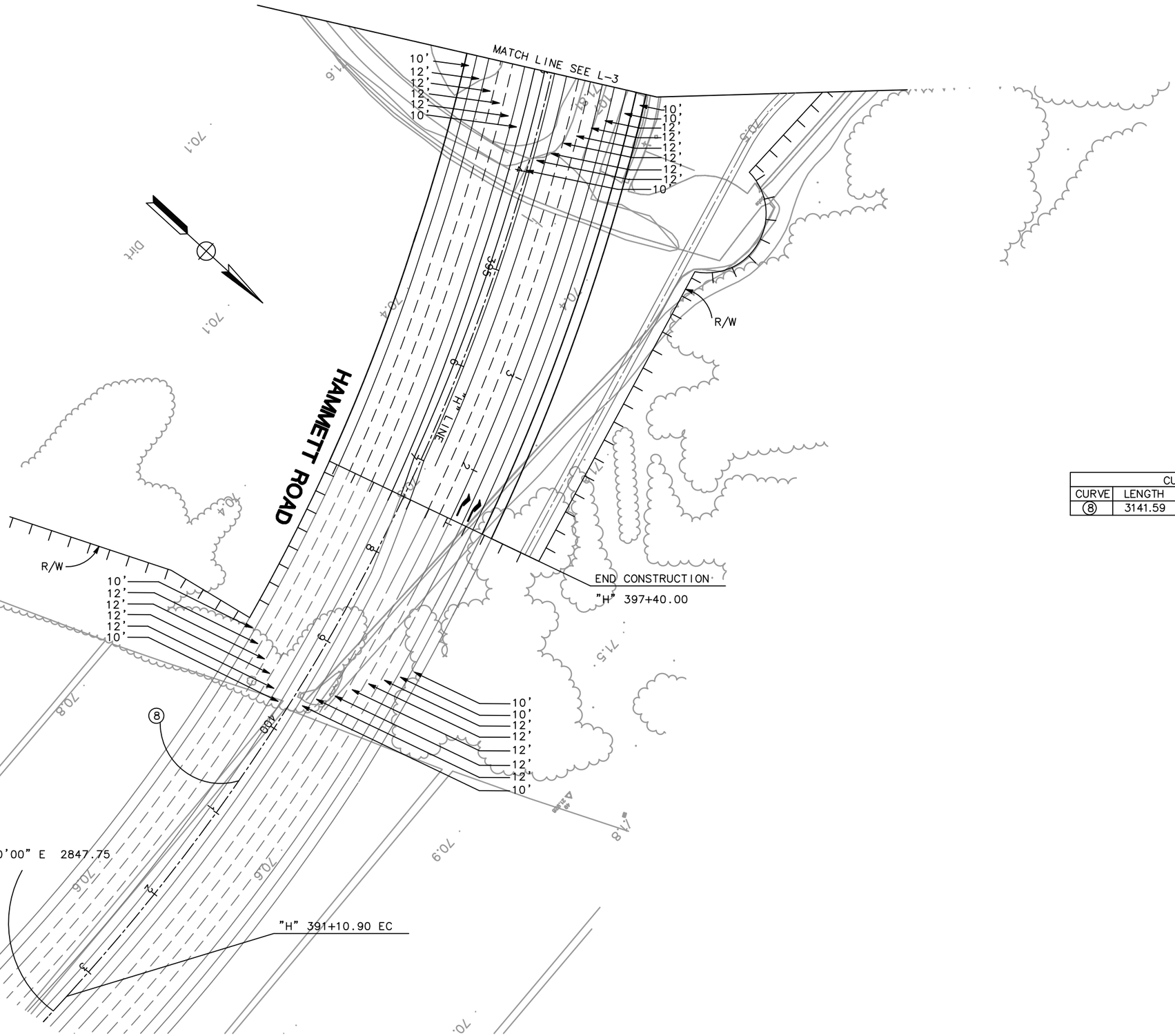

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT
⑧	3141.59	2000.00	90°00'00"	2000.00

ROUTE 99 / HAMMETT ROAD
ALTERNATIVE 1
LAYOUT

SCALE 1"=50'

L-8

DATE PLOTTED => $DATE
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DATE
REVISED BY
DATE REVISED

RELATIVE BORDER SCALE
IS IN INCHES
0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

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EA 10-0L320K

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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RAJAPPAN & MEYER
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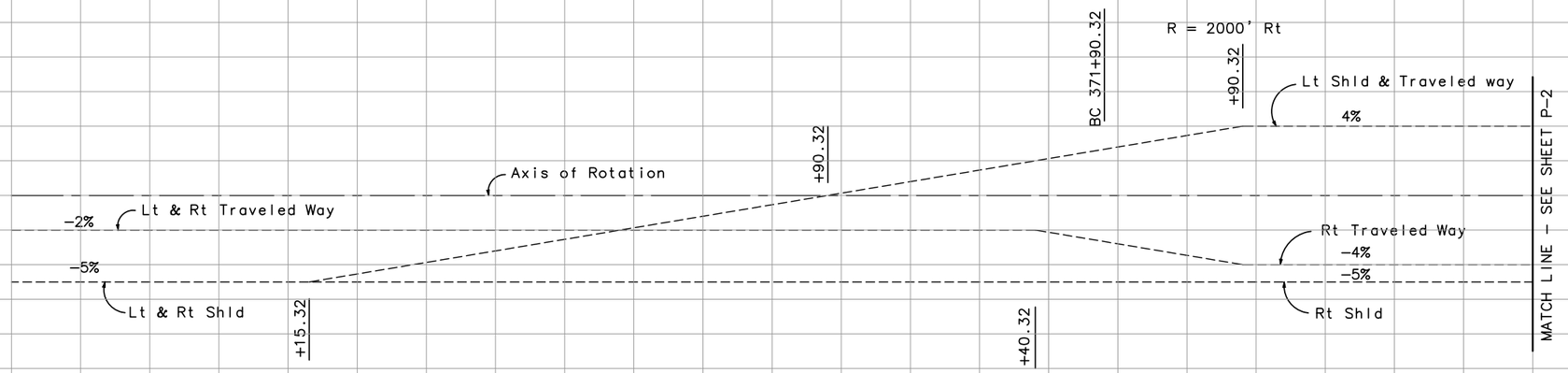
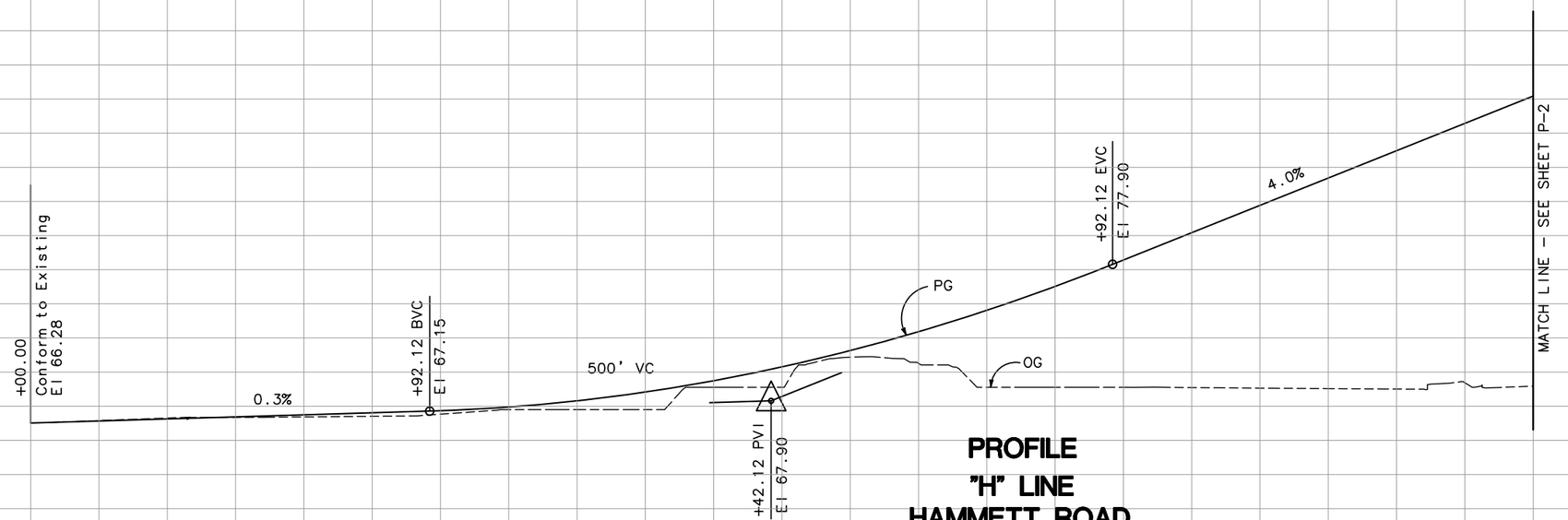
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



SUPERELEVATION DIAGRAM
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'



PROFILE
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-1

Station 4 365 6 7 8 9 370 1 2 3 4 375

CY Exc / Emb

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DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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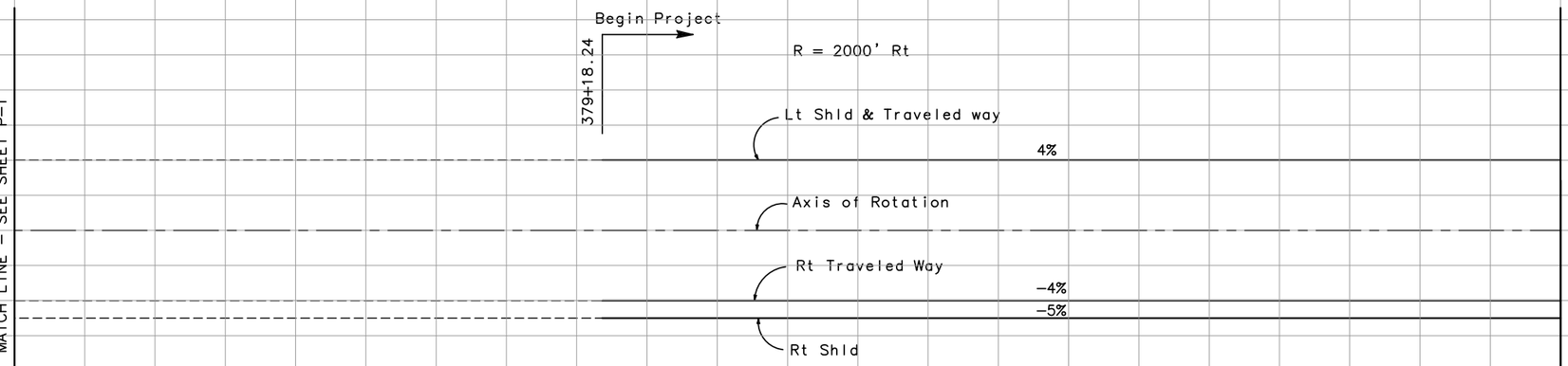
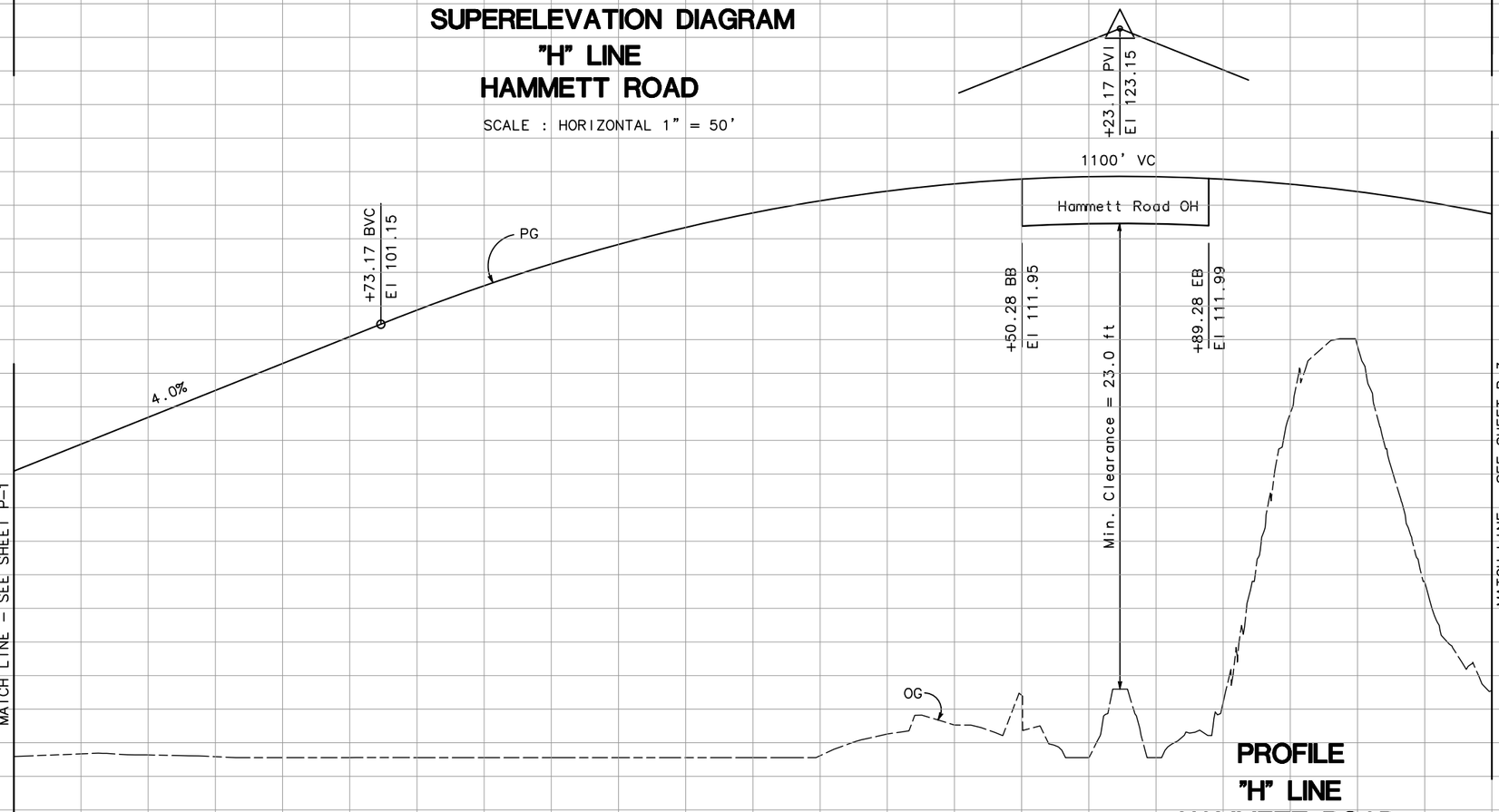
RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



SUPERELEVATION DIAGRAM
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'



PROFILE
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-2

Station 375 6 7 8 9 380 1 2 3 4 385 6

CY Exc / Emb

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DGN FILE => $REQUEST

CU | EA

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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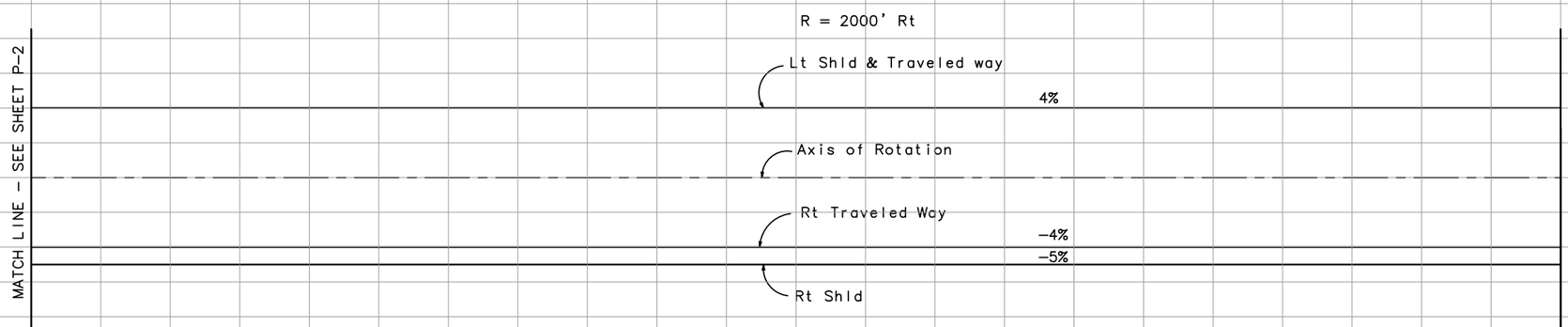
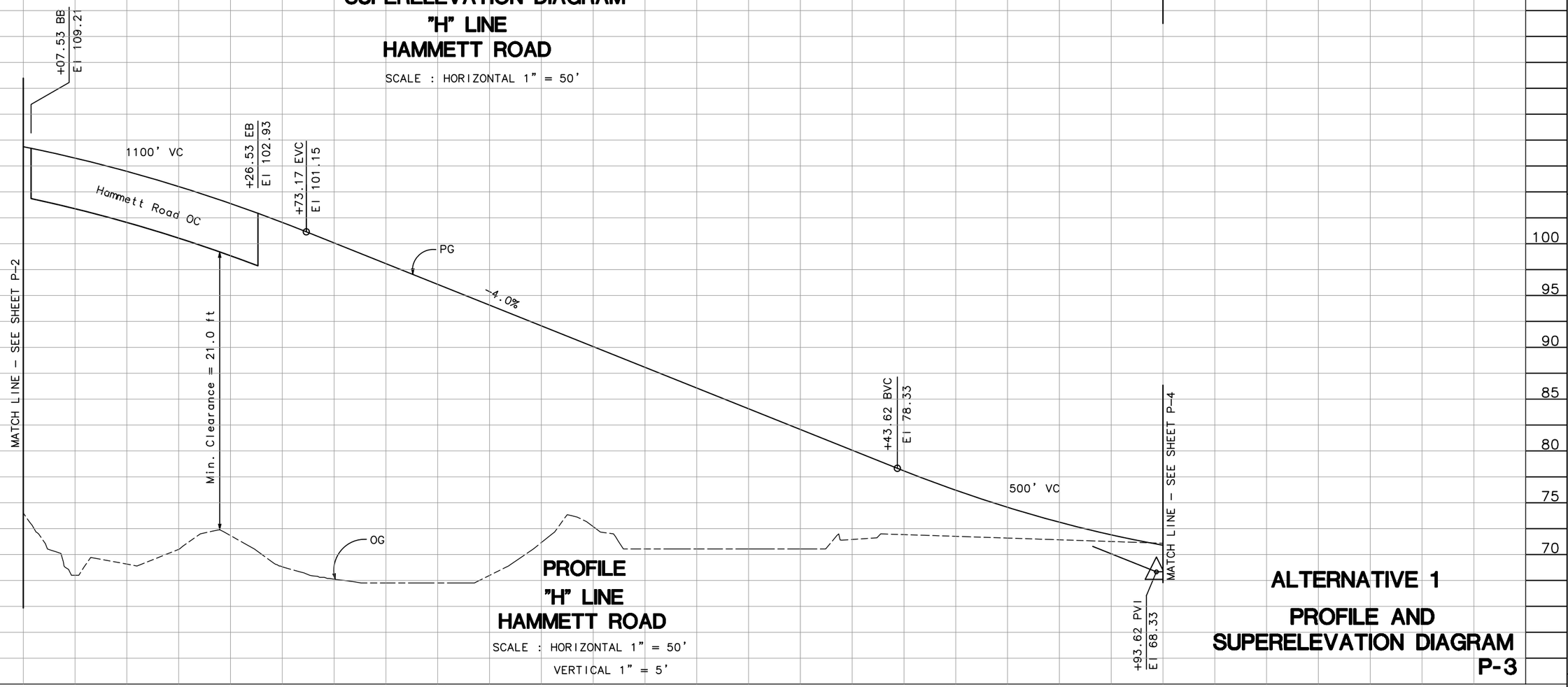
SUPERELEVATION DIAGRAM
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'





PROFILE
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'

VERTICAL 1" = 5'

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-3

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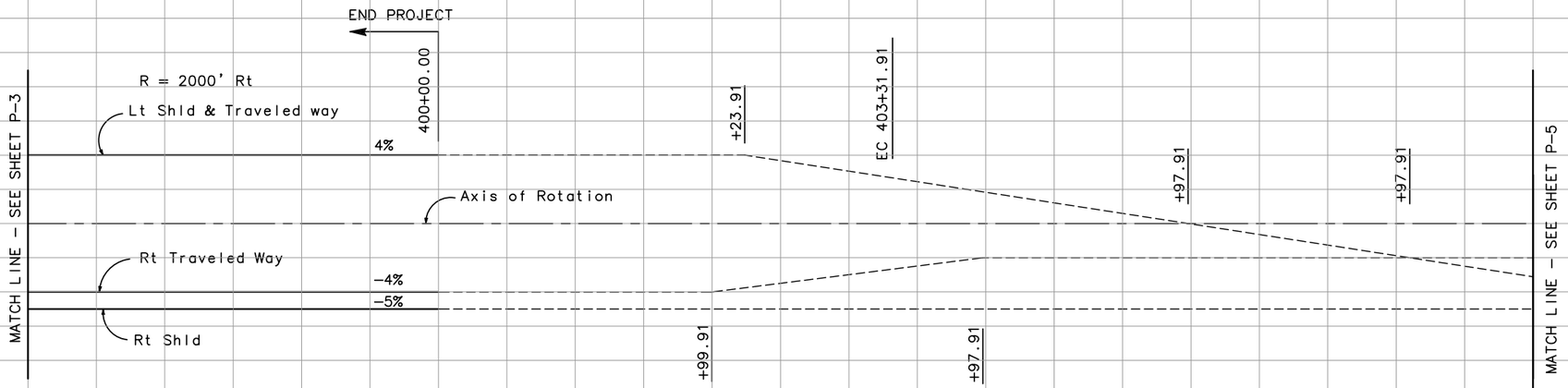
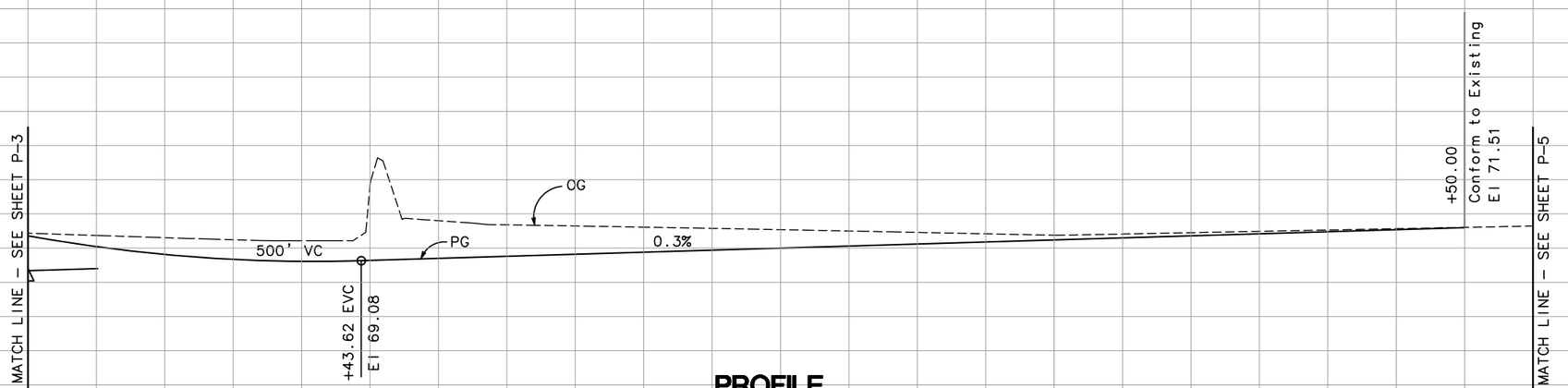


SUPERELEVATION DIAGRAM
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'



PROFILE
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'

VERTICAL 1" = 5'

Station 7 8 9 400 1 2 3 4 405 6 7 8

CY Exc

Emb

ALTERNATIVE 1

PROFILE AND SUPERELEVATION DIAGRAM

P-4

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

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CU | EA

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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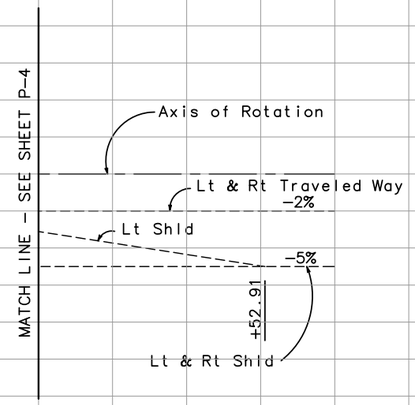
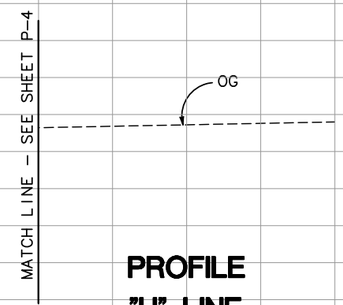
SAN JOSE, CALIFORNIA 95126



SUPERELEVATION DIAGRAM
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'



PROFILE
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'

VERTICAL 1" = 5'

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-5

REVISED BY | DATE REVISED | DATE

CALCULATED/DESIGNED BY | CHECKED BY

DESIGN OVERSIGHT

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Station 8 9 410

CY Exc | Emb

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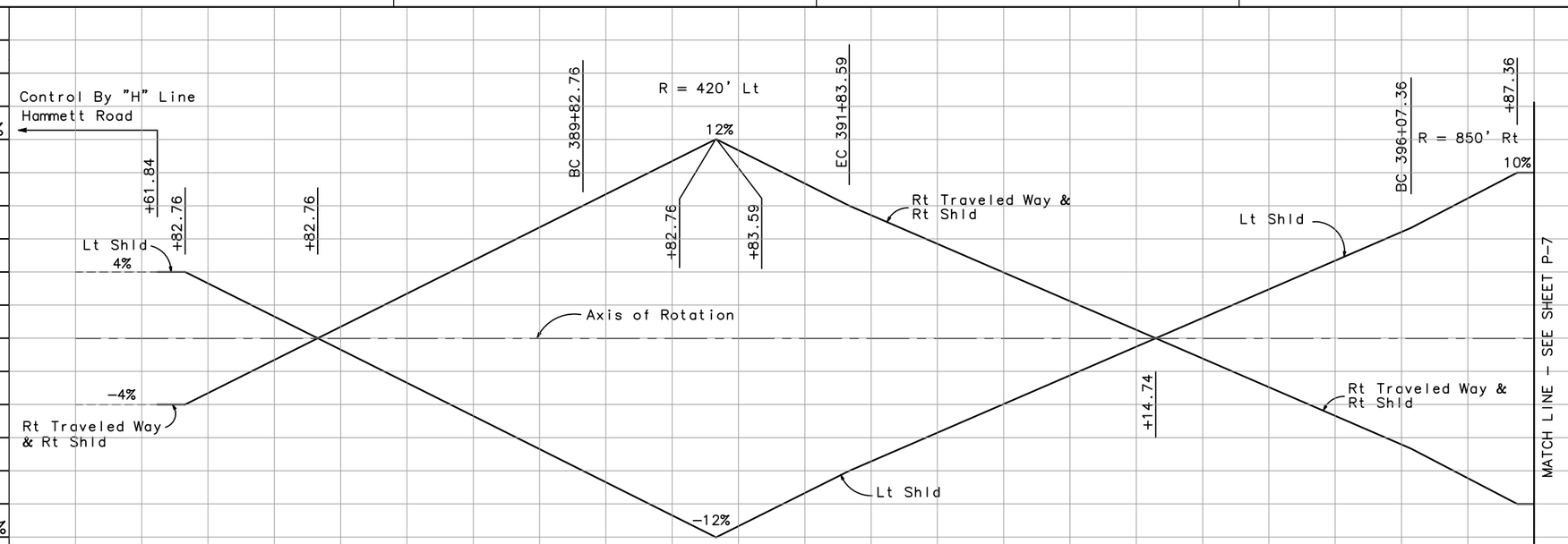
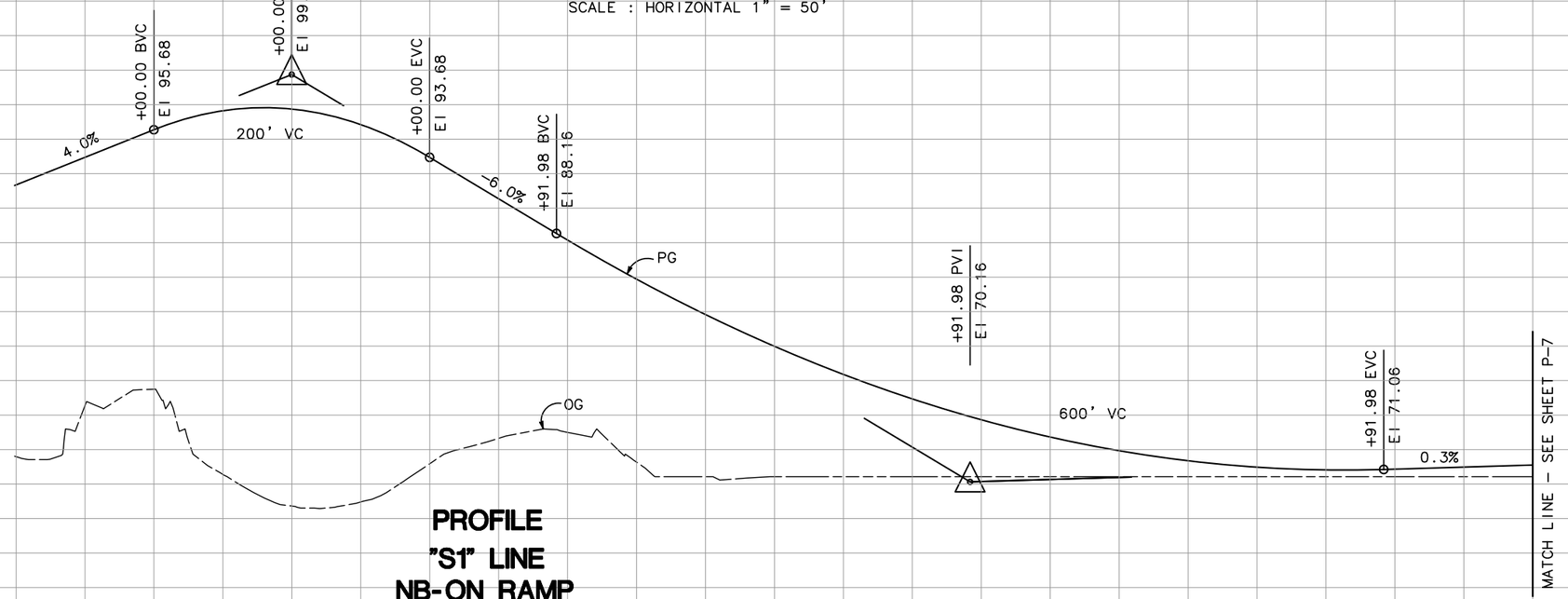
CU | EA



SUPERELEVATION DIAGRAM
"S1" LINE
NB-ON RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S1" LINE
NB-ON RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-6

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

REVISED BY | DATE REVISED
DATE
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Station 6 7 8 9 390 1 2 3 4 5 6 7

CY Exc
Emb

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CU | EA

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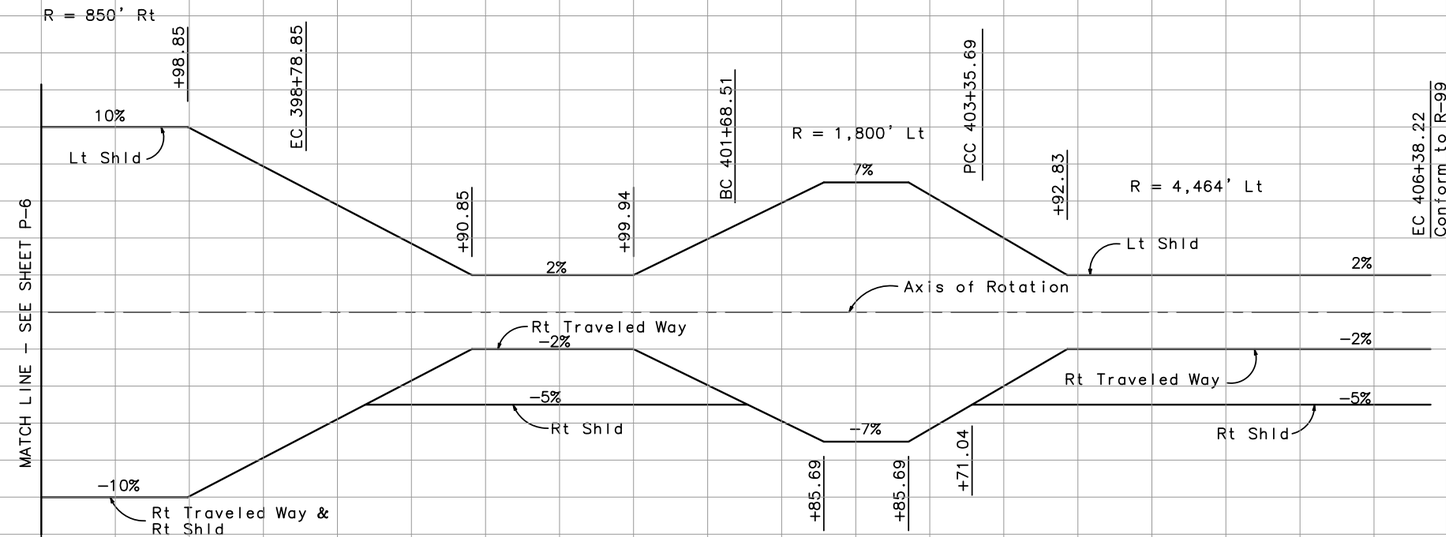
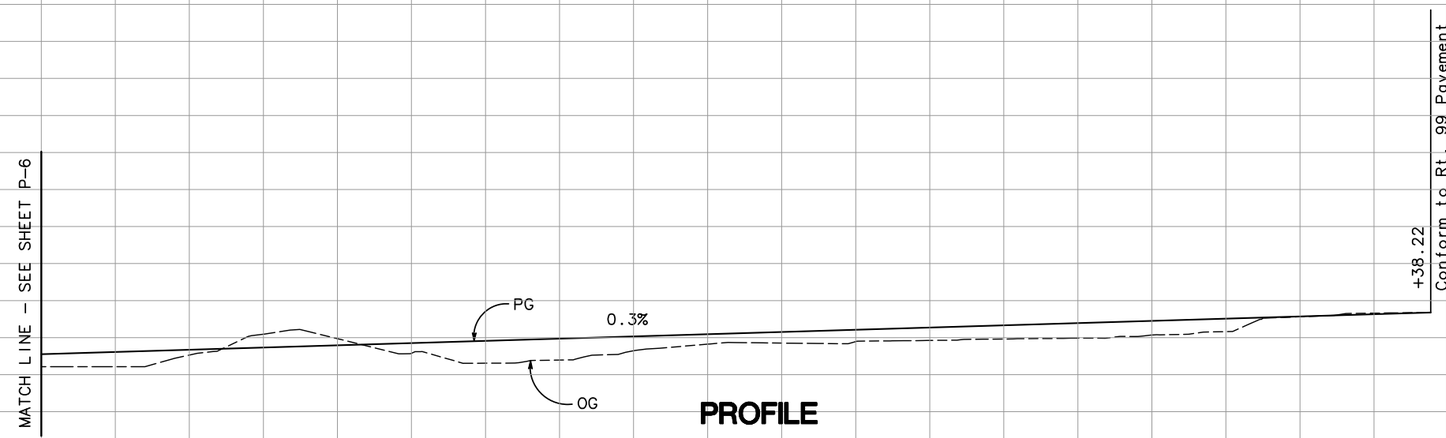


SUPERELEVATION DIAGRAM
"S1" LINE
NB-ON RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S1" LINE
NB-ON RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

Station 7 8 9 400 1 2 3 4 405 6

CY Exc
Emb

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-7

REVISED BY | DATE REVISED
DATE
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

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DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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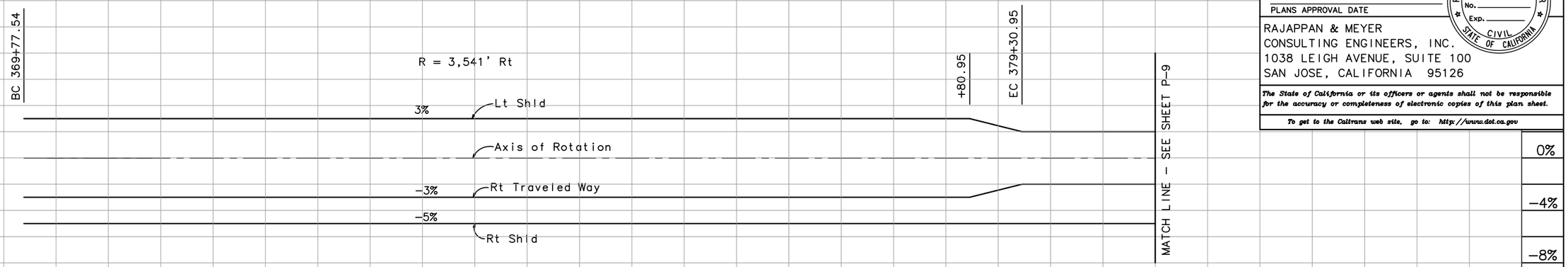
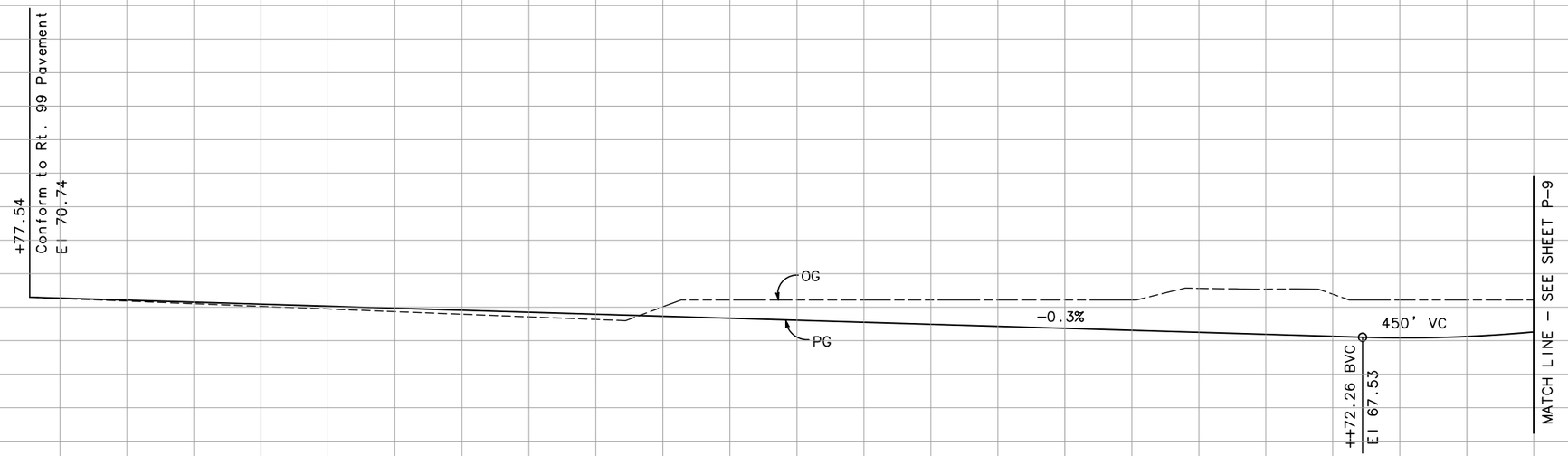


SUPERELEVATION DIAGRAM
"S2" LINE
NB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S2" LINE
NB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-8

Station 370 1 2 3 4 375 6 7 8 9 380 1

CY Exc Emb

$REQUEST

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU EA

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

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

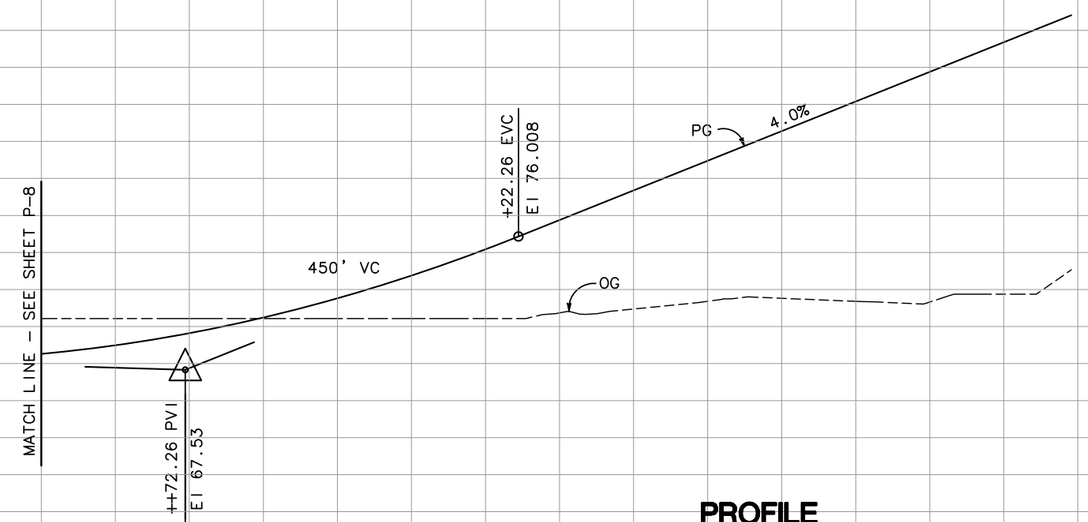
PLANS APPROVAL DATE

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

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

SUPERELEVATION DIAGRAM
"S2" LINE
NB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S2" LINE
NB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

Station 1 2 3 4 385 6 7 8

CY Exc Emb

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-9

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

$REQUEST

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

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU | EA

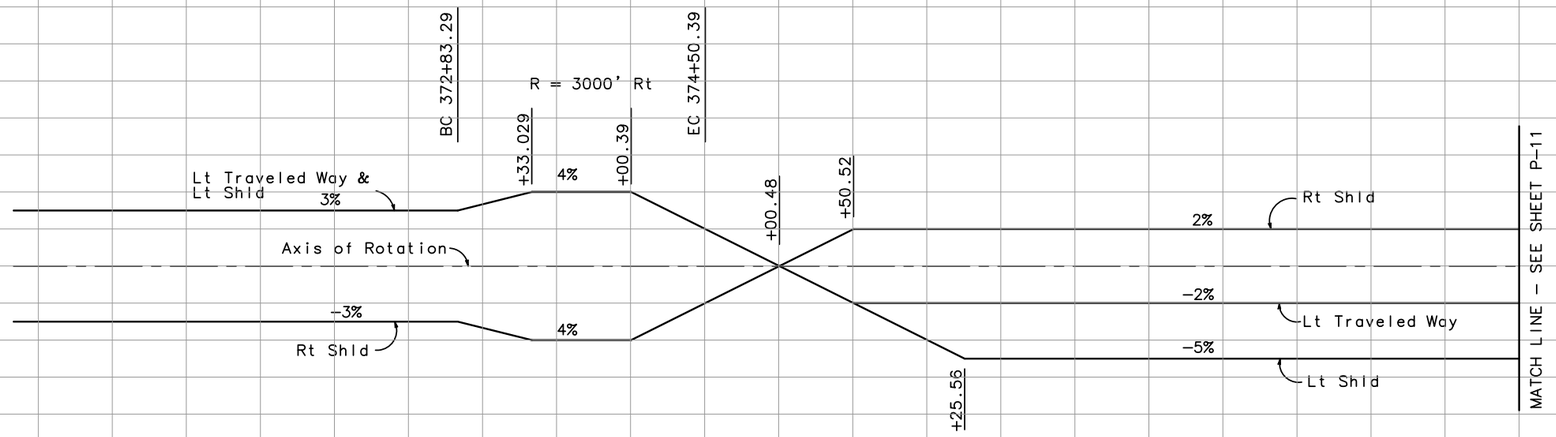
DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

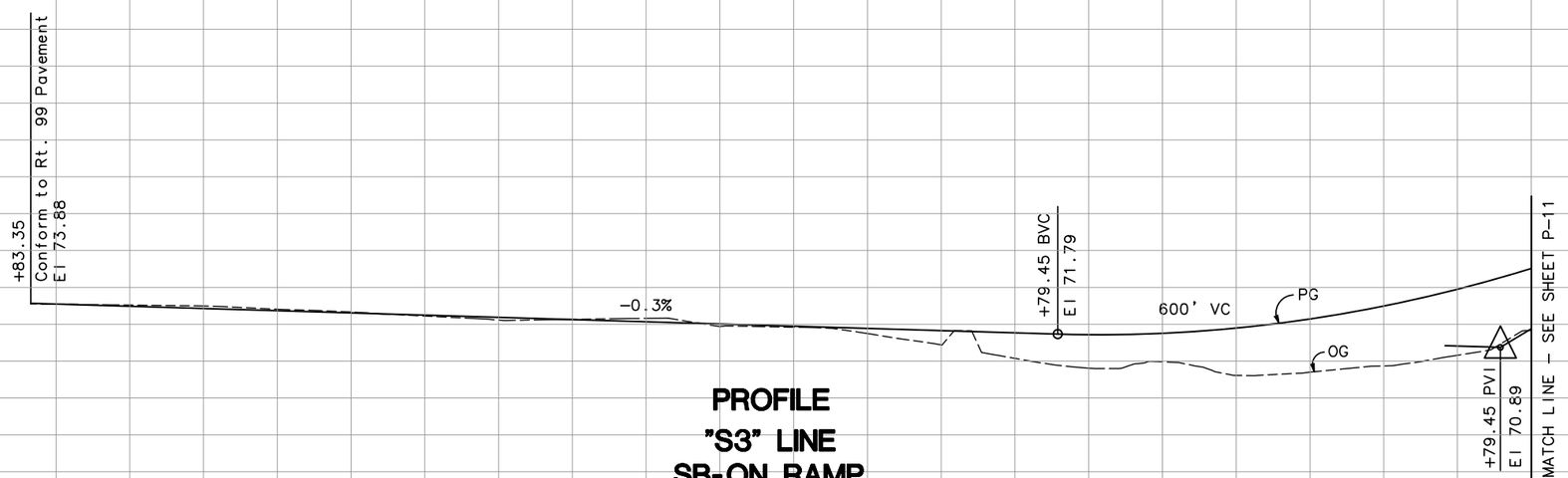
REGISTERED PROFESSIONAL ENGINEER — No. ____ Exp. ____ CIVIL — STATE OF CALIFORNIA

