

INDEX OF PLANS

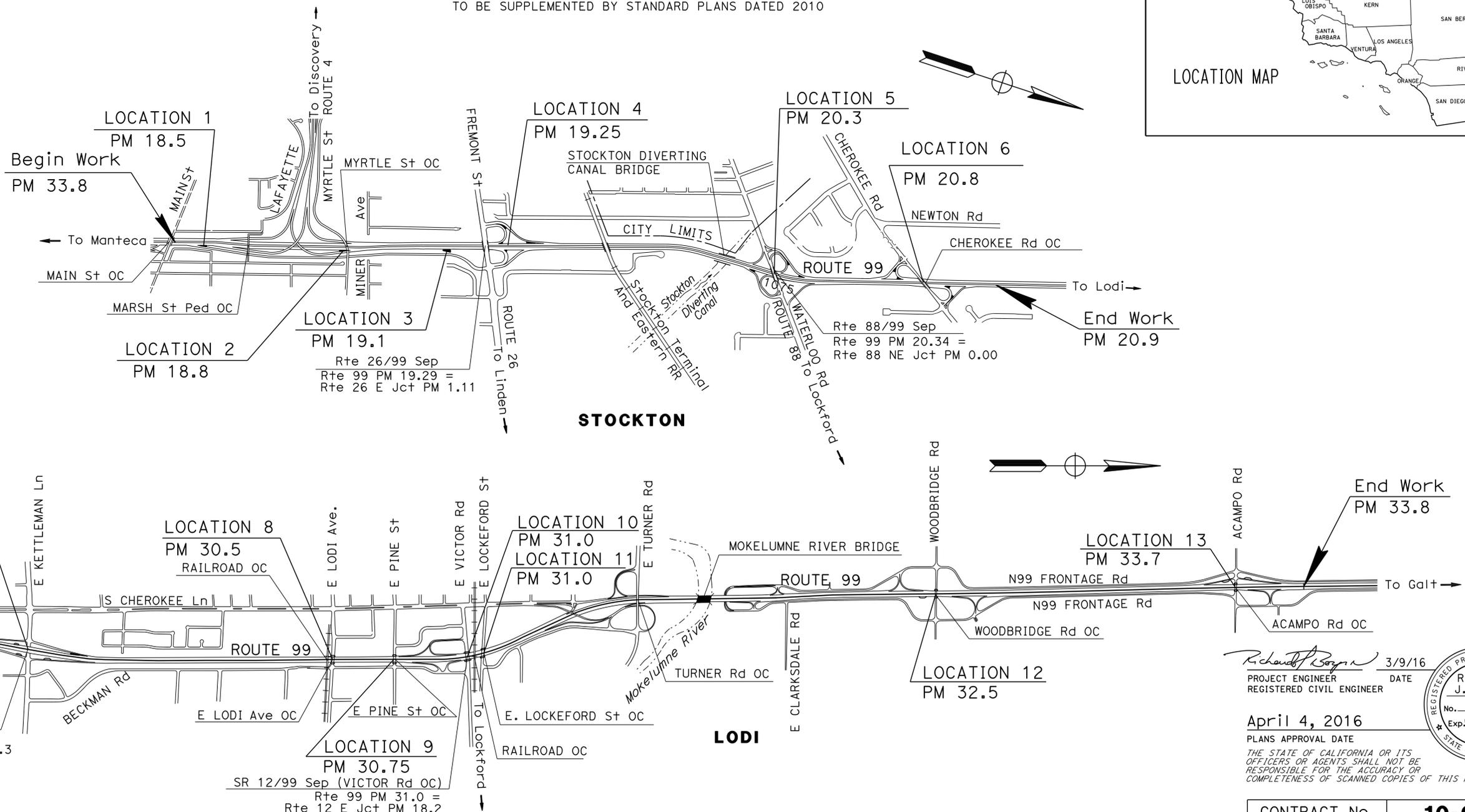
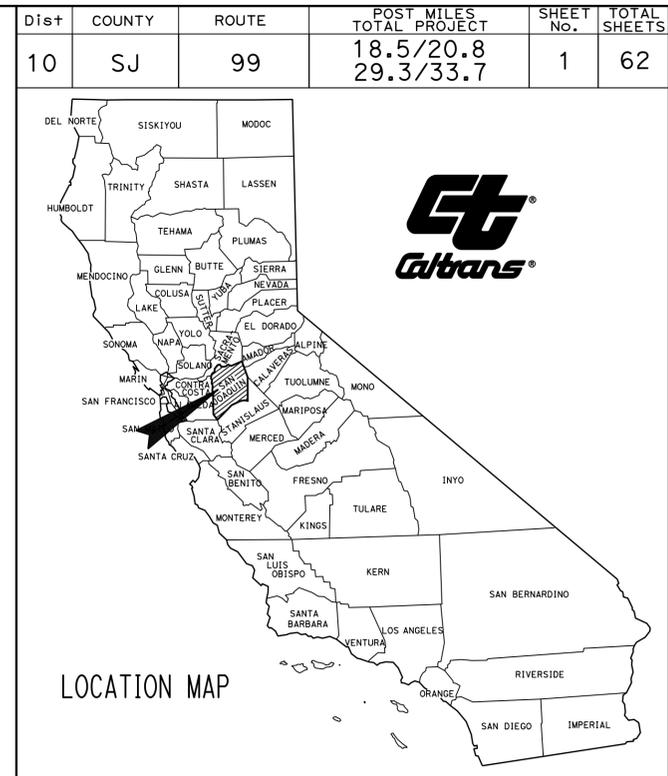
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-9	LAYOUTS
10-25	CONSTRUCTION DETAILS
26	CONSTRUCTION AREA SIGNS
27-29	TRAFFIC HANDLING PLANS AND QUANTITIES
30	MOTORIST INFORMATION PLAN
31-37	SIGN PLANS AND QUANTITIES
38-39	SUMMARY OF QUANTITIES
40-43	IRRIGATION PLANS, DETAILS AND QUANTITIES
44-62	REVISED STANDARD PLANS

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA **ACNHP-P099(600)E**  
**DEPARTMENT OF TRANSPORTATION**

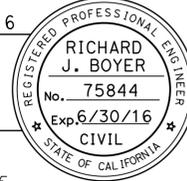
**PROJECT PLANS FOR CONSTRUCTION ON  
 STATE HIGHWAY  
 IN SAN JOAQUIN COUNTY AT VARIOUS  
 LOCATIONS FROM 0.1 MILE NORTH OF MAIN STREET  
 OVERCROSSING TO CHEROKEE ROAD OVERCROSSING  
 AND FROM ROUTE 12/99 SEPERATION TO  
 0.1 MILE NORTH OF ACAMPO ROAD OVERCROSSING**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



PROJECT MANAGER  
 SINAREN PHENG  
 DESIGN ENGINEER  
 NOMER GUTIERREZ

*Richard J. Boyer* 3/9/16  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
**April 4, 2016**  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

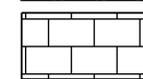
DATE PLOTTED => 25-JUL-2016 TIME PLOTTED => 15:43

x	G.E.	03/18/16
	G.E.	2/8/16
x	REVISOR	DATE
	GABE ELEFANTE	RICHARD BOYER
x	CALCULATED-DESIGNED BY	CHECKED BY
	NOMER GUTIERREZ	
x	FUNCTIONAL SUPERVISOR	
x	STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
	<b>Caltrans</b>	

**NOTES:**

- FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- SEE IRRIGATION PLANS FOR IRRIGATION CONDUIT LOCATIONS.

**LEGEND:**

-  GORE PAVING EXTENTION
-  MVP HMA (TYPE A)
-  SLOPE PAVING
-  TEXTURE PAVING (BRICK BASKET WEAVE)
-  TEXTURE PAVING (BRICK RUNNING BOND PATTERN)

**DESIGN DESIGNATION**

SLOPE, GORE, AND MVP PAVING

	PM: 18.5 - 20.8	
AADT	2015 (Exist YEAR)	100,600 T=11%
AADT	2017 (Const YEAR)	105,600 D=61%
AADT	2037 (DESGN YEAR)	171,400
FUTURE	DHV	17,200

	PM: 29.3 - 33.7	
AADT	2015 (Exist YEAR)	67,600 T=11%
AADT	2017 (Const YEAR)	70,600 D=60%
AADT	2037 (DESGN YEAR)	105,000
FUTURE	DHV	10,500