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



SUPERELEVATION DIAGRAM
"S3" LINE
SB-ON RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S3" LINE
SB-ON RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-10

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

$REQUEST

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

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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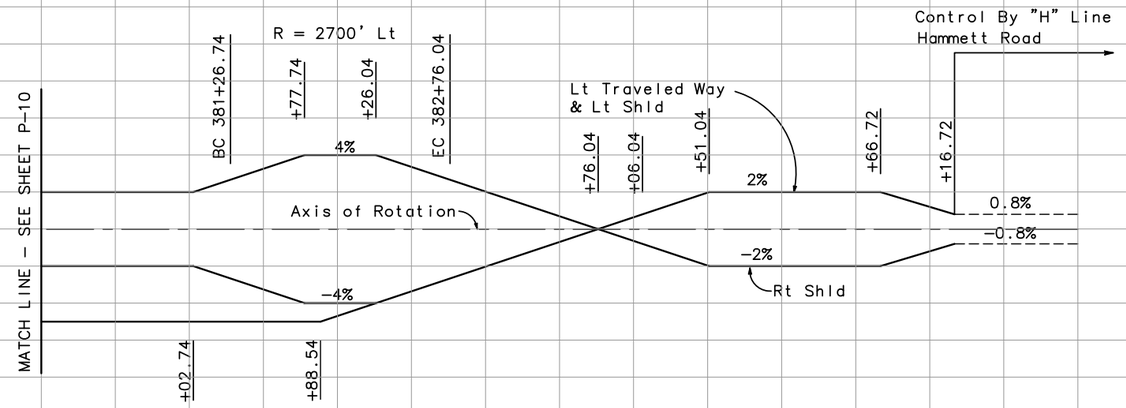
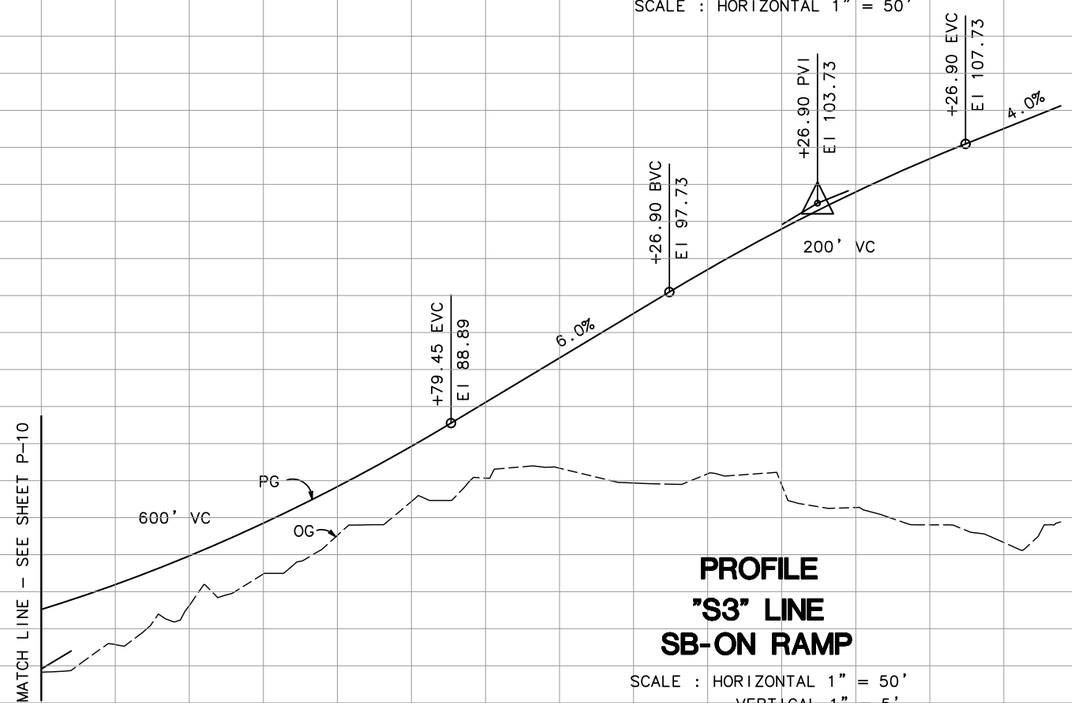
DGN FILE => $REQUEST

CU | EA



SUPERELEVATION DIAGRAM
"S3" LINE
SB-ON RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S3" LINE
SB-ON RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-11

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

$REQUEST

CY Exc Emb

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU | EA

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

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY

DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

Caltrans

$REQUEST

Control By "H" Line
Hammett Expessway

+45.00 +80.00

Lt Traveled Way & Lt Shld

Axis of Rotation

Rt Shld

0.8%

-0.8%

2%

-2%

MATCH LINE – SEE SHEET P-13

SUPERELEVATION DIAGRAM
"S4" LINE
SB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'

+96.75 BVC
El 112.63

+96.75 PVI
El 116.63

+96.75 EVC
El 110.63

4.0%

200' VC

PG

-6.0%

OG

+52.59 BVC
El 89.28

600' VC

+52.59 PVI
El 71.28

MATCH LINE – SEE SHEET P-13

PROFILE
"S4" LINE
SB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-12

12% 8% 4% 0% -4% -8% -12%

120 115 110 105 100 95 90 85 80 75 70

Station 8 9 390 1 2 3 4 395 6 7 8

CY Exc Emb

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

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU | EA

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

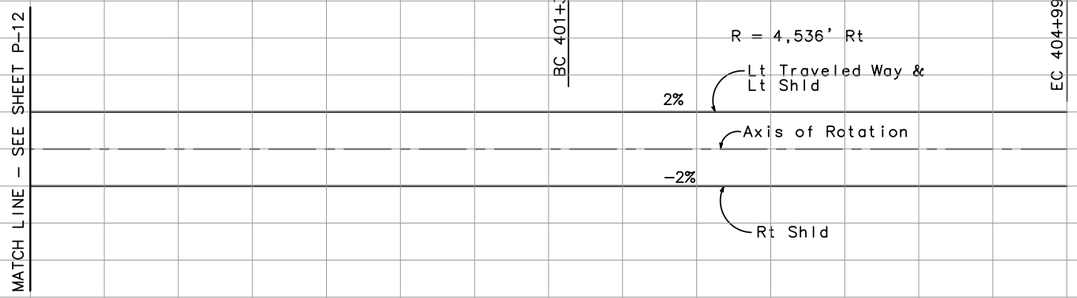
RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

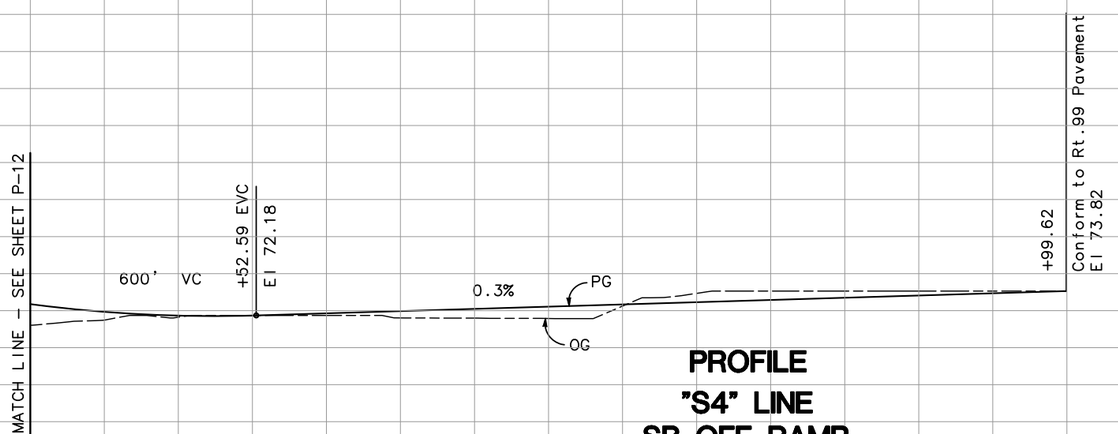
Caltrans

$REQUEST



SUPERELEVATION DIAGRAM
"S4" LINE
SB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S4" LINE
SB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

Station	8	9	400	1	2	3	4	405
CY Exc								
CY Emb								

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
P-13

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

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

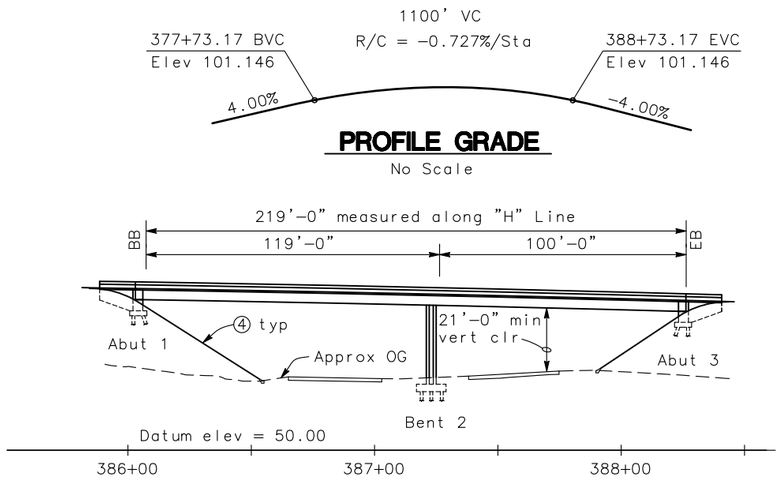
CU | EA

PREPARED FOR THE STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
10	Stan	99	R23.9/25.1

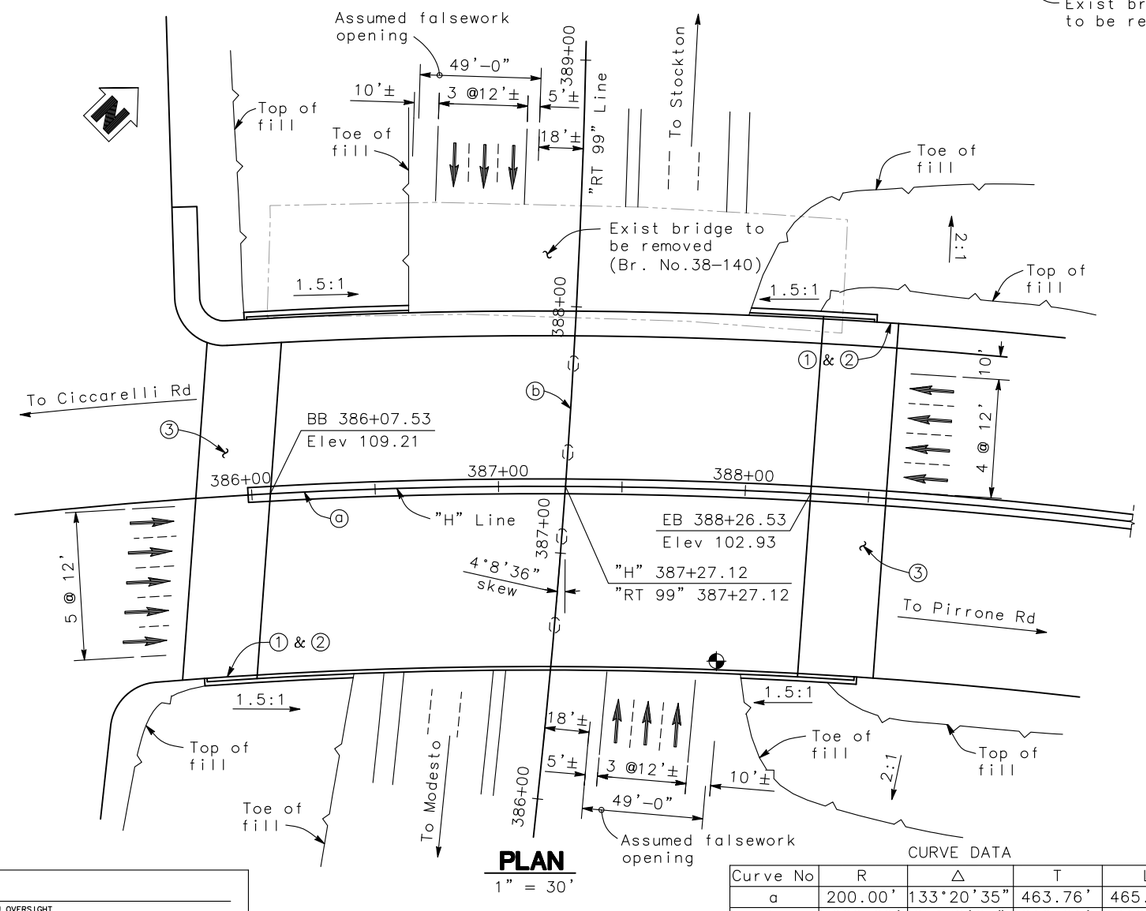
RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVE, SUITE 100
SAN JOSE, CA 95126

REGISTERED PROFESSIONAL ENGINEER
PHILIP SHINN
No. S 4967
Exp. 12/31/08
STRUCTURAL
STATE OF CALIFORNIA



PROFILE GRADE
No Scale

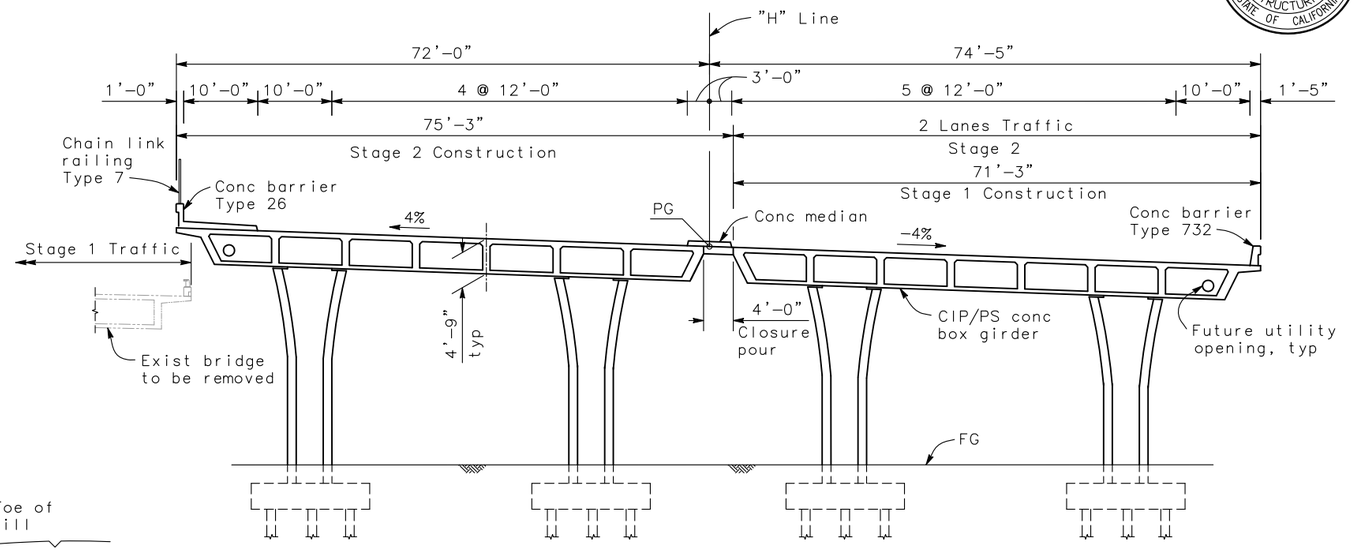
ELEVATION
1" = 30'



PLAN
1" = 30'

CURVE DATA

Curve No	R	Δ	T	L
a	200.00'	133°20'35"	463.76'	465.45'
b	3600.00'	25°38'23"	819.21'	1610.99'



TYPICAL SECTION
1" = 10'

VEHICULAR TRAFFIC

1. ___ New alignment. No traffic at the site
2. ___ Traffic will be detoured away from the site
3. X Traffic will be carried on the structure
   Stage construction will be required
4. X Traffic will pass under the structure on Route 99
   - A. ___ No falsework allowed over traffic
   - B. X Falsework opening(s) required:

	Temporary vertical clearance	Width of traffic opening
N Bnd.	16'-6" min	49'-0"
S Bnd.	16'-6" min	49'-0"
___ Two-Way		

C. ___ Temporary traffic lane reduction needed for footing excavation

Indicates point of minimum vertical clearance

Indicates existing structure

Date of estimate	= 8/8/08
Str. Depth	= 4'-9"
Length	= 219'-0"
Width	= 146'-5"
Area	= 32,065 ft²
Cost/ft² including 10% Mobilization & 25% Contingency	= $199.11
Bridge Total Cost (Bridge removal included)	= $6,595,000

LEGEND:

1. Paint Bridge Name "Hammett Road Overcrossing"
2. Paint Bridge Number and Year Completed
3. Approach Slab Type N(30S)
4. Concrete Slope Paving (1.5 to 1 slope)

ALTERNATIVE 1

DESIGNED BY P. SHINN	DATE 8/08	P. SHINN PROJECT ENGINEER	ADVANCE PLANNING STUDY
DRAWN BY I. LAM	DATE 8/08		HAMMETT ROAD OC (REPLACE)
CHECKED BY K. HARIRSAZ	DATE 8/08		BRIDGE NO. TBD / CU 10
APPROVED	DATE		SCALE: AS NOTED / EA 0L320K / SHEET 1 OF 1

DESIGN OVERSIGHT

SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 2/25/05)

FILE => $REQUEST

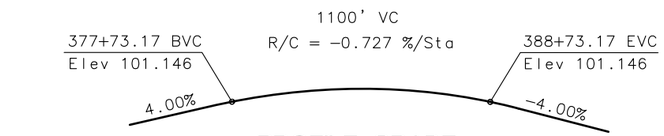
TIME PLOTTED => $TIME
DATE PLOTTED => $DATE
USERNAME => $USER

PREPARED FOR THE STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

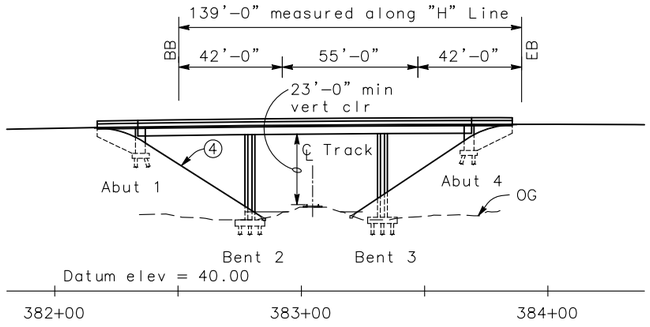
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
10	Stan	99	R23.9/25.1

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVE, SUITE 100
SAN JOSE, CA 95126

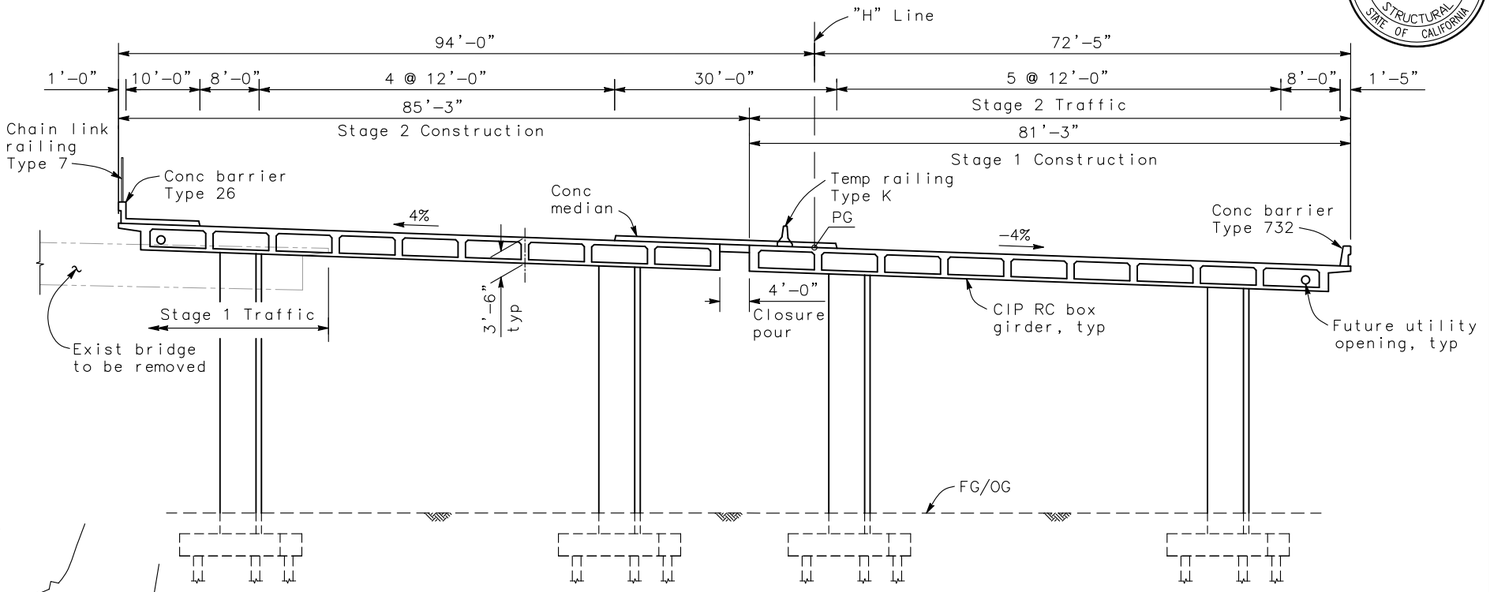
REGISTERED PROFESSIONAL ENGINEER
PHILIP SHINN
No. S 4967
Exp. 12/31/08
STRUCTURAL
STATE OF CALIFORNIA



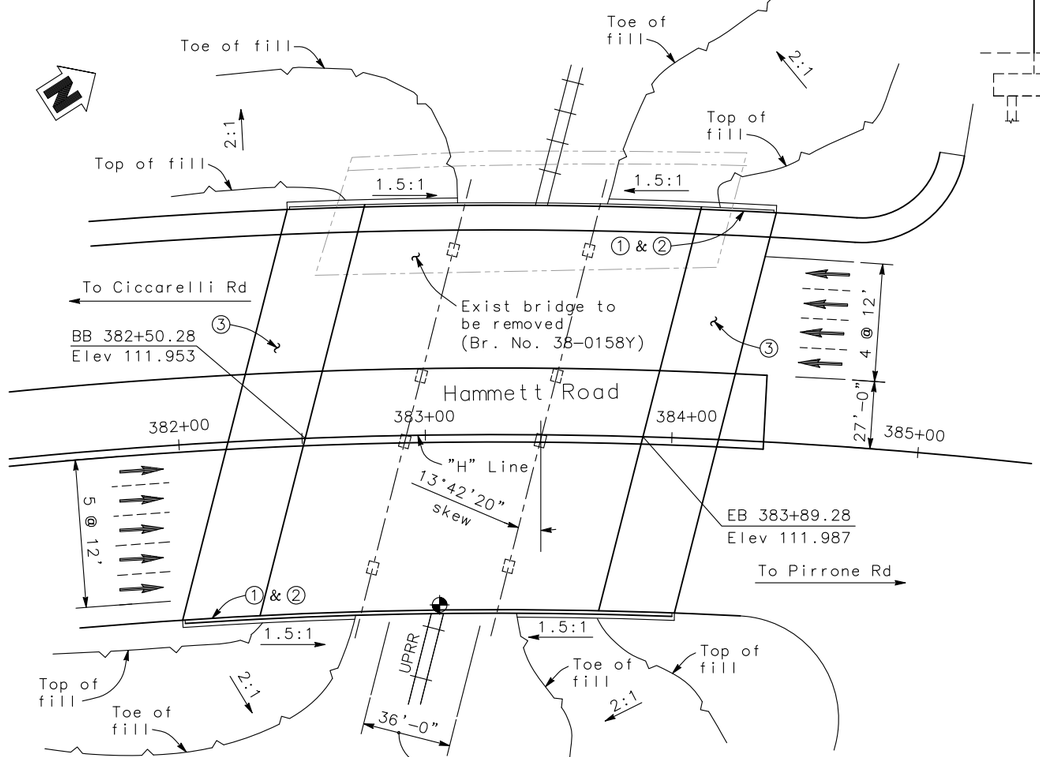
PROFILE GRADE
No Scale



ELEVATION
1" = 30'



TYPICAL SECTION
1" = 10'



PLAN
1" = 30'

CURVE DATA

R	Δ	T	L
2000.00'	90°0'0"	2000.00'	3141.59'

RAILROAD TRAFFIC

Falsework opening(s) required over Union Pacific Railroad

Vertical Clearance	Horizontal Clear Width
21'−6"*	36'−0"*

* Temporary minimum clearance should be subjected to approval by the Railroad and the Public Utilities Commissions

Date of estimate	= 8/8/08
Str. Depth	= 3'−6"
Length	= 139'−0"
Width	= 166'−5"
Area	= 23,132 ft²
Cost/ft² including 10% Mobilization & 25% Contingency	= $240.59
Bridge Total Cost (Bridge removal included)	= $5,712,000

LEGEND:

① Paint Bridge Name "Hammett Road Overhead"
② Paint Bridge Number and Year Completed
③ Approach Slab Type N(30S)
④ Concrete Slope Paving (1.5 to 1 slope)

◆ Indicates point of minimum vertical clearance
Indicates existing structure

ALTERNATIVE 1

DESIGNED BY P. SHINN	DATE 8/08	P. SHINN PROJECT ENGINEER	ADVANCE PLANNING STUDY
DRAWN BY I. LAM	DATE 8/08		HAMMETT ROAD OH (REPLACE)
CHECKED BY K. HARIRSAZ	DATE 8/08		BRIDGE NO. 38−0158Y / CU 10
APPROVED	DATE		SCALE: AS NOTED / EA 0L320K / SHEET 1 OF 1

DESIGN OVERSIGHT

SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 2/25/05)

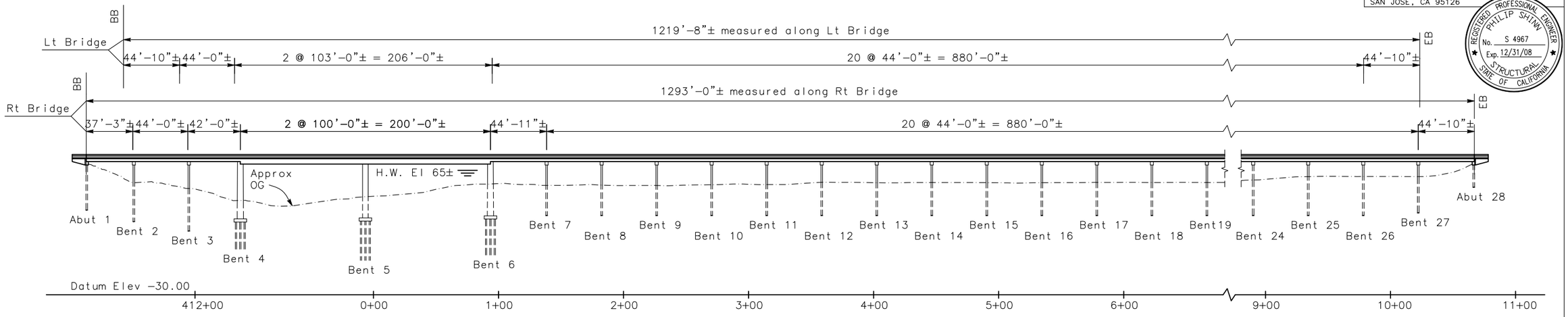
FILE => $REQUEST

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

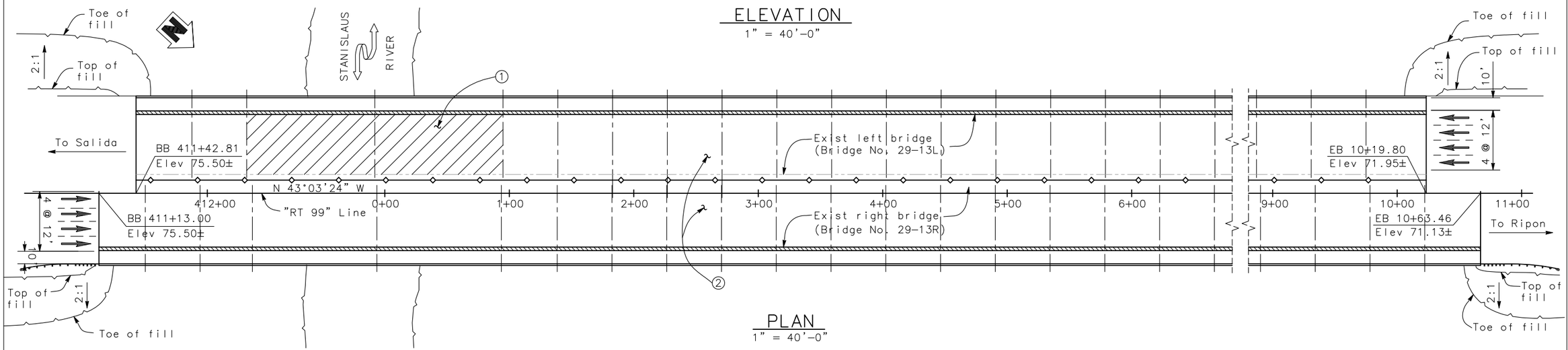
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
10	Stan	99	R23.9/25.1

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVE, SUITE 100
SAN JOSE, CA 95126

REGISTERED PROFESSIONAL ENGINEER
PHILIP SHINN
No. S 4967
Exp. 12/31/08
STRUCTURAL
STATE OF CALIFORNIA



ELEVATION
1" = 40'-0"



PLAN
1" = 40'-0"

VEHICULAR TRAFFIC

1. ___ New alignment. No traffic at the site
2. ___ Traffic will be detoured away from the site
3. X Traffic will be carried on the structure
   Stage construction will not be required
4. ___ Traffic will pass under the structure on _____
   - A. ___ No falsework allowed over traffic
   - B. ___ Falsework opening(s) required:

	Temporary vertical clearance	Width of traffic opening
___ Bnd.	_____	_____
___ Bnd.	_____	_____
___ Two-Way	_____	_____

C. ___ Temporary traffic lane reduction needed for footing excavation

Date of estimate	=	8/28/08
Str. Depth	=	Varies
Length	=	Lt 1219'-8"±
	=	Rt 1293'-0"±
Width of Widening	=	24'-0"
Area	=	30,152 ft^2
Cost/ft^2 including 10% Mobilization & 25% Contingency	=	$298.52
Bridge Widening Total Cost	=	$9,001,000
Bridge Retrofit* (Contingency Included)	=	$7,860,500
Grand Total	=	$16,862,000

*Bridge Retrofit included:
1. Clean and Paint Structural Steel (Exist)
2. Deck Rehabilitation
3. Remove and Rebuild Span 3 and Span 4 of Left Bridge

Note:

For Typical Section, see sheet 2 of 2

Legend:

- Bridge Removal (Portion)
- Indicates Existing Structure
- Indicates Existing Double Thrie Beam Barrier
- ① Indicates Remove and Rebuild Span 3 and Span 4 of Left Bridge
- ② Indicates Deck Rehabilitation

DESIGNED BY	P. SHINN	DATE	8/08
DRAWN BY	I. LAM	DATE	8/08
CHECKED BY	K. HARIRSAZ	DATE	8/08
APPROVED		DATE	

P. SHINN
PROJECT ENGINEER

ADVANCE PLANNING STUDY
STANISLAUS RIVER BR. (WIDEN)

BRIDGE NO. 29-13 RL	CU 10	
SCALE: AS NOTED	EA 0L320K	SHEET 1 OF 2

PREPARED FOR THE STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

DESIGN OVERSIGHT

SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 2/25/05)

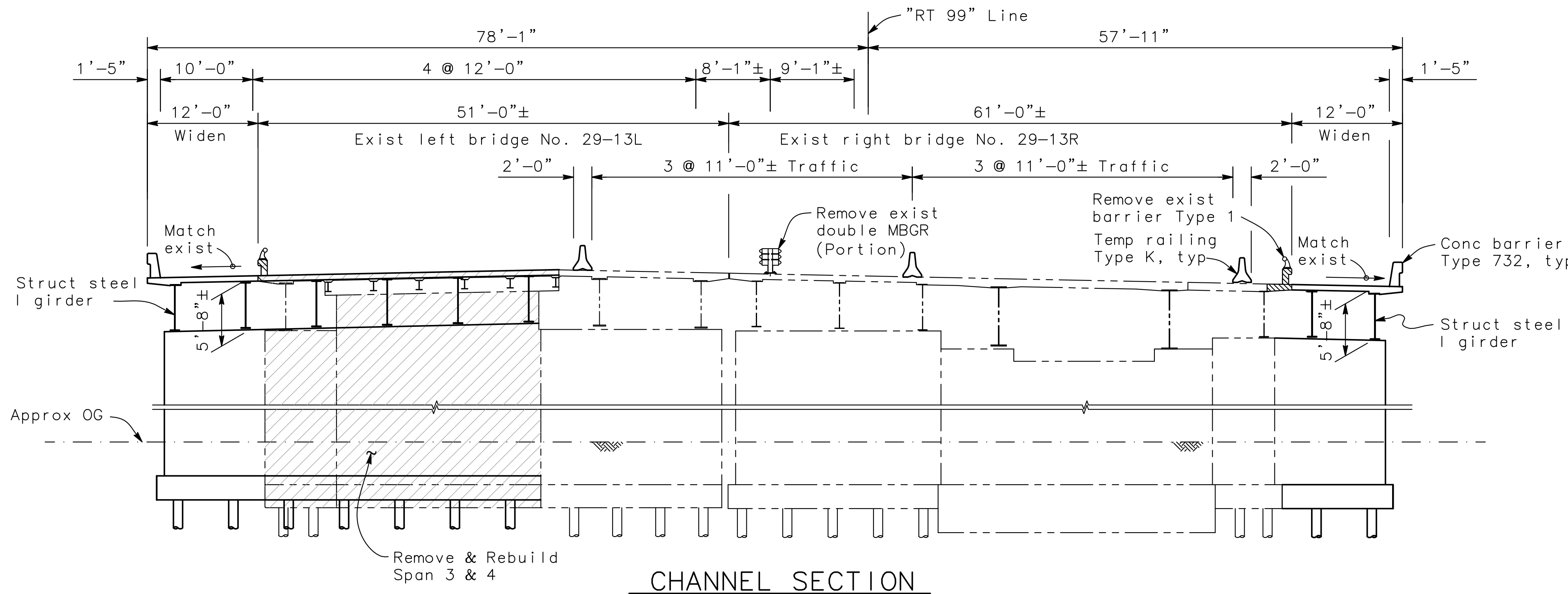
FILE => $REQUEST

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
10	Stan	99	R23.9/25.1

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVE, SUITE 100
SAN JOSE, CA 95126

REGISTERED PROFESSIONAL ENGINEER PHILIP SHINN No. S 4967 Exp. 12/31/08 STRUCTURAL STATE OF CALIFORNIA



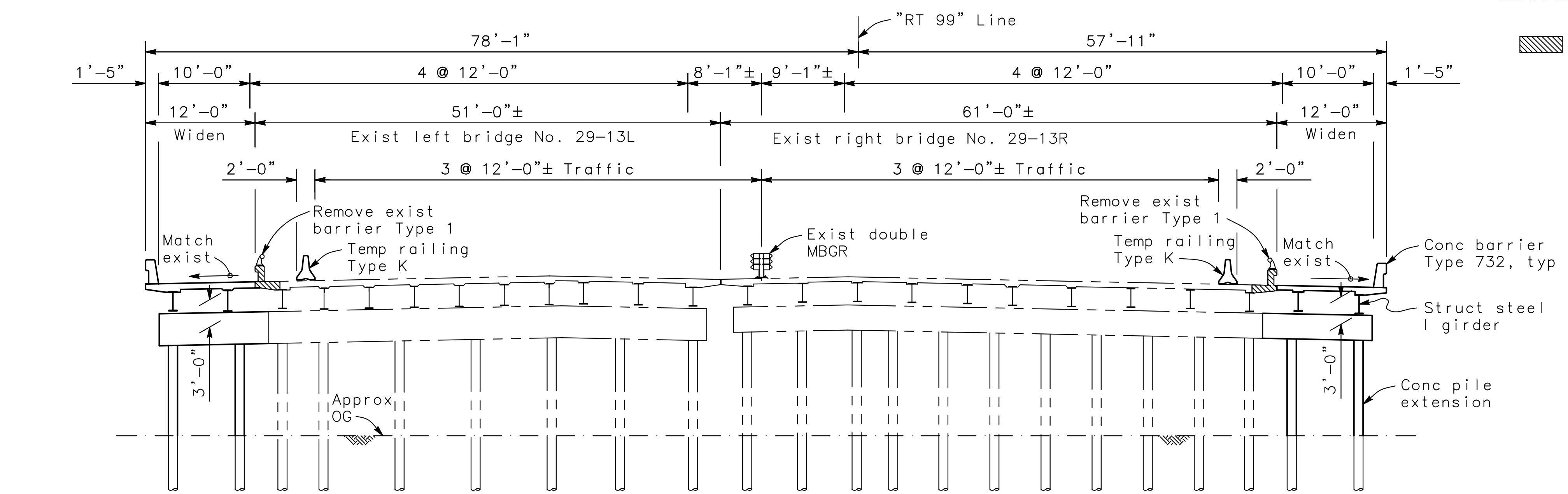
CHANNEL SECTION

1/8" = 1'-0"

Legend:

- - - - Indicates Existing Structure

▨ Indicates Concrete Removal



TRESTLE SECTION

1/8" = 1'-0"

DESIGNED BY	P. SHINN	DATE	8/08
DRAWN BY	I. LAM	DATE	8/08
CHECKED BY	K. HARIRSAZ	DATE	8/08
APPROVED		DATE	

P. SHINN
PROJECT ENGINEER

ADVANCE PLANNING STUDY

STANISLAUS RIVER BR. (WIDEN)

BRIDGE NO. 29-13 RL	CU 10	
SCALE: AS NOTED	EA 0L320K	SHEET 2 OF 2

DESIGN OVERSIGHT

SIGN OFF DATE

Attachment C – Geometric Approval Drawings (Alternative 2)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	STA	99	23.9/25.1		

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN STANISLAUS
FROM 0.4 MILE SOUTH OF HAMMETT ROAD OC
TO 0.8 MILES NORTH OF HAMMETT ROAD OC

To be suplemented by Standard Plans dated May 2006

INDEX OF SHEETS

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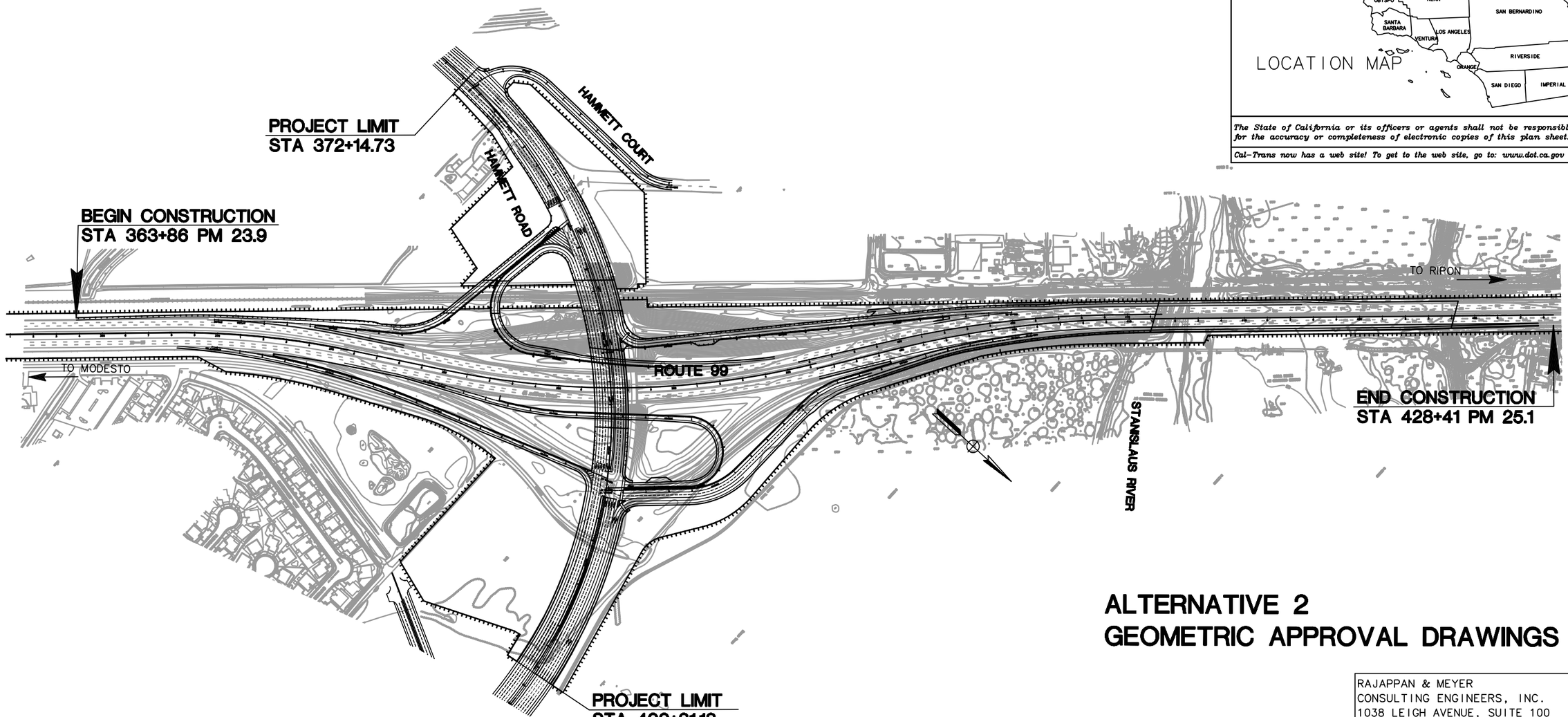
Cal-Trans now has a web site! To get to the web site, go to: www.dot.ca.gov



ALTERNATIVE 2
GEOMETRIC APPROVAL DRAWINGS

PROJECT ENGINEER | DESIGN OVERSIGHT APPROVAL | PRINTED NAME | SIGNATURE | REGISTRATION NO. | DATE

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

Contract No.

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => $USER
DGN FILE => $REQUEST

CU

EA 10-0L320K

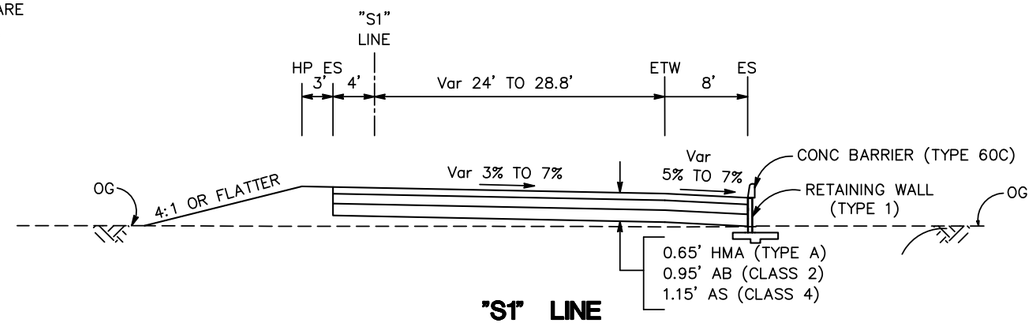
LAST REVISION XX-XX-XX

DATE PLOTTED => $DATE

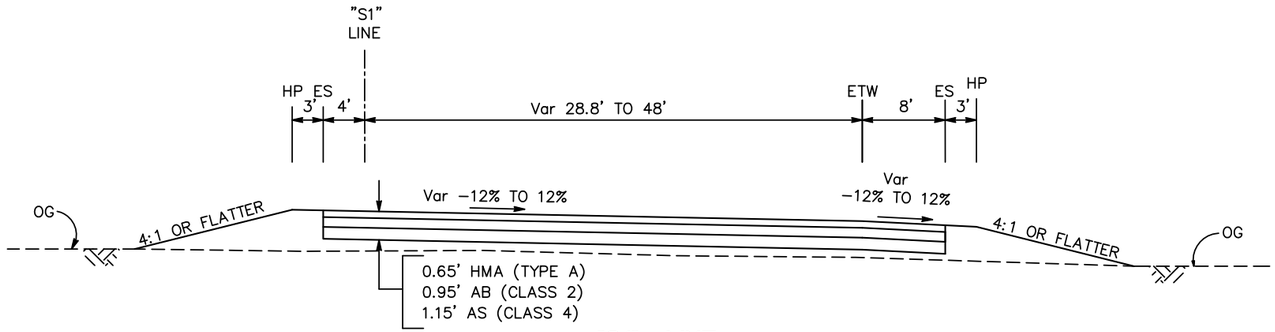
$TIME

NOTE:

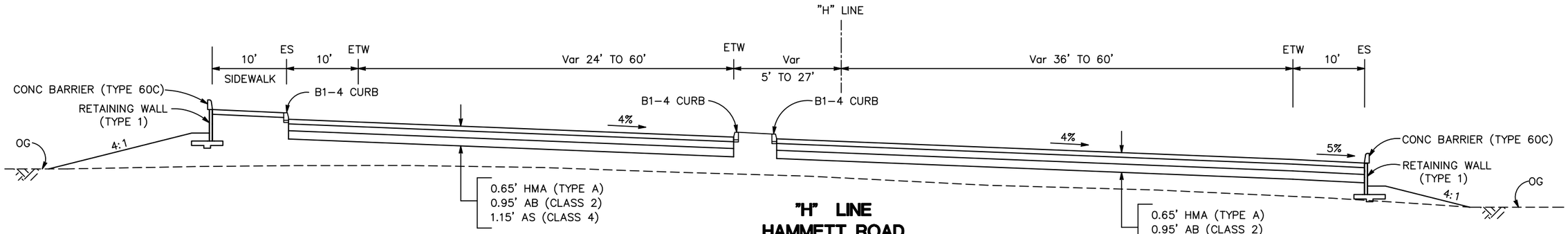
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURES SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAMS.