**PAVEMENT CLIMATE REGION**

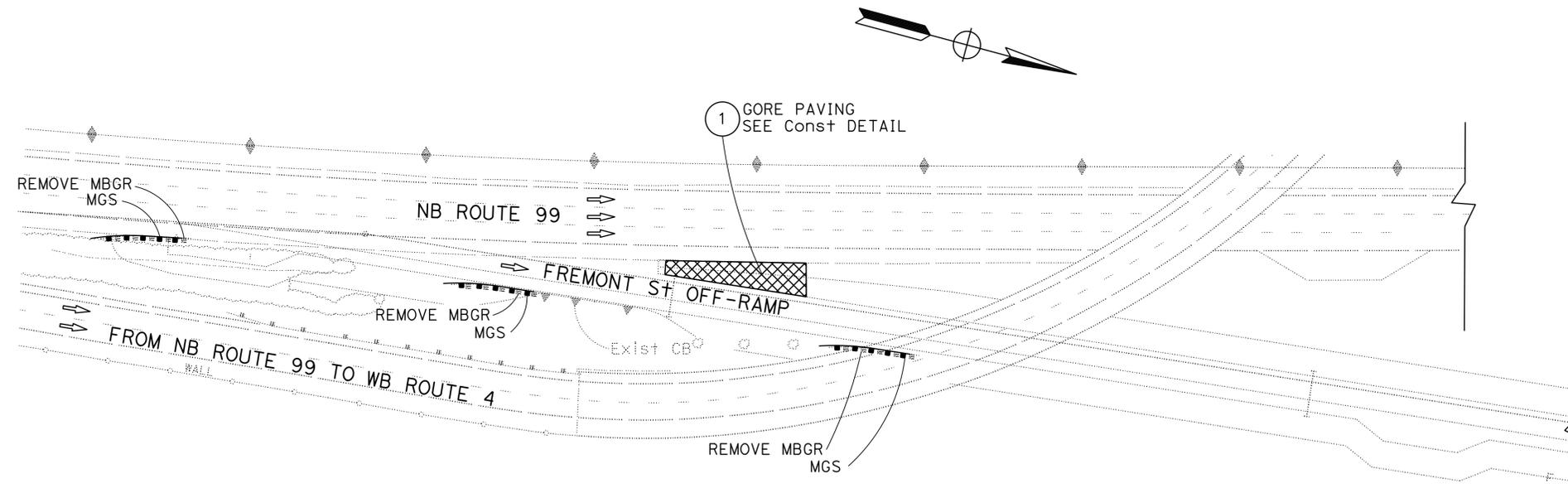
INLAND VALLEY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	2	62

Richard J. Boyer 3/9/16  
 REGISTERED CIVIL ENGINEER DATE  
 4-4-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 RICHARD J. BOYER  
 No. 75844  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA

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



① NB 99 TO FREMONT St OFF-RAMP

**LOCATION 1**  
PM 18.5

**LAYOUT**  
SCALE: 1" = 50'

**L-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	NOMER GUTIERREZ
		CALCULATED-DESIGNED BY	CHECKED BY
GABE ELEFANTE	RICHARD BOYER	REVISOR	DATE
		REVISOR	DATE
G.E.	G.E.	REVISOR	DATE
G.E.	G.E.	REVISOR	DATE

**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

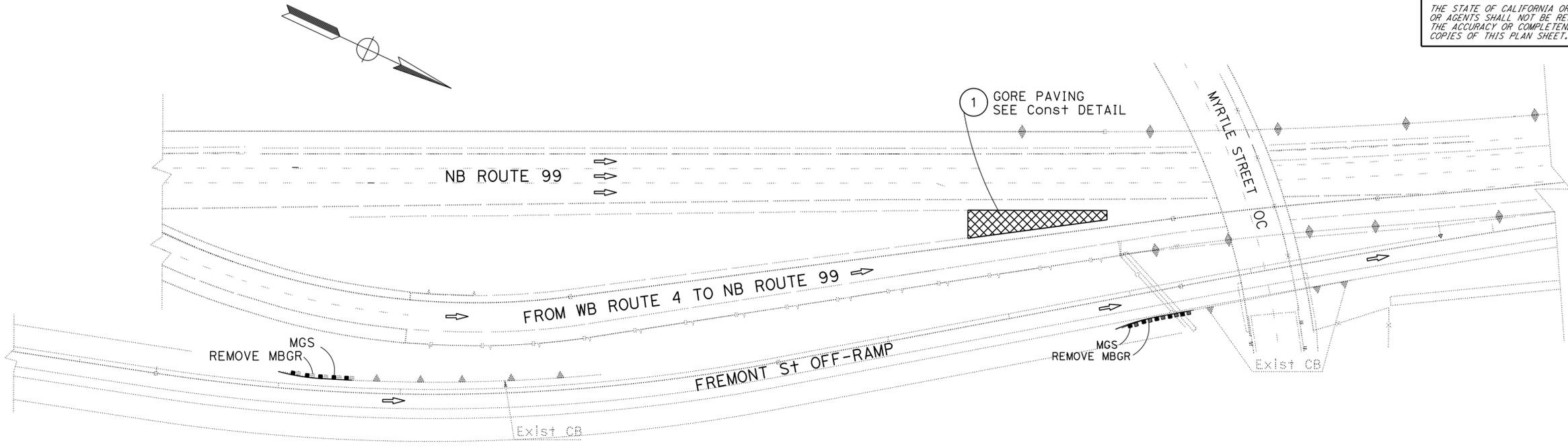
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	3	62

Richard J. Boyer 3/9/16  
REGISTERED CIVIL ENGINEER DATE

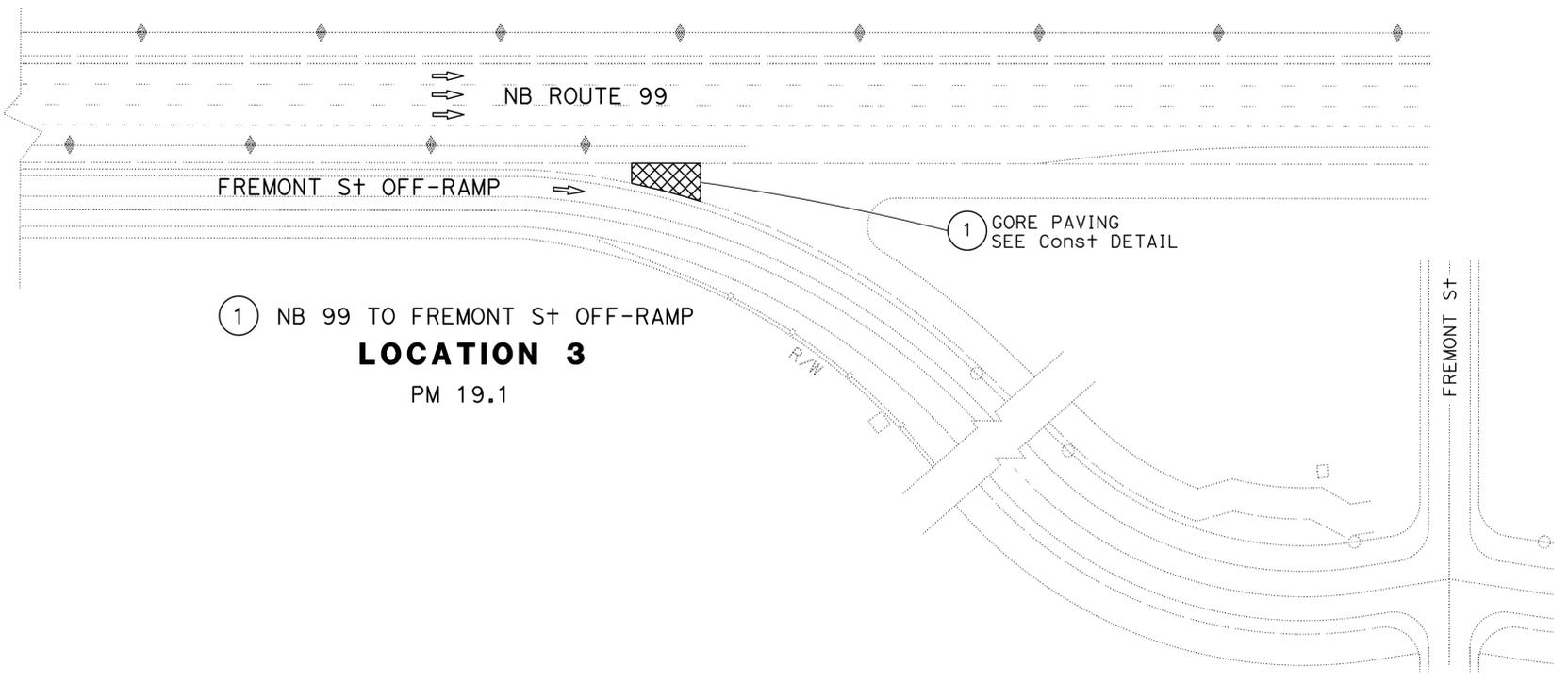
4-4-16  
PLANS APPROVAL DATE

RICHARD J. BOYER  
No. 75844  
Exp. 6/30/16  
CIVIL  
STATE OF CALIFORNIA

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1 WB 04 TO NB 99 ON-RAMP  
**LOCATION 2**  
PM 18.8