"S1" LINE
NORTHBOUND ON RAMP
FROM 401+00 TO 405+70.91



"S1" LINE
NORTHBOUND ON RAMP
STA. S1 386+37.00 TO 401+00.00



"H" LINE
HAMMETT ROAD
STA. 363+04.04 TO 400+31.13

ROUTE 99 / HAMMETT ROAD
ALTERNATIVE 2
TYPICAL CROSS SECTIONS

NO SCALE

X-1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

STANISLAUS COUNTY
1010 10TH STREET, SUITE 3500
MODESTO, CALIFORNIA 95354

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

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Caltrans

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CU

EA 10-0L320K

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

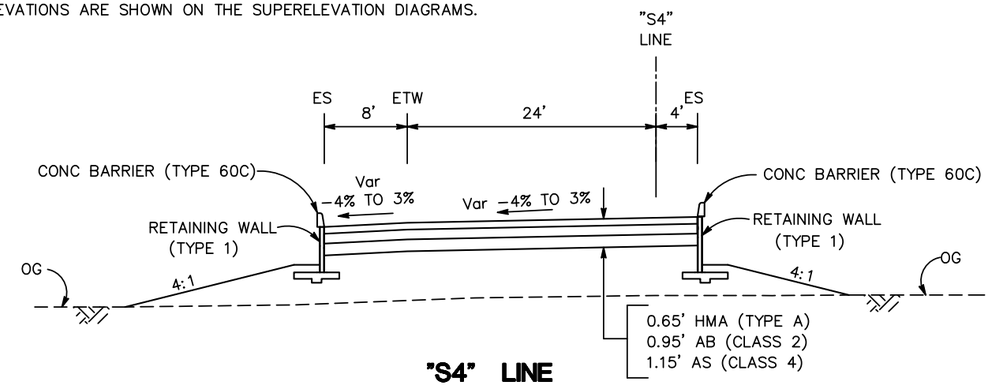
REGISTERED PROFESSIONAL ENGINEER — No. Exp. — CIVIL — STATE OF CALIFORNIA

STANISLAUS COUNTY
1010 10TH STREET, SUITE 3500
MODESTO, CALIFORNIA 95354

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

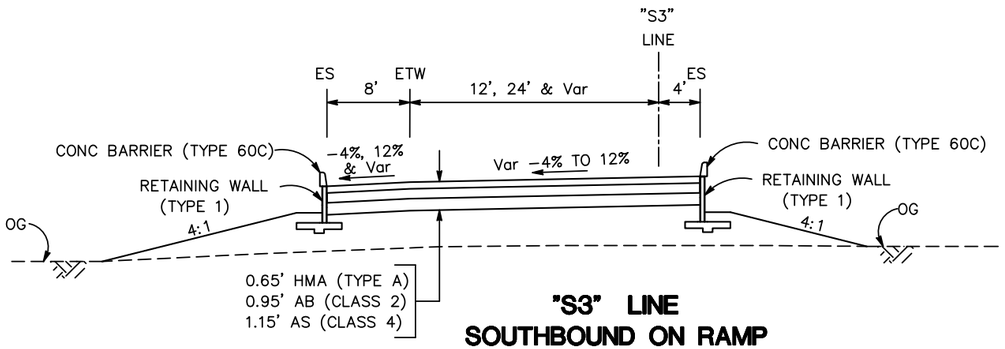
NOTE:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURES SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAMS.



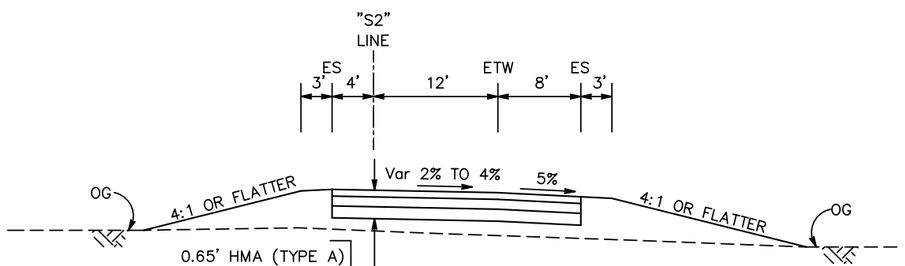
"S4" LINE
SOUTHBOUND OFF RAMP

STA. S4 369+83.35 TO 386+87.62



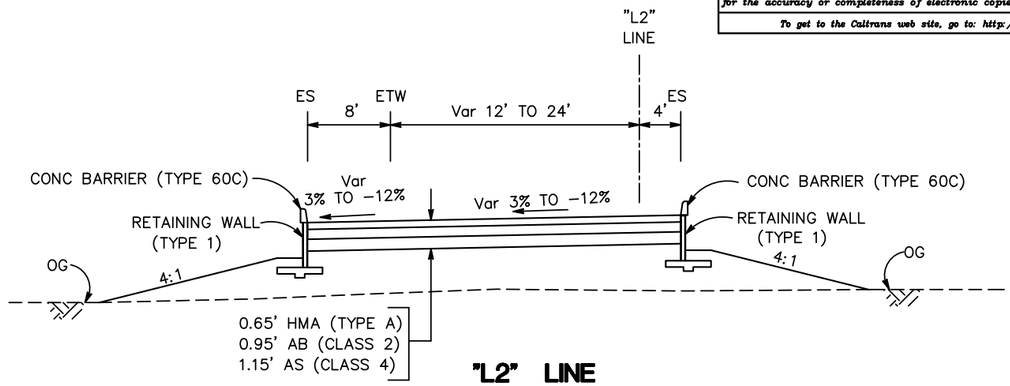
"S3" LINE
SOUTHBOUND ON RAMP

STA S3 369+83.35 TO 386+87.61



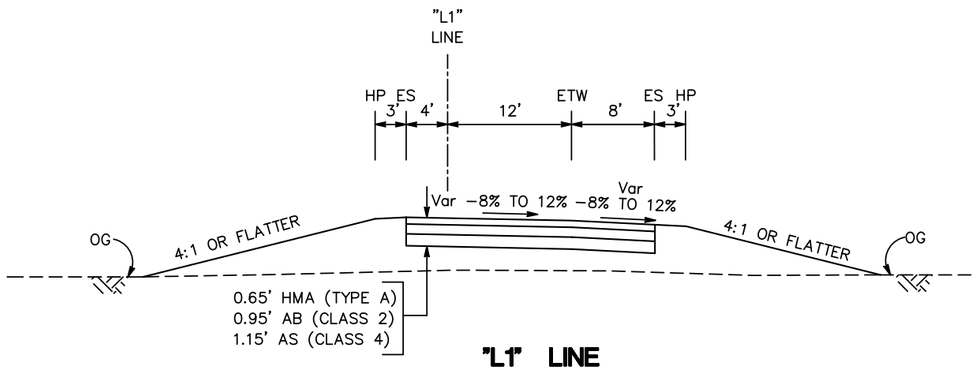
"S2" LINE
NORTHBOUND OFF RAMP

STA. S2 369+77.54 TO 390+15.37



"L2" LINE
SOUTHBOUND LOOP OFF RAMP

STA. L2 385+80.89 TO 402+99.69



"L1" LINE
NORTHBOUND LOOP OFF RAMP

STA. L1 379+45.39 TO 369+50.60

ROUTE 99 / HAMMETT ROAD
ALTERNATIVE 2
TYPICAL CROSS SECTIONS

NO SCALE

X-2

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EA 10-0L320K

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TIME PLOTTED => $TIME

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

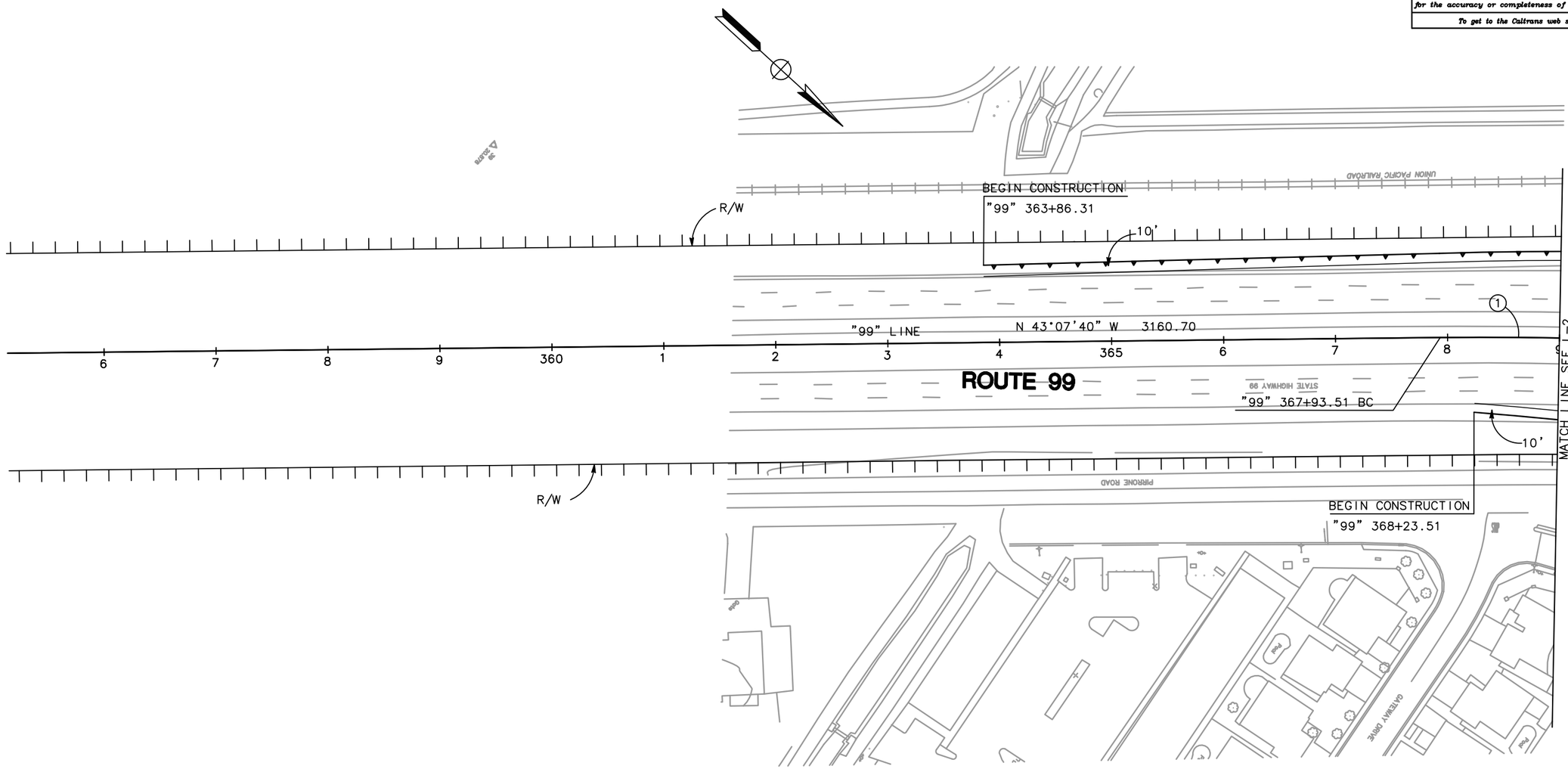
PLANS APPROVAL DATE

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

STANISLAUS COUNTY
1010 10TH STREET, SUITE 3500
MODESTO, CALIFORNIA 95354

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
(1)	773.97	3600.00	12°19'05"	388.48



ROUTE 99 / HAMMETT ROAD ALTERNATIVE 2 LAYOUT

SCALE 1"=50'

L-1

DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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CU

EA 10-0L320K

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

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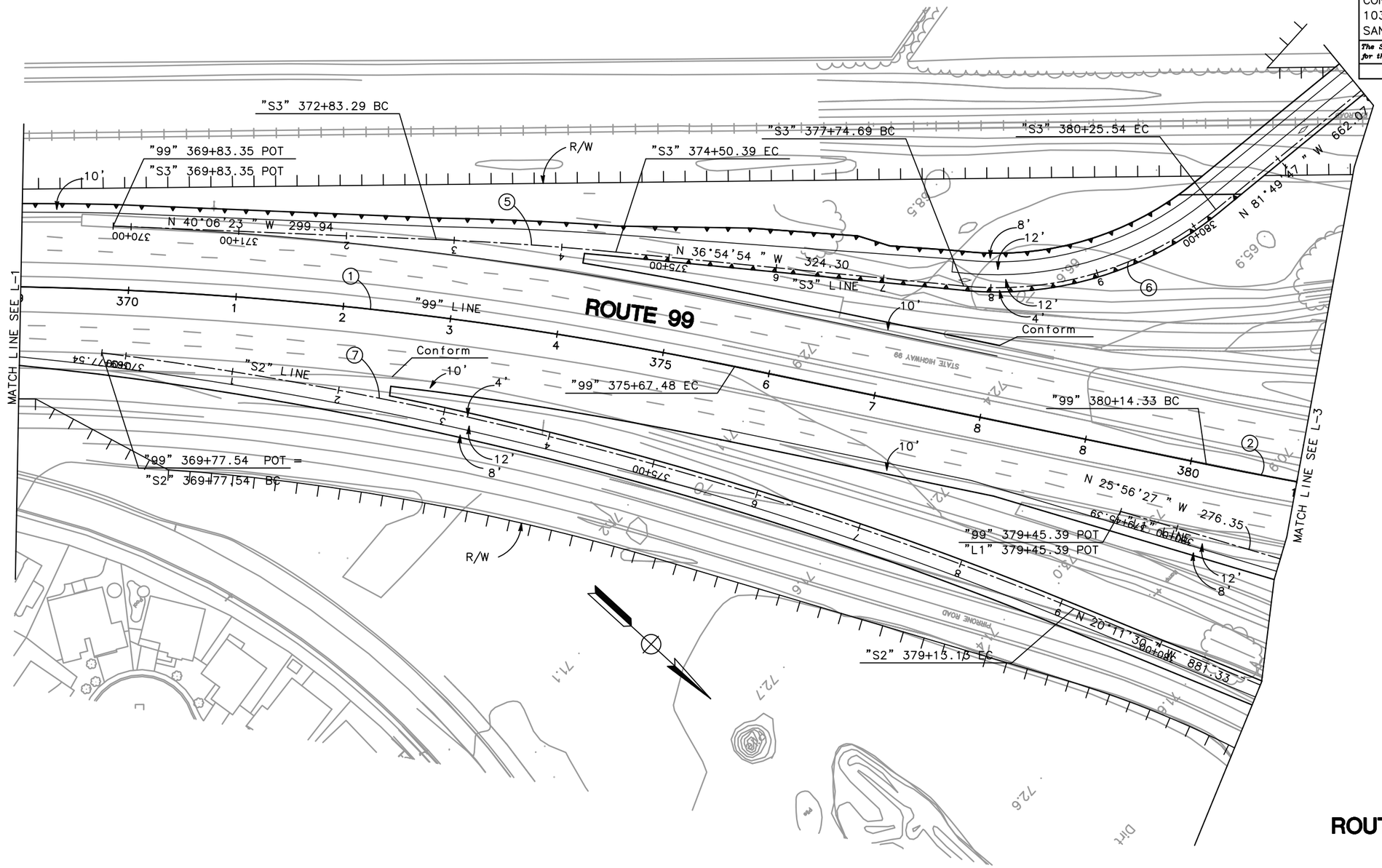
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
①	773.97	3600.00	12°19'05"	388.48
②	1610.99	3600.00	25°38'23"	819.21
⑤	167.10	3000.00	03°11'29"	83.57
⑥	250.85	320.00	44°54'53"	132.27
⑦	935.59	3541.00	15°08'18"	470.53



ROUTE 99 / HAMMETT ROAD ALTERNATIVE 2 LAYOUT

SCALE 1"=50'

L-2

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DGN FILE => $REQUEST

CU

EA 10-0L320K

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

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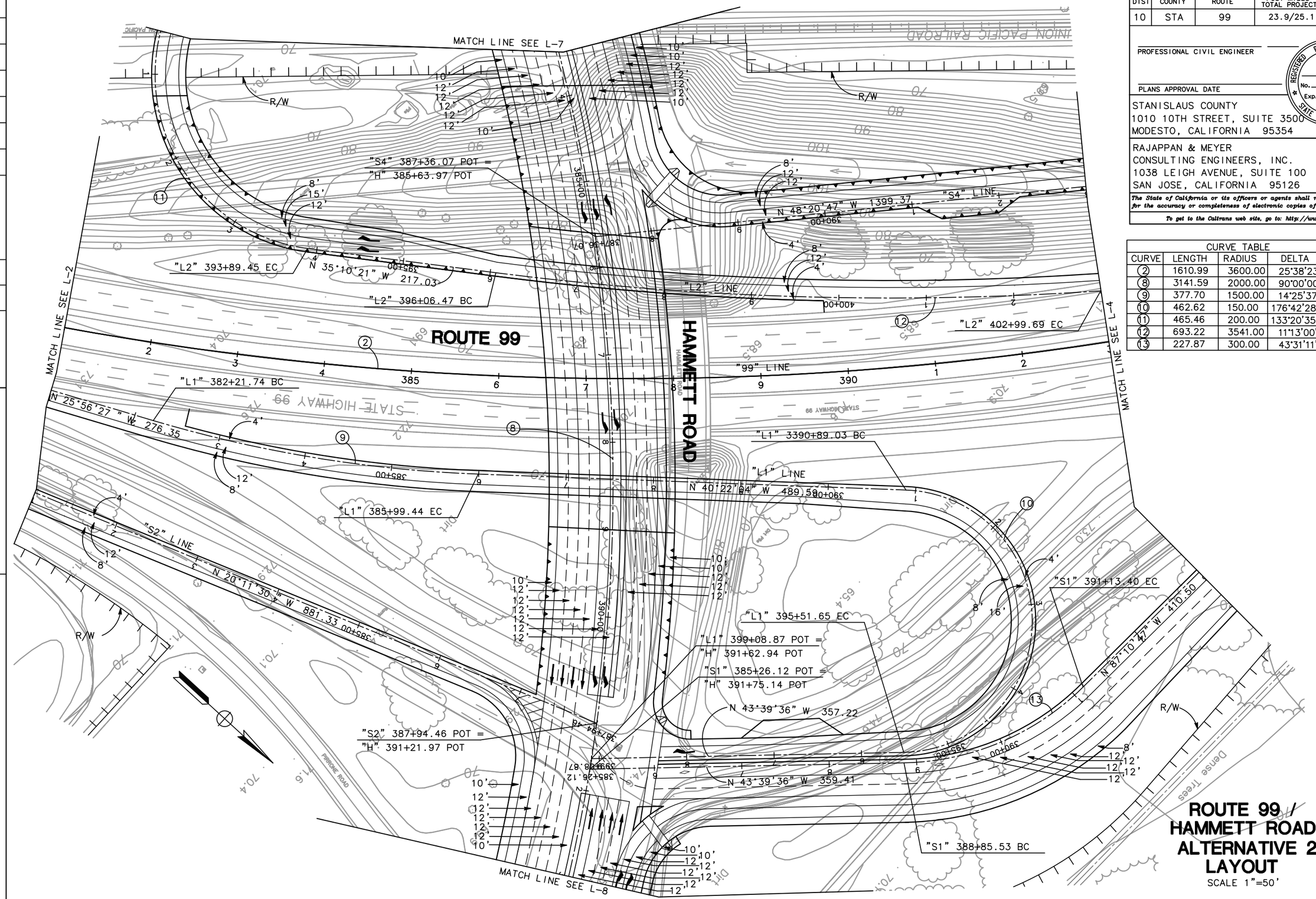
RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
(2)	1610.99	3600.00	25°38'23"	819.21
(8)	3141.59	2000.00	90°00'00"	2000.00
(9)	377.70	1500.00	14°25'37"	189.85
(10)	462.62	150.00	176°42'28"	5219.47
(11)	465.46	200.00	133°20'35"	663.76
(12)	693.22	3541.00	11°13'00"	347.72
(13)	227.87	300.00	43°31'11"	119.75



ROUTE 99 / HAMMETT ROAD ALTERNATIVE 2 LAYOUT

SCALE 1"=50'

L-3

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TIME PLOTTED => $TIME

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USERNAME => $USER

DGN FILE => $REQUEST

CU

EA 10-0L320K

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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1010 10TH STREET, SUITE 3500
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RAJAPPAN & MEYER
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SAN JOSE, CALIFORNIA 95126

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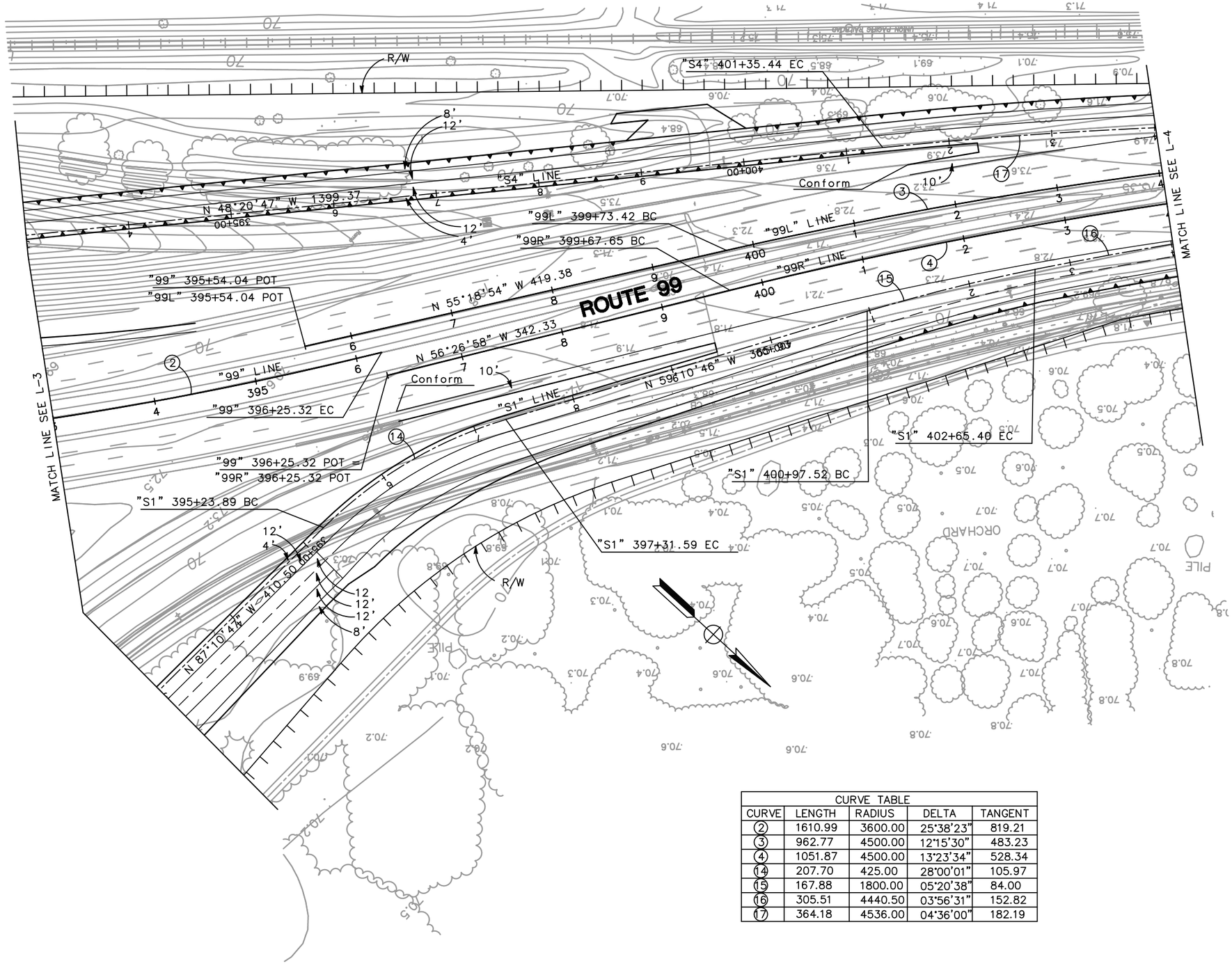

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
②	1610.99	3600.00	25°38'23"	819.21
③	962.77	4500.00	12°15'30"	483.23
④	1051.87	4500.00	13°23'34"	528.34
⑭	207.70	425.00	28°00'01"	105.97
⑮	167.88	1800.00	05°20'38"	84.00
⑯	305.51	4440.50	03°56'31"	152.82
⑰	364.18	4536.00	04°36'00"	182.19

ROUTE 99 / HAMMETT ROAD ALTERNATIVE 2 LAYOUT

SCALE 1"=50'

L-4

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EA 10-0L320K

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

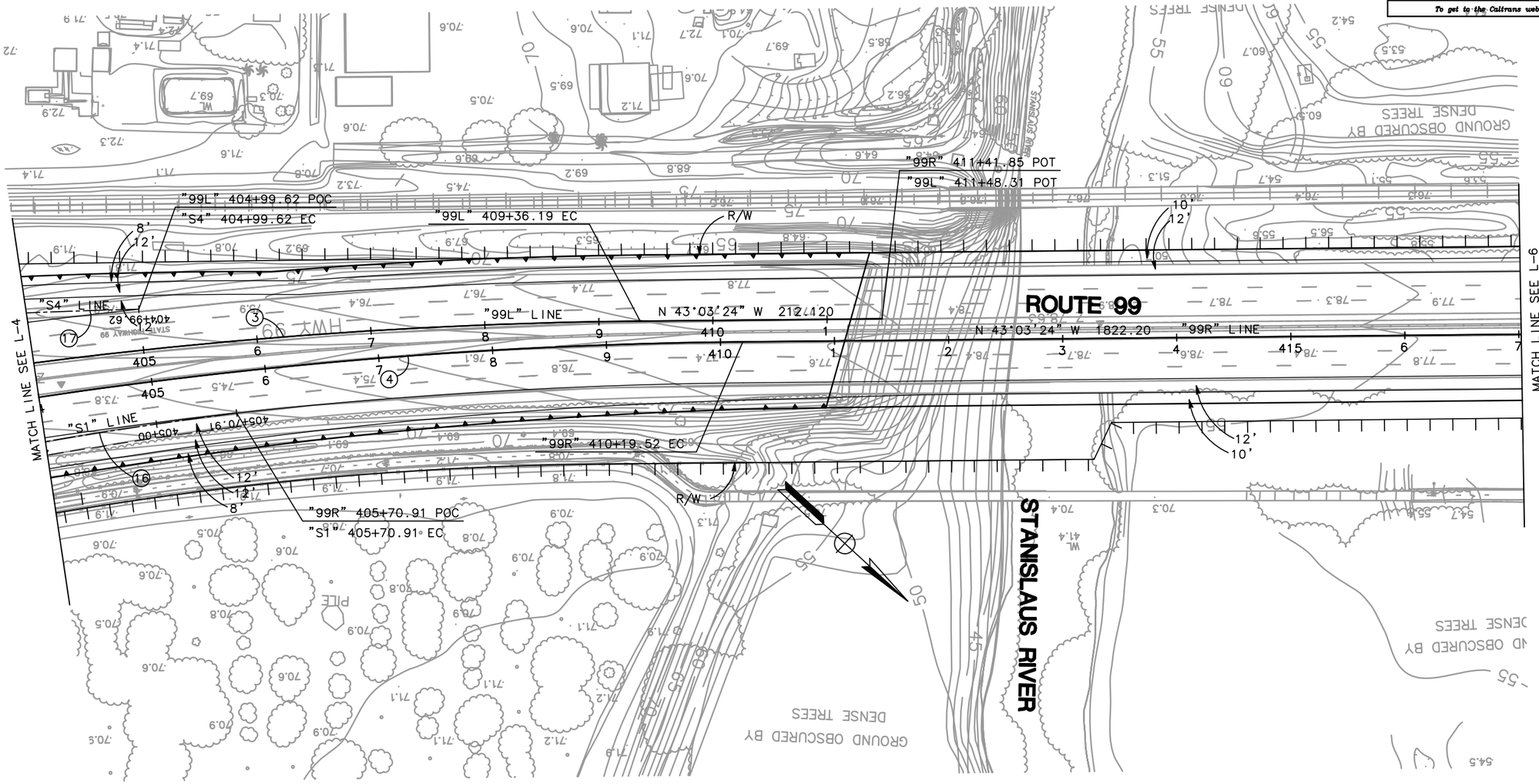
PLANS APPROVAL DATE

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

STANISLAUS COUNTY
1010 10TH STREET, SUITE 3500
MODESTO, CALIFORNIA 95354

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
③	962.77	4500.00	12°15'30"	483.23
④	1051.87	4500.00	13°23'34"	528.34
⑯	305.51	4440.50	03°56'31"	152.82
⑰	364.18	4536.00	04°36'00"	182.19



ROUTE 99 / HAMMETT ROAD ALTERNATIVE 2 LAYOUT

SCALE 1"=50'

L-5

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CU

EA 10-0L320K

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

STANISLAUS COUNTY
1010 10TH STREET, SUITE 3500
MODESTO, CALIFORNIA 95354

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

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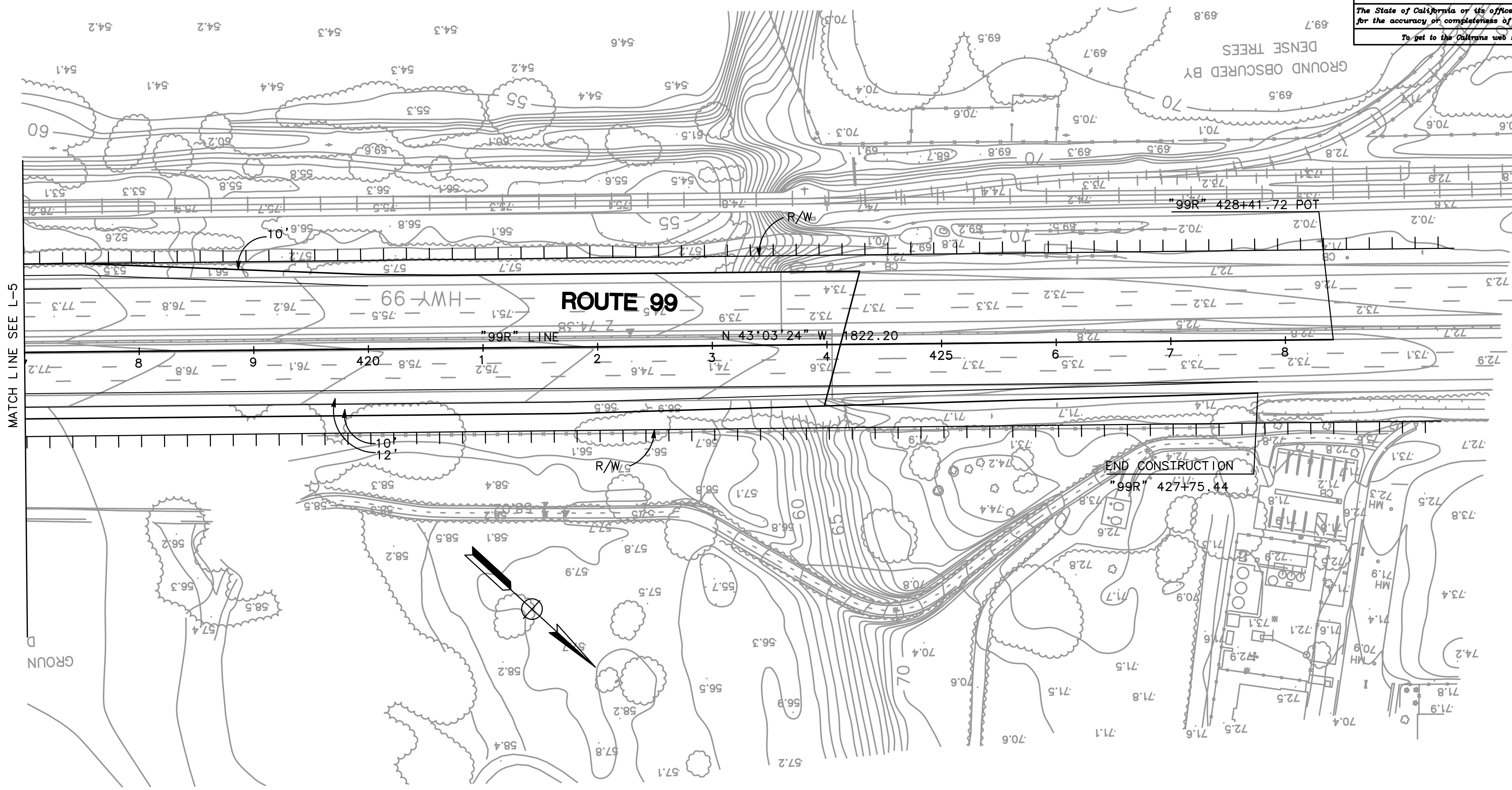

ROUTE 99 / HAMMETT ROAD
ALTERNATIVE 2
LAYOUT

SCALE 1"=50'

L-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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CU | EA 10-0L320K

$REQUEST

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

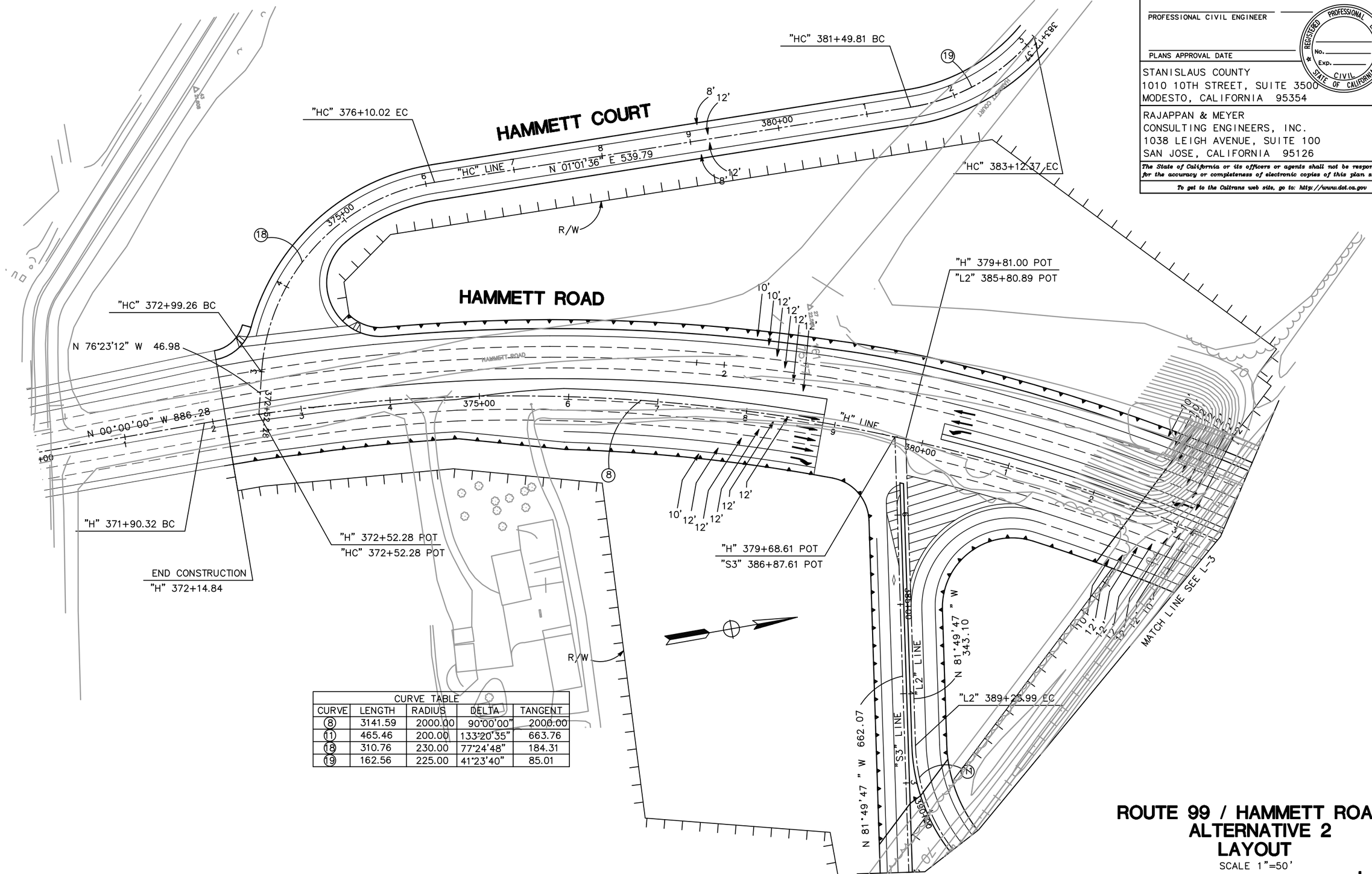
PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

STANISLAUS COUNTY
1010 10TH STREET, SUITE 3500
MODESTO, CALIFORNIA 95354

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
⑧	3141.59	2000.00	90°00'00"	2000.00
⑪	465.46	200.00	133°20'35"	663.76
⑱	310.76	230.00	77°24'48"	184.31
⑲	162.56	225.00	41°23'40"	85.01

ROUTE 99 / HAMMETT ROAD ALTERNATIVE 2 LAYOUT

SCALE 1"=50'

L-7

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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MODESTO, CALIFORNIA 95354

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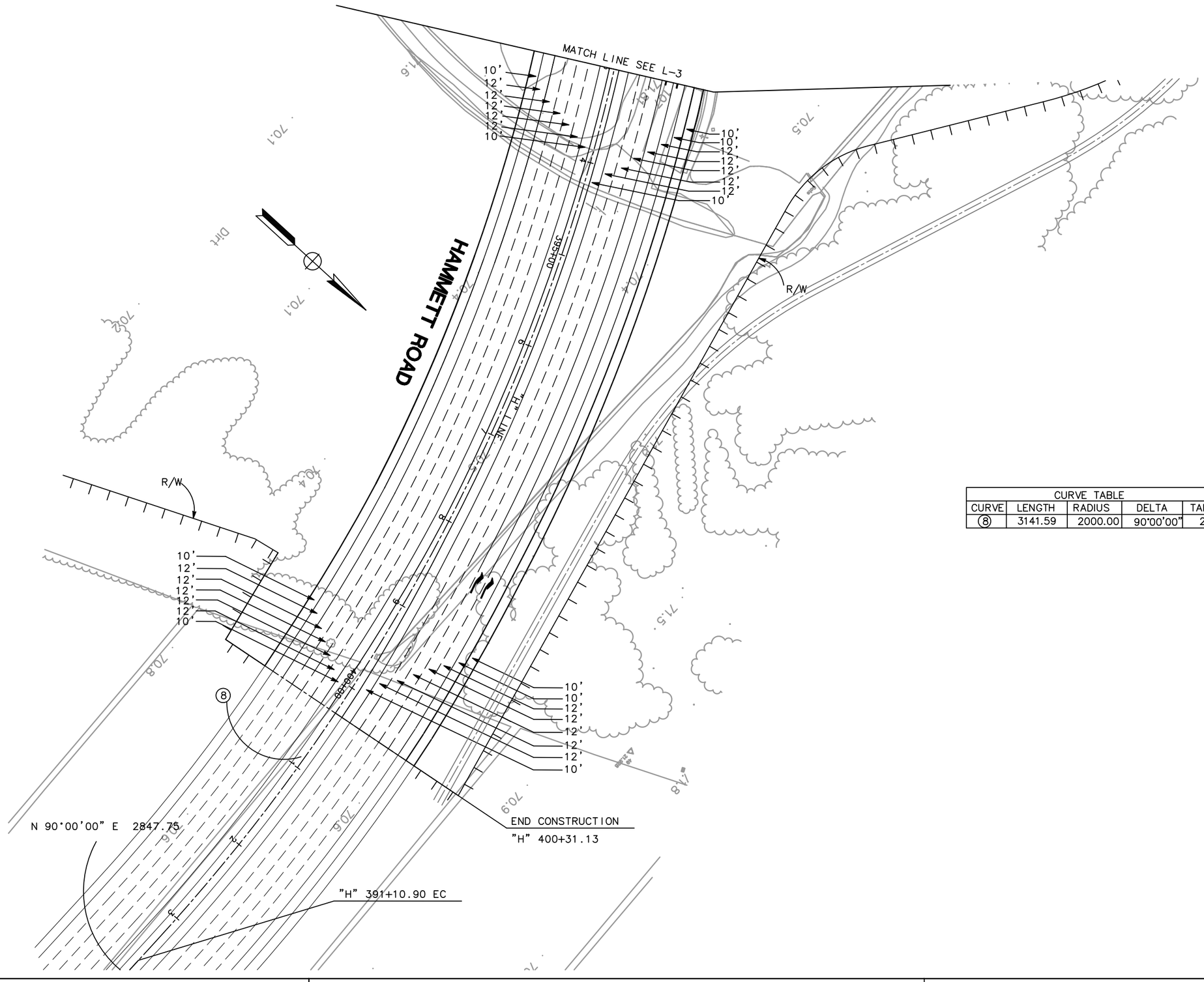

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
⑧	3141.59	2000.00	90°00'00"	2000.00

ROUTE 99 / HAMMETT ROAD ALTERNATIVE 2 LAYOUT

SCALE 1"=50'

L-8

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EA 10-0L320K

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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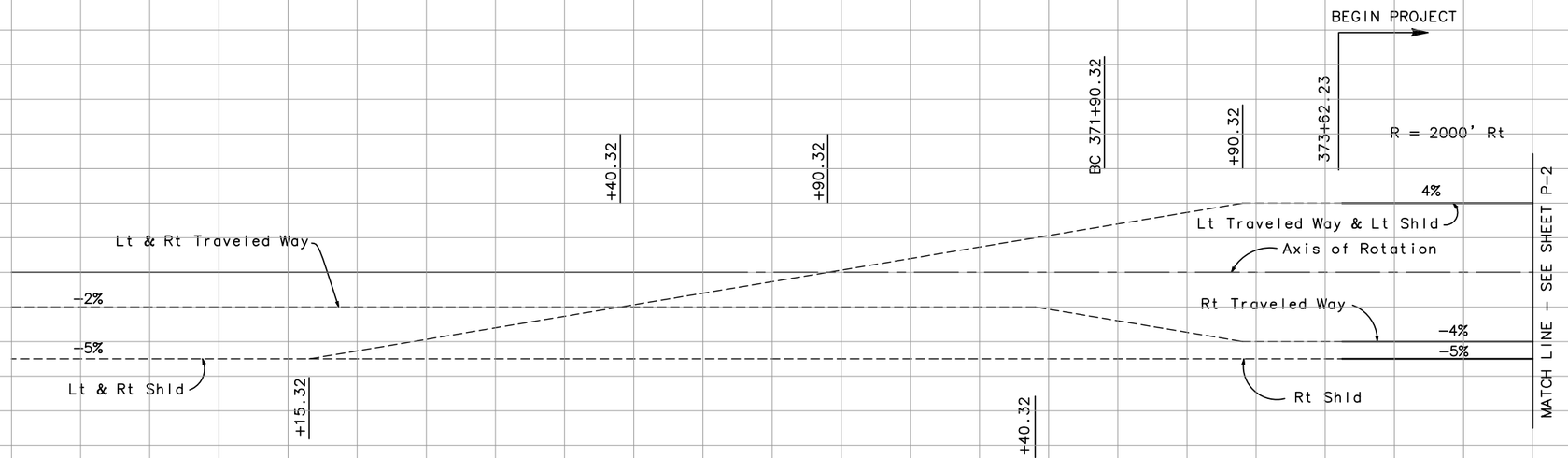
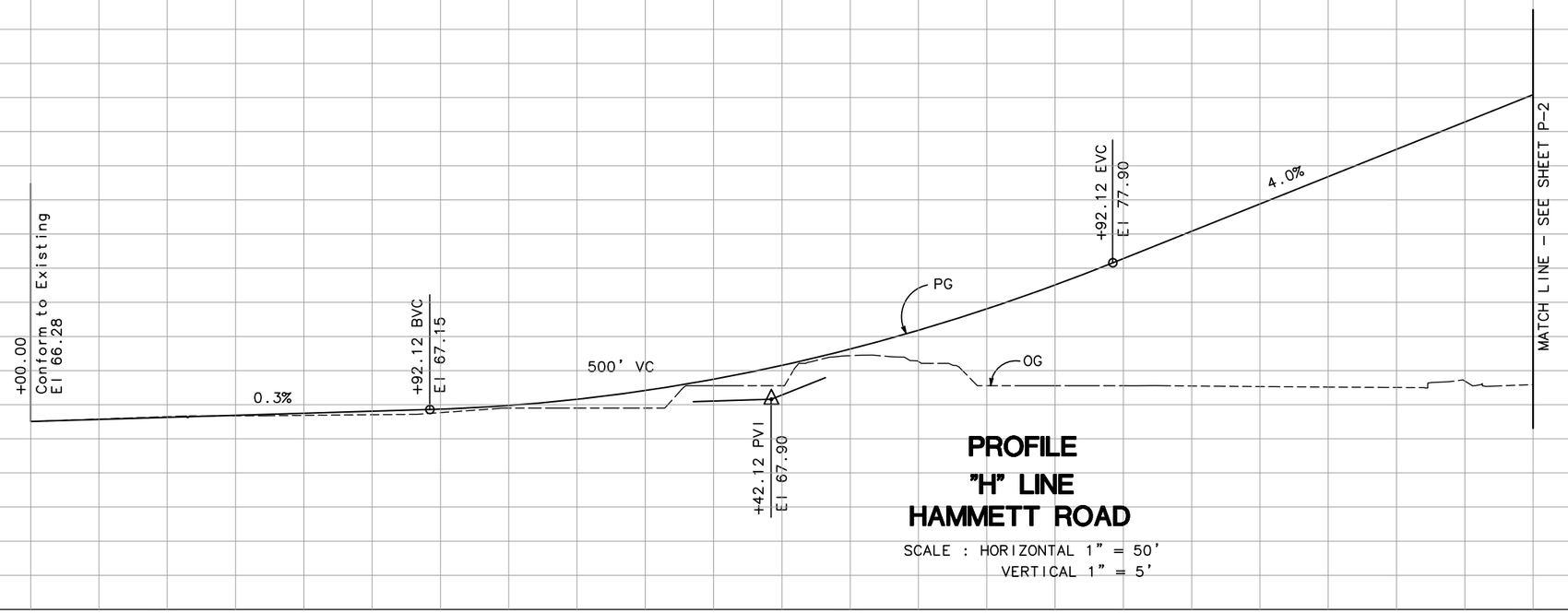
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