1 NB 99 TO FREMONT ST OFF-RAMP  
**LOCATION 3**  
PM 19.1

**LAYOUT**  
SCALE: 1" = 50'

**L-2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	4	62

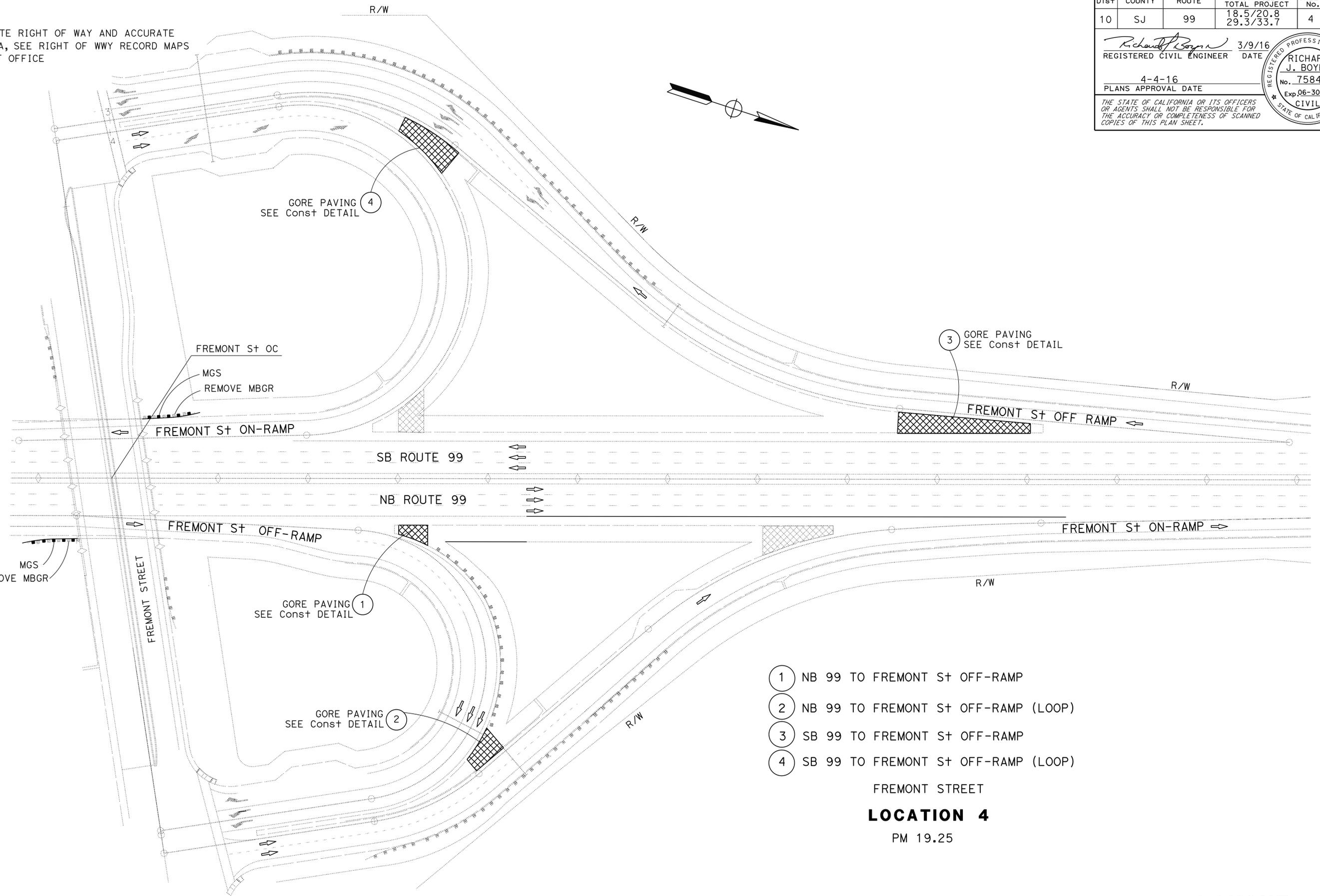
<i>Richard J. Boyer</i>	3/9/16
REGISTERED CIVIL ENGINEER	DATE
RICHARD J. BOYER	
No. 75844	
Exp. 06-30-16	
CIVIL	
STATE OF CALIFORNIA	

4-4-16  
PLANS APPROVAL DATE

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**NOTES:**  
FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WY RECORD MAPS AT DISTRICT OFFICE



- ① NB 99 TO FREMONT ST OFF-RAMP
- ② NB 99 TO FREMONT ST OFF-RAMP (LOOP)
- ③ SB 99 TO FREMONT ST OFF-RAMP
- ④ SB 99 TO FREMONT ST OFF-RAMP (LOOP)

FREMONT STREET  
**LOCATION 4**  
PM 19.25

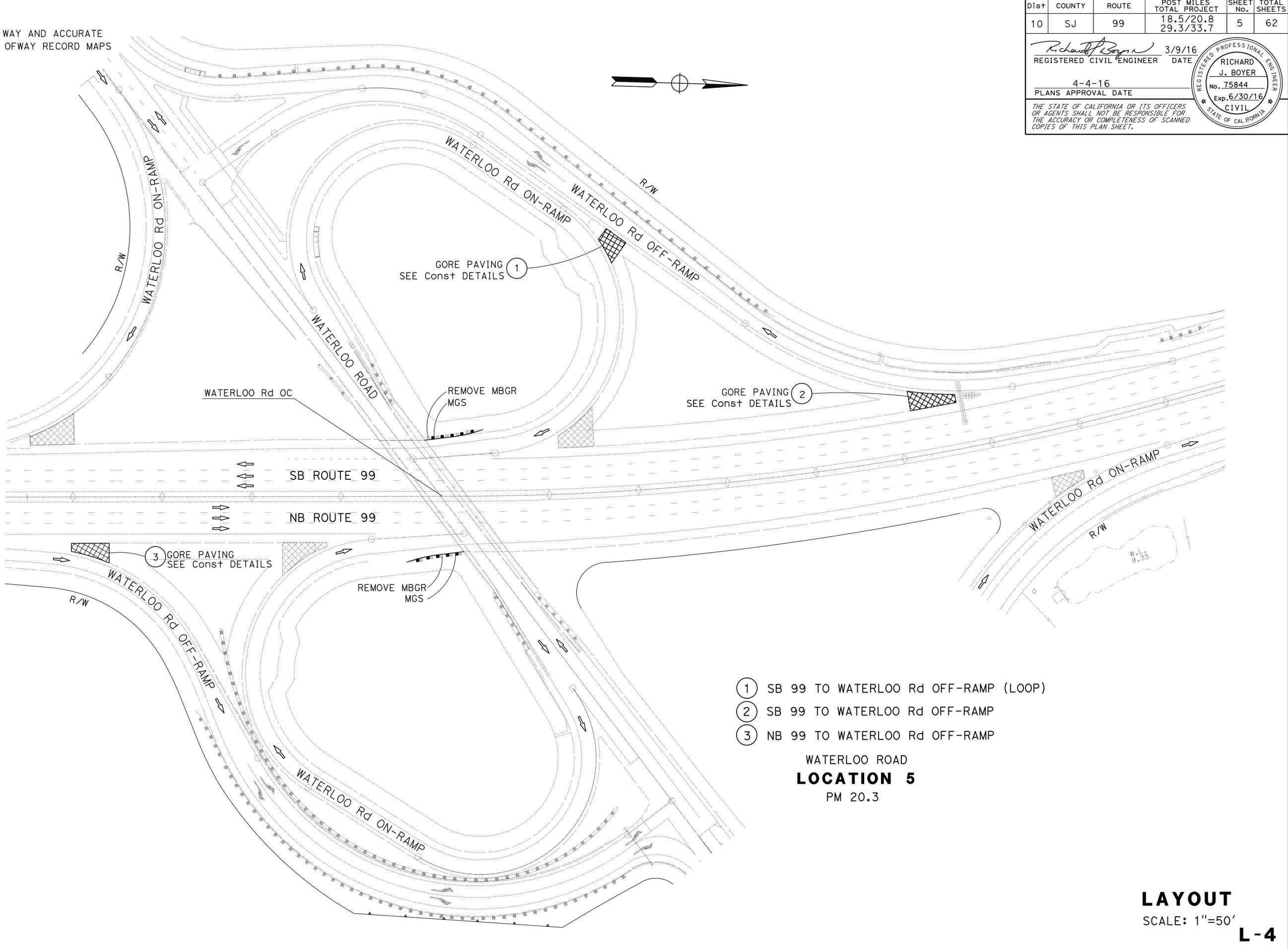
**LAYOUT**  
SCALE: 1" = 50'  
**L-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	NOMER GUTIERREZ
CALCULATED-DESIGNED BY	CHECKED BY
GABE ELEFANTE	RICHARD BOYER
REVISOR	DATE
G.E.	2/12/16
G.E.	03/18/16