SUPERELEVATION DIAGRAM
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'



PROFILE
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-1

Station 4 365 6 7 8 9 370 1 2 3 4 375

CY Exc / Emb

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DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

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RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

R = 2000' Rt

Lt Traveled Way & Lt Shld 4%

Axis of Rotation

Rt Traveled Way −4%

−5%

Rt Shld

MATCH LINE – SEE SHEET P-1

MATCH LINE – SEE SHEET P-3

SUPERELEVATION DIAGRAM
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'

+23.17 PVI
El 123.15

1100' VC

Hammett Road OH

Hammett Road OC

+73.17 BVC
El 101.15

PG

4.0%

+50.28 BB
El 111.96

Min. Clearance = 23.0 ft

+89.28 EB
El 111.99

+60.12 BB
El 110.10

MATCH LINE – SEE SHEET P-1

MATCH LINE – SEE SHEET P-3

OG

PROFILE
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-2

Station 375 6 7 8 9 380 1 2 3 4 385 6

CY Exc

Emb

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DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

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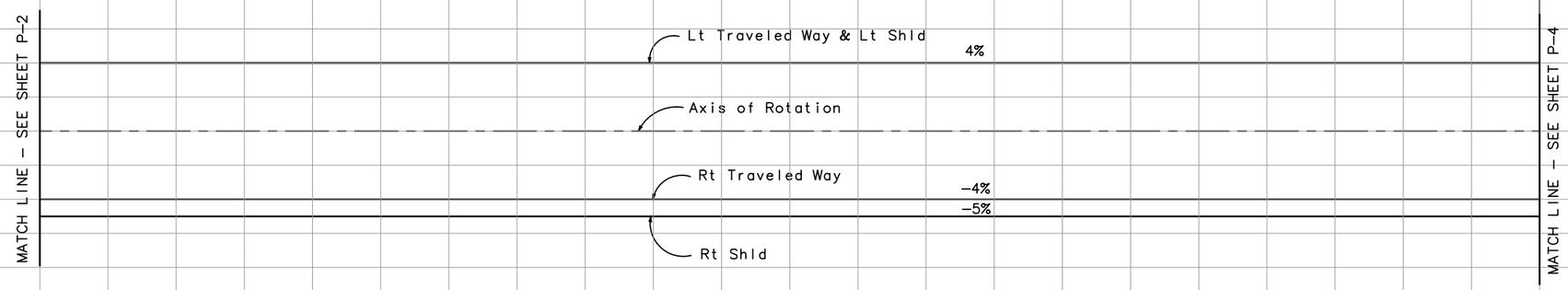
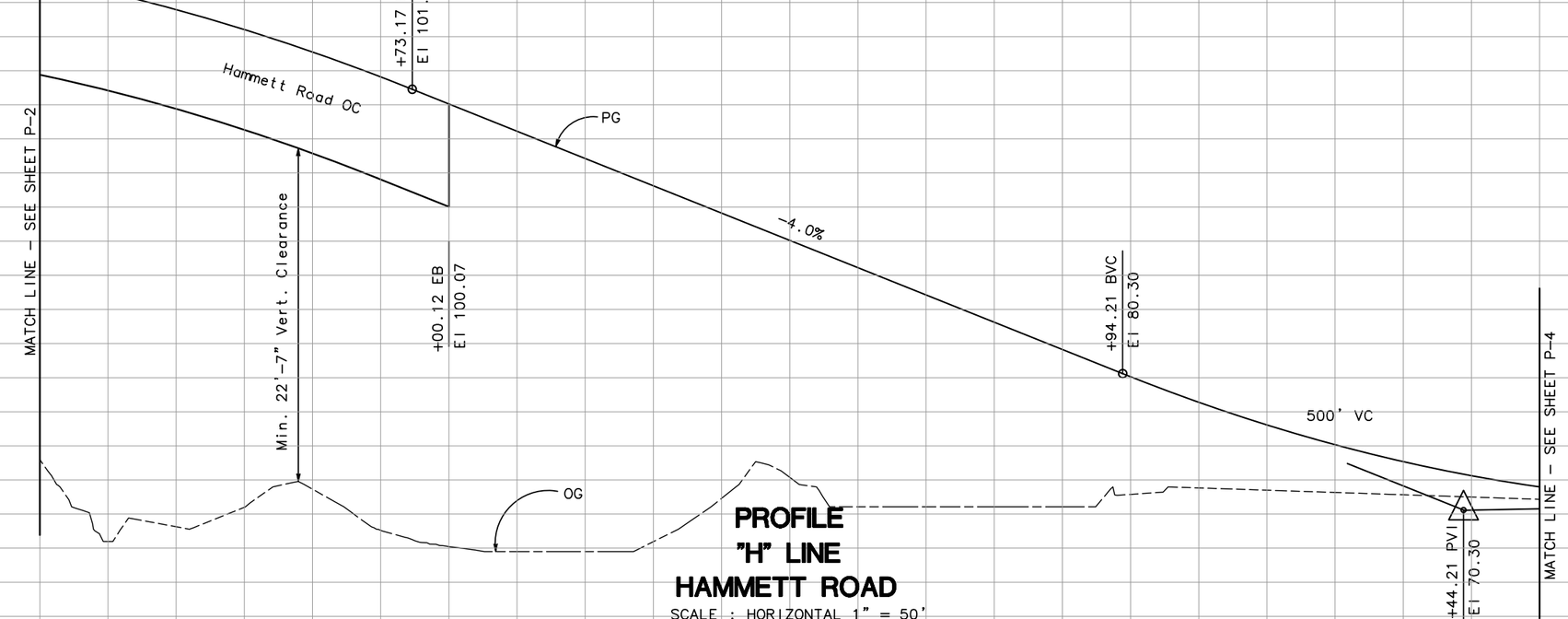
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



SUPERELEVATION DIAGRAM
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'



PROFILE
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-3

Station 6 7 8 9 390 1 2 3 4 395 6 7

CY Exc / Emb

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STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION — Caltrans

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CU | EA

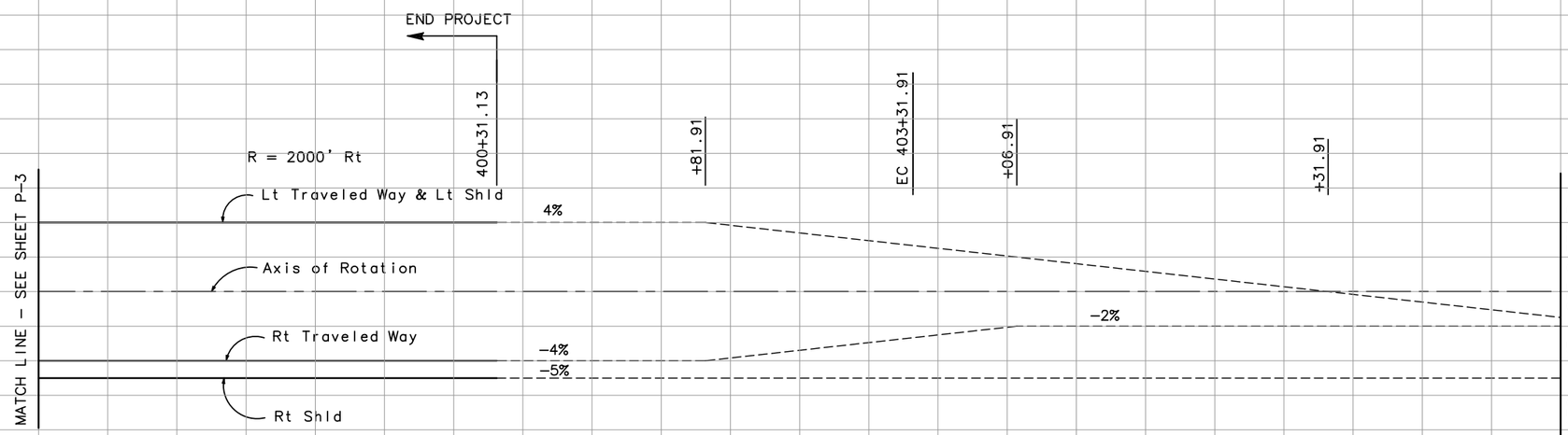
DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

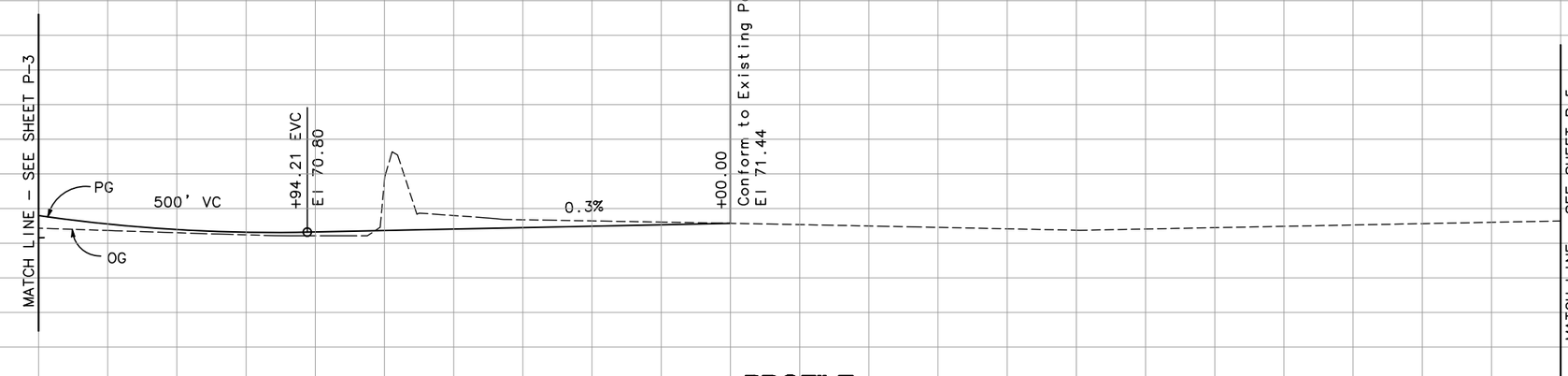
REGISTERED PROFESSIONAL ENGINEER — No. Exp. — CIVIL — STATE OF CALIFORNIA

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



SUPERELEVATION DIAGRAM
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'



PROFILE
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-4

Station 7 8 9 9 400 1 2 3 4 405 6 7

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DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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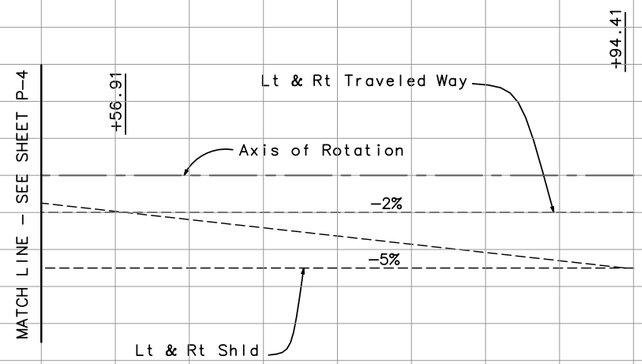
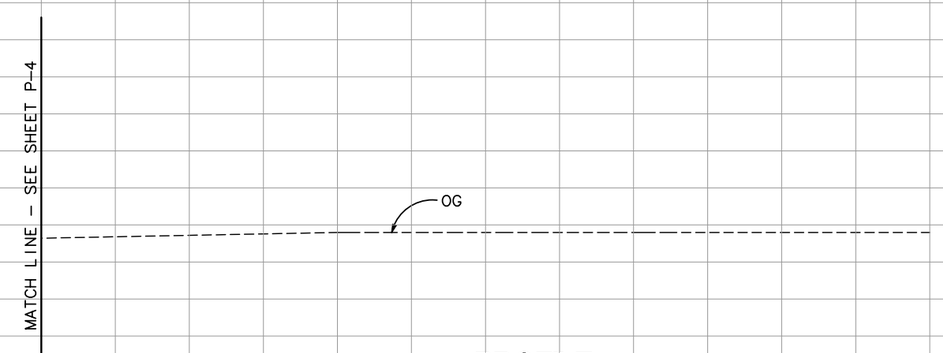


SUPERELEVATION DIAGRAM
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'

85 80 75 70 65



PROFILE
"H" LINE
HAMMETT ROAD

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

Station 7 8 9 410 1 2

CY Exc Emb

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-5

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION — Caltrans

$REQUEST

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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DGN FILE => $REQUEST

CU EA

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

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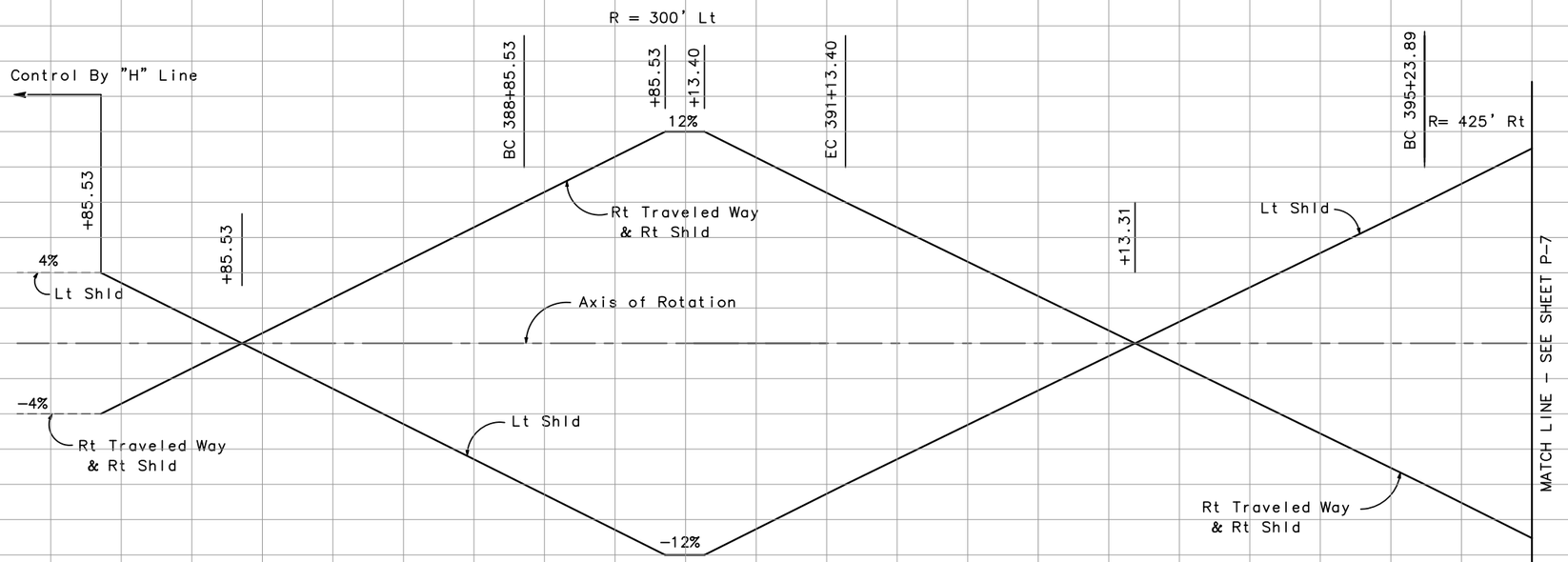
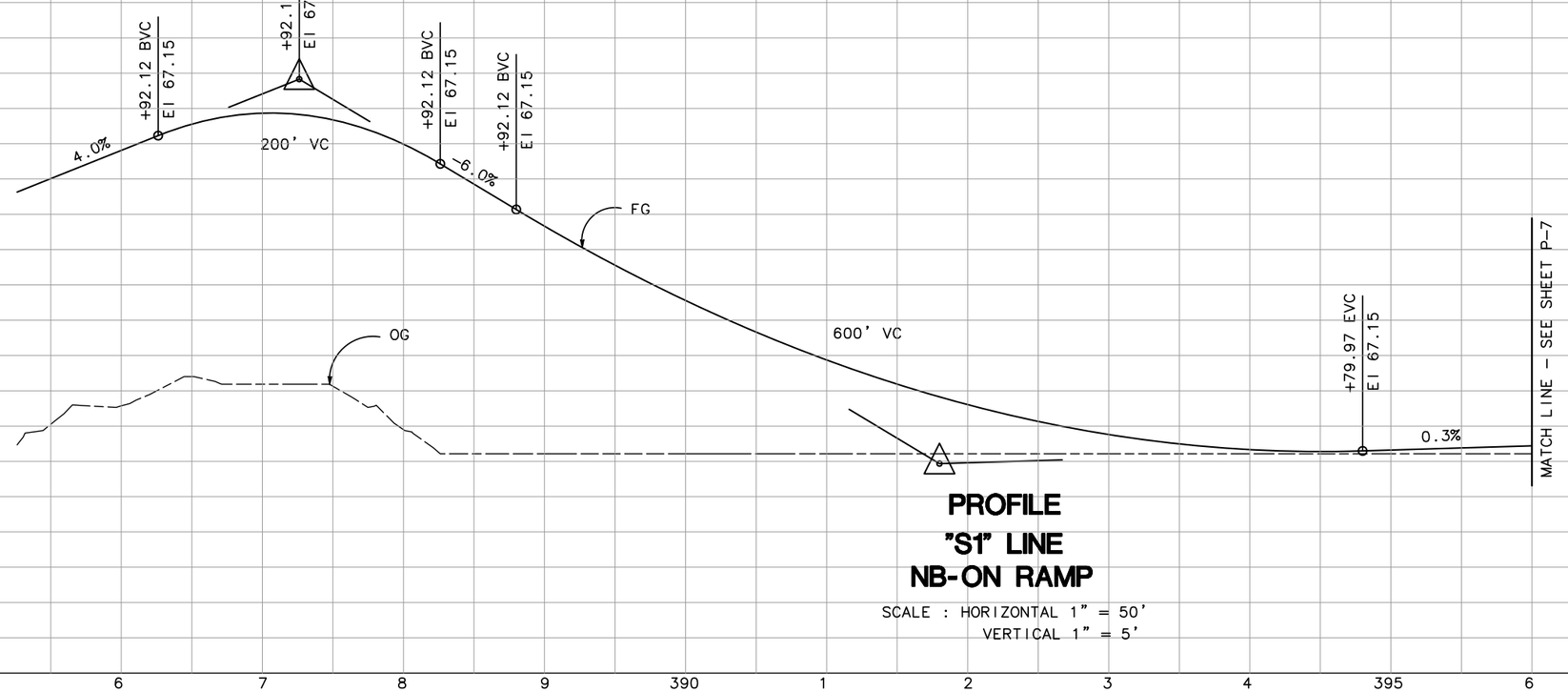


SUPERELEVATION DIAGRAM
"S1" LINE
NB-ON RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S1" LINE
NB-ON RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-6

REVISED BY | DATE REVISED
CALCULATED/DESIGNED BY | CHECKED BY
DESIGN OVERSIGHT
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
$REQUEST
CY Exc | Emb
LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME
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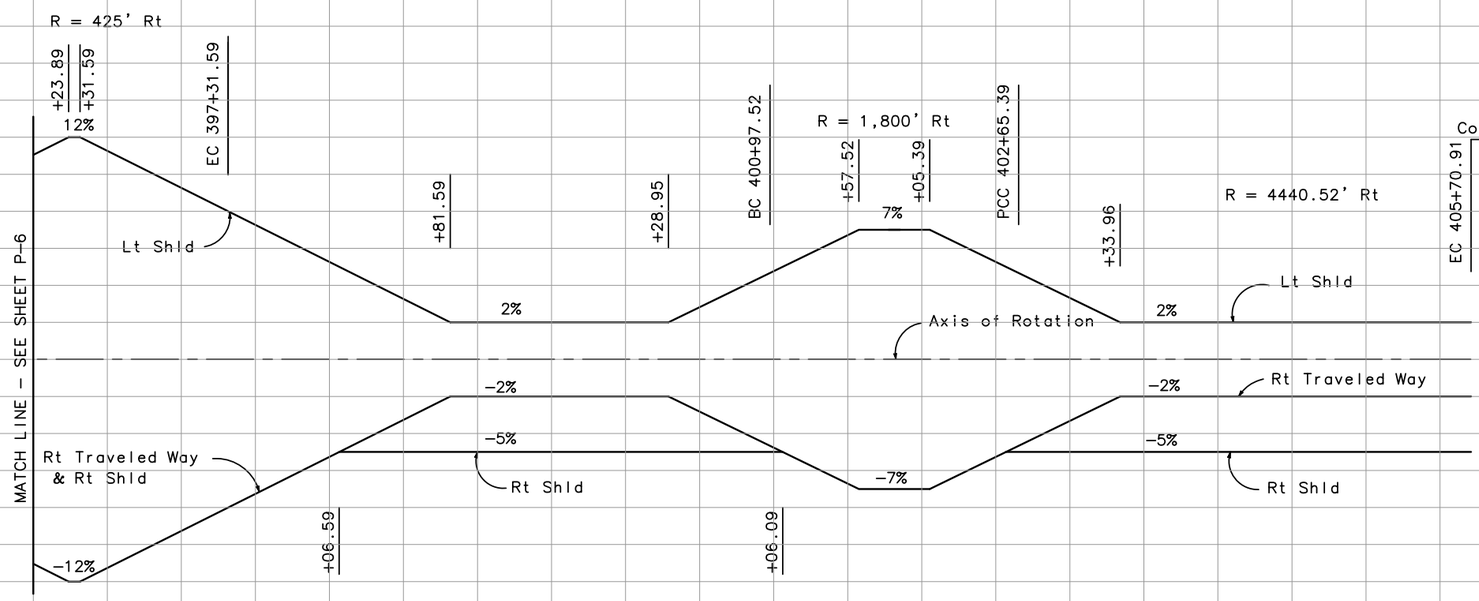
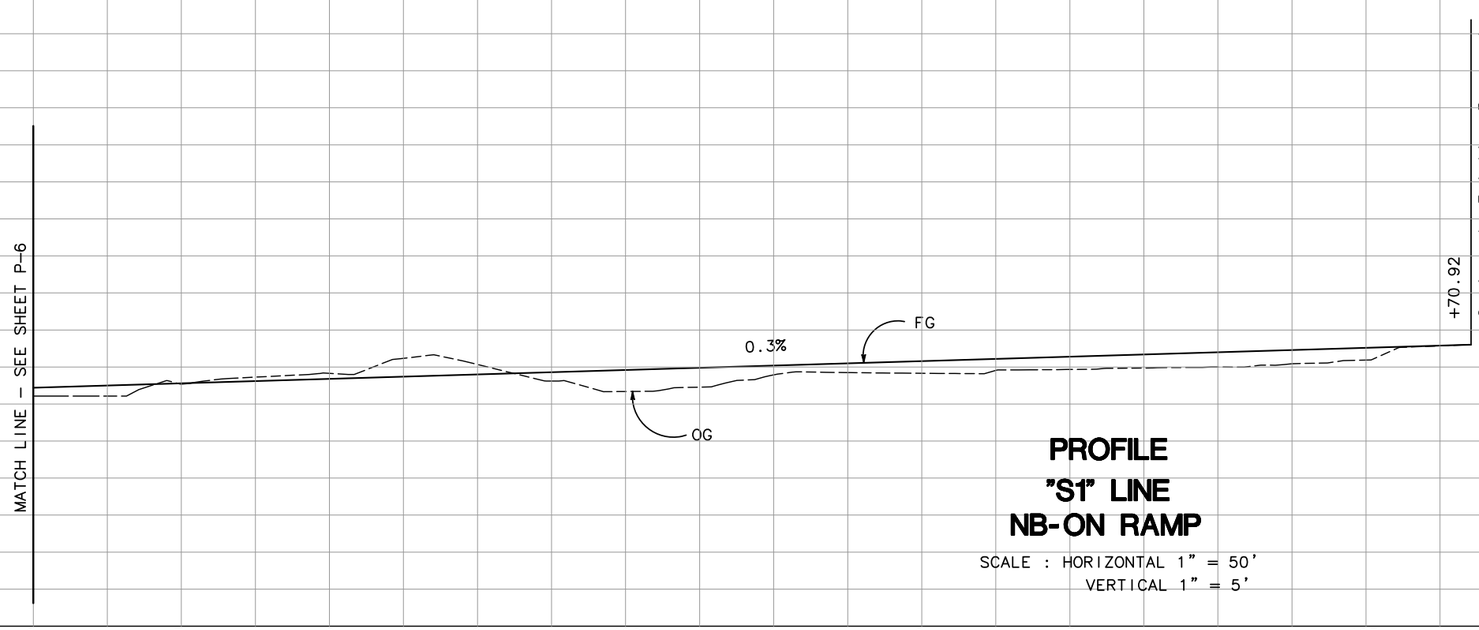


SUPERELEVATION DIAGRAM
"S1" LINE
NB-ON RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S1" LINE
NB-ON RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-7

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126

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DESIGN OVERSIGHT
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
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LAST REVISION 00-00-00
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

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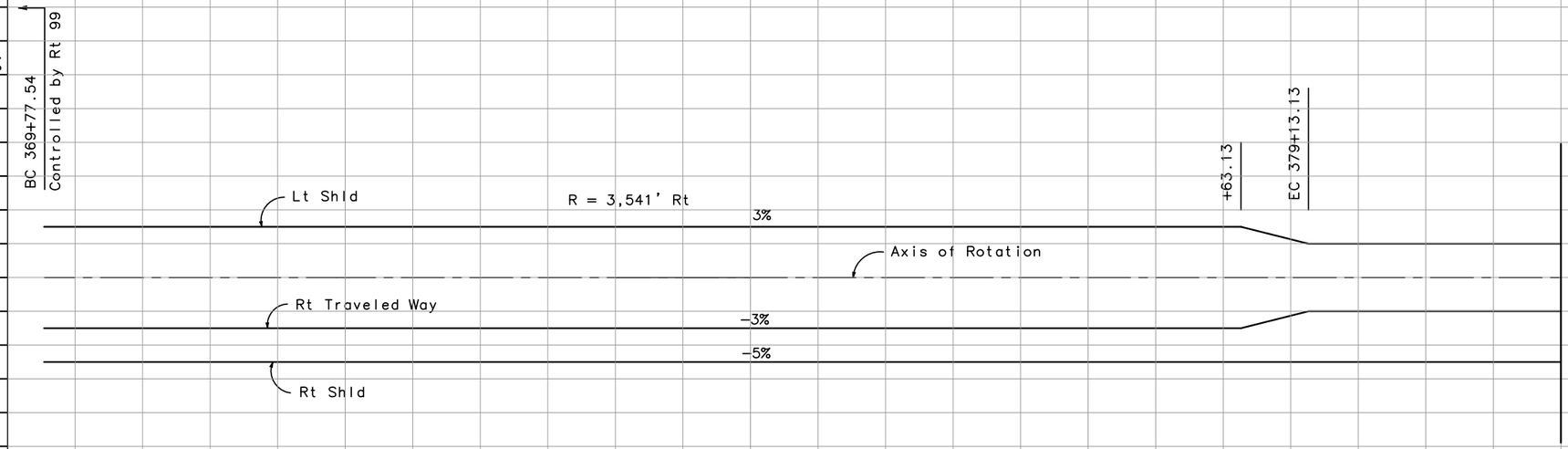
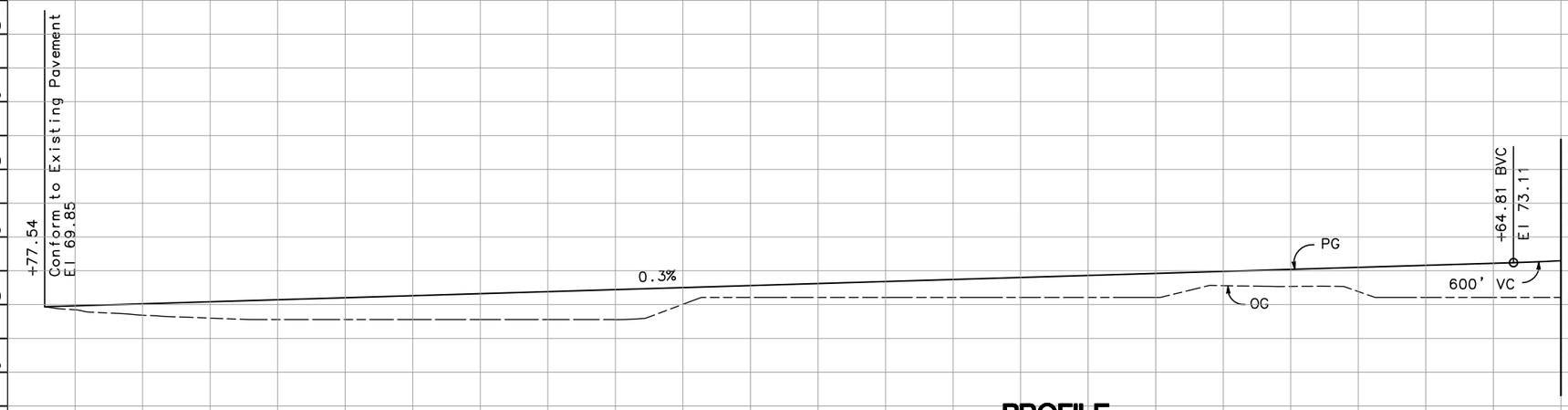


SUPERELEVATION DIAGRAM
"S2" LINE
NB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S2" LINE
NB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-8

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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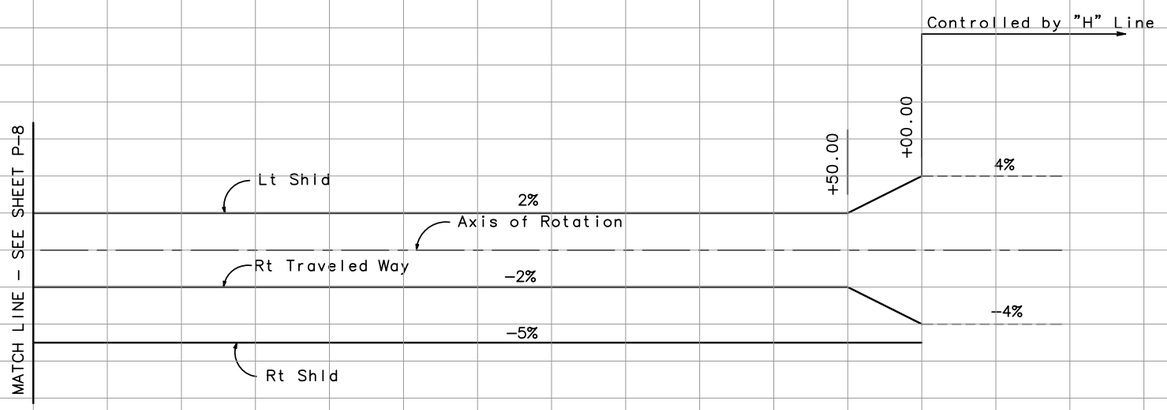
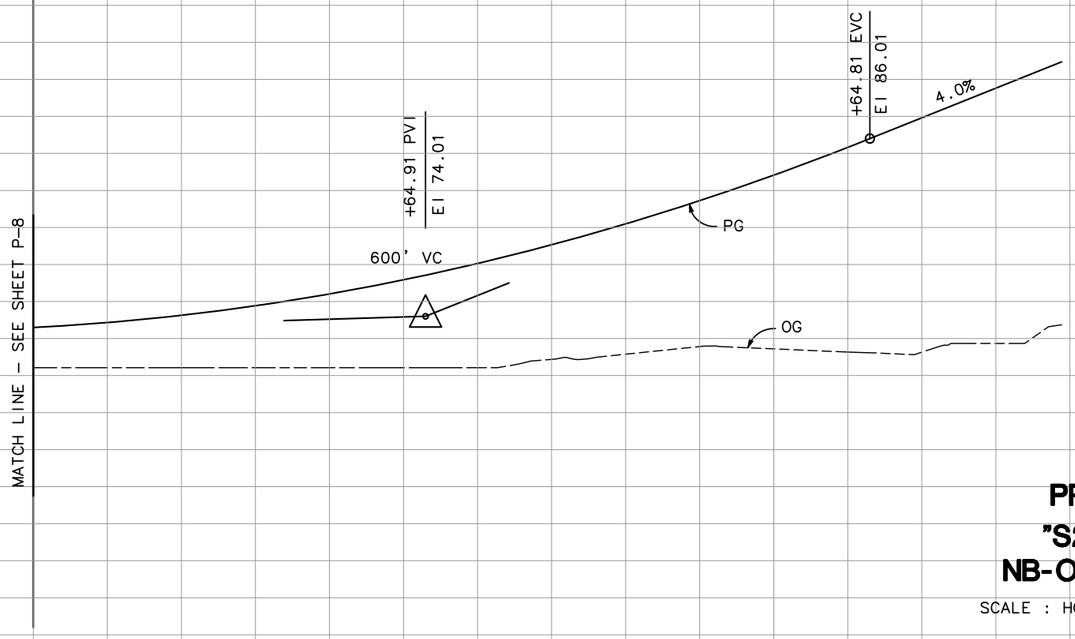


SUPERELEVATION DIAGRAM
"S2" LINE
NB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S2" LINE
NB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-9

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

Caltrans

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CY Exc Emb

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

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
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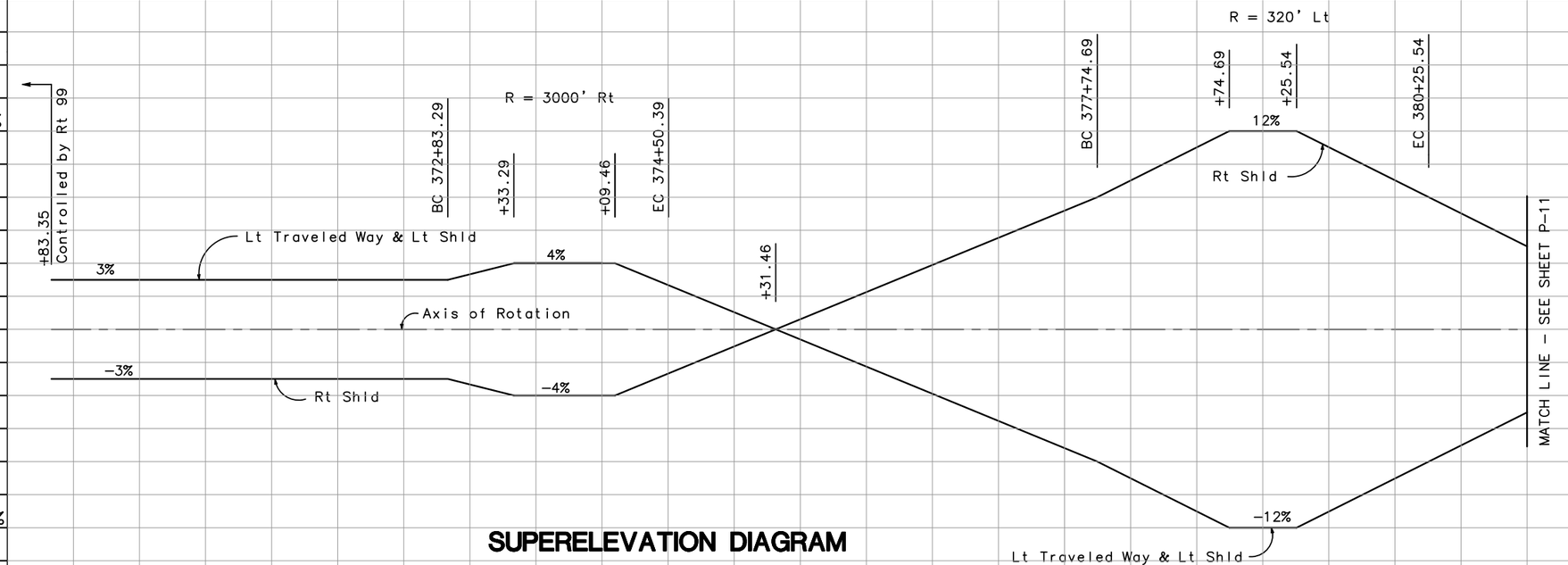
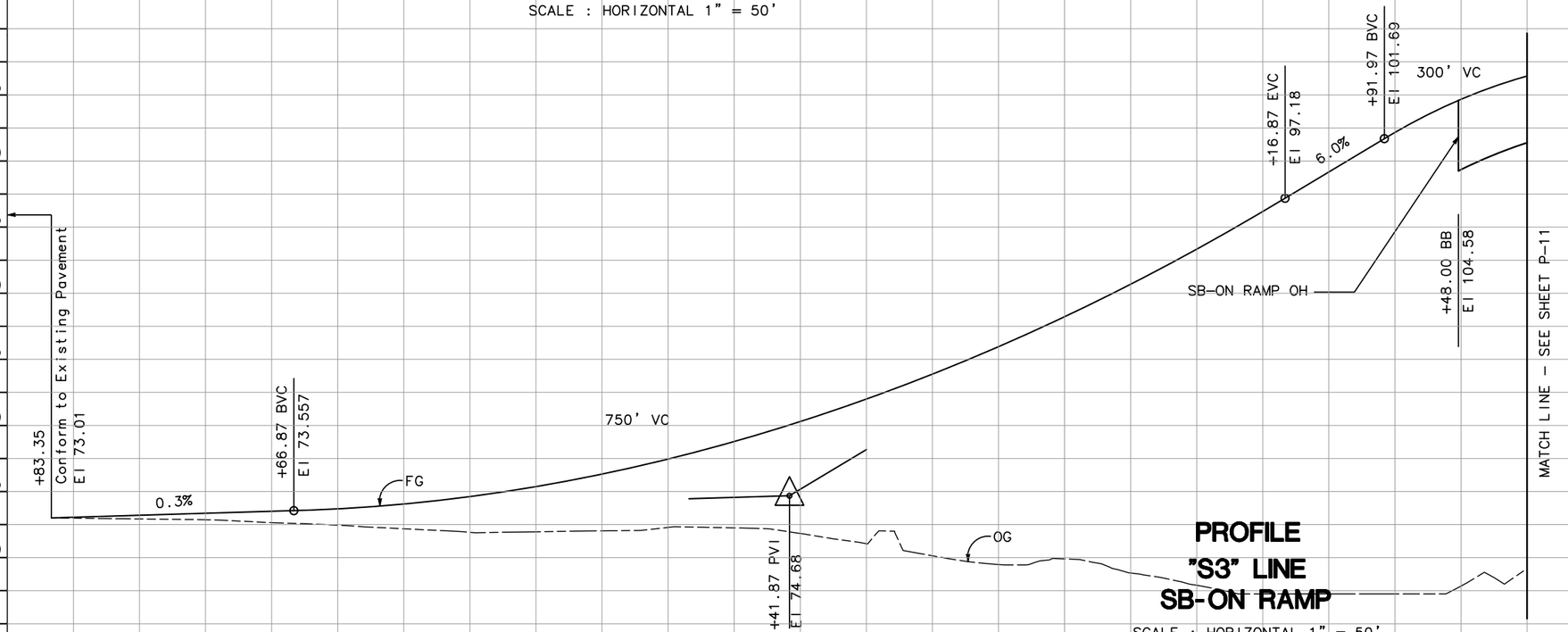


SUPERELEVATION DIAGRAM
"S3" LINE
SB-ON RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S3" LINE
SB-ON RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-10

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
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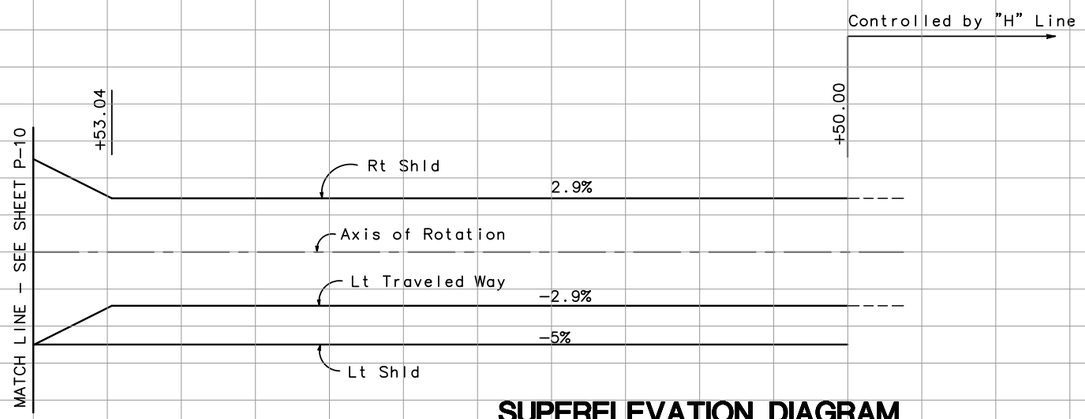
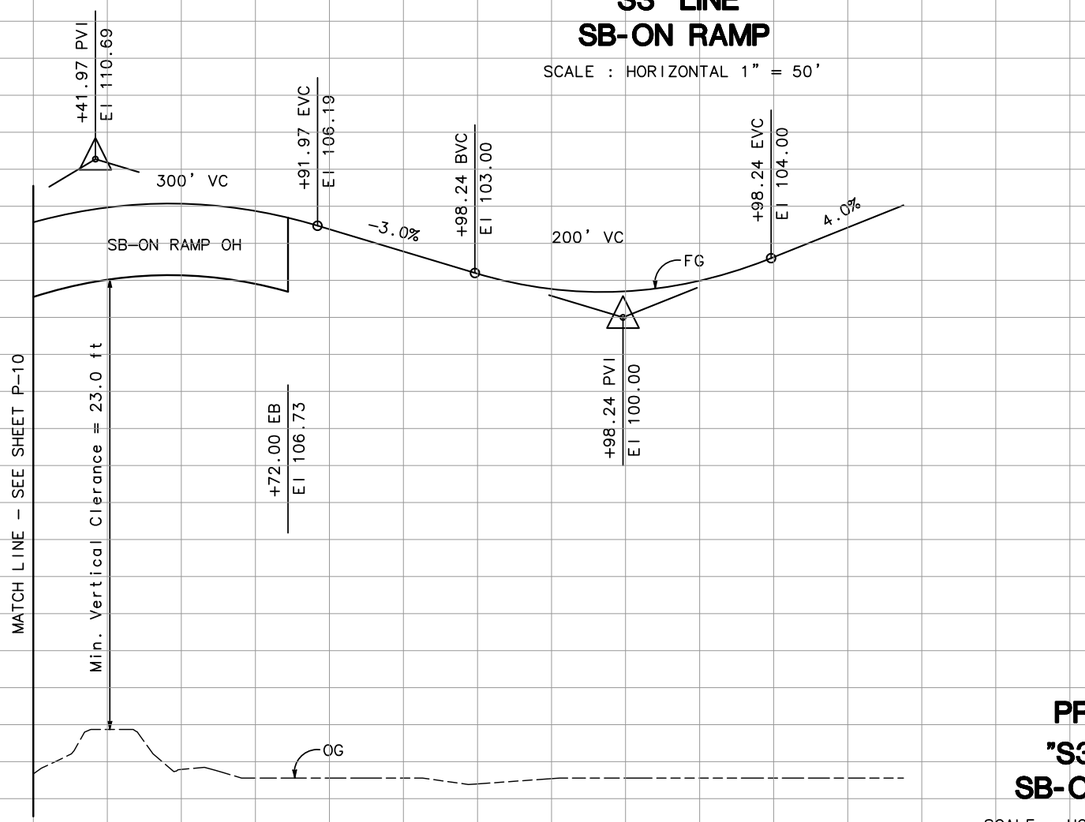