LAST REVISION      DATE PLOTTED => 25-JUL-2016      TIME PLOTTED => 15:43

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN

FUNCTIONAL SUPERVISOR	HELEN LAM	REVISOR	G.E.
CHECKED BY	RICHARD BOYER	DATE	03/18/16
DESIGNED BY		DATE	03/18/16
CHECKED BY		DATE	2/12/16
DESIGNED BY		DATE	
CHECKED BY		DATE	
DESIGNED BY		DATE	
CHECKED BY		DATE	
DESIGNED BY		DATE	
CHECKED BY		DATE	



- ① SB 99 TO WATERLOO Rd OFF-RAMP (LOOP)
- ② SB 99 TO WATERLOO Rd OFF-RAMP
- ③ NB 99 TO WATERLOO Rd OFF-RAMP

WATERLOO ROAD  
**LOCATION 5**  
 PM 20.3

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	5	62

REGISTERED CIVIL ENGINEER RICHARD J. BOYER  
 No. 75844  
 Exp. 6/30/16  
 CIVIL

3/9/16 DATE  
 4-4-16 PLANS APPROVAL DATE

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	6	62

<i>Richard J. Boyer</i>	3/9/16
REGISTERED CIVIL ENGINEER	DATE
4-4-16	
PLANS APPROVAL DATE	