SUPERELEVATION DIAGRAM
"S3" LINE
SB-ON RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S3" LINE
SB-ON RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-11

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

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CY Exc | Emb

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CU | EA

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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1038 LEIGH AVENUE, SUITE 100
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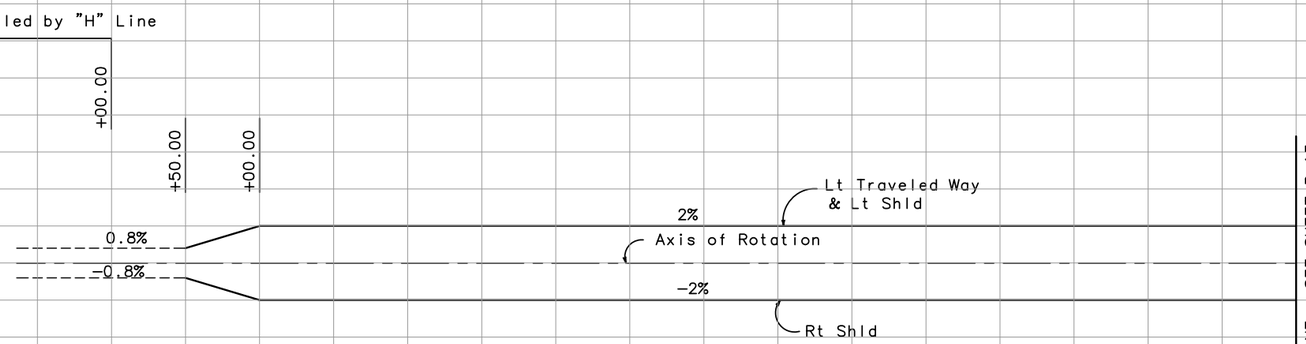
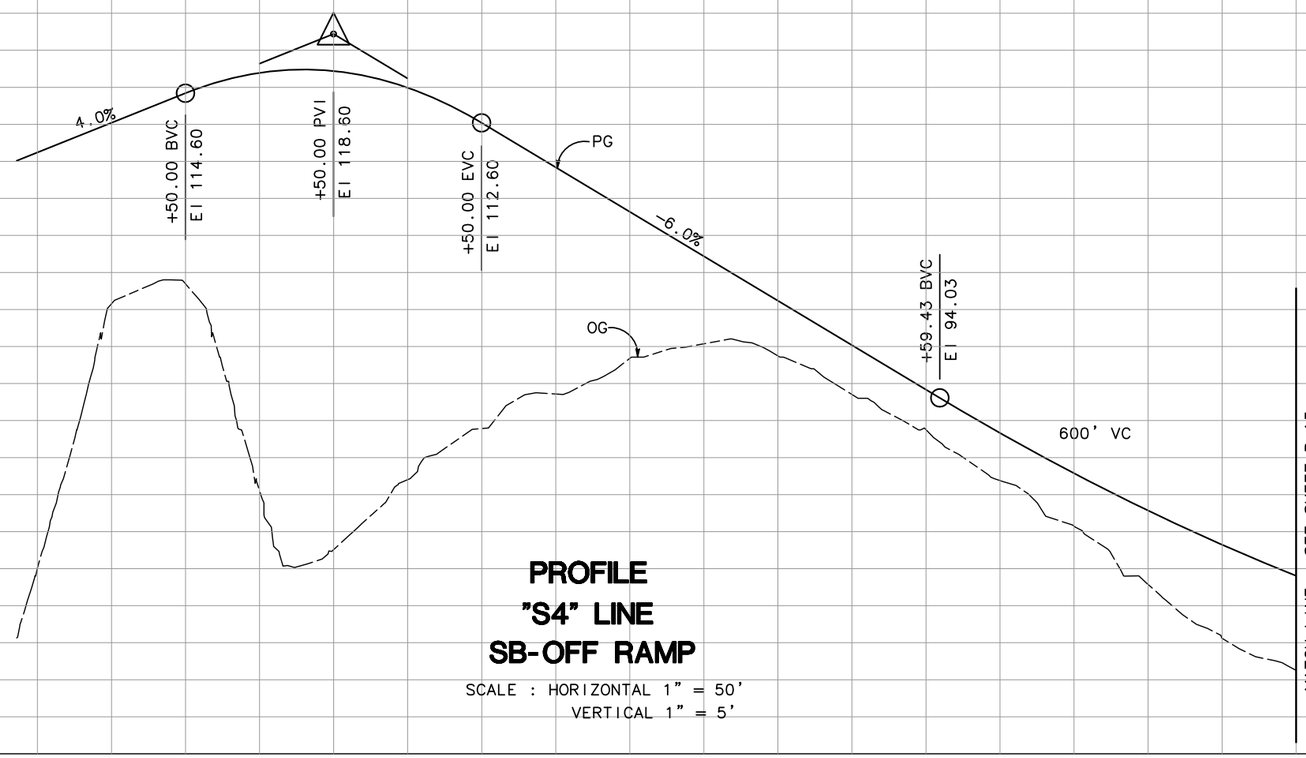


SUPERELEVATION DIAGRAM
"S4" LINE
SB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S4" LINE
SB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-12

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

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Station 7 8 9 390 1 2 3 4 395 6

CY Exc | Emb

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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PROFESSIONAL CIVIL ENGINEER

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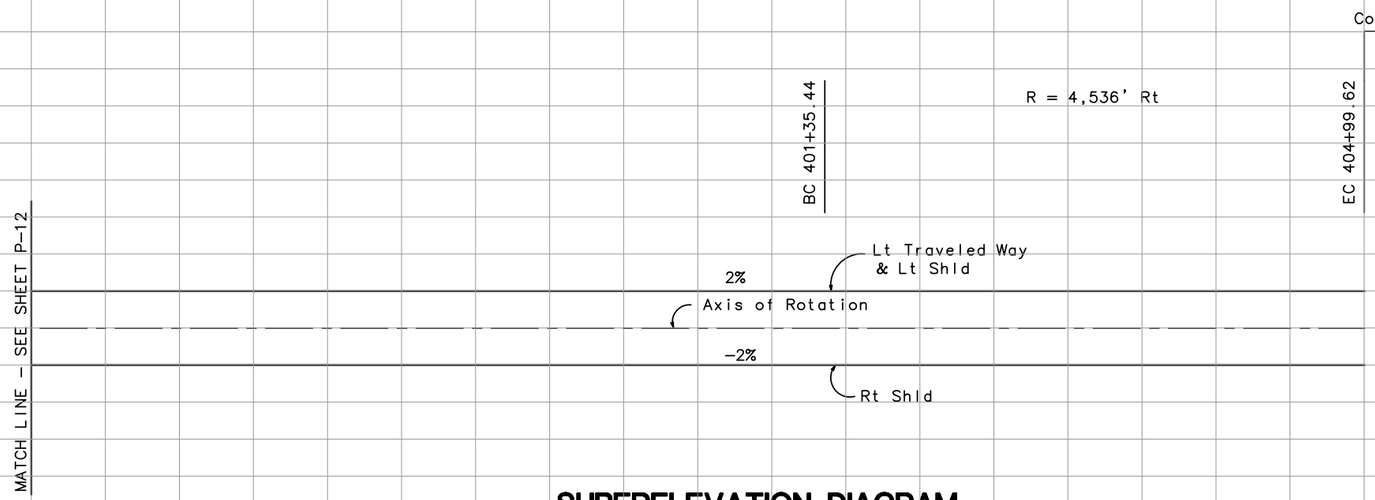
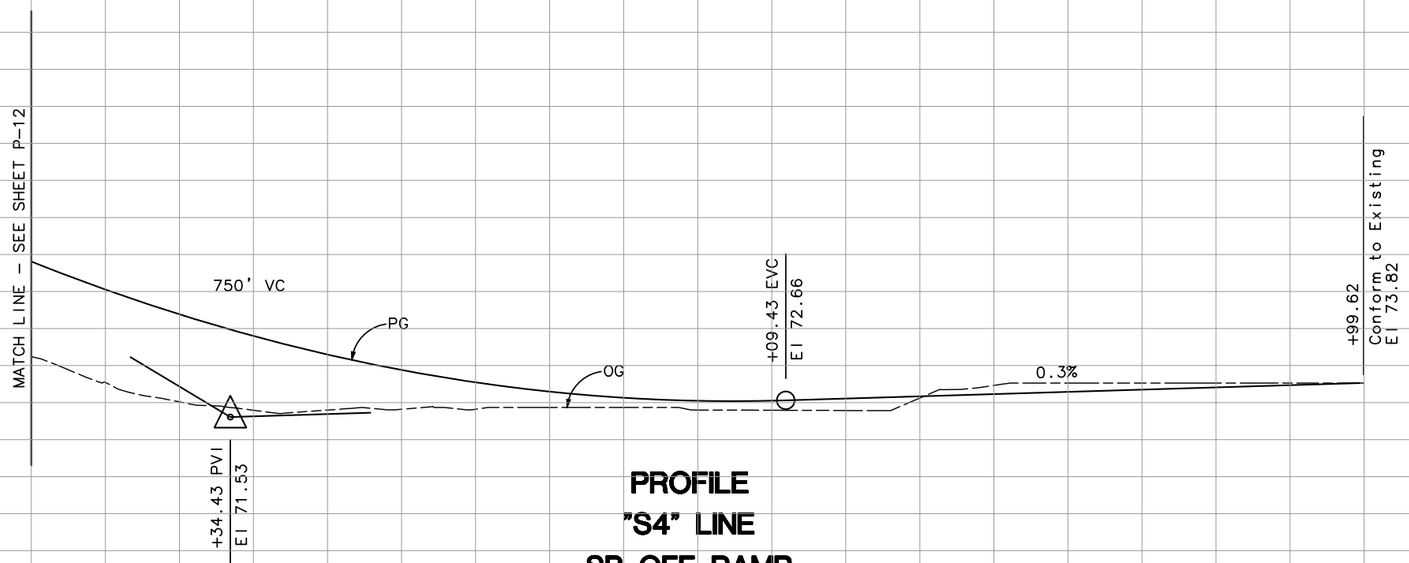


SUPERELEVATION DIAGRAM
"S4" LINE
SB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"S4" LINE
SB-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-13

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

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Station | CY Exc | CY Emb

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

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU | EA

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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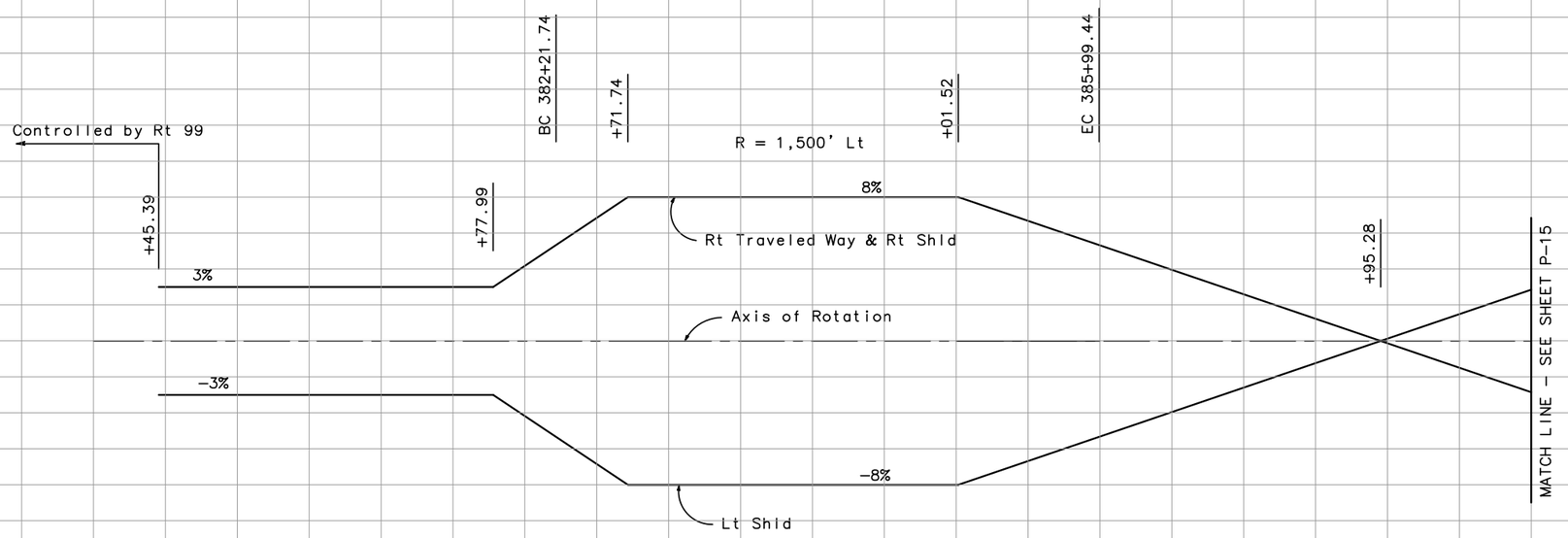
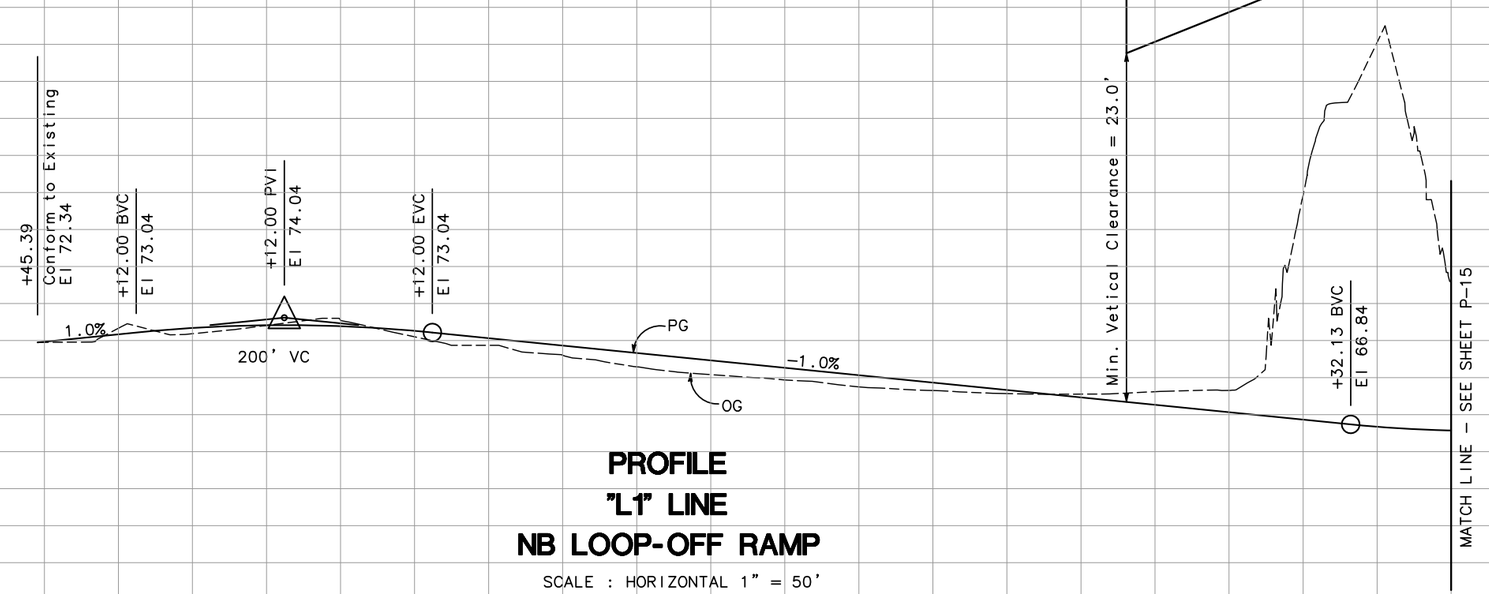


SUPERELEVATION DIAGRAM
"L1" LINE
NB LOOP-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"L1" LINE
NB LOOP-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-14

REVISED BY | DATE REVISED | DATE | CALCULATED/ DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION — Caltrans

$REQUEST

Station: 380 1 2 3 4 385 6 7 8 9

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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PROFESSIONAL CIVIL ENGINEER

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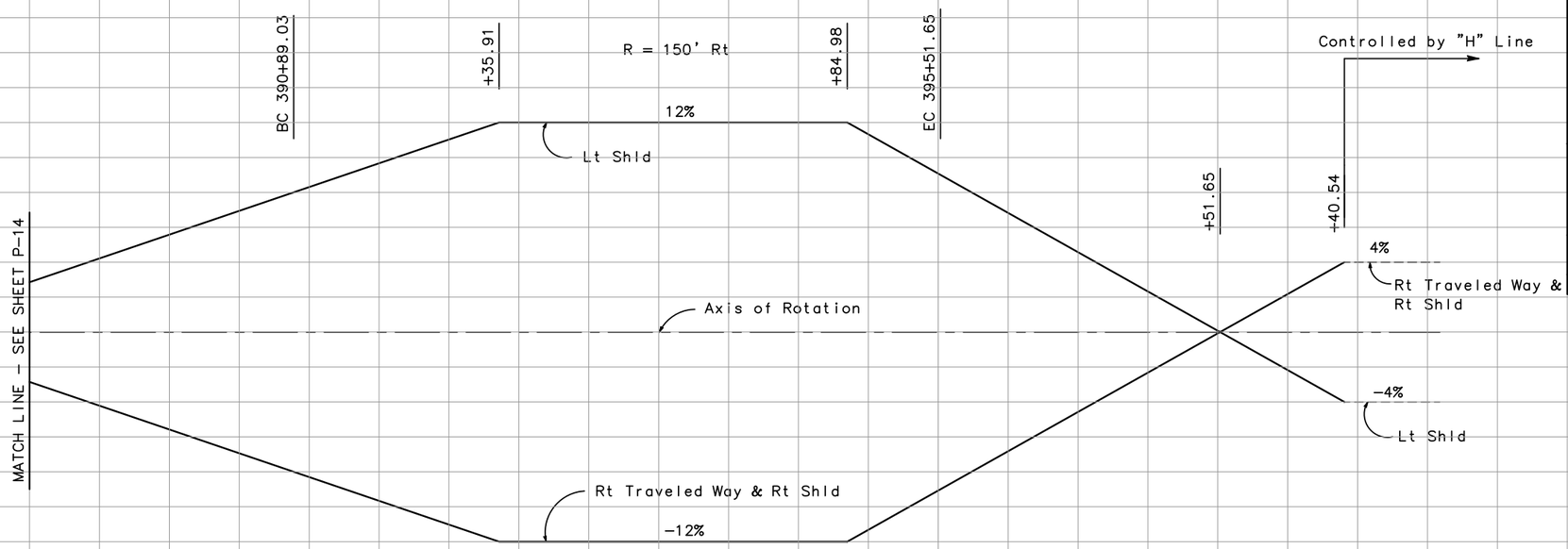
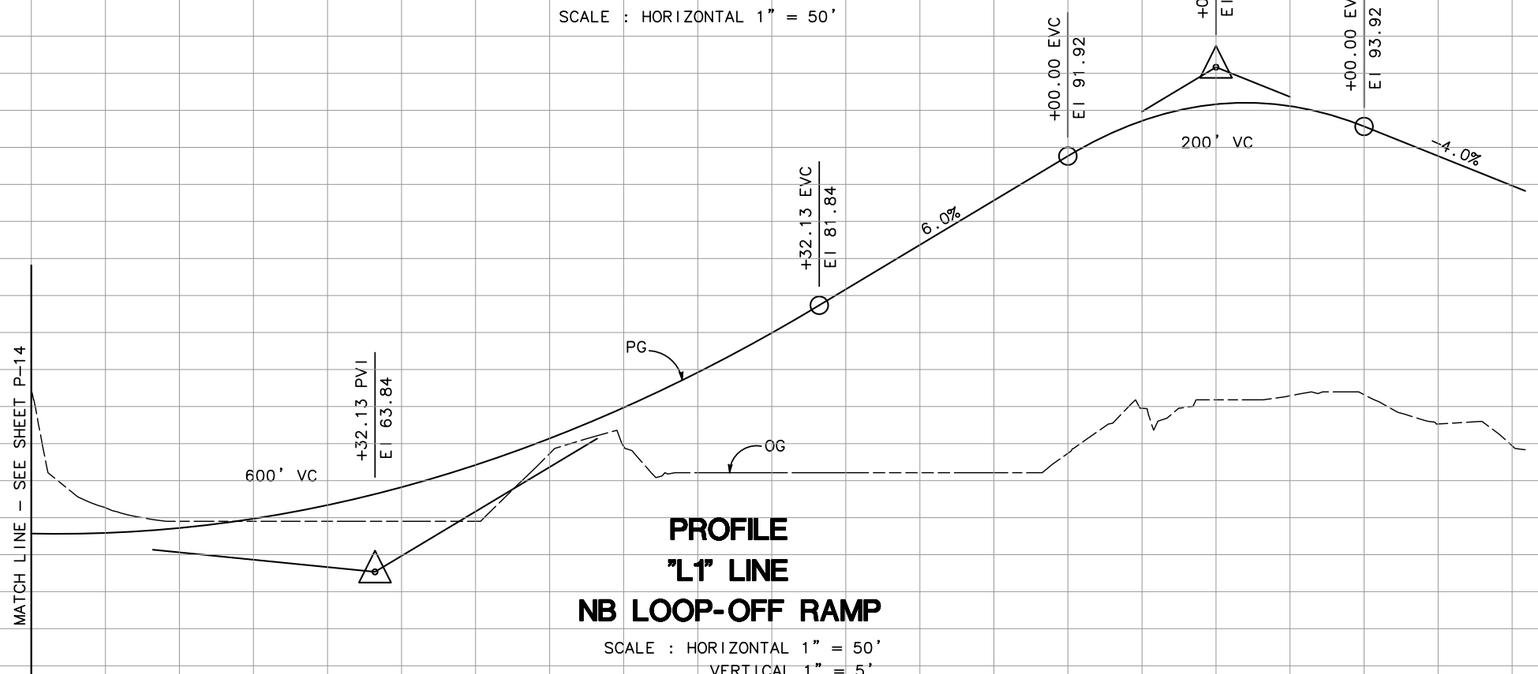


SUPERELEVATION DIAGRAM
"L1" LINE
NB LOOP-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"L1" LINE
NB LOOP-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-15

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

Caltrans

$REQUEST

Station: 9 | 390 | 1 | 2 | 3 | 4 | 395 | 6 | 7 | 8 | 9

CY: Exc | Emb

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU | EA

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

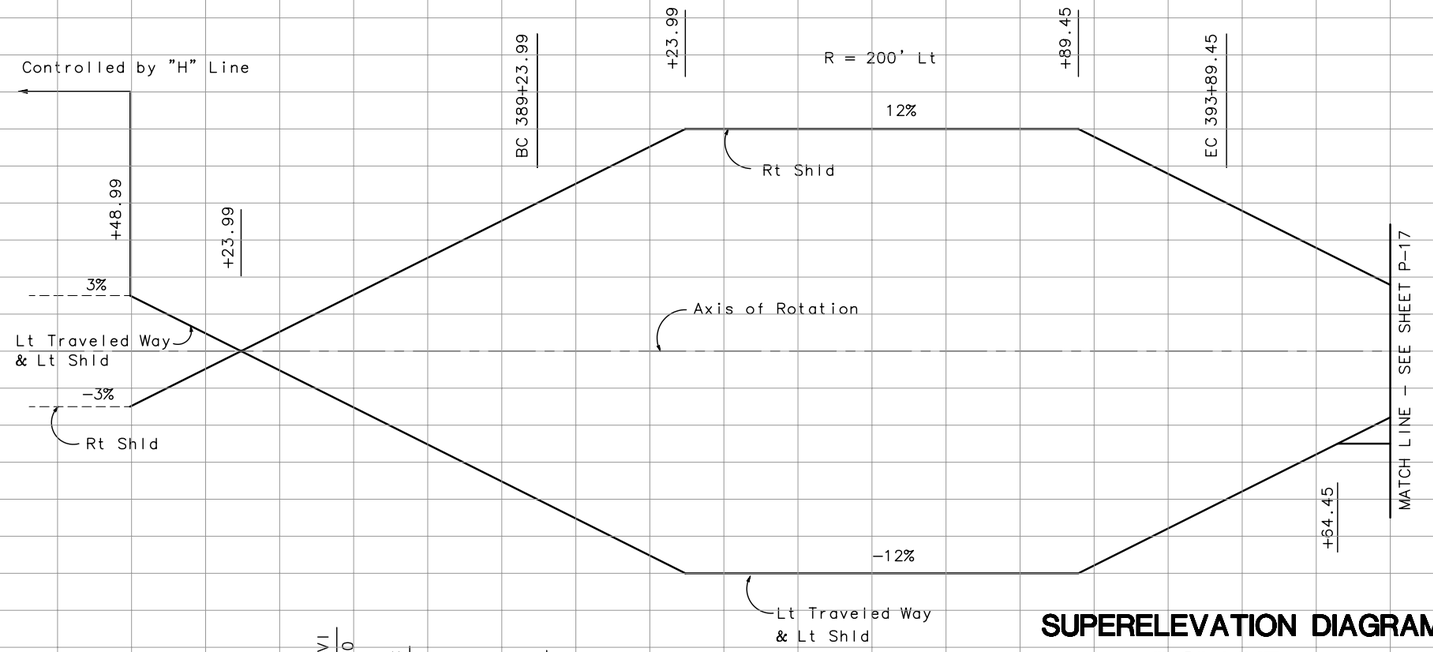
DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

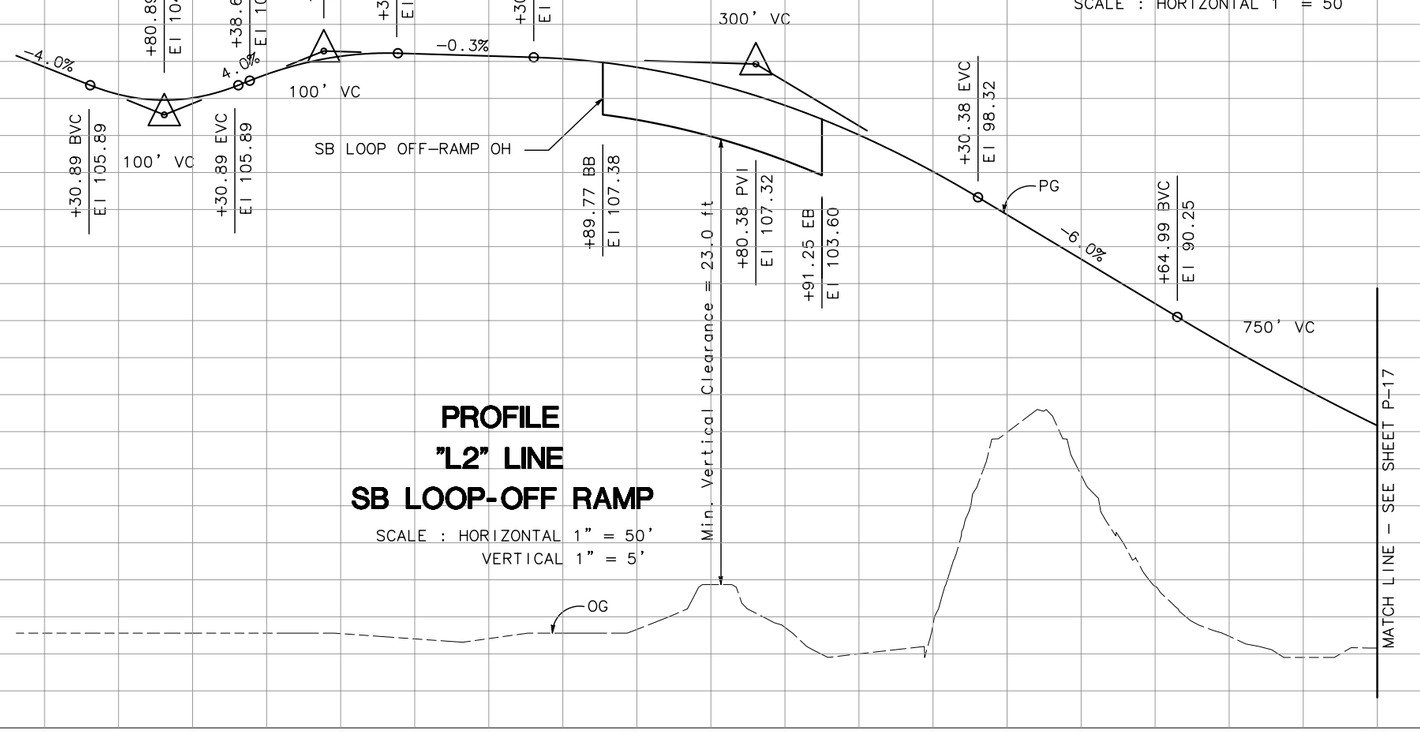
REGISTERED PROFESSIONAL ENGINEER — No. ____ Exp. ____ CIVIL — STATE OF CALIFORNIA

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



SUPERELEVATION DIAGRAM
"L2" LINE
SB LOOP-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"L2" LINE
SB LOOP-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-16

REVISED BY | DATE REVISED | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA − DEPARTMENT OF TRANSPORTATION

Caltrans

$FREQUEST

Station 6 7 8 9 390 1 2 3 4 395

CY Exc | Emb

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU | EA

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

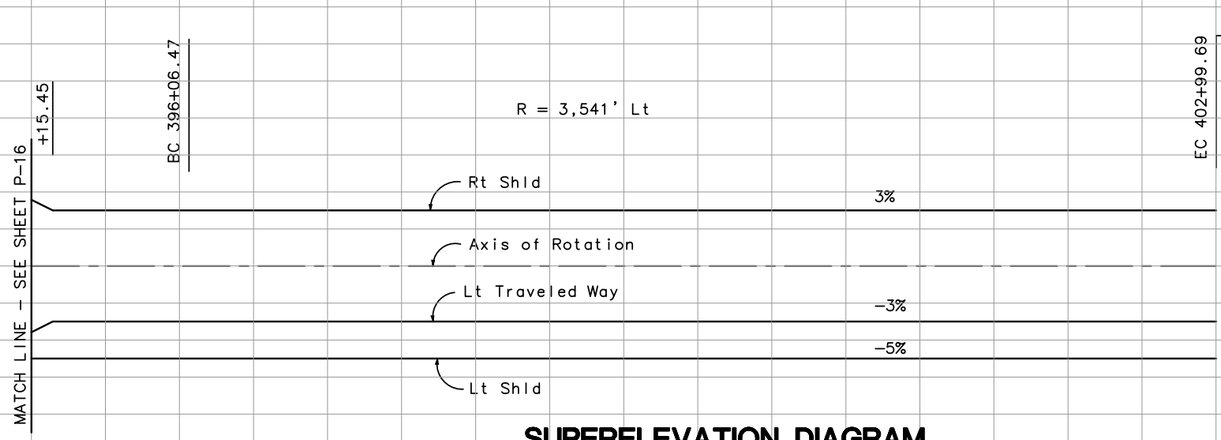
DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ		23.9/25.1		

PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

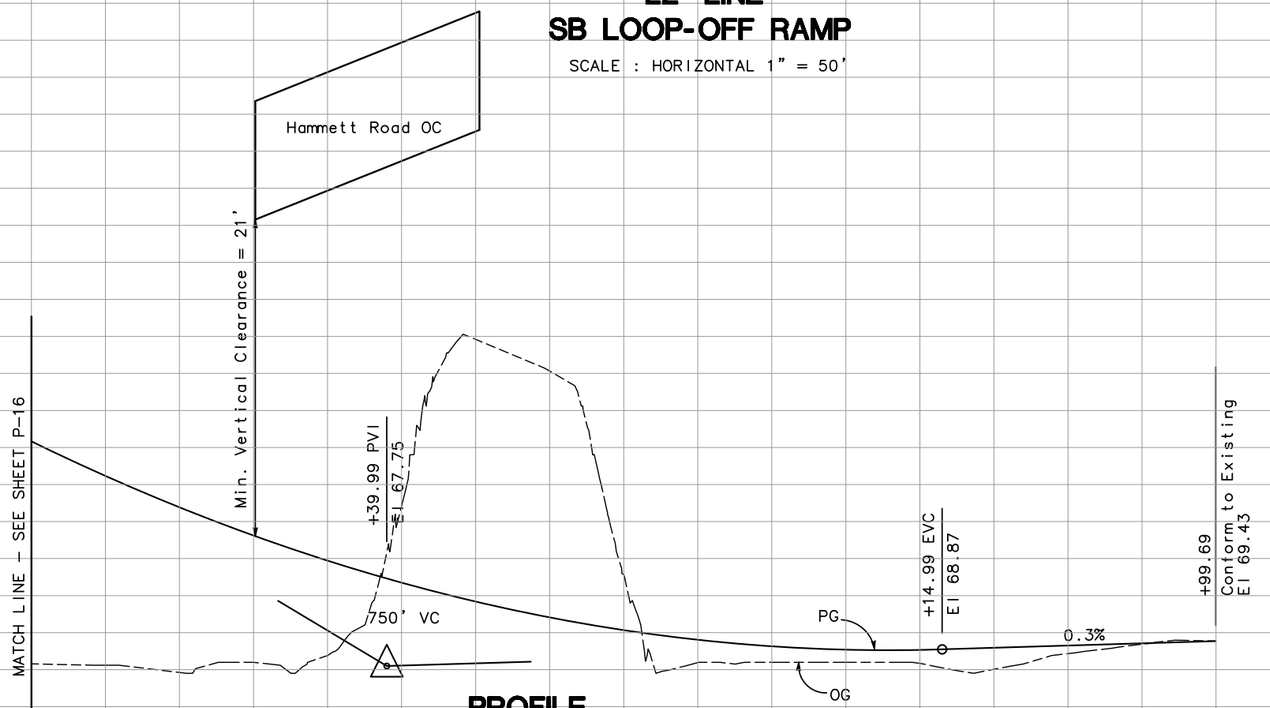
REGISTERED PROFESSIONAL ENGINEER — No. ____ Exp. ____ CIVIL — STATE OF CALIFORNIA

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



SUPERELEVATION DIAGRAM
"L2" LINE
SB LOOP-OFF RAMP

SCALE : HORIZONTAL 1" = 50'



PROFILE
"L2" LINE
SB LOOP-OFF RAMP

SCALE : HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

ALTERNATIVE 2
PROFILE AND SUPERELEVATION DIAGRAM
P-17

REVISED BY | DATE REVISED | DATE | CALCULATED/DESIGNED BY | CHECKED BY | DESIGN OVERSIGHT

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION — Caltrans

$PREQUEST

Station: 395 6 7 8 9 400 1 2 3

CY: Exc | Emb

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU | EA

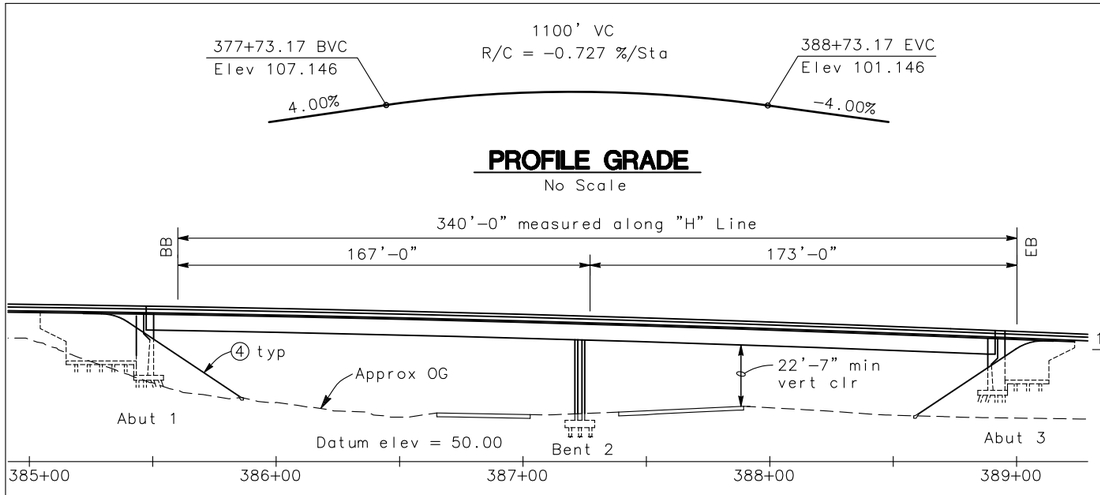
LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

PREPARED FOR THE STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
10	Stan	99	R23.9/25.1

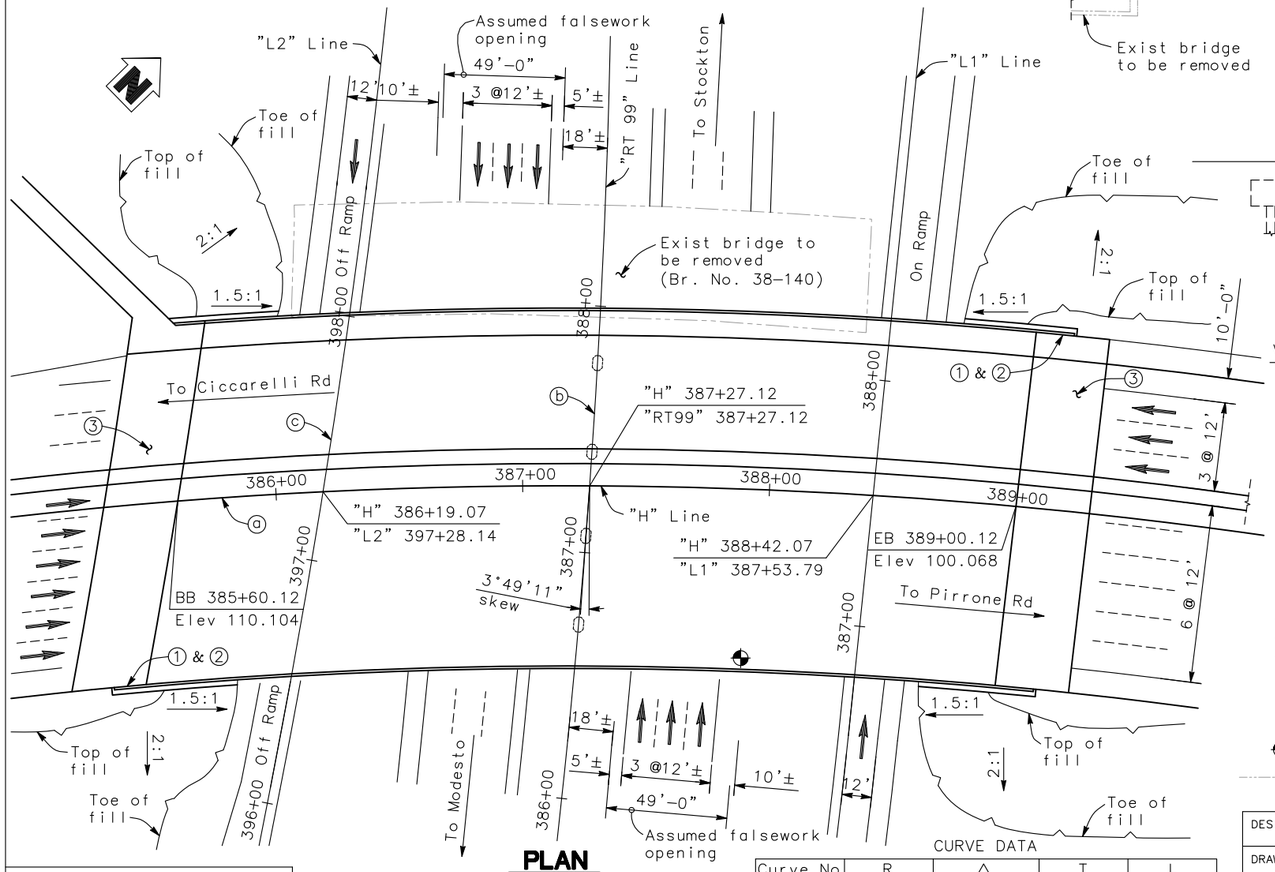
RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVE, SUITE 100
SAN JOSE, CA 95126

REGISTERED PROFESSIONAL ENGINEER
PHILIP SHINN
No. S 4967
Exp. 12/31/08
STRUCTURAL
STATE OF CALIFORNIA



PROFILE GRADE
No Scale

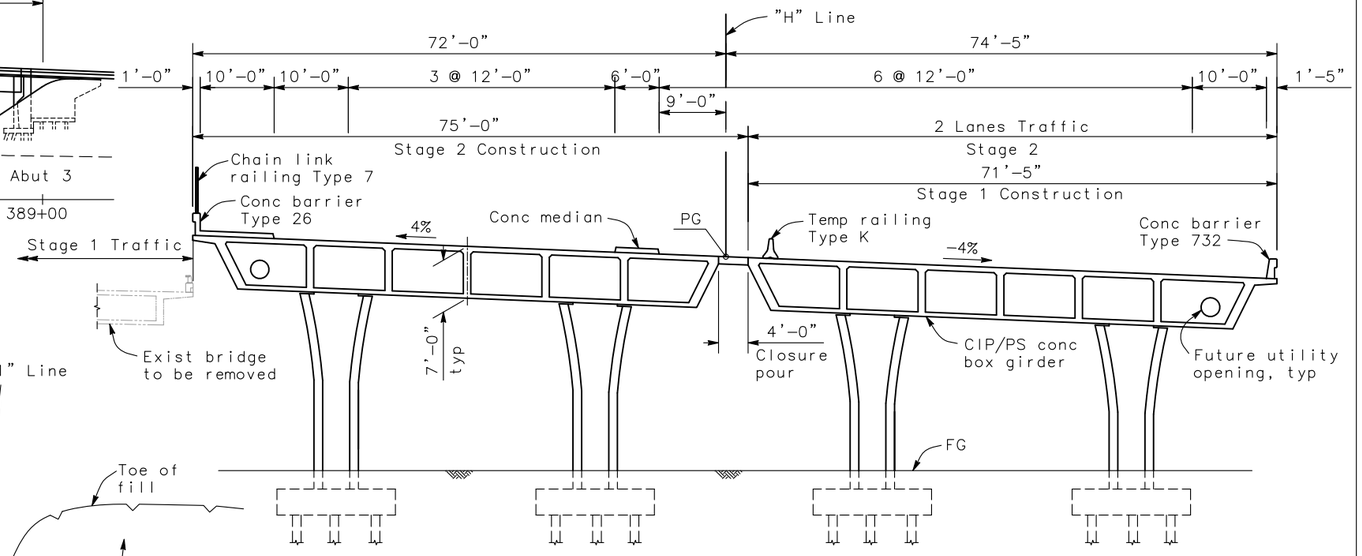
ELEVATION
1" = 30'



PLAN
1" = 30'

CURVE DATA

Curve No	R	Δ	T	L
a	2000.00'	90°0'0"	2000.00'	3141.59'
b	3600.00'	25°38'23"	819.21'	1610.99'
c	3541.00'	11°13'00"	347.72'	693.22'



TYPICAL SECTION
1" = 10'

VEHICULAR TRAFFIC

1. ___ New alignment. No traffic at the site
2. ___ Traffic will be detoured away from the site
3. X Traffic will be carried on the structure
   Stage construction will be required
4. X Traffic will pass under the structure on Route 99
   A. ___ No falsework allowed over traffic
   B. X Falsework opening(s) required:

	Temporary vertical clearance	Width of traffic opening
N Bnd.	19'-4" min	49'-0"
S Bnd.	19'-4" min	49'-0"
Two-Way		

C. ___ Temporary traffic lane reduction needed for footing excavation

◆ Indicates point of minimum vertical clearance
Indicates existing structure

Date of estimate	= 8/8/08
Str. Depth	= 7'-0"
Length	= 340'-0"
Width	= 146'-5"
Area	= 49,782 ft²
Cost/ft² including 10% Mobilization & 25% Contingency	= $231.92
Bridge Total Cost (Bridge removal included)	= $11,756,000

LEGEND:
① Paint Bridge Name "Hammett Road Overcrossing"
② Paint Bridge Number and Year Completed
③ Approach Slab Type N(30S)
④ Concrete Slope Paving (1.5 to 1 slope)

ALTERNATIVE 2

DESIGNED BY	P. SHINN	DATE	8/08
DRAWN BY	I. LAM	DATE	8/08
CHECKED BY	K. HARIRSAZ	DATE	8/08
APPROVED		DATE	

P. SHINN
PROJECT ENGINEER

ADVANCE PLANNING STUDY
HAMMETT ROAD OC (REPLACE)

BRIDGE NO. TBD	CU 10	
SCALE: AS NOTED	EA 0L320K	SHEET 1 OF 1

DESIGN OVERSIGHT
SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 2/25/05)

FILE => $REQUEST

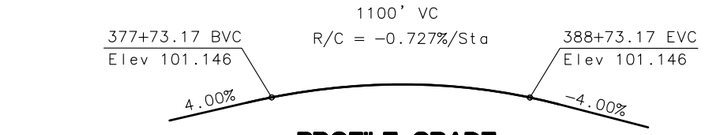
TIME PLOTTED => $TIME
DATE PLOTTED => $DATE
USERNAME => $USER

PREPARED FOR THE STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

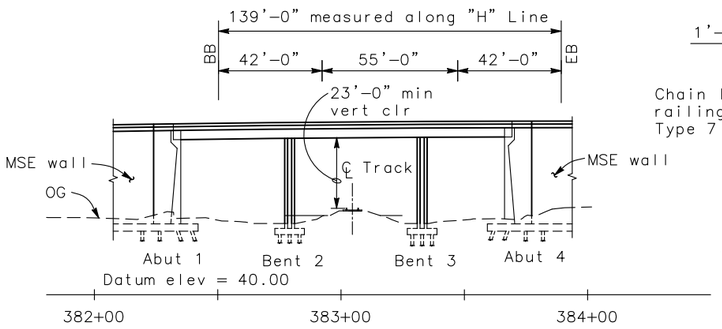
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
10	Stan	99	R23.9/25.1

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVE, SUITE 100
SAN JOSE, CA 95126

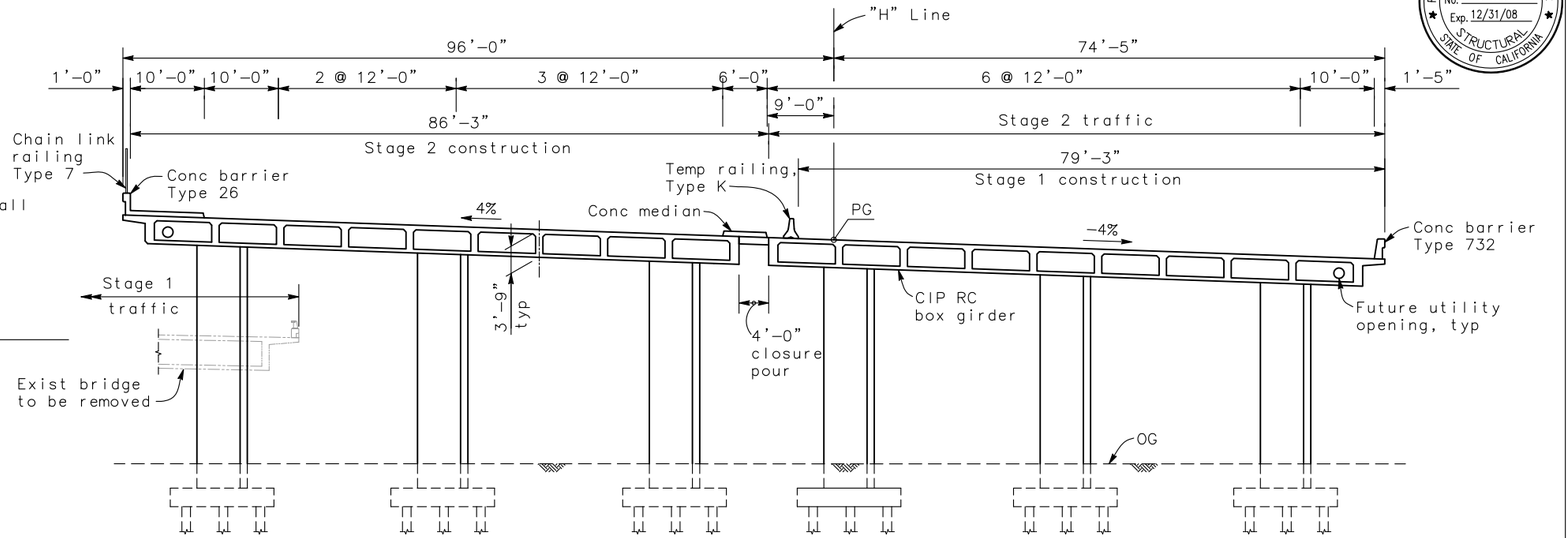
REGISTERED PROFESSIONAL ENGINEER
PHILIP SHINN
No. S 4967
Exp. 12/31/08
STRUCTURAL
STATE OF CALIFORNIA



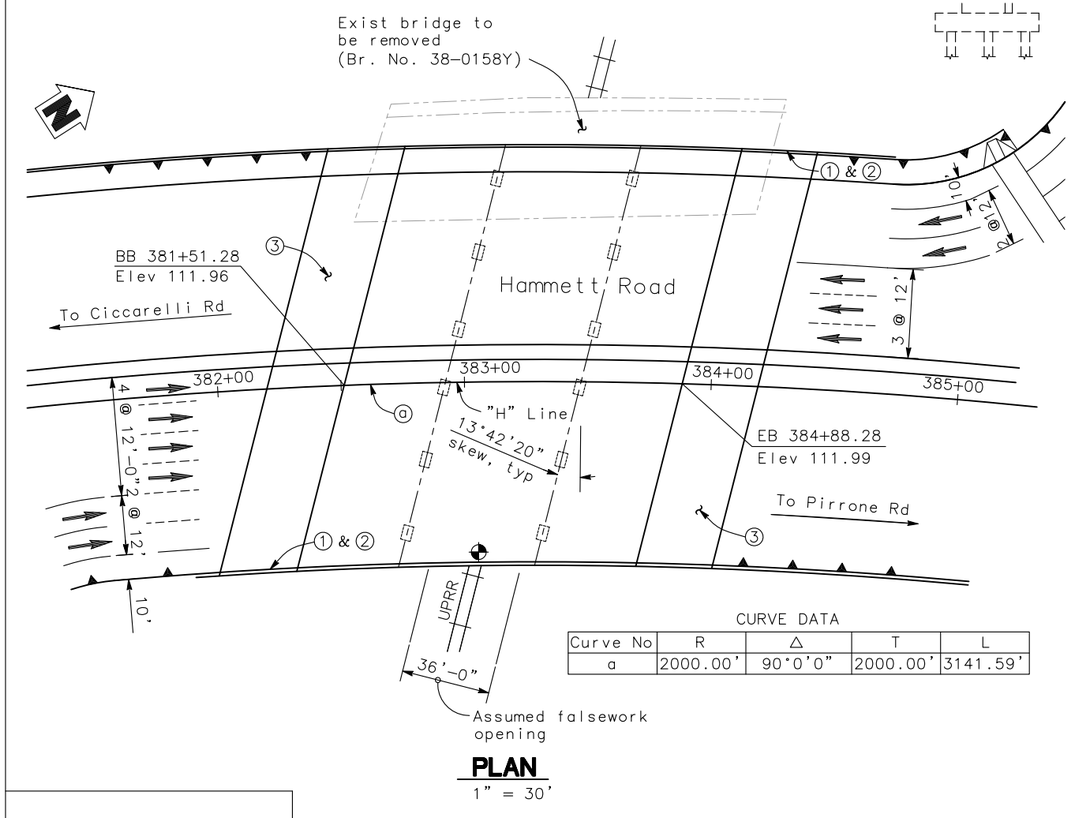
PROFILE GRADE
No Scale



ELEVATION
1" = 30'



TYPICAL SECTION
1" = 10'



CURVE DATA

Curve No	R	Δ	T	L
a	2000.00'	90°0'0"	2000.00'	3141.59'

PLAN
1" = 30'

RAILROAD TRAFFIC

Falsework opening(s) required over Union Pacific Railroad

Vertical Clearance	Horizontal Clear Width
21'-6"*	36'-0"*

* Temporary minimum clearance should be subjected to approval by the Railroad and the Public Utilities Commissions

Date of estimate	= 3/11/09
Str. Depth	= 3'-9"
Length	= 139'-0"
Width	= 170'-5"
Area	= 23,688 ft^2
Cost/ft^2 including 10% Mobilization & 25% Contingency	= $380.96
Bridge Total Cost (Bridge removal included)	= $9,171,000

LEGEND:

① Paint Bridge Name "Hammett Road Overhead"
② Paint Bridge Number and Year Completed
③ Approach Slab Type N(30S)

◆ Indicates point of minimum vertical clearance
Indicates existing structure
Indicates MSE wall

ALTERNATIVE 2

DESIGNED BY	P. SHINN	DATE	8/08
DRAWN BY	I. LAM	DATE	8/08
CHECKED BY	K. HARIRSAZ	DATE	8/08
APPROVED		DATE	

P. SHINN
PROJECT ENGINEER

ADVANCE PLANNING STUDY
HAMMETT ROAD OH (REPLACE)

BRIDGE NO. TBD	CU 10	
SCALE: AS NOTED	EA 0L320K	SHEET OF

DESIGN OVERSIGHT

SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 2/25/05)

FILE => $REQUEST

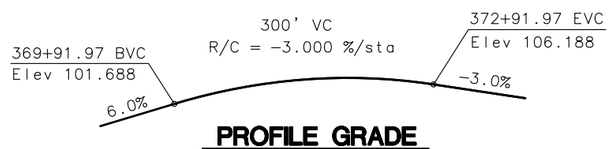
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME
USERNAME => $USER

PREPARED FOR THE STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

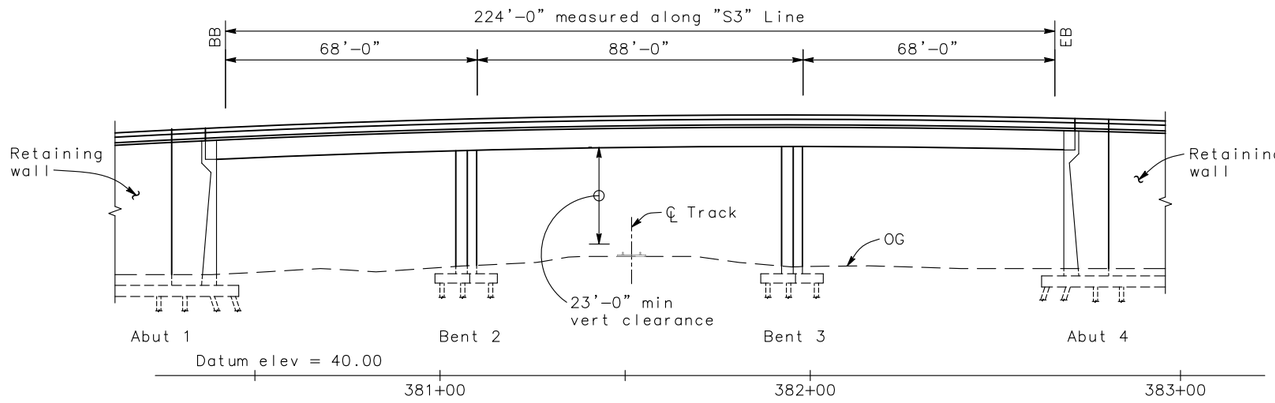
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
10	Stan	99	R23.9/25.1

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVE, SUITE 100
SAN JOSE, CA 95126

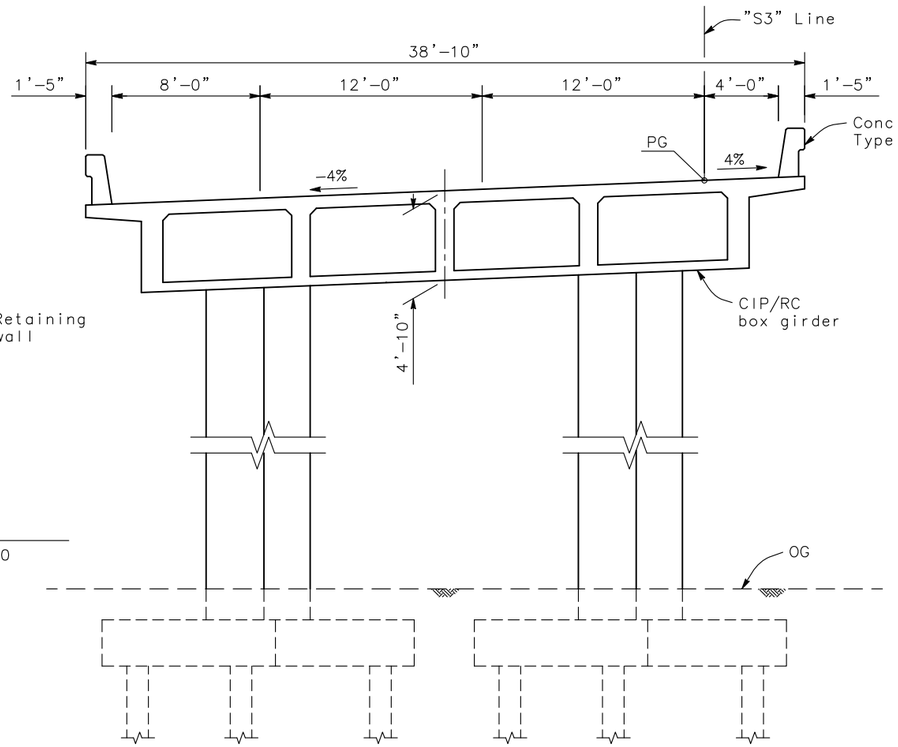
REGISTERED PROFESSIONAL ENGINEER
PHILIP SHINN
No. S 4967
Exp. 12/31/08
STRUCTURAL
STATE OF CALIFORNIA



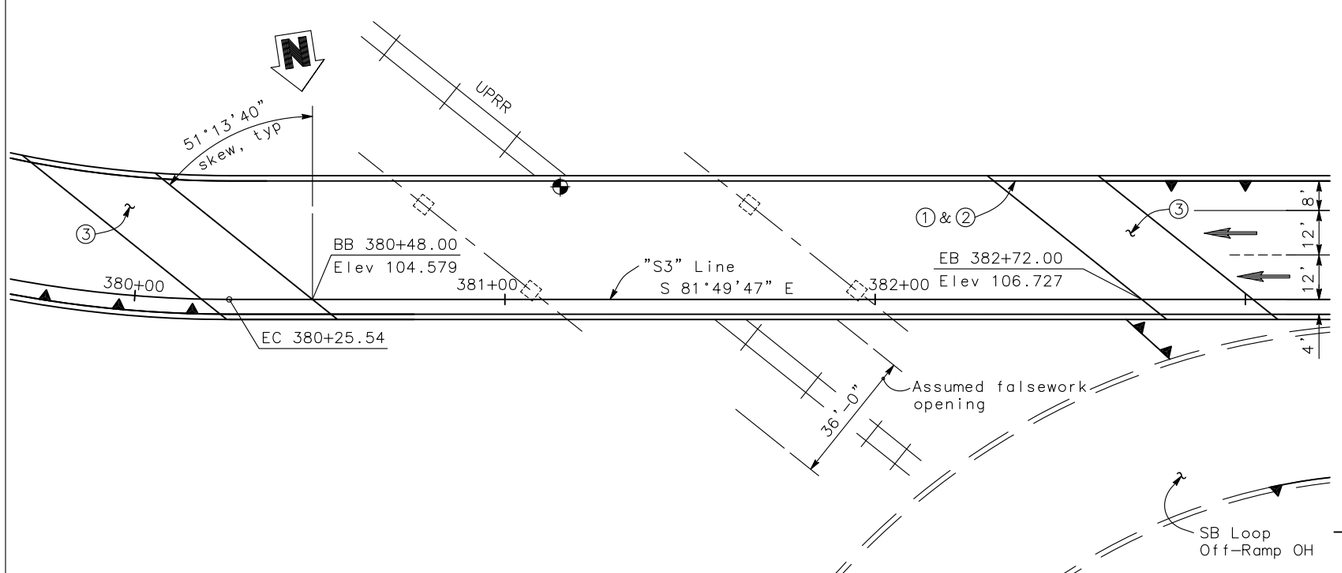
PROFILE GRADE
No Scale



ELEVATION
1" = 20'



TYPICAL SECTION
1/4" = 1'-0"



PLAN
1" = 20'

RAILROAD TRAFFIC

Falsework opening(s) required over Union Pacific Railroad

Vertical Clearance	Horizontal Clear Width
21'-6" *	36'-0"

* Temporary minimum clearance should be subjected to approval by the Railroad and the Public Utilities Commissions

LEGEND:
① Paint Bridge Name
② Paint Bridge Number and Year Completed
③ Approach Slab Type N(30S)
Indicates point of minimum vertical clearance
Indicates Retaining Wall

Date of estimate	=	8/8/08
Str. Depth	=	4'-10"
Length	=	224'-0"
Width	=	38'-10"
Area	=	8,699 ft^2
Cost/ft^2 including 10% Mobilization & 25% Contingency	=	$ 398.41
Bridge Total Cost	=	$ 3,466,000

ALTERNATIVE 2

DESIGNED BY	P. SHINN	DATE	8/08
DRAWN BY	I. LAM	DATE	8/08
CHECKED BY	K. HARIRSAZ	DATE	8/08
APPROVED		DATE	

P. SHINN
PROJECT ENGINEER

ADVANCE PLANNING STUDY
HAMMETT RD SB ON-RAMP OH

BRIDGE NO. TBD	CU 10	
SCALE: AS NOTED	EA 0L320K	SHEET 1 OF 1

DESIGN OVERSIGHT
SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 2/25/05)

FILE => $REQUEST

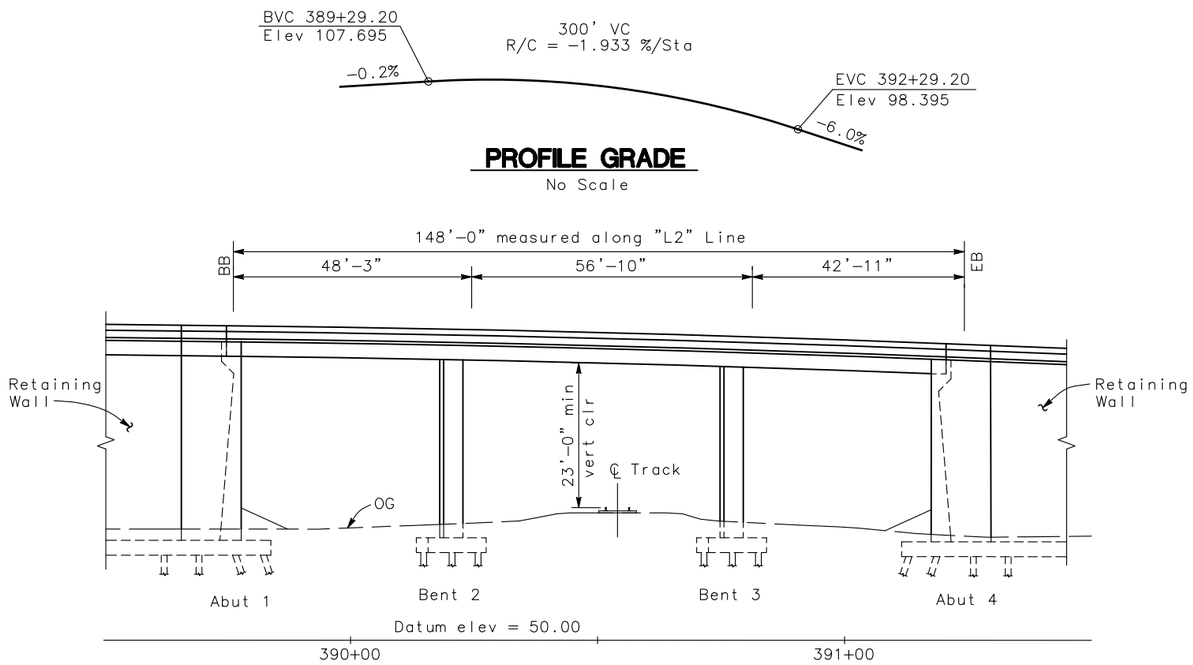
TIME PLOTTED => $TIME
DATE PLOTTED => $DATE
USERNAME => $USER

PREPARED FOR THE STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

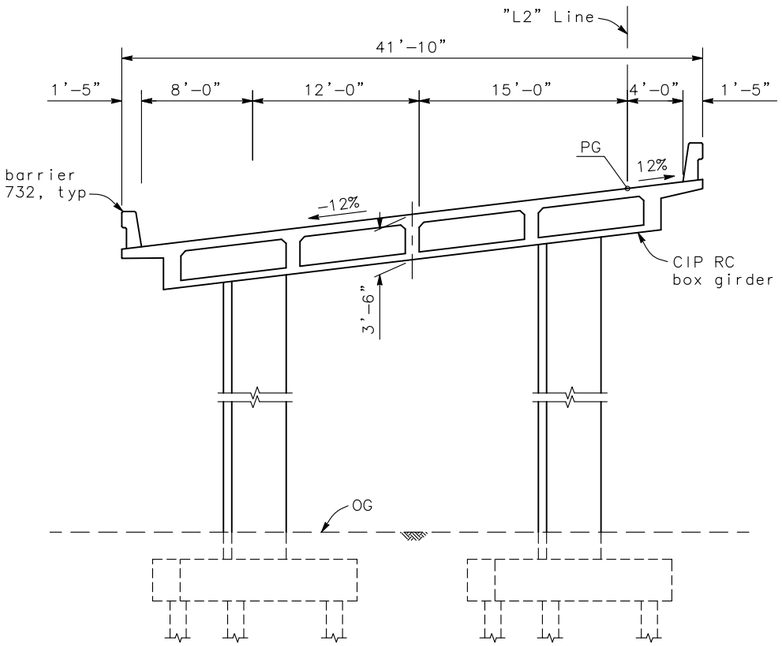
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
10	Stan	99	R23.9/25.1

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVE, SUITE 100
SAN JOSE, CA 95126

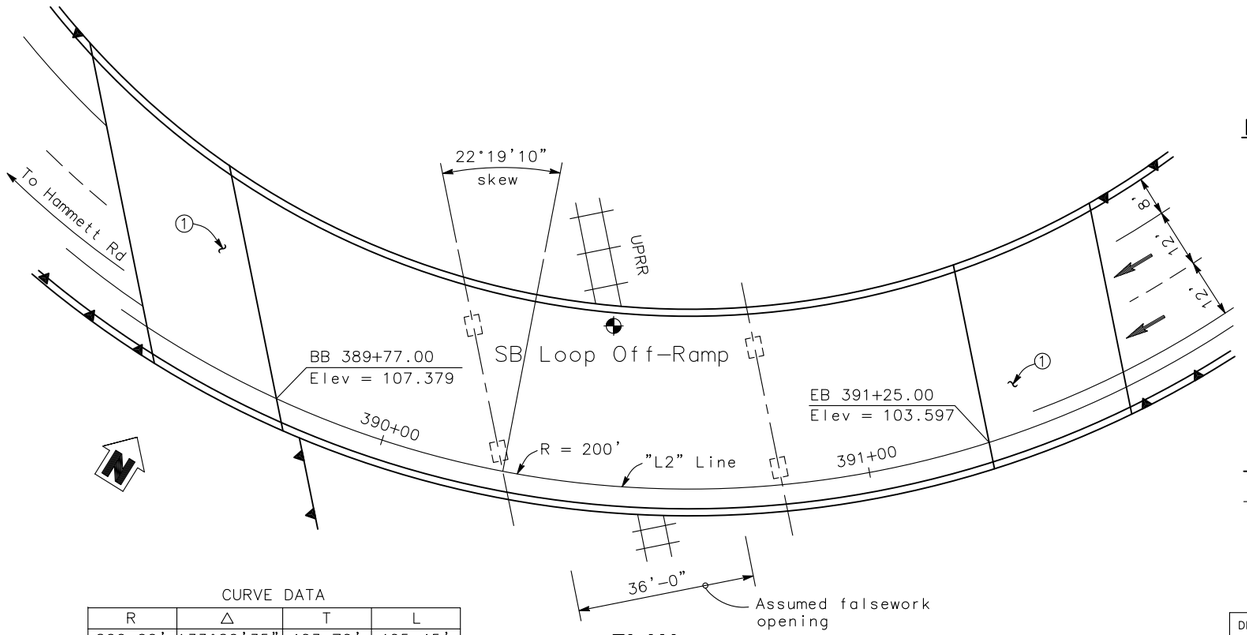
REGISTERED PROFESSIONAL ENGINEER
PHILIP SHINN
No. S 4967
Exp. 12/31/08
STRUCTURAL
STATE OF CALIFORNIA



ELEVATION
1" = 15'



TYPICAL SECTION
3/16" = 1'–0"



CURVE DATA

R	Δ	T	L
200.00'	133°20'35"	463.76'	465.45'

PLAN
1" = 15'

RAILROAD TRAFFIC

Falsework opening(s) required over Union Pacific Railroad

Vertical Clearance	Horizontal Clear Width
21'–6"*	36'–0"

*Temporary minimum clearance should be subjected to approval by the Railroad and the Public Utilities Commissions

LEGEND:

① Approach Slab Type N(30S)

Indicates point of minimum vertical clearance

Indicates Retaining Wall

Indicates Right of Way

Date of estimate	= 8/8/08
Str. Depth	= 3'–6"
Length	= 148'–0"
Width	= 41'–10"
Area	= 6,191 ft²
Cost/ft² including 10% Mobilization & 25% Contingency	= $431.51
Bridge Total Cost	= $2,671,000

ALTERNATIVE 2

ADVANCE PLANNING STUDY

HAMMETT ROAD

SB LOOP OFF–RAMP OH

BRIDGE NO.	CU 10	
SCALE: AS NOTED	EA 0L320K	SHEET 1 OF 1

DESIGNED BY	P. SHINN	DATE	8/08
DRAWN BY	I. LAM	DATE	8/08
CHECKED BY	K. HARIRSAZ	DATE	8/08
APPROVED		DATE	

P. SHINN
PROJECT ENGINEER

DESIGN OVERSIGHT

SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 2/25/05)

FILE => $REQUEST

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

Attachment D – Cost Estimates

HAMMETT/ROUTE 99 INTERCHANGE
PRELIMINARY PROJECT COST ESTIMATE SUMMARY
TOTAL ESCALATED IMPLEMENTATION COST

DIST - CO - RTE	10-STA-99
Type of Estimate	PSR
PM:	23.9/25.1
EA:	10-0L320K
PP No. :	

Limits:

Proposed Improvement: (Scope) **Route 99/Hammett Road Interchange Project Alternative 1 Wide Diamond Interchange**

COMPONENT	PCT	OF	CURRENT DOLLARS	START OF COST	ANNUAL PCT ESCALATION	ESCALATED COST
PS&E	7.0%	CONST	$5,075,000	1/1/2010	0.0%	$5,080,000
R/W Support	5%	R/W	$575,000	9/1/2010	3.5%	$590,000
R/W Capitol	100%	R/W	$11,493,000	9/1/2010	3.5%	$11,790,000
Constr. Support	10.0%	CONST	$7,250,000	12/1/2012	3.5%	$8,040,000
Construction	100%	CONST	$72,500,000	12/1/2012	3.5%	$80,390,000
TOTAL ESCALATED COST			**$96,893,000**			**$105,890,000**
					CONST + CM	$88,430,000

HAMMETT/ROUTE 99 INTERCHANGE
PRELIMINARY PROJECT COST ESTIMATE SUMMARY
SUPPORT COSTS (ESCALATED)

Limits:

Proposed Improvement: **Route 99/Hammett Road Interchange Project**
(Scope) Alternative 1 Wide Diamond Interchange

COMPONENT	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	TOTAL
PS&E		$5,080,000				$5,080,000
R/W Support			$590,000			$590,000
Constr. Support					$8,040,000	$8,040,000
TOTAL ESC. COST		# $5,080,000	$590,000		$8,040,000	**$13,710,000**

ROUTE 99/HAMMETT ROAD INTERCHANGE PROJECT
PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE 10-STA-99
PM: 23.9/25.1
EA: 10-0L320K
Program Code:

Project Description: **Route 99/Hammett Road Interchange Project**

Limits: **In Stanislaus County**

Proposed Improvement: (Scope) **Alternative 1 Wide Diamond Interchange**

Alternative: Standard Interchange Spacing Alternative

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$42,300,000
TOTAL STRUCTURE ITEMS	$18,700,000
SUBTOTAL CONSTRUCTION COSTS	$61,000,000
TOTAL RIGHT OF WAY ITEMS	$11,500,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	**$72,500,000**

Approved by Project Manager  (Signature) **Date** 12/1/2009

Phone No. 408-280-2772

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

	DIST - CO - RTE
	10-STA-99
PM:	23.9/25.1
EA:	10-0L320K

I. ROADWAY ITEMS

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Section 1 - Earthwork					
Roadway Excavation	38,710	CY	$28.00	$1,083,880	
Imported Borrow	210,650	CY	$35.00	$7,372,750	
Clearing & Grubbing	Lump Sum	LS	$200,000.00	$200,000	
Develop Water Supply	Lump Sum	LS	$50,000.00	$50,000	
Project Schedule	Lump Sum	LS	$120,000.00	$120,000	
				Subtotal Earthwork	$8,826,630
Section 2 - Pavement Structural Section *					
PCC Pavement (___ Depth)					
PCC Pavement (___ Depth)					
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Pavement	76,380	SY	$55.00	$4,200,900	
Concrete Curb & Gutter	50	CY	$500.00	$24,750	
Sidewalk	332	CY	$500.00	$166,000	
				Subtotal Pavement Structural Section	$4,391,650
Section 3 - Drainage					
Large Drainage Facilities					
Storm Drains	Lump Sum	LS	$2,000,000.00	$2,000,000	
Construction BMP's	Lump Sum	LS	$800,000.00	$800,000	
Construction Site Management	Lump Sum	LS	$100,000.00	$100,000	
Treatment BMP's	Lump Sum	LS	$500,000.00	$500,000	
Sampling and Analysis	Lump Sum	LS	$15,000.00	$15,000	
Detention Basin	Lump Sum	LS	$200,000.00	$200,000	
				Subtotal Drainage	$3,615,000

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE

10-STA-99
PM: 23.9/25.1
EA:

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Section 4 - Specialty Items					
Retaining Walls	29,960	SF	$84.00	$2,516,640	
Noise Barriers		SF	$46.00	$0	
Barriers and Guardails	7,176	LF	$150.00	$1,076,400	
Equipment/Animal Passes					
Highway Planting	Lump Sum	LS	$900,000.00	$900,000	
Replacement Planting	Lump Sum	LS	$800,000.00	$800,000	
Irrigation Modification	Lump Sum	LS	$300,000.00	$300,000	
Relocate Private Irrigation Facilities					
Erosion Control	Lump Sum	LS	$500,000.00	$500,000	
Slope Protection					
Water Pollution Control	Lump Sum	LS	$200,000.00	$200,000	
Hazardous Waste Mitigation					
Work	Lump Sum	LS	$1,500,000.00	$1,500,000	
Environmental Mitigation	Lump Sum	LS	$550,000.00	$550,000	
Resident Engineer Office Space	Lump Sum	LS	$100,000.00	$100,000	
				Subtotal Specialty Items	$8,443,040
Section 5 - Traffic Items					
Lighting	Lump Sum	LS	$1,300,000.00	$1,300,000	
Traffic Delineation Items	65,690	LF	$3.00	$197,070	
Traffic Signals	2	EA	$200,000.00	$400,000	
Overhead Sign Structures	2	EA	$100,000.00	$200,000	
ITS	Lump Sum	LS	$100,000.00	$100,000	
Roadside Signs	Lump Sum	LS	$150,000.00	$150,000	
Traffic Control Systems	Lump Sum	LS	$1,200,000.00	$1,200,000	
Transportation Mgmt Plan	Lump Sum	LS	$400,000.00	$400,000	
Ramp Metering Equipment	2	EA	$50,000.00	$100,000	
COZEEP Contract	Lump Sum	LS	$500,000.00	$500,000	
				Subtotal Traffic Items	$4,547,070
				TOTAL SECTIONS 1 - 5:	$29,823,390

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

	DIST - CO - RTE
	10-STA-99
PM:	23.9/25.1
EA:	10-0L320K

				Item Cost	Section Cost
Section 6 - Minor Items					
Subtotal Sections 1 - 5		$29,823,390	X (5%)	$1,491,170	
			TOTAL MINOR ITEMS:		$1,491,170
Section 7 - Roadway Mobilization					
Subtotal Sections 1 - 5		$29,823,390			
Minor Items		$1,491,170			
	Sum	$31,314,560	X (10%)	$3,131,456	
			TOTAL ROADWAY MOBILIZATION		$3,131,460
Section 8 - Roadway Additions					
Supplemental					
Subtotal Sections 1 - 5		$29,823,390			
Minor Items		$1,491,170			
	Sum	$31,314,560	X (5%)	$1,565,728	
Contingencies					
Subtotal Sections 1 - 5		$29,823,390			
Minor Items		$1,491,170			
	Sum	$31,314,560	X 20% *	$6,262,912	
			TOTAL ROADWAY ADDITIONS		$7,828,640
			TOTAL ROADWAY ITEMS (Subtotal of Sections 1 - 8)		$42,270,000

Estimate Prepared By:	David Liu	(408) 280-2772	24-Dec-09
	(Print Name)	(Phone)	(Date)
Estimate Checked By:	Bo Gao	(408) 280-2772	24-Dec-09
	(Print Name)	(Phone)	(Date)

* Use 25% at the PSR stage or a higher or lower rate if justified.

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE
10-STA-99
PM: 23.9/25.1
EA: 10-0L320K

II. STRUCTURES ITEMS

Bridge Name	Rail Road Grade Seperation	River Bridge	Route 99/Hammett
Structure Type		CIP/PS Concrete Box Girder	
Width (ft) - out to out			
Span Lengths (ft)			
Total Area (SQ ft)	23,132.0	30,000.0	32,065.0
Footing Type(pile/spread)	Pile		Pile
Cost per Sq. ft. Including: Mobilization: 10% Contingency: 25%	$250	$210	$205
Bridge Removal/Modification			
Total Cost For Structure	$5,783,000	$6,300,000	$6,573,325

SUBTOTAL STRUCTURES ITEMS (Sum of Total cost for Structures) $18,700,000

Railroad Related Costs

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS: (Sum of Stuctures Items plus Railroad items) $18,700,000

COMMENTS:

Estimate Prepared By: David Liu (Print Name) (408)280-2772 (Phone) 24-Dec-09 (Date)

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE
10-STA-99
PM: 23.9/25.1
EA: 10-0L320K

III. RIGHT OF WAY

	Escalated Value *
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$7,919,100
B. Utility Relocation (State Share)	$3,491,775
C. Relocation Assistance	$0
D. Clearance / Demolition	$30,000
E. Title and Escrow Fees	$52,050

TOTAL RIGHT OF WAY ITEMS (Escalated Value) $11,492,930

Anticipated Date of Right of Way Certification (Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of Work: Property restoration

Right of Way Branch Cost Estimate for Work* $30,000

*This dollar amount is to be included in the Roadway and/or Structures Item of Work, as appropriate.
Do not include in the Right of Way Items

COMMENTS:

Estimate prepared by: Steve Castellano (Print Name) 925-691-8500 (Phone) 9-Apr-09 (Date)

HAMMETT/ROUTE 99 INTERCHANGE
PRELIMINARY PROJECT COST ESTIMATE SUMMARY
TOTAL ESCALATED IMPLEMENTATION COST

DIST - CO - RTE	10-STA-99
Type of Estimate	PSR
PM:	23.9/25.1
EA:	10-0L320K
PP No. :	

Limits:

Proposed Improvement: **Route 99/Hammett Road Interchange Project**

(Scope) **Alternative 2 Partial Cloverleaf Interchange**

COMPONENT	PCT	OF	CURRENT DOLLARS	START OF COST	ANNUAL PCT ESCALATION	ESCALATED COST
PS&E	7.0%	CONST	$6,517,000	1/1/2011	0.0%	$6,520,000
R/W Support	5%	R/W	$575,000	1/1/2011	3.5%	$600,000
R/W Capitol	100%	R/W	$11,493,000	9/1/2011	3.5%	$12,210,000
Constr. Support	10.0%	CONST	$9,310,000	12/1/2012	3.5%	$10,320,000
Construction	100%	CONST	$93,100,000	12/1/2012	3.5%	$103,230,000
TOTAL ESCALATED COST			**$120,995,000**			**$132,880,000**
					CONST + CM	$113,550,000

HAMMETT/ROUTE 99 INTERCHANGE
PRELIMINARY PROJECT COST ESTIMATE SUMMARY
SUPPORT COSTS (ESCALATED)

Limits:

Proposed Improvement: **Route 99/Hammett Road Interchange Project**

(Scope) Alternative 2 Partial Cloverleaf Interchange

COMPONENT	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	TOTAL
PS&E			$6,520,000			$6,520,000
R/W Support			$600,000			$600,000
Constr. Support					$10,320,000	$10,320,000
TOTAL ESC. COST		$0	$7,120,000		$10,320,000	**$17,440,000**

ROUTE 99/HAMMETT ROAD INTERCHANGE PROJECT
PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE 10-STA-99
PM: 23.9/25.1
EA: 10-0L320K
Program Code:

Project Description: **Route 99/Hammett Road Interchange Project**

Limits: **In Stanislaus County**

Proposed Improvement (Scope): **Alternative 2 Partial Cloverleaf Interchange**

Alternative: Standard Interchange Spacing Alternative

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$49,600,000
TOTAL STRUCTURE ITEMS	$32,000,000
SUBTOTAL CONSTRUCTION COSTS	$81,600,000
TOTAL RIGHT OF WAY ITEMS	$11,500,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	**$93,100,000**

Approved by Project Manager  (Signature) **Date** 12/1/2009

Phone No. 408-280-2772

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

	DIST - CO - RTE
	10-STA-99
PM:	23.9/25.1
EA:	10-0L320K

I. ROADWAY ITEMS

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Section 1 - Earthwork					
Roadway Excavation	56,843	CY	$28.00	$1,591,604	
Imported Borrow	275,400	CY	$35.00	$9,639,000	
Clearing & Grubbing	Lump Sum	LS	$200,000.00	$200,000	
Develop Water Supply	Lump Sum	LS	$50,000.00	$50,000	
Project Schedule	Lump Sum	LS	$120,000.00	$120,000	
				Subtotal Earthwork	$11,600,604.00
Section 2 - Pavement Structural Section *					
PCC Pavement (___ Depth)					
PCC Pavement (___ Depth)					
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Pavement	86,045	SY	$55.00	$4,732,475	
Concrete Curb & Gutter	67	CY	$500.00	$33,500	
Sidewalk	457	CY	$500.00	$228,500	
				Subtotal Pavement Structural Section	$4,994,475.00
Section 3 - Drainage					
Large Drainage Facilities					
Storm Drains	Lump Sum	LS	$1,500,000.00	$1,500,000	
Construction BMP's	Lump Sum	LS	$900,000.00	$900,000	
Construction Site Management	Lump Sum	LS	$100,000.00	$100,000	
Treatment BMP's	Lump Sum	LS	$500,000.00	$500,000	
Sampling and Analysis	Lump Sum	LS	$15,000.00	$15,000	
Detention Basin	Lump Sum	LS	$200,000.00	$200,000	
				Subtotal Drainage	$3,215,000.00

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE

10-STA-99

PM: 23.9/25.1

EA:

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Section 4 - Specialty Items					
Retaining Walls	64,190	SF	$84.00	$5,391,960	
Noise Barriers		SF	$46.00	$0	
Barriers and Guardails	8,000	LF	$150.00	$1,200,000	
Equipment/Animal Passes					
Highway Planting	Lump Sum	LS	$900,000.00	$900,000	
Replacement Planting	Lump Sum	LS	$800,000.00	$800,000	
Irrigation Modification	Lump Sum	LS	$300,000.00	$300,000	
Relocate Private Irrigation Facilities					
Erosion Control	Lump Sum	LS	$500,000.00	$500,000	
Slope Protection					
Water Pollution Control	Lump Sum	LS	$200,000.00	$200,000	
Hazardous Waste Mitigation Work	Lump Sum	LS	$500,000.00	$500,000	
Environmental Mitigation	Lump Sum	LS	$550,000.00	$550,000	
Resident Engineer Office Space	Lump Sum	LS	$100,000.00	$100,000	
				Subtotal Specialty Items	$10,441,960.00
Section 5 - Traffic Items					
Lighting	Lump Sum	LS	$1,300,000.00	$1,300,000	
Traffic Delineation Items	71,000	LF	$3.00	$213,000	
Traffic Signals	2	EA	$150,000.00	$300,000	
Overhead Sign Structures	2	EA	$100,000.00	$200,000	
ITS	Lump Sum	LS	$100,000.00	$100,000	
Roadside Signs	Lump Sum	LS	$150,000.00	$150,000	
Traffic Control Systems	Lump Sum	LS	$1,500,000.00	$1,500,000	
Transportation Mgmt Plan	Lump Sum	LS	$400,000.00	$400,000	
Ramp Metering	2	EA	$50,000.00	$100,000	
COZEEP Contract	Lump Sum	LS	$500,000.00	$500,000	
				Subtotal Traffic Items	$4,763,000.00
				TOTAL SECTIONS 1 - 5:	$35,015,039.00

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

	DIST - CO - RTE
	10-STA-99
PM:	23.9/25.1
EA:	10-0L320K

				Item Cost	Section Cost
Section 6 - Minor Items					
Subtotal Sections 1 - 5	$35,015,039	X (5%)		$1,750,752	
			TOTAL MINOR ITEMS:		$1,750,752
Section 7 - Roadway Mobilization					
Subtotal Sections 1 - 5	$35,015,039				
Minor Items	$1,750,752				
Sum	$36,765,791	X (10%)		$3,676,579	
			TOTAL ROADWAY MOBILIZATION		$3,676,580
Section 8 - Roadway Additions					
Supplemental					
Subtotal Sections 1 - 5	$35,015,039				
Minor Items	$1,750,752				
Sum	$36,765,791	X (5%)		$1,838,290	
Contingencies					
Subtotal Sections 1 - 5	$35,015,039				
Minor Items	$1,750,752				
Sum	$36,765,791	X	20% *	$7,353,158	
			TOTAL ROADWAY ADDITIONS		$9,191,450
			TOTAL ROADWAY ITEMS (Subtotal of Sections 1 - 8)		$49,630,000

Estimate Prepared By:	Tinh Trong	(408) 280-2772	24-Dec-09
	(Print Name)	(Phone)	(Date)
Estimate Checked By:	Bo Gao	(408) 280-2772	24-Dec-09
	(Print Name)	(Phone)	(Date)

* Use 25% at the PSR stage or a higher or lower rate if justified.

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE
10-STA-99
PM: 23.9/25.1
EA: 10-0L320K

II. STRUCTURES ITEMS

Bridge Name	Rail Road Grade Seperation	River Bridge	Route 99 /Hammett	Hammett SB On Ramp	Hammtt SB Off Ramp	Hammtt 3 Loop Off Ran
Structure Type						
Width (ft) - out to out						
Span Lengths (ft)						
Total Area (SQ ft)	20,352.0	30,000.0	49,782.0	8,699.0	7,767.0	6,191.0
Footing Type(pile/spread)	Pile		Pile	Pile	Pile	Pile
Cost per Sq. ft. Including: Mobilization: 10% Contingency: 25%	$265	$210	$230	$400	$345	$430
Bridge Removal/Modification						
Total Cost For Structure	$5,393,280	$6,300,000	$11,449,860	$3,479,600	$2,679,615	$2,662,130

SUBTOTAL STRUCTURES ITEMS (Sum of Total cost for Structures): $32,000,000

Railroad Related Costs

SUBTOTAL RAILROAD ITEMS: $0

TOTAL STRUCTURES ITEMS: $32,000,000
(Sum of Stuctures Items plus Railroad items)

COMMENTS:

Estimate Prepared By: David Liu (Print Name) (408)280-2772 (Phone) 24-Dec-09 (Date)

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST - CO - RTE
10-STA-99
PM: 23.9/25.1
EA: 10-0L320K

III. RIGHT OF WAY

	Escalated Value *
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$7,919,100
B. Utility Relocation (State Share)	$3,491,775
C. Relocation Assistance	$0
D. Clearance / Demolition	$30,000
E. Title and Escrow Fees	$52,050

TOTAL RIGHT OF WAY ITEMS (Escalated Value) $11,492,930

Anticipated Date of Right of Way Certification (Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of Work:

Right of Way Branch Cost Estimate for Work* $0

*This dollar amount is to be included in the Roadway and/or Structures Item of Work, as appropriate.
Do not include in the Right of Way Items

COMMENTS:

Estimate prepared by: Tinh Trong (Print Name) (408)-280-2772 (Phone) 24-Dec-09 (Date)

Attachment E – Right of Way Data Sheets (RWDS)

RIGHT OF WAY DATA SHEET (Cont.)

(Form #)

EXHIBIT
4-EX-1 (REV 3/2004)

To: District Office Chief
R/W Local Public
Agency Services
District Branch

Attention: Services

Date 04/09/2009

Dist 10 Co STA Rte 99 P/M (K/P) 23.9/25.1

EA 10-0L320K

Project Description Construct New Wide Diamond

Subject: Right of Way Data Sheet – Local Public Agency Services

Alternate No. Alternative 1

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 Year 2009	Escalation Rate	Projected Value
A.	**Total Acquisition Cost** Acquisition, including Excess Lands, Damages, and Goodwill.	$ 7,542,000	5 %	$ 7,919,100
	Grantors' Appraisal Cost	$ 30,000		$ 30,000
B.	**Utility Relocation (State Share)**	$ 3,325,500	5 %	$ 3,491,775
C.	**Relocation Assistance**	$ 0	0 %	$ 0
D.	**Clearance/Demolition**	$ 0	0 %	$ 0
E.	**Title and Escrow**	$ 21,000	5 %	$ 22,050
F.	**Total Estimated Cost**	$ 10,918,500		$ 11,462,925
G.	**Construction Contract Work**	$ 30,000	*(These are construction costs that are to be included in the projects PS&E.)*	

2. **Current Date of Right of Way Certification** 12/31/2010

3. **Parcel Data:** To be entered into PMCS EVNT RW Screen.

Type		Dual/Appr
X		
A		
B	6	4
C		
D		
E	XXXX	
F	XXXX	

Total 6

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

RR Involvements	
None	
C&M Agrmt	1
Svc Contract	
Design	
Const.	
Lic/RE/Clauses	

Misc. R/W Work	
RAP Displ	0
Clear/Demo	0
Const Permits	1
Condemnation	0
Excess	N/A

Areas: R/W 19.023 Acres No. Excess Parcels 0

Entered PMCS Screens ___/___/___ by _____

Entered AGRE Screen (Railroad data only) ___/___/___ by _____

4. Are there any major items of construction contract work? Yes ☒ No ☐ (If "Yes," explain.)

There will be Caltrans construction encroachment permits to construct a bridge during construction time.

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. ☐

Land zoning and Specific Plan areas in the project site consist of commercial, industrial and agricultural uses.

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 Railroad 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 0 No. of business/nonprofit 0

No. of multi-family 0 No. of farms 0

DRIS will be prepared in PA/ED phase.

11. Are there Material Borrow and/or Disposal Sites 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.)

RIGHT OF WAY DATA SHEET (Cont.)

(Form #)

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 the R/W requirements on Page 1 of this Data Sheet, R/W will require a lead time of 12 months from the date regular appraisals can begin to project certification.

In any event, RW Maps will require 8 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.)

The Stanislaus County is the sponsor of the project. County will perform right of way work.

Evaluation Prepared By:

Right of Way: Name _____ Date 04/28/09
Steven L. Castellano, SR/WA
Right of Way Consultant
Associated Right of Way Services, Inc.

Railroad: Name _____ Date 6/19/09
~~Bo Gao~~

Utilities: Name _____ Date 4/23/09
John Beebe

Recommended for Approval:
_____ Date 6/19/09
Keith G. Meyer, P.E.

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.

_____
Michael J. Rodrigues
Assistant Central Region Chief, Right of Way

7-8-09
Date

STATE OF CALIFORNIA● DEPARTMENT OF TRANSPORTATION

UTILITY INFORMATION SHEET

SR 99 at Hammett Rd. Alternative 1

EXHIBIT
4-EX-5 (REV 3/2004)

1. Name of utility companies involved in project: AT&T, PG&E Gas Transmission, and the Modesto Irrigation District (MID)

2. Types of facilities and agreements required: PG&E has a 12" gas transmission pipeline on private property in an exclusive easement on the east side of SR 99. AT&T has a direct buried Cable on private property in an exclusive easement on the east side of SR 99. MID has an overhead distribution facility on the east side of SR 99 on private property in an exclusive easement. Those PG&E, AT&T, and MID facilities in superior easement rights and will require like rights.

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

   Disposition of longitudinal encroachment(s):
   [X] Relocation required.
   Exception to policy needed.
   Other. Explain.

4. Additional information concerning utility involvements on this project, i.e., long lead time materials, growing or special seasons, customer service seasons (no transmission tower relocations in summer). The PG&E gas transmission pipeline is a long lead item with seasonal restrictions

5. PMCS Input Information
   Total estimated cost of State's obligation for utility relocation on this project:
   $ 3,325,500

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

Utility Involvements

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

Prepared By:

John Beebe Right of Way Utility Estimator — 4/23/09 Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

RAILROAD INFORMATION SHEET

(Form #)

EXHIBIT
4-EX-6

1. Describe railroad facilities or right of way affected.

   Union Pacific Railroad cross Hammett Road. A wider bridge will be build over the railroad.

2. When branch lines or spurs are affected, would acquisition and/or payment of damages to businesses and/or industries served by the railroad facility be more cost effective than construction of a facility to perpetuate the rail service? Yes _____ No __X___
   (If yes, explain)
   No branch lines or spurs are affected.

3. Discuss types of agreements and right required from the railroads. Are grade crossings requiring service contracts or grade separations requiring construct and maintenance agreements involved?

   Grade separations are required for construction of new bridge along with new maintenance agreements.

4. Remarks (non-operating railroad right of way involved?): None.

5. PMCS Input Information

RR Involvements

None	_____
C&M Agreement	1
Service Contract	_____
Design	_____
Const.	_____
Lic/RE/Clauses	_____

Prepared By:

Bo Gao

Right of Way Railroad Coordinator

06/19/2009

Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

ESTIMATE WORKSHEET

(Form #)

DISTRICT	COUNTY	ROUTE	P.M./K.P.
10	STA	99	23.9/25.1
ALTERNATIVE 1			EA 10-0L320K

PREPARED BY: Steve Castellano

DATE: 9-Apr-09

PAGE 1 OF 1

TYPE	PARCEL	P.M./K.P.	ESTIMATED COST	RAP COST	CLEAR/DEMO COST	NO RAP DISPL.	NO CLEAR/ DEMO	NO CONST PERMITS	CCW COST	ESCROW COST	NAME - OTHER INFO.	R/W AREA (ft^2)	EXC. AREA (ft^2)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)
B	003-014-005	23.9/251	745,000							3,500		149,000	
B	003-014-007	23.9/251	3,914,000							3,500		391,400	
B	003-014-008	23.9/251	310,700							3,500		31,070	
B	003-014-009	23.9/251	599,600							3,500		59,960	
B	136-037-001	23.9/251	54,000							3,500		5,400	
B	136-001-017	23.9/251	1,918,400							3,500		191,840	
		TOTAL	7,542,000							21,000		828,670	0
		GRAND TOTAL	7,542,000									828,670	0
		FROM ALL PAGES											

PROJECT PERMIT FEES

PERMITTER			ESTIMATED COST	TYPE OF PERMIT	DATE TO EXPEND
	(14)		(15)	(16)	(17)
		TOTAL			
		GRAND TOTAL			
		FROM ALL PAGES			

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	STA	99	23.9/25.1		

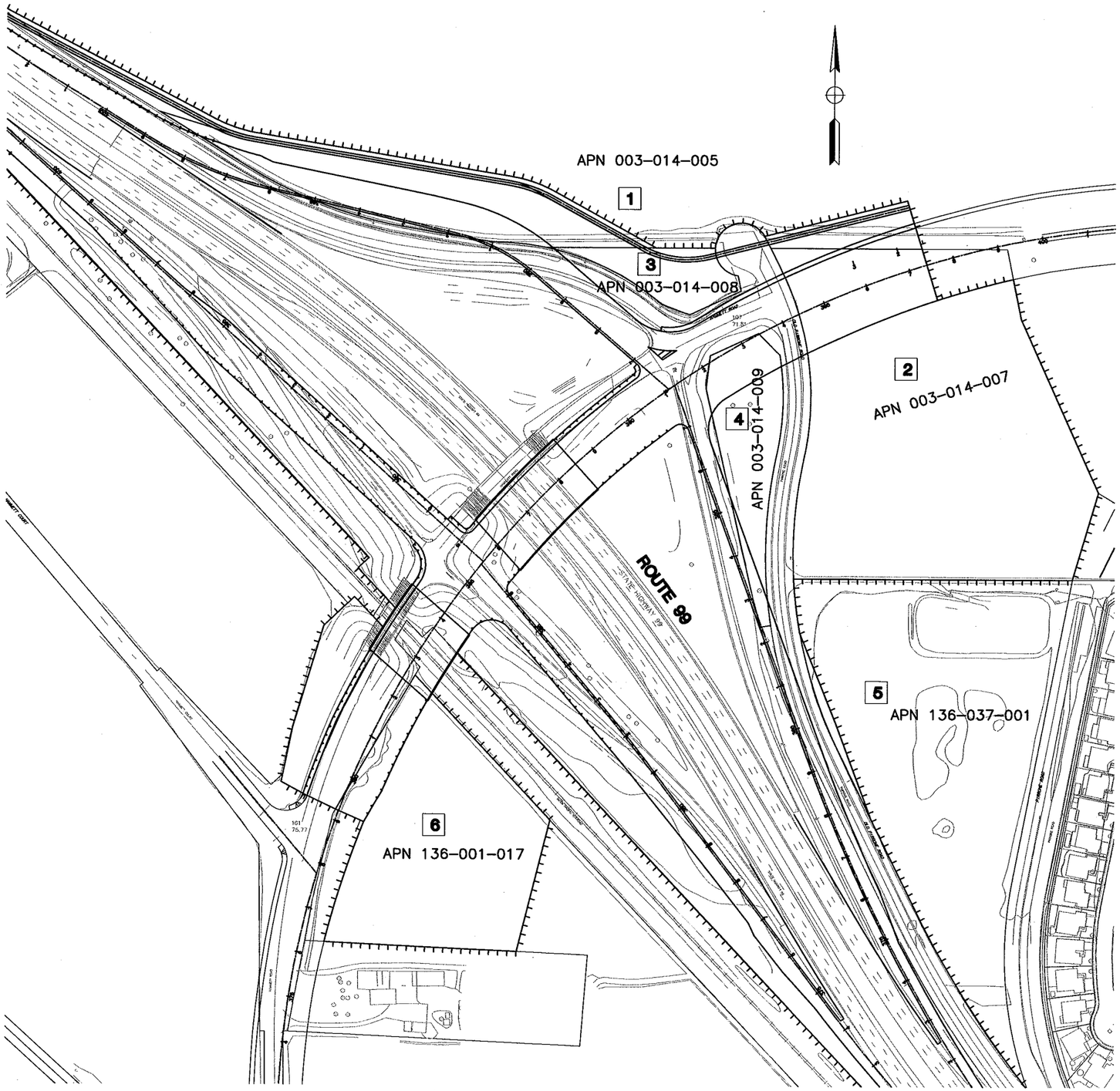
PROFESSIONAL CIVIL ENGINEER

PLANS APPROVAL DATE

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

STANISLAUS COUNTY
DEPARTMENT OF PUBLIC WORKS
1010 10th STREET, SUITE 3500
MODESTO, CA 95354

RAJAPPAN & MEYER
CONSULTING ENGINEERS, INC.
1038 LEIGH AVENUE, SUITE 100
SAN JOSE, CALIFORNIA 95126



RIGHT OF WAY TAKE AREAS

	PARCEL APN	TOTAL AREA (SF)	R/W TAKE (SF)	AREA REMAIN (SF)
1	003-014-005	15,690,370±	149,000±	15,541,370±
2	003-014-007	443,050±	391,400±	51650±
3	003-014-008	31,070±	31,070±	0
4	003-014-009	59,960±	59,960±	0
5	136-037-001	349,440±	5,400±	344,040±
6	136-001-017	1,040,170±	191,840±	848,330±

TOTAL RIGHT OF WAY TAKE = 828,670 SF
TOTAL RIGHT OF WAY TAKE = 19.023 ACRES

RIGHT OF WAY TAKE

NOT TO SCALE

RW-1

DATE REVISED | BY | DATE REVISED | BY
CALCULATED/DESIGNED BY
CHECKED BY
DESIGN OVERSIGHT

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION
Caltrans

$REQUEST

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

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU

EA 10-0L330K

Attachment F – Storm Water Data Report Cover Sheet (SWDR)

Caltrans

Dist-County-Route: 10-STA-99

Post Mile Limits:
R023.9/R025.1

Project Type: Interchange

EA: 10-0L320K

RU: 10-243 (Design Oversight)

Program Identification: 20.10.400

Phase: ☒PID ☐PA/ED ☐PS&E

Regional Water Quality Control Board(s): Central Valley (Region 5 – Sacramento)

Is the project required to consider incorporating 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 60 days prior to PS&E Submittal. List submittal date: _____

Total Disturbed Soil Area: 38.3 acres for Alternative 1; 43.6 acres for Alternative 2

Estimated Construction Start Date: **Jan 2012** Construction Completion Date: **Jan 2014**

Notification of Construction (NOC) Date to be submitted: **Dec 2011**

Notification of ADL reuse (if Yes, provide date) ☐Yes Date: _____ ☒No

Separate Dewatering Permit (if Yes, permit number) ☐Yes Permit #: _____ ☒No

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Gao Bo

05-20-2009

Bo Gao *Registered Project Engineer* Date

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

Christina Hibbard 5/20/09

Christina Hibbard, *Project Manager* Date

Allan E Shafer 5/20/09

Allan Shafer, *Designated Maintenance Representative* Date

for Brad Cole, *Central Region Landscape Architect* 5/26/09 Date

for Ethan A. Heilman 5/26/09

Marissa Nishikawa, *Central Regional NPDES Stormwater Coordinator* Date

Attachment G – TMP Checklist

STATE OF CALIFORNIA

D-10 TRAFFIC MANAGEMENT: DELIVERY- MEMO

To: Alex Ng	From: Karen Mai D-10 Traffic Management	Date: 9/18/08
Cc: FILE, D-10 PIO	Phone: (209) 942-6089	

MESSAGE

Re: EA #0L320K

Attached is the Approved TMP Checklist, Lane Requirement Charts, and Table Z for the above mentioned project.

Please include a copy of the TMP Checklist in the RE Book with all supporting Documentation.

We request the following:

a. *Contractor shall work with RE/Inspector to request the necessary lane closures needed. Requests shall be made the week prior to the actual work. Inspector shall submit closure through the Lane Closure System (LCS) for our approval by Wednesday afternoon of the week prior.*

b. *All lane closures shall be called in by either the Contractor to the Traffic Management Center (TMC) when the closure begins (10-97), ends (10-98), or is canceled (10-22). The TMC can be reached 24-7 at (209) 948-7556 or 7551.*

c. *Use proper Traffic Control devices throughout the duration of the project as per Caltrans Standard Specifications.*

d. *Please verify PM R 25.1*

Please call if you have any questions regarding the attached information.

D-10 TRANSPORTATION MANAGEMENT PLAN CHECKLIST

District - EA: 10-0L320K
Date Prepared: September 12, 2008
Prepared By: Karen Mai
Requested By: Alex Ng
Stage of Project (X box): [X] PID [ ] PSR [ ] PR [ ] PS&E

Co.-Rte.-P.M. 10-STA-99 PM R23.9/R25.1
Location: From 0.48 miles south of San Joaquin County Line and 1.70 mi north of the existing Kiernan Ave Interchange

Description: Reconstruction of interchange at SR 99/ Hammett Rd

Date Signed | Date Signed | Date Signed | Date Signed

	REQUIRED	RECOMMENDED	NOT APPLICABLE	BEES Item No.	COMMENTS	ITEM COST	REQUIRED IN SPEC.
1.0 Public Information Strategies							
1.1 Brochures and Mailers	X				RE to hand-deliver to business/residences.		
1.2 Media Releases (& minority media sources)	X						
1.3 Paid Advertising		X					
1.4 Public Information Center	X				See comments below.		
1.5 Public Meetings/Speakers Bureau	X			066063	Designer to add to budget if public meeting is added.		
1.6 Project Telephone Hotline		X					
1.7 Internet, E-Mail		X					
1.8 Local cable TV and News		X					
1.9 Notification to Impacted groups (i.e. bicycle users, pedestrians with disabilities, others)	X				Designer to verify impacted groups.		
1.10 Project Web Page	X				Web page could be linked to local City pg.		
1.11 Caltrans Public Information Office	X			066063	Items 1.1 to 1.11 to be handled by CT PIO.	$50K	
1.12 Consultant Public Information Office	X				If Caltrans PIO not used	$125K	
1.13 Other items			X				
2.0 Traveler Information Strategies							
2.1 Changeable Message Signs (permanent)		X			See comments below		
2.2 Changeable Message Signs (portable)	X			128650	1 pair cms (19 mo.) (3.5k/mo.) = $66.5k	$67K	X
2.3 Special Construction Signs	X			120590			
2.4 Traveler Information Systems (CHIN/Internet)	X			861985	As required.		
2.5 Highway Advisory Radio "HAR" (fixed or mobile)			X	860520			
2.6 Radar Speed Sign			X	066064			
2.7 Traffic Management Team		X			As needed		
2.8 Revised Transit Schedules/ Maps			X				
2.9 Bicycle community information	X				Same as Item 1.9.		
2.10 Other item			X				
3.0 Incident Management							
3.1 COZEEP	X			066062	2 chp (10 hr) ($90/hr) (250 days) = $450K	$450K	
3.2 Freeway Service Patrol (tow truck service patrol)			X	066065			
3.3 Traffic Surveillance Stations (loops or CCTV)	X			066876	Existing to remain &/or provide new stations.		
3.4 Transportation Management Center			X		RE to notify for incident & status closure.		
3.5 Traffic Control Inspector (Caltrans)			X				
3.6 Traffic Management Team		X			TMC will contact TMT as needed.		
3.7 On-site Traffic Advisor (contractor)			X				
3.8 Other Items			X				
4.0 Construction Strategies							
4.1 Delay damage clause	X					TBD	X
4.2 Night work	X				Per Lane Closure Charts		X
4.3 Weekend Work			X				
4.4 Extended Weekend Closures			X				
4.5 Planned Lane Closures	X				Per Lane Closure Charts		X
4.6 Planned Ramp Closures/Connector Closure	X						X
4.7 Total Facility Closure	X						X
4.8 Project Phasing	X				As per stage construction if any.		X
4.9 Truck Traffic Restrictions			X				
4.10 Reduced Lane Widths	X				Per drawings/data sheet if any.		X
4.11 Temporary K-Rail	X			129000			X
4.12 Temporary Traffic Screens	X			129150			X
4.13 Reduced Speed Zones	X						X
4.14 Traffic Control Improvements	X				As necessary.		

4.0 Construction Strategies (Continued)	REQUIRED	RECOMMENDED	NOT APPLICABLE	BEES Item No.	COMMENTS	ITEM COST	REQUIRED IN SPEC.
4.15 Contingency Plans	X						X
4.15.1 Material Plant on standby			X				
4.15.2 Extra Critical Equipment on site	X						
4.15.3 Material Testing Plan			X				
4.15.4 Alternate Material on site			X				
(In case of failure or major delays)							
4.15.5 Emergency Detour Plan	X						
4.15.6 Emergency Notification Plan			X				
4.15.7 Weather Conditions Plan	X						
4.15.8 Delay Timing and Documentation Plan	X						
4.15.9 Late Closure Reopening Notification	X						
4.16 Signal timing modification	X						
4.17 Coordination with adjacent construction	X			07850	RE to confirm prior to scheduling of closures.		X
4.18 Double Fine Zone (signs)	X						X
4.19 Right of Way Delay	X			066022	Designer to determine costs for maintaining traffic	TBD	X
4.20 Other Items	X				See comments below.		X
5.0 Demand Management							
5.1 HOV Lanes/Ramps			X				
5.2 Ramp metering		X			See comments below.		
5.3 Park-and-Ride Lots			X				
5.4 Parking Management/Pricing			X				
5.5 Rideshare Incentives			X				
5.6 Rideshare Marketing			X	066069			
5.7 Transit, Train, or Light-Rail Incentives			X	066066			
5.8 Transit Service Modification			X				
5.9 Variable Work Hours			X				
5.10 Telecommute			X				
5.11 Other Items			X				
6.0 Alternate Route Strategies							
6.1 Ramp Closures			X				
6.2 Street Improvements			X				
6.3 Reversible Lanes			X				
6.4 Temporary Lanes or Shoulders Use			X				
6.5 Freeway to freeway connector closures			X				
7.0 Other Strategies							
7.1 Application of new technology			X				
7.2 Other Items			X				

Comments:

1.4 Plan, progress/completion information should be available at Local Public Works, Chamber of Commerce Offices, and CT Maintenance Offices.
1.9 Impacted groups need to be notified and informed about upcoming construction. During construction, access across job site will be needed.
1.11 PIO estimated at $2k/mo. Or per stage construction or per major milestone.
1.12 Consultant PIO estimated at $5k/mo
2.1 Consult with 315 program advisor in regards to ITS elements
4.20 RE/Inspector shall maintain access to all business & residences at all times.
5.20 Consult with 315 program advisor in regards to ITS elements

Approved by:

Laurie R Jurgens 9-18-08

DISTRICT TRAFFIC MANAGER DATE

Chart No. 1
Freeway/Expressway Lane Requirements

County: STA	Route/Direction: 99/ NB	PM: R23.9/ R25.1

Closure Limits: from 0.48 mi South of SJ County Line and 1.7 mi North of the existing Kiernan Ave interchange

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	2																2	2	2	2	1
Fridays	1	1	1	1	2																				
Saturdays																									
Sundays																							2	2	2

Legend:

1	Provide at least one through traffic lane open in direction of travel
2	Provide at least two adjacent through traffic lanes open in direction of travel
	Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

1. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.

2. Closures of local roads will require City/County concurrence.

Note to Design:

Above window must be re-evaluated or updated if actual construction takes place later than Year 2013.

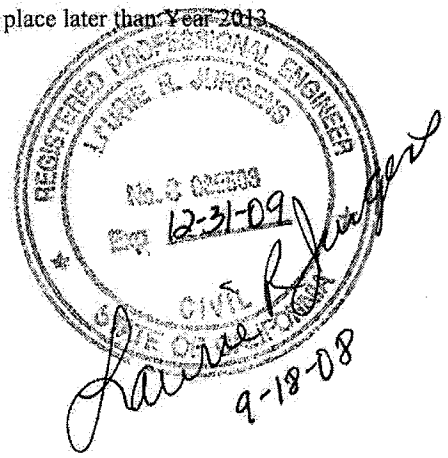


Chart No. 2
Freeway/Expressway Lane Requirements

County: STA	Route/Direction: 99/ SB	PM: R23.9/ R25.1

Closure Limits: from 0.48 mi South of SJ County Line and 1.7 mi North of the existing Kiernan Ave interchange

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	2																2	2	2	1
Fridays	1	1	1	1	1	2																			
Saturdays																									
Sundays																						2	2	2	1

Legend:

1	Provide at least one through traffic lane open in direction of travel
2	Provide at least two adjacent through traffic lanes open in direction of travel
	Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

1. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.

2. Closures of local roads will require City/County concurrence.

Note to Design:

Above window must be re-evaluated or updated if actual construction takes place later than Year 2013.

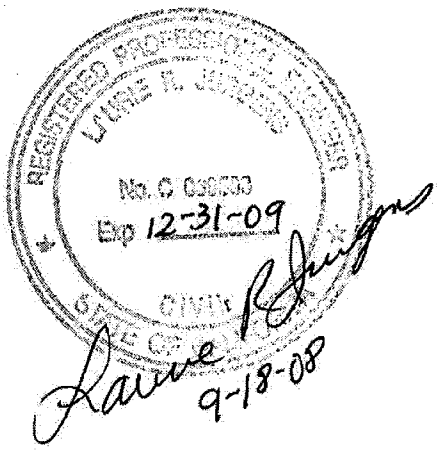


Chart No. 3
Complete Ramp Closure Hours/Ramp Lane Requirements

County: STA	Route/Direction: 99/NB	PM: R23.9/R25.1

Closure Limits: Hammett Rd On and Off Ramps

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	C																C	C	C	C	
Fridays	C	C	C	C	C																				
Saturdays																									
Sundays																								C	C

Legend:

C	Ramp may be closed completely
	Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

1. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.
2. Traffic shall utilize next off-ramp.
3. Closures of local roads will require City/County concurrence.
4. Opposing Ramps at the same location shall not be closed concurrently

Note to Design:

Above window must be re-evaluated or updated if actual construction takes place later than Year 2013.

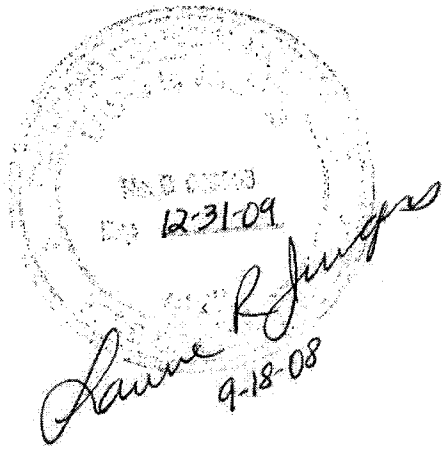


Chart No. 4
Complete Ramp Closure Hours/Ramp Lane Requirements

County: STA	Route/Direction: 99/SB	PM: R23.9/R25.1

Closure Limits: Hammett Rd On and Off Ramps

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	C	C																C	C	C	
Fridays	C	C	C	C	C	C																			
Saturdays																									
Sundays																						C	C	C	

Legend:

C	Ramp may be closed completely
	Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

1. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.
2. Traffic shall utilize next off-ramp.
3. Closures of local roads will require City/County concurrence.
4. Opposing Ramps at the same location shall not be closed concurrently

Note to Design:

Above window must be re-evaluated or updated if actual construction takes place later than Year 2013.

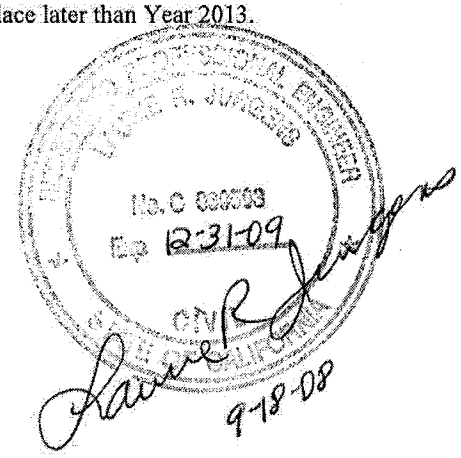


Chart No. 5
Complete Freeway/Expressway Closure Hours
(For Demolition, Falsework removal and erection)

County:STA	Route/Direction:99/NB & SB	PM:R23.9/R25.1

Closure Limits: from 0.48 mi South of SJ County line and 1.7 mi North of the existing Kiernan Ave Interchange

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C																					
Fridays	C	C	C	C																					
Saturdays																									
Sundays																									

Legend:

C	Freeway or expressway may be closed completely.
	No complete freeway or expressway closure is permitted.

REMARKS:

1. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.
2. 7-day advance notice required.
3. Detour required.
4. Closures of local roads will require City/County concurrence.
5. Northbound and Southbound Shall not be closed simultaneously

Note to Design:

Above window must be re-evaluated or updated if actual construction takes place later than Year 2013.

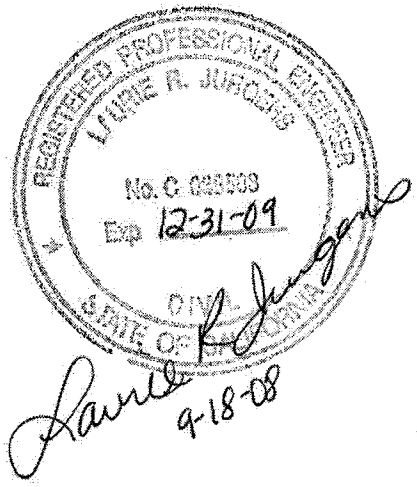


Chart No. 6
Conventional Highway Lane Requirements

County: STA	Route/Direction: 99& Hammett Rd/ EB&WB	PM: R23.9/R25.1

Closure Limits: at Hammett Rd Overcrossing

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Fridays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									
Saturdays																									
Sundays																							R	R	R

Legend:

R	Provide at least one through traffic lane, not less than 10 feet in width, for use by both directions of travel (Reversing Control)
	Work permitted within project right of way where shoulder or lane closure is not required.

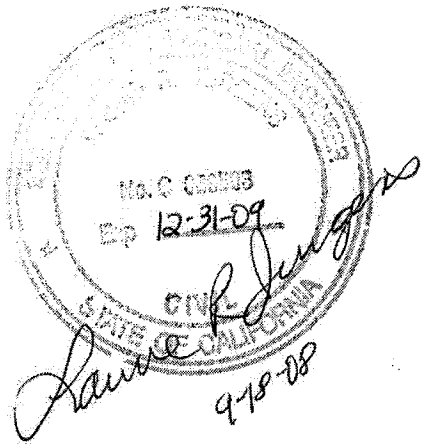
REMARKS:

1. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.

2. Closures of local roads will require City/County concurrence.

Note to Design:

Above window must be re-evaluated or updated if actual construction takes place later than Year 2013.



(Attn OE Reviewer: Use in Dist 10 projects only)

{ XE "12-128_E_A03-16-07" }

USE WITH 2006 STANDARDS.

Add to the end of SSP 12-100. Consult with the District Traffic Managers for editing of this table.

Lane Closure Restriction for Designated Legal Holidays and Special Days

Thu	Fri	Sat	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Sun
x	**H** xxx	xxx	xxx	xx						
	SD xxx									
	xxx	**H** xxx	xxx	xx						
		SD xxx								
	x	xxx	**H** xxx	xxx	xx					
			SD xxx							
	x	xxx	xxx	**H** xxx	xx					
				SD xxx						
			xxx	xxx	**H** xxx	xx				
					SD xxx					
					x	**H** xxx	xx			
						SD xxx				
						x	**H** xxx	xxx	xxx	xxx
							SD xxx			

Legends:

	Refer to lane closure charts
x	The full width of the traveled way shall be open for use by public traffic after 6:00 a.m. No work that interferes with public traffic will be allowed after 6:00 a.m.
xx	No work that interferes with public traffic will be allowed before 9:00 a.m.
xxx	The full width of the traveled way shall be open for use by public traffic. No work that interferes with public traffic will be allowed.
H	Designated Legal Holiday
SD	Special Day

Attachment H – PEAR Document

Preliminary Environmental Analysis Report

Project Information

District 10 County Stanislaus Route 99 Post Mile STA 23.8/24.8 SJ 0.0/0.4 EA OL320K

Project Title: Hammett Road/Route 99 Interchange Reconstruction Project

Project Manager: Christina Hibbard, Caltrans District 10 Phone # (209) 948-7889

Design Engineer: Bo Gao, Rajappan & Meyer Consulting Engineers Phone # (408) 280-2772

Environmental Manager: Gail Miller Phone # (559) 243-8274

Environmental Planner Generalist: Raychel Skeen Phone # (559) 243-8266

Project Description

Purpose and Need: The purpose of the project is to expand the interchange to better accommodate projected vehicular, pedestrian, and bicycle traffic associated with planned housing and business development in the Salida Community Plan area. Figure 1 describes the Regional Vicinity and Project Location.

The need of the project is due to anticipated congestion and inadequacy of the existing interchange to accommodate future traffic needs.

The project will also include realignment of existing local road connections to provide standard spacing from the interchange ramps. Bicycle and pedestrian access are proposed to meet American with Disabilities Act Standards to provide safe travel across the interchange. An existing bicycle/pedestrian trail must be realigned to accommodate the new geometry. Auxiliary lanes and other operational improvements will be investigated to improve access to and from the mainline of State Route 99. The new interchange overcrossing structure will be widened to accommodate an ultimate 8-lane State Route 99 per Caltrans policy.

Description of work: The proposed project involves reconstruction of the existing Hammett interchange including the overcrossing, on and off-ramps, and roadway segments within the interchange area. On and off-ramps will be widened to accommodate greater traffic volumes entering and exiting the mainline. Depending on the alternative, the overcrossing will either be widened or replaced as necessary to accommodate the widening of Hammett/Ladd Road, and the widening of State Route 99. The new interchange overcrossing structure will have a six-lane cross section that conforms with a six-lane cross section for Hammett/Ladd Road widening. Pirrone Road will be extended to the northeast intersecting with the planned Ladd Road that will extend east of the northbound on and off-ramps.

Hammett Court will be realigned to intersect Hammett Road close to perpendicular, as well as provide at least 160 meters from the southbound ramps. The unsignalized intersection will allow left turns from Hammett Road to Hammett Court and from Hammett Court to Hammett Road.

The existing State Route 99 bridge structure over the Stanislaus River will be widened to accommodate forecast traffic volumes associated with the long-term interchange improvements (e.g., ramp extensions) and could affect resources in or adjacent to the river. Widening improvements are needed to accommodate the northern-most interchange improvements as the ramp extensions and auxiliary lanes taper or transition on/off of State Route 99. With these transitional improvements on State Route 99, the bridge structure will require widening and placement of additional columns within the live river channel, and potentially adversely impact anadromous fish species. Likewise, riparian resources could be affected during construction, including oak trees and blue elderberry bushes that potentially provide habitat for the valley elderberry longhorn beetle.

Alternatives:
Two alternatives plus the No Build alternative are being considered for reconstruction of the proposed interchange.

Alternative 1 is an Expanded Diamond interchange alternative that will accommodate predicted traffic volumes up to year 2030. In order to achieve standard vertical clearance with State Route 99, the northbound State Route 99 lanes will have to be lowered or the existing overcrossing will need to be replaced with a higher bridge overcrossing. Widening of the overcrossing to a six-lane cross section will be required to conform with locally planned roadway improvements. The northbound auxiliary lane will extend for 300 meters from the merge point of the northbound onramp. As noted above widening of the State Route 99 bridge over the Stanislaus River will be required for ramp extensions. Figure 2 presents the design components of Alternative 1.

Alternative 2 is a Modified Partial Cloverleaf interchange alternative. The bridge overcrossing must be replaced to accommodate vertical clearance with State Route 99. The reconstructed bridge will carry six lanes. Alternative 2 will accommodate predicted traffic volumes beyond year 2030. A loop northbound on-ramp will be constructed to accommodate the additional traffic entering State Route 99. As noted above, the northbound onramp adds an auxiliary lane which will extend approximately 780 meters (or 300 meters beyond the merge point of the northbound diagonal ramp) and may require minor improvements to the State Route 99 Bridge over the Stanislaus River. The bridge crossing the Stanislaus River will be widened to accommodate components of the Alternative 2 interchange. Figure 3 presents the design components for Alternative 2.

The **No Build** alternative will also be considered. No new interchange improvements would occur with this alternative and the interchange would become a traffic bottleneck for motorists accessing State Route 99 or to simply cross the mainline. Unacceptable levels of service would occur and the interchange would not accommodate predicted traffic volumes.

Funding
The project is anticipated to be funded by a combination of Public Facility Fee (PFF), future sales tax revenue and funding from the State Transportation Improvement Program (STIP). Stanislaus County has currently collected some traffic mitigation funds through City/County Transportation Facilities Public Facility Fee (PFF) program. The anticipated collection through the PFF is $50-$100 million for this project. The County is currently pursuing STIP funding for construction phases to cover any shortfalls.

Anticipated Environmental Approval

CEQA	NEPA
☐ **Categorical Exemption/Statutory Exemption**	☐ **Categorical Exclusion/Programmatic CE**
☒ **Negative Declaration/Mitigated ND**	☒ **Finding of No Significant Impact**
☐ **Environmental Impact Report**	☐ **Environmental Impact Statement**

PSR Summary Statement

The anticipated document for the proposed project is an Initial Study/Mitigated Negative Declaration for the California Environmental Quality Act and an Environmental Assessment/Finding of No Significant Impact for the National Environmental Policy Act. Caltrans would be the lead agency for the purposes of both the California Environmental Quality Act and the National Environmental Policy Act. Under the provisions established by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Caltrans has been delegated authority to review and approve the NEPA process by the Federal Highway Administration (FHWA). Accordingly, on behalf of FHWA, Caltrans will serve as the lead agency for NEPA. Environmental review is expected to start in January 2009 and should be concluded by August 2010. A total of 2,400 – 2,600 person hours have been estimated to complete the identified tasks. The major environmental issues to be addressed include water quality and erosion, air quality and noise, cultural resources, hazardous waste/materials, farmland conversion, visual, and biological resources. The majority of the riparian and river related environmental issues are due to the expansion of lanes over the SR-99/Stanislaus River Bridge.

Assumptions and Risks

Assumptions:

- Scope as defined in current build alternatives
- New right-of-way acquisition from 10.69 acres (affecting 6 parcels) to 14.06 acres (affecting 8 parcels) will be required for the proposed project, depending on the build alternative.
- Federal Funding
- Biological Resources:
  - At least 1 federally listed species will be impacted
  - Assume formal Section 7 consultation with USFWS and NMFS
  - Assume that Section 7 consultation will take no more that 135 days
  - Mitigation for oak trees
  - Work window restrictions will be imposed during construction to avoid impacting fish migration, as well as other mitigation to minimize the fish impacts
- Cultural resources:
  - ASR, Extended Phase I, Archaeological Evaluation Report (AER), HRER, HPSR will be completed. If no resources are determined eligible this portion of the Section 106 process will require six months to complete.
  - Five cultural resources will require formal evaluation (including 2 buildings)
  - If resources are determined eligible, a Finding of Effect (FOE) will be required. If impacts are adverse a Memorandum of Agreement (MOA) and Historic Property Treatment Plan (HPTP) will address mitigation requirements. As a result of multi-agency participation, this portion of the Section 106 process can take an additional six months
  - Native American consulting parties do not object to methods/findings
- No hazardous waste issues.

- No cumulative impacts associated with traffic congestion.
- No visual impacts.
- No air quality impact due to carbon dioxide.

Risks:

- Moderate Probability/High Impact: Design plans change to include activities not currently identified in the request (November 2008) would increase project costs and schedule delay for cultural resources (1 additional year).
- Moderate Probability/High Impact: Impacts to additional federally listed species would increase mitigation costs and the proposed schedule (up to 1 year).
- Low Probability/High Impact: If additional archaeological or architectural properties requiring evaluation were identified in the APE, then increased project costs and schedule delay (up to 1 year) would occur.
- Low Probability/High Impact: FHWA/SHPO disagrees with effects finding and require extended MOA consultation, then increased project costs and schedule delay (up to 6 months) would occur.
- Low Probability/High Impact: Significant Native American controversy would increase costs and delay schedule 6 months to 1 year.
- Low Probability/High Impact: If unforeseen issues of hazardous waste, visual, air quality, or cumulative impacts due to traffic are encountered, then increased project costs, schedule delay (up to 6 months) would occur.
- Low Probability/Moderate Risk: Significant public controversy necessitating a public meeting would add 4-6 months to schedule.

Mitigation

Mitigation estimates are based on preliminary studies from the proposed project and without necessary concurrence from federal resource agencies. Therefore, final mitigation costs may vary from those provided in this document.

Right of Way Capital (050) Total: $ 220,000

$220,000 for biological resources including $25,000 for VELB mitigation and $15,000 for oak tree removal

Construction Capital (042) Total: $190,000

$145,000 for historical and archeological resources mitigation
$35,000 for hazardous materials abatement
$10,000 for paleontological resources mitigation

Reviewed by:

Environmental Manager — Date: 12-19-08

Environmental Office Chief — Date: 12-19-08

Project Manager — Date: 1/12/09

Environmental Technical Reports or Studies Required

	Study	Document	N/A
Community Impact Study	☒	☐	☐
Farmland	☒	☐	☐
Section 4(f) Evaluation	☐	☐	☒
Visual Resources	☒	☐	☐
Water Quality	☒	☐	☐
Floodplain Evaluation	☒	☐	☐
Noise Study	☒	☐	☐
Air Quality Study	☒	☐	☐
Paleontology	☒	☐	☐
Wild and Scenic River Consistency	☐	☐	☒
Cumulative Impacts	☒	☐	☐
Cultural			
ASR	☒	☐	☐
HRER	☒	☐	☐
HPSR	☒	☐	☐
Section 106	☐	☒	☐
SHPO Concurrence	☐	☒	☐
Native American Coordination	☐	☒	☐
Finding of Effect_____	☒	☐	☐
Data Recovery Plan_____	☐	☐	☒
Hazardous Waste			
ISA (Additional)	☒	☐	☐
PSI	☒	☐	☐
Other			
_____	☐	☐	☐
Biological			
Endangered Species (Federal)	☒	☐	☐
Endangered Species (State)	☒	☐	☐
Species of Concern (CNPS, USFS, BLM, S, F)	☒	☐	☐
Biological Assessment (USFWS, NMFS, State)	☒	☐	☐
Wetlands	☐	☐	☒
Invasive Species	☐	☒	☐
Natural Environment Study	☒	☐	☐
NEPA 404 Coordination	☐	☐	☒
Other			
_____	☐	☐	☐
Permits			
401 Permit Coordination	☒	☐	☐
404 Permit Coordination (NW)	☒	☐	☐
1600 SAA Coordination	☒	☐	☐
City/County Coastal Permit Coordination	☐	☐	☒
State Coastal Permit Coordination	☐	☐	☒
NPDES Coordination	☒	☐	☐
US Coast Guard (Section 10)	☒	☐	☐
State 2081 Permit	☐	☐	☒

Discussion of Technical Review

Socio-economic and Community Effects

The project is not expected to have any effects on the local community or the economy. At present, there are no residential uses or business and commercial uses in the immediate interchange area. Proposed improvements do not cause any direct effects on an established neighborhood, nor affect any known group that might be subject to issues involving environmental justice. None of the project alternatives affect socio-economic or community interests any differently than the existing interchange improvements and support circulation network. However, as a result of the supporting roadway network, there is a potential to indirectly impact neighborhoods proximate to the interchange improvements. Therefore, a Community Impact Analysis will be conducted to analyze any potential effects the project may have on the existing nearby community/neighborhoods. This may take an estimated 2 months for completion. No additional permits or agency coordination required.

Farmlands

On the west side of the project area, farmlands could be affected by the widening of Hammett Road. In this area, an orchard is present between the Union Pacific Railroad railroad tracks and Hammett Court. Approximately 10 acres could be impacted. On the east side, the extension of Ladd Road to Pirrone Road will encroach into farmlands, and could impact fallow farmland, a small portion of an orchard, and an area planted in row crops. Both Ladd Road and Pirrone Road will ultimately divide the lands planted in row crops when the area is developed in accordance with the Salida Community Plan. A Farmland Conversion Study will be necessary to assess the effects from loss of farmlands. This may take an estimated 2-3 months for completion. Coordination with the USDA Soil Conservation Service will be needed. No additional permits are required.

Section 4(f) Impacts

(Not Applicable) The project is not expected to have 4(f) issues as a result of any temporary or permanent impacts on recreational facilities. No additional permits or agency coordination required. It should be noted, however, that an existing bike trail must be realigned within the interchange area to accommodate the modified geometry.

Visual Effects

Tree losses within the Stanislaus River corridor area (due to SR-99 bridge widening) and along roadways in the agricultural areas (from the support roadway network) are expected. Accordingly, a Scenic Resources Evaluation should be prepared to document the potential presence of scenic resources. As scenic resources are expected in the project area, it is anticipated that further visual studies (i.e., Visual Impact Assessment) will be necessary. This may take an estimated 1 month for completion. No additional permits or agency coordination required.

Water Quality and Erosion

The site is not expected to have any unusual water quality problems. No water resources are located within the project area that might be affected by erosion or runoff from new roadway surfaces.

The Stanislaus River is located almost 1/2-mile to the north, although is not a direct receiver of runoff from the interchange. Widening of the SR-99 bridge crossing over the Stanislaus River will require Best Management Practices to ensure that construction impact do not negatively impact water quality. Conveyance mechanisms should be included in the bridge widening to convey storm water runoff away from the river.

Since the interchange currently exists, drainage conditions are pre-existing for the reconstructed interchange features. Additional runoff will be generated by the widening of Hammett Road, as well

as from the extension of Ladd Road and Pirrone Road. However, the additional runoff should not create any new water quality issues and can be addressed through the application of standard water quality measures and Best Management Practices. If site dewatering is required for new construction, a dewatering plan is required. Nonetheless, a Water Quality Assessment report will be required to characterize the project's contribution to water quality concerns. A Section 401 Water Quality Certification will likely be required as well as NPDES coordination with the RWQCB for these temporary impacts. This may take an estimated 1-2 months for completion.

Floodplain

The project site is not located within the 100-year floodplain, and has no unusual flood or drainage issues. The project's effect from implementing the build alternatives on local drainage should be discussed, including the use of basins within the interchange footprint to detain runoff during peak storm conditions. The widening of the bridge over the Stanislaus River should not noticeably impact the floodplain and water surface elevation. A technical Floodplain Analysis will be conducted by the project engineer as needed to estimate additional runoff, and define a strategy/design concept for accommodating additional stormwater. Agency coordination may be required with the Central Valley Flood Protection Board. This may take an estimated 1-2 months for completion.

Air Quality

Potential air quality issues are expected from reconstruction of the interchange. An air quality analysis will be required to determine project-specific impacts, conformity and mitigation. Standard dust control measures and compliance with San Joaquin Valley Air Pollution Control District rules and regulations will be required during construction. This may take an estimated 6-8 weeks for completion. Coordination will be required with San Joaquin COG and Caltrans regarding air quality conformity consultation processes. The air quality conformity analysis must identify the status of this project as a potential project of air quality concern. No additional permits are required.

Noise

Potential short term noise issues are expected from reconstruction of the interchange. While the existing interchange does not have any direct affect on existing sensitive receptors, the new interchange includes the support circulation network and could have a long term impact on the adjacent residential subdivision. A noise study will be required to analyze these potential short term and/or long term impacts. A noise barrier may be required as attenuation for sensitive receptors. A Noise Abatement Decision document would also be required if a noise barrier is proposed. This may take an estimated 6-8 weeks for completion. No additional permits or agency coordination required.

Wild and Scenic River

(Not Applicable) The Stanislaus River is a not federally designated wild and scenic river. The interchange reconstruction will have a minor effect on the river where additional columns are needed to support SR-99/Stanislaus River bridge widening. No additional permits or agency coordination required.

Paleontology

The project area has the potential to contain Pleistocene sediments located within the Modesto Formation. Moderately developed Holocene soils overlying the Pleistocene deposits and the potential need for drainage basins within the project area suggest a potential for encountering paleontological resources during construction activities. A Paleontological Identification Report (PIR) would be prepared and certified by a qualified paleontologist to document the identification efforts for paleontological resources and the need for paleontological monitoring during construction activities based on project design. If paleontological resources are identified during construction monitoring, a Paleontological Evaluation Report (PER) will be prepared by a qualified paleontologist to evaluate the significance of the paleontological resource within the project area. This may take an estimated 3 months for completion. No additional permits or agency coordination required.

Cultural Resources

Research on previous cultural studies conducted in the area identified four cultural resources that will require evaluation for eligibility for listing in the National Register, if the final Area of Potential Effect boundary includes these resources: a segment of the Union Pacific Railroad, fruit orchards and vineyards which may be part of a cultural landscape, a farmstead, and Lateral #8 of the Modesto Main Canal.

Cultural resource studies are needed to address Section 106 of the National Historic Preservation Act, in accordance with the *Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans regarding Compliance with Section 106 of the National Historic Preservation Act* (Caltrans 2004). The proposed Area of Potential Effect must include all access roads, work areas and staging areas beyond the existing paved highway.

Findings of the HRER/ASR will be presented in the HPSR. A Finding of Effect (FOE) will be required to evaluate the project's impact on National Register eligible properties. If eligible cultural resources are not impacted by the project, the project's Section 106 responsibilities would be fulfilled. This portion of the Section 106 process may take up to six months to complete. Any subsequent changes in project scope may require additional archaeological or historical review. Coordination may be required with SHPO if eligible resources are impacted.

Native American Coordination

On May 5, 2008, LSA sent a letter with maps depicting the project area to the Native American Heritage Commission (NAHC) in Sacramento asking the commission to review their sacred lands file for any Native American cultural resources that might be affected by the project. A fax from a NAHC Program Analyst informed LSA that a review of the Sacred Lands File did not "indicate the presence of Native American cultural resources in the immediate project area." A list of Native American contacts was also provided. Those individuals from the list have been contacted and no concerns were identified. No additional permits or agency coordination required.

Hazardous Waste/Materials

An Initial Site Assessment (ISA) has been conducted for the proposed interchange reconstruction. The ISA included a government records search and a site survey for potential hazardous wastes and materials. There is some evidence of contamination from existing or past land uses, activities or operations, which would present potential hazards for construction workers. The site survey determined that reflective paint was used on the Union Pacific Railroad Bridge overcrossing (south side only) that could contain lead. Hazardous thermoplastic striping material has been used to designate travel lanes. Removal and disposal of the striping must be conducted in accordance with applicable safety laws and regulations. Testing for lead in the reflective paint and the potential for

hazardous waste is required. Testing to ensure that the agricultural lands do not contain hazardous wastes from agricultural practices, or UPRR lands will be required. The risk ranking for the interchange is considered low.

Studies for aerially deposited lead (ADL) will be conducted prior to construction activities. If Naturally Occurring Asbestos (NOA) is suspected, testing will also be conducted. Measures will be identified to protect the health and safety of construction workers. This may take an estimated 5-6 months for completion. No additional permits or agency coordination required.

Biological Resources

The project could impact an existing blue elderberry (*Sambucus mexicana*) plant that potentially provides habitat for the valley elderberry longhorn beetle (VELB). Formal Section 7 consultation with the USFWS for the VELB would be required.

Impacts to aquatic species (anadromous fish) are expected due to the widening of the State Route 99 Bridge over the Stanislaus River as needed to accommodate interchange geometry. Additional columns will be needed in the river channel for the widening improvements. A Biological Assessment would be required to address federally listed fish species. Consultation with the NOAA/NMFS for anadromous fish may be required due to potential effects on fish spawning and fish passage. It is anticipated work window restrictions will be imposed during construction to avoid impacting fish migration, as well as other mitigation to minimize the fish impacts.

Both the existing State Route 99/Stanislaus River bridge and the State Route 99/Hammett Road bridge should be inspected for the presence/absence of bats, nesting swallows, and other protected migratory bird species. Existing ground squirrel burrows should be inspected for the presence of burrowing owls. Swainson's hawk preconstruction surveys should be conducted based on tree removal activities. Bird and bat surveys should be completed in the spring/summer season. If present, bats, swallows and burrowing owls must be excluded prior to initiating construction.

Several interior live oaks (*Quercus wislizenii*) occur within the Stanislaus River corridor, near the existing interchange and along roadway shoulders and may be removed. A Natural Environment Study will be required to address general biological resources, including both plant and wildlife species. This may take an estimated 9-10 months (including consultation with federal agencies) for completion.

Wetlands

Based on reconnaissance level field review, it appears that the only wetlands likely present within the project boundary subject to Army Corps of Engineers jurisdiction occur within the Stanislaus River corridor. Widening of the bridge deck over the Stanislaus River may temporarily impact jurisdictional waters during construction. As confirmation, a jurisdictional delineation will be necessary to identify potential wetlands or special aquatic site habitat areas, followed by an impact assessment. If the project will create impacts to jurisdictional waters, a nationwide permit (Section 404/Corps of Engineers) will likely be required. Impacts to waters of the U.S. may also trigger a Section 401 Water Quality Certification from the RWQCB. Impacts to riparian areas would require a Section 1602 Streambed Alteration Agreement from the CDFG. In addition coordination with the U.S. Coast Guard (Section 10) is necessary due to the navigability of the Stanislaus River. These permits/agreements may take an estimated 3-4 months for completion.

Invasive Pest Plant Species

Executive Order 13112 requires that any federal action may not cause or promote the spread or introduction of invasive species. This project will use machinery capable of transporting invasive

plant species on and off the project site. To avoid spreading invasive plant species, all earthmoving and seeding equipment will be thoroughly washed before entering the site and prior to leaving. No additional permits or agency coordination required.

Right-of-Way Relocation or Staging Area

New right-of-way will be required for this project. It is expected that staging will occur primarily within the open areas of the existing interchange, although some adjacent lands may also be required. Material sites and disposal sites will be required, but have not yet been identified. Areas of right-of-way acquisition and staging areas will require complete environmental evaluation as part of this project. No additional permits or agency coordination required.

Permits

Widening of the SR-99 bridge deck over the Stanislaus River may impact jurisdictional waters during construction and from additional bridge columns. A Nationwide Permit (Section 404), Section 1602 Streambed Alteration Agreement, Section 401 Water Quality Certification, and U.S. Coast Guard (Section 10) Advance Approval will likely be required for these impacts (also refer to Wetlands above).

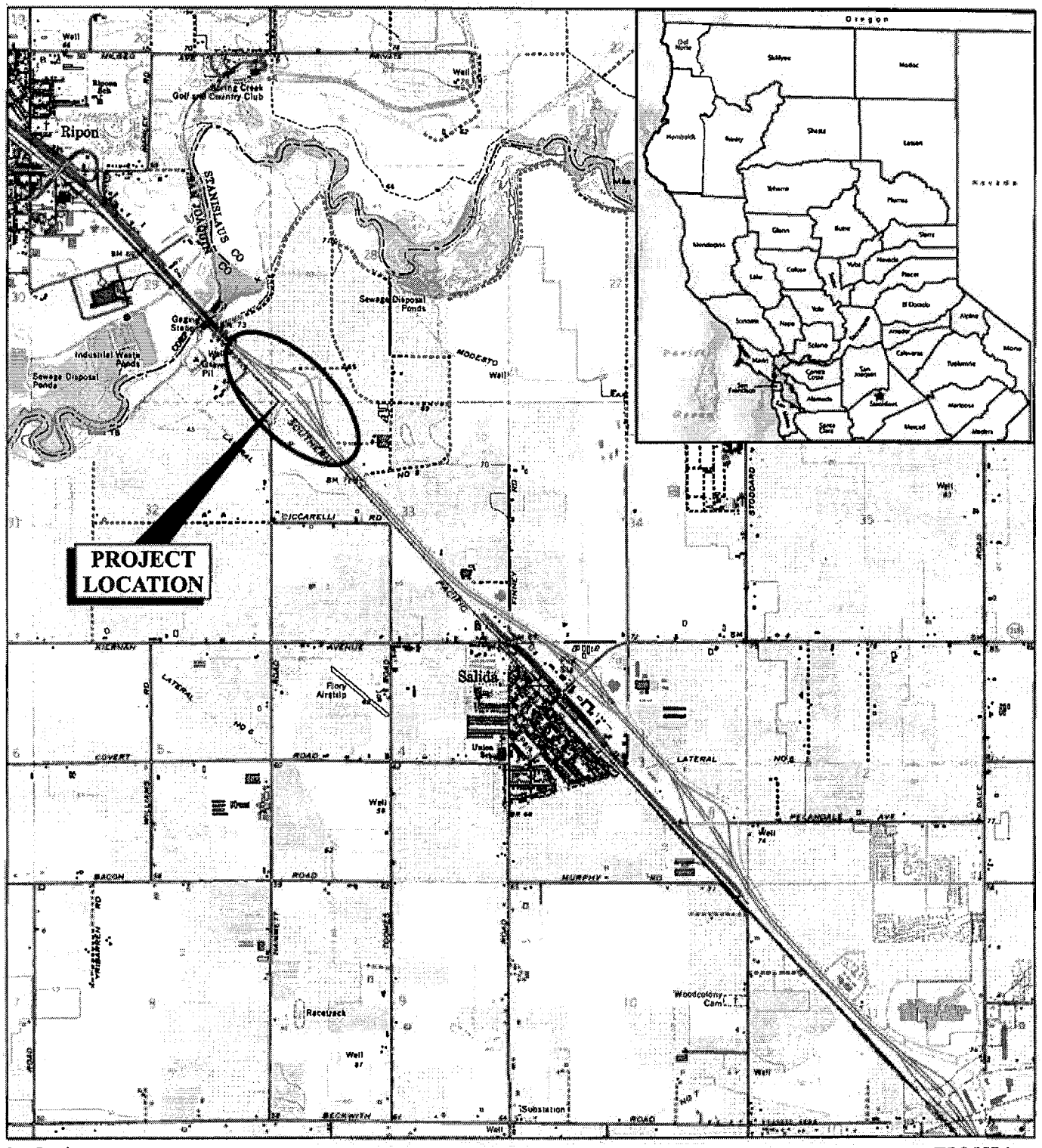
Coastal Zone

(Not Applicable) This project is not within the coastal jurisdiction. No additional permits or agency coordination required.

List of Preparers

LSA Associates, Inc.
Bill Mayer, Principal: PEAR documentation, project management
Amberly Morgan, Assistant Environmental Planner: PEAR documentation
Laura Belt, Assistant Wildlife Biologist: Hazardous waste/materials research
Mike Trueblood, Assistant Biologist: PEAR documentation, biological review
Neal Kaptain, Archaeologist: Cultural resource documentation
Karin Goetter, Archaeologist: Cultural resource documentation

Hazardous Waste Review by: Bill Mayer, Principal	Date 2004
Biological Review by: Mike Trueblood, Assistant Biologist	Date 2007
Cultural Review by: Karin Goetter, Archaeologist	Date 2008
Paleontology Review by: Karin Goetter, Archaeologist	Date 2008
Community Impact Review by: Bill Mayer, Principal	Date 2008
Visual Review by: Bill Mayer, Principal	Date 2008
Floodplain Review by: Bill Mayer, Principal	Date 2008

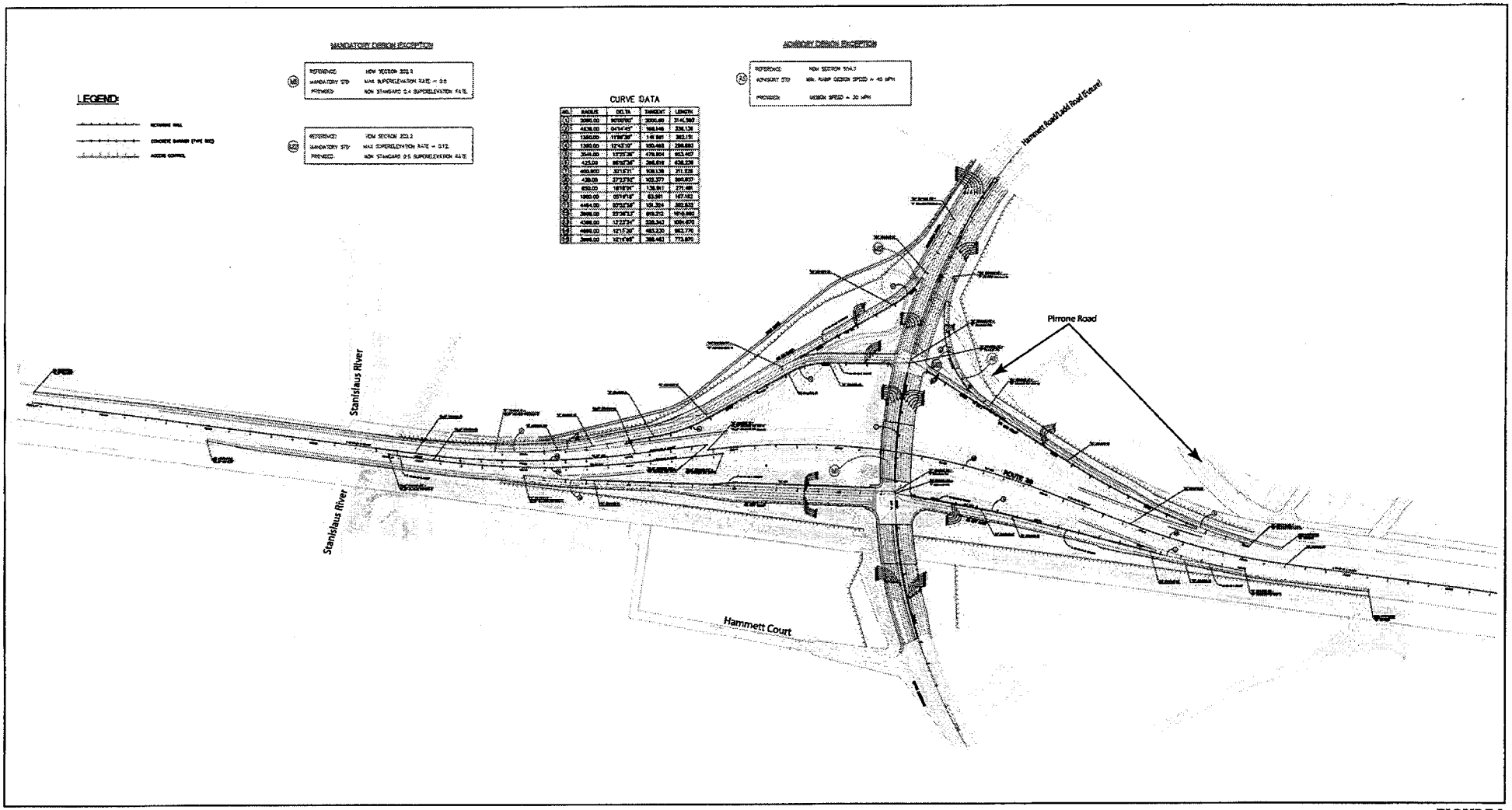


LSA

FIGURE 1

SOURCE USGS 7.5' QUAD - SALIDA

SR-99/Hammett Road Interchange
Project Location and Vicinity



LSA

FIGURE 2

SOURCE: Rajappan & Meyer (2008)

SR-99/Hammett Road Interchange
Alternative 1 - Expanded Diamond Interchange

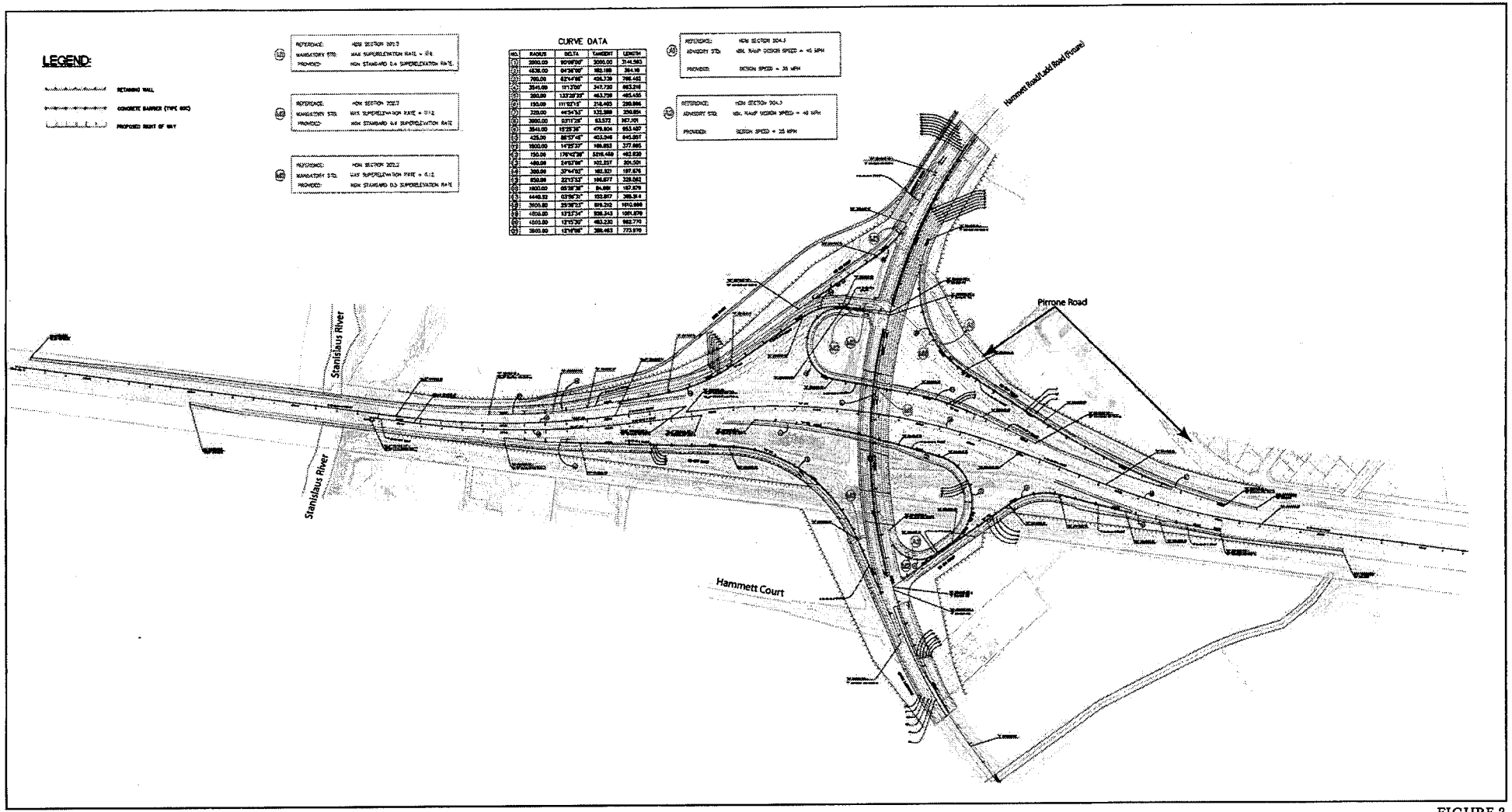


FIGURE 3

LSA

SOURCE: Rajappan & Meyer (2008)

SR-99/Hammett Road Interchange
Alternative 2 - Modified Partial Cloverleaf Interchange

ATTACHMENT A – RESOURCES BY WORK BREAKDOWN STRUCTURE CODE

ATTACHMENT A - Resources by WBS Code

EA: OL320K

Description: Hammett Road/SR-99 Interchange Reconstruction

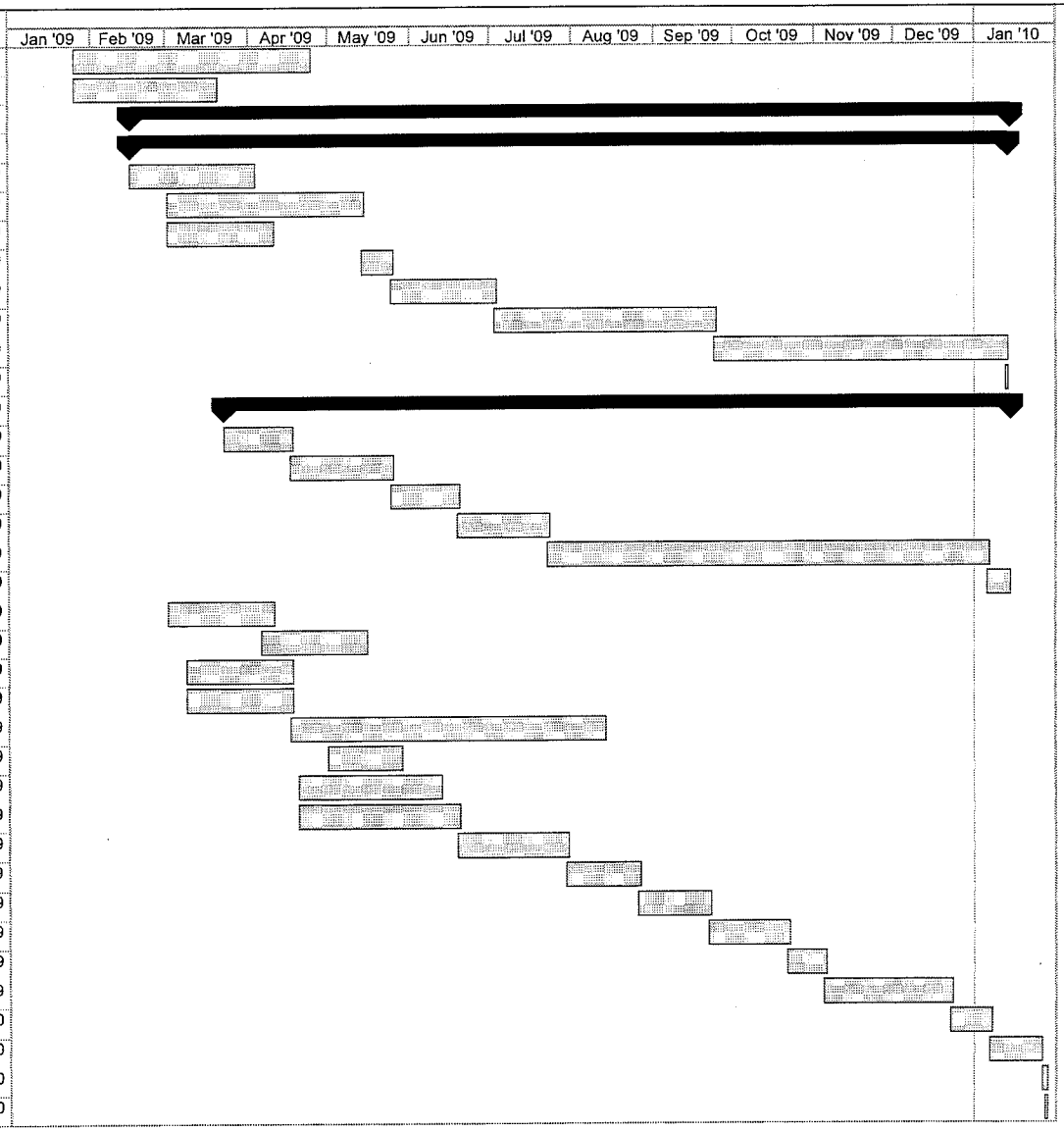
WBS Task Activity Code	Senior	Generalist	Landscape Architect	Biologist	Cultural Resource Specialist	Paleontologist	Haz Waste Specialist	Socio-Economic Specialist	R/W & Relocation Specialist	Storm Water Specialist	Noise/Air Specialist	Total
Assigned Unit												
100 Project Management												
100.05 - Develop and Manage Schedule & Support Budget												0
100.05.05 – Develop and Manage Initial (PID) Project Schedule	25											25
100.05.10 – Develop and Manage Baseline Schedule	25											25
100.05.15 – Develop and Maintain Work Agreements	30											30
100.10 – Maintain Project Data	20	20										40
100.15 - Respond to Internal and External Requests for Information	20	20										40
100.20 - Procure External Resources	15											15
150 Conduct Initial Cultural Studies												-
150.20.30 - Conduct Initial Archaeology Study					-							-
150.20.35 - Conduct Initial Built Environment					-							-
150.20.70 - Conduct Initial Native American Coordination					-							-
160 Perform Preliminary Engineering Studies and Prepare Draft Project Report												-
160.10.30 – Review Project Scope	20											20
160.15.25 – Circulate, Review & Approve Draft Project Report	40	20		10	10		10			10	10	110
165 Perform Environmental Studies and Prepare Draft Environmental Document												-
165.05 - Perform Environmental Scoping & Select Alternatives for Study												-
165.05.05 – Rev Project Information	10											10
165.05.10 – Pub & Agency Scoping	10	10										20
165.05.15 – Select Alt for Fut Study	10	10										20
165.05.20 – Maps for Env Evaluation		20										20
165.10 - Perform General Environmental Studies												-
165.10.05 – Surveys & Map for Study		15										15
165.10.10 – Obtain Rights of Entry	10	20										30
165.10.15 – Socio-Economic, Land Use & Growth, Farmland	20	60						160				240
165.10.20 - Visual/Landscape			40									40
165.10.25 – Noise Study											160	160
165.10.30 – Air Quality Study											100	100
165.10.35 – Water Quality Studies										60		60
165.10.40 – Energy Studies	10	10										20
165.10.45 – Summarize Geotech Report		10										10
165.10.50 – Preliminary Site Investigation for Hazardous Waste							80					80
165.10.55 - Right of Way Relocation Impact Document	10							80	50			140
165.10.60 - Location Hydraulic/Floodplain Study Report										50		50
165.10.65 – Paleontology Study						80						80
165.15 - Perform Biological Studies												-
165.15.05 – Biological Assessment				100								100
165.15.10 – Wetlands Study				40								40
165.15.15 – Resource Agency Permit Coordination				40								40
165.15.20 – NES Report				150								150
165.20 - Perform Cultural Resource Studies												-
165.20.05.05 Prepare APE Map					70							70
165.20.05.10 Native American Consultation					30							30
165.20.05 – Archaeology Survey												-
165.20.10 – Extended Phase I Archaeology Studies/Prepare ASR with sites present					128							128
165.20.15 – Phase II Archaeology Studies/Prepare HRER					572							572
165.20.20 – Historic& Architect Studies/Conduct Extended Phase 1					-							-
165.20.25 – Cultural Resource Compliance Docs					-							-
165.20.25.05 - Final APE map/Study Area Map												-
165.20.25.15 - Prepare HPSR					65							65
165.20.45 - Prepare HRCR												-
165.20.50 - Prepare FOE/MOA					150							150
165.20.50 - Prepare Data Recovery Plan/Treatment Plan												-
165.25 - Prepare and Approve Draft Environmental Document												-
165.25.05 – Prepare DED	75	150										225
165.25.10 – 4(f) Evaluation	20	100										120
165.25.15 – CE/CE Determination												-
165.25.20 – Peer & Other Reviews	100	140										240
165.25.25 – Obtain Approval to Circ	25	20										45

WBS Task Activity Code	Senior	Generalist	Landscape Architect	Biologist	Cultural Resource Specialist	Paleontologist	Haz Waste Specialist	Socio-Economic Specialist	R/W & Relocation Specialist	Storm Water Specialist	Noise/Air Specialist	Total
175 Circulate Draft Environmental Document and Select Preferred Project Alternative												
175.05 - Circulate DED	15	20										35
175.05.05 – Master Dist & Inv Lists		20										20
175.05.10 – Notices Regarding Publiv Hearing & Availability	10	30										40
175.05.15 – Publish & Circulate DED	30	50										80
175.05.20 – Fed Const Det (Coastal)												-
175.10 - Hold Public Hearing												-
175.10.05 – Determine Need for Pub Hearing	5											5
175.10.10 – Pub Hearing Logistics		30										30
175.10.15 – Displays for Pub Hearing	20	30										50
175.10.20 – Notices of Public Hearing & Availability	5	20										25
175.10.25 – Review Map Displays	5											5
175.10.30 – Display Public Hearing Maps		10										10
175.10.35 – Hold Public Hearing	10	10										20
175.10.40 – Distribute Record of Pub Hearing		20										20
175.15 – Respond to Public Hearing Comments	30	40										70
175.20 – Select Preferred Alternative	10											10
180 Prepare and Approve Project Report and Final Environmental Document												
180.10 - Prepare and Approve Final ED												-
180.10.05 – Prep & Approve FED	25	10										35
180.10.05.10 – Public Circulation of ED for Review	5	10										15
180.15 - Close Out Environmental Process	5	10										15
180.15.05 – Prep & App ROD (NEPA)												-
180.15.10 – Prep & File NOD (CEQA)		5										5
205 Obtain Permits, Agreements and Route Adoptions												
205.05 - Determine Required Permits												-
205.10 - Obtain Permits												-
205.10.05 – Army Corp Permit (404)				50								50
205.10.10 – USFS Permit												-
205.10.15 – US Coast Guard Permit				20								20
205.10.20 – DFG Permit (1602)				50								50
205.10.25 – Coastal Dev Permit												-
205.10.30 – Loc Agcy Concurrence												-
205.10.40 – Waste Dischg (NPDES)										50		50
205.10.45 – USFWS Approval												-
205.10.50 – RWQCB Permit (401)				50								50
235 Mitigate Environmental Impacts and Clean-up Hazardous Waste												
235.05 - Perform Environmental Mitigation	40	40		30	30					20	60	220
235.10 - Perform Detailed Site Investigation for Haz Waste							75					75
235.25 – Perform HW Clean-up							75					75
235.35 – Long Term Mitigation Monitoring				100								100
255 Circulate, Review and Prepare Final District PS&E Package												
255.15 – Env Reevaluation					80							80
270 Perform Construction Engineering and General Contract Administration												
270.05 - Prepare Engineer's File												-
270.20.50 - Construction Monitoring (cultural)					30							30
285 Prepare and Administer Contract Change Orders												
285.10 - Environmental Support for Construction	40	40		90								170
Total Project Hours	750	1,020	40	730	1,165	80	240	240	50	190	330	4,835

ATTACHMENT B – PROJECT TIMELINE

Hammett/SR-99 Interchange Reconstruction Schedule

Task Name	Duration	Start	Finish
Design	65 days	Mon 1/26/09	Fri 4/24/09
Right of Entry	40 days	Mon 1/26/09	Fri 3/20/09
Env. Techn. Studies	**239 days**	**Mon 2/16/09**	**Thu 1/14/10**
Cultural Studies	**238 days**	**Mon 2/16/09**	**Wed 1/13/10**
Surveys/Records Search	35 days	Mon 2/16/09	Fri 4/3/09
HRER	54 days	Mon 3/2/09	Thu 5/14/09
ASR	30 days	Mon 3/2/09	Fri 4/10/09
HPSR	8 days	Thu 5/14/09	Mon 5/25/09
Caltrans/SHPO Review	30 days	Mon 5/25/09	Fri 7/3/09
Finding of Effect	60 days	Fri 7/3/09	Thu 9/24/09
Caltrans/SHPO Review	80 days	Thu 9/24/09	Wed 1/13/10
106 Clearance	1 day	Wed 1/13/10	Wed 1/13/10
Biology Studies	**214 days**	**Mon 3/23/09**	**Thu 1/14/10**
Surveys	20 days	Mon 3/23/09	Fri 4/17/09
NES	27 days	Fri 4/17/09	Mon 5/25/09
Biological Assessment	20 days	Mon 5/25/09	Fri 6/19/09
Caltrans Review	25 days	Fri 6/19/09	Thu 7/23/09
USFWS/NMFS consultation	120 days	Thu 7/23/09	Wed 1/6/10
Biological opinion	7 days	Wed 1/6/10	Thu 1/14/10
Palelontology	30 days	Mon 3/2/09	Fri 4/10/09
Noise/Air	30 days	Mon 4/6/09	Fri 5/15/09
Water Quality/Drainage	30 days	Mon 3/9/09	Fri 4/17/09
ISA Hazmat	30 days	Mon 3/9/09	Fri 4/17/09
PSA Hazmat	85 days	Fri 4/17/09	Thu 8/13/09
Visual Impacts	20 days	Fri 5/1/09	Thu 5/28/09
Farmland Conversion	40 days	Mon 4/20/09	Fri 6/12/09
AD IS/EA; Peer Review	45 days	Mon 4/20/09	Fri 6/19/09
Caltrans Review	30 days	Fri 6/19/09	Thu 7/30/09
Draft IS/EA Revision	20 days	Thu 7/30/09	Wed 8/26/09
Caltrans/FHWA Approval	20 days	Wed 8/26/09	Tue 9/22/09
Public Review/Circulation	23 days	Tue 9/22/09	Thu 10/22/09
Pref. Altern./Responses	11 days	Thu 10/22/09	Thu 11/5/09
Caltrans Peer Review	35 days	Thu 11/5/09	Wed 12/23/09
Revision	12 days	Wed 12/23/09	Thu 1/7/10
Caltrans Approval	14 days	Thu 1/7/10	Tue 1/26/10
Approve MND	2 days	Wed 1/27/10	Thu 1/28/10
FONSI	1 day	Thu 1/28/10	Thu 1/28/10



Project: Hammett Schedule.mpp
Date: Fri 12/19/08

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline

Attachment I –Cooperative Agreement

10-STA-99-24.4
State Route 99/Hammett Road
Interchange Modifications
EA: 10-0L320
District Agreement No. 10-327

COOPERATIVE AGREEMENT

THIS AGREEMENT, ENTERED INTO EFFECTIVE ON December 10, 2008, is between the STATE OF CALIFORNIA, acting by and through its Department of Transportation, referred to herein as "STATE", and the

County of Stanislaus, a political subdivision of the State of California, referred to herein as "COUNTY".

RECITALS

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

2. COUNTY intends to modify the interchange at State Route (SR) 99 and Hammett Road, referred to herein as "PROJECT"

3. COUNTY is willing to fund one hundred percent (100%) of costs, except that the costs of STATE's Independent Quality Assurance (IQA) of PROJECT Project Approval and Environmental Document (PA&ED) hereinafter referred to as WORK, and STATE's costs incurred as the California Environmental Quality Act (CEQA) Lead Agency and National Environmental Policy Act (NEPA) Lead Agency, if applicable, in the review and approval of the PROJECT environmental documentation prepared entirely by COUNTY, will be borne by STATE.

4. STATE funds will not be used to finance any of the WORK costs except as set forth in this Agreement.

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

6. PROJECT Plans, Specifications and Estimates (PS&E), Right of Way (R/W), landscape maintenance and construction will be the subject of a separate future agreement or agreements.

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

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

SECTION I

COUNTY AGREES:

1. To fund one hundred percent (100%) of all WORK costs except for costs of STATE's IQA and STATE's review and approval of the PROJECT environmental documentation for CEQA and NEPA, if applicable.

2. To not use STATE funds for any WORK costs except as set forth in this Agreement.

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

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

5. To have a Project Report (PR) prepared, at no cost to STATE, and to submit to STATE for STATE's review and concurrence at appropriate stages of development.. The PR for PROJECT shall be signed on behalf of COUNTY by a Civil Engineer registered in the State of California.

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

7. To permit STATE to monitor, participate, and oversee selection of personnel who will prepare the PR, conduct environmental studies and prepare environmental documentation, for PROJECT. COUNTY agrees to consider any request by STATE to avoid a contract award or to discontinue services of any personnel considered by STATE to be unqualified on the basis of credentials, professional expertise, failure to perform, and/or other pertinent criteria.

8. To make written application to STATE for necessary encroachment permits authorizing entry of COUNTY onto SHS right of way to perform required WORK as more specifically defined elsewhere in this Agreement. COUNTY shall also require COUNTY's consultants and contractors to make written application to STATE for the same necessary encroachment permits.

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

10. If COUNTY terminates the WORK prior to completion, COUNTY shall also be liable to compensate STATE for all the expenses incurred by STATE with regard to this Agreement.

SECTION II

STATE AGREES:

1. At no cost to COUNTY, to complete STATE's review as CEQA Lead Agency and NEPA Lead Agency, if applicable, of the environmental documentation prepared and submitted by COUNTY and to provide IQA of all COUNTY WORK necessary for completion of the PR for PROJECT done by COUNTY, including, but not limited to, investigation of potential hazardous material sites undertaken by COUNTY or its designee, and provide prompt reviews, comments, concurrence, and/or approvals as appropriate, of submittals by COUNTY, while cooperating in timely processing of documents necessary for completion of the environmental documentation and PR for PROJECT.

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

SECTION III

IT IS MUTUALLY AGREED:

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

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

3. The preparation of environmental documentation, including the related investigative studies and technical environmental reports for PROJECT shall be performed in

accordance with all applicable Federal and STATE standards and practices current as of the date of performance.

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

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

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

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

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

8. COUNTY, subject to STATE's prior review and approval, as a PROJECT cost, shall be responsible for preparing, submitting, publicizing and circulating all public notices related to the CEQA environmental process the NEPA, if applicable, environmental process, including, but not limited to, notice(s) of availability of the environmental document and/or determinations and notices of public hearings. Public notices shall comply with all State and Federal laws, regulations, policies and procedures. STATE will work with the appropriate Federal agency to publish notices in the Federal Register, if applicable.

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

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

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

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

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

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

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

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

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

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

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

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

16. Remedial actions proposed by COUNTY on SHS right of way shall be pre-approved by STATE and shall be performed in accordance with STATE's standards and practices and standards and practices mandated by those Federal and State regulatory agencies.

17. A separate Cooperative Agreement or agreements will be required to address and cover responsibilities and funding for PS&E, R/W, landscape maintenance, and the construction phase of PROJECT.

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

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

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

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

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

23. This Agreement shall terminate upon satisfactory completion of all PROJECT obligations of COUNTY and the delivery of required PA&ED PROJECT documents, with concurrence of STATE, or on January 6, 2015, whichever is earlier in time, except that the ownership, operation, maintenance, indemnification, environmental commitments, legal challenges, and claims articles shall remain in effect until terminated or modified, in writing, by mutual agreement. Should any claims arising out of PROJECT be asserted against one of the parties, the parties agree to extend the fixed termination date of this Agreement, until such time as the PROJECT claims are settled, dismissed or paid.

SIGNATURES ON FOLLOWING PAGE:

STATE OF CALIFORNIA
Department of Transportation
WILL KEMPTON
Director

By _____
KOME AJISE
District Director, District 10

STANISLAUS COUNTY

By _____
Jim DeMartini, Vice-Chairman
of the Board of Supervisors

Attest _____
CHRISTINE FERRARO TALLMAN
Clerk of the Board of Supervisors

Approved as to form and Procedure

By _____
Attorney
Department of Transportation

Approved as to Content

By _____
MATT MACHADO
Director of Public Works

Certified as to State Funds

By _____
ANNE WELLS
District 10 Budget Manager

Approved as to Form
John P. Doering,
County Counsel

By _____
THOMAS E. BOZE
Deputy County Counsel

Certified as to Procedure

By _____
Accounting Administrator

Attachment J – Traffic Forecasts

FIGURE 6
2035 NO BUILD TRAFFIC CONFIGURATION AND VOLUMES

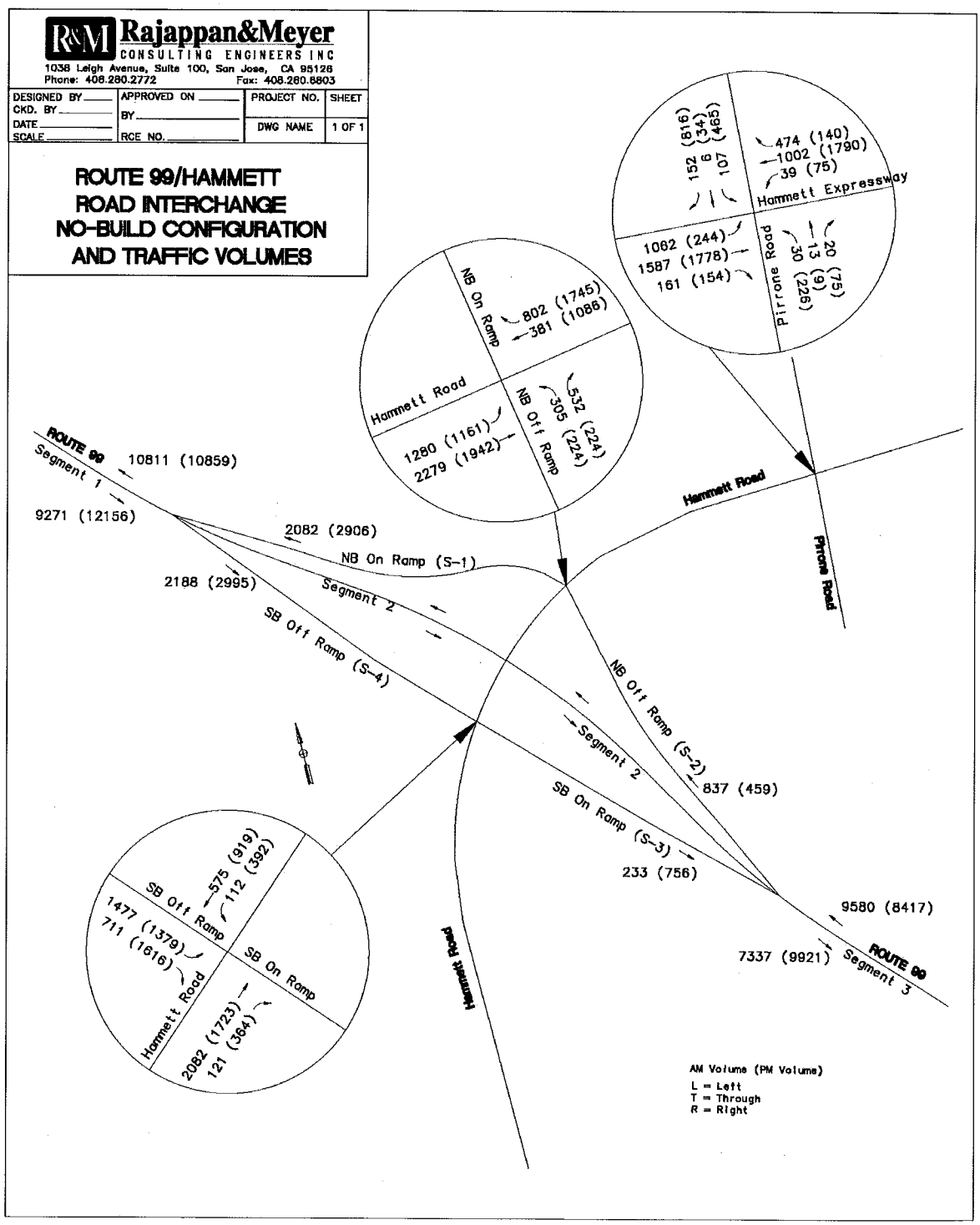


FIGURE 7
2035 BUILD ALTERNATIVE 1 TRAFFIC CONFIGURATION AND VOULMES

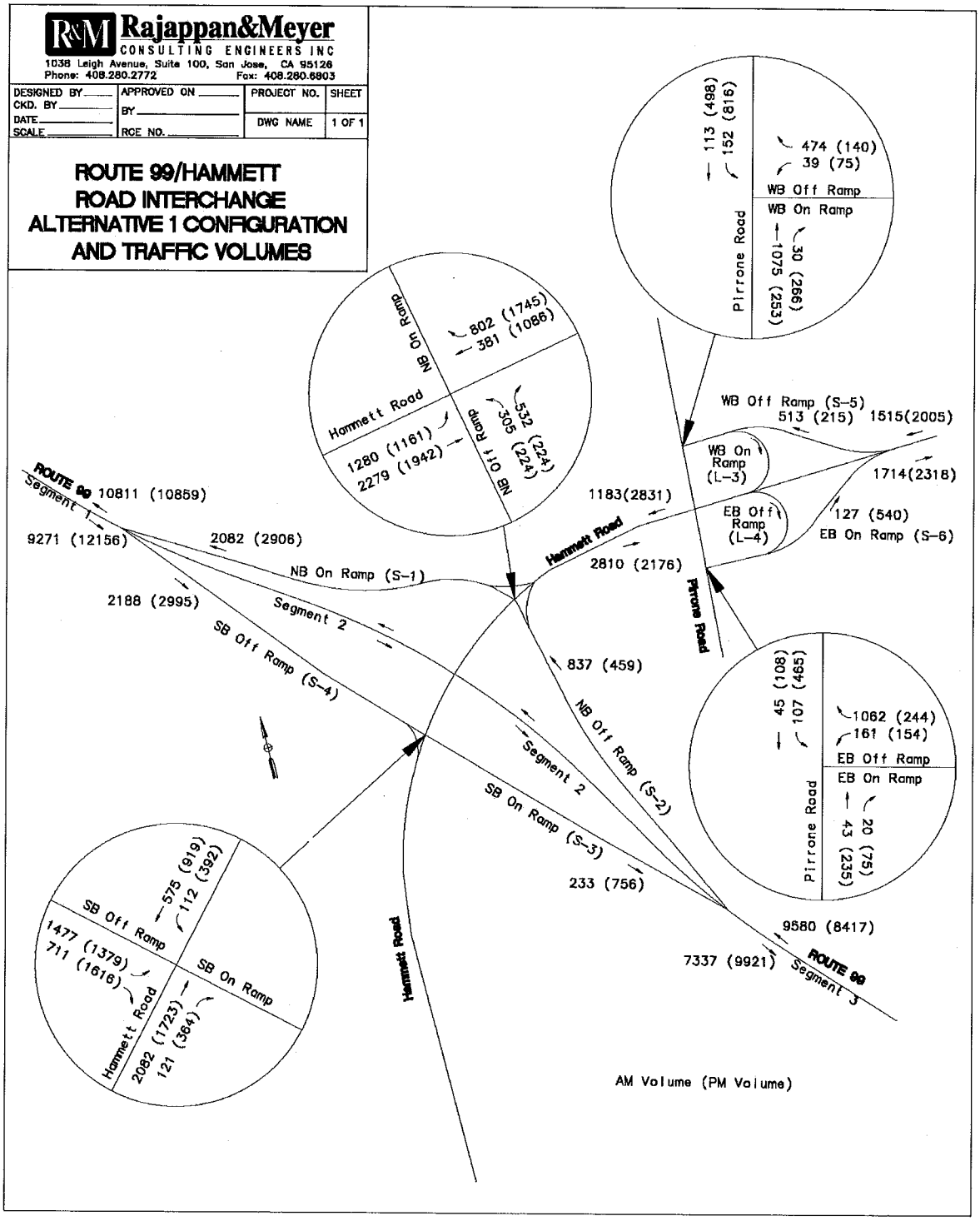


FIGURE 8
2035 BUILD ALTERNATIVE 2 TRAFFIC CONFIGURATION AND VOULMES