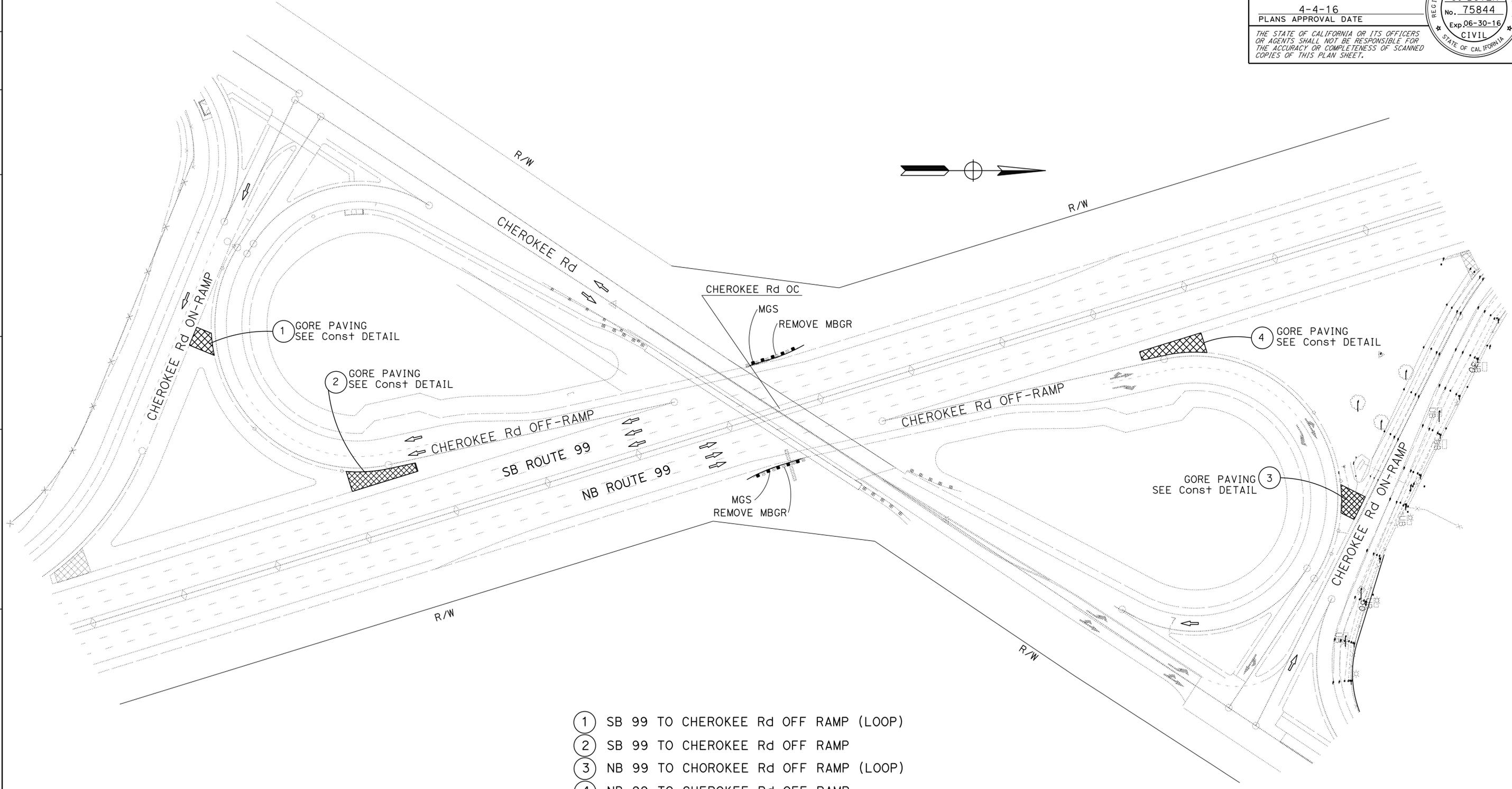
  

REGISTERED PROFESSIONAL ENGINEER <b>RICHARD J. BOYER</b> No. 75844 Exp. 06-30-16 CIVIL STATE OF CALIFORNIA
---

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	NOMER GUTIERREZ
CALCULATED-DESIGNED BY	CHECKED BY
GABE ELEFANTE	RICHARD BOYER
REVISED BY	DATE REVISED
G.E.	2/12/15
G.E.	03/18/15



- ① SB 99 TO CHEROKEE Rd OFF RAMP (LOOP)
- ② SB 99 TO CHEROKEE Rd OFF RAMP
- ③ NB 99 TO CHOROKEE Rd OFF RAMP (LOOP)
- ④ NB 99 TO CHEROKEE Rd OFF RAMP

CHEROKEE ROAD  
**LOCATION 6**  
 PM 20.8

**LAYOUT**  
 SCALE: 1" = 50'  
**L-5**

LAST REVISION      DATE PLOTTED => 25-JUL-2016      TIME PLOTTED => 15:43  
 2-12-15



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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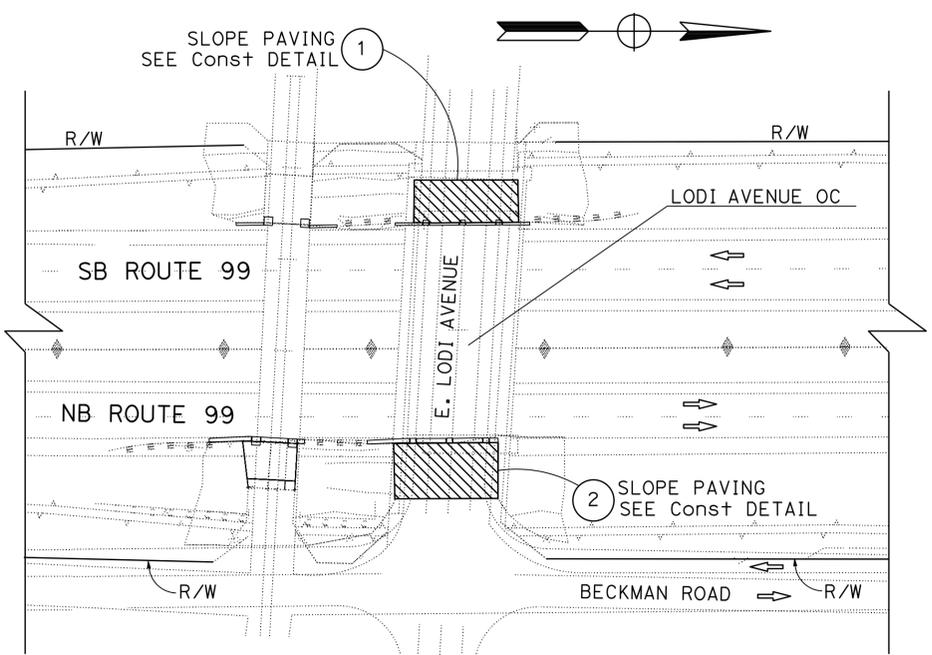
<i>Richard J. Boyer</i>	3/9/16
REGISTERED CIVIL ENGINEER	DATE
4-4-16	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER  
**RICHARD J. BOYER**  
 No. 75844  
 Exp. 06-30-16  
 CIVIL  
 STATE OF CALIFORNIA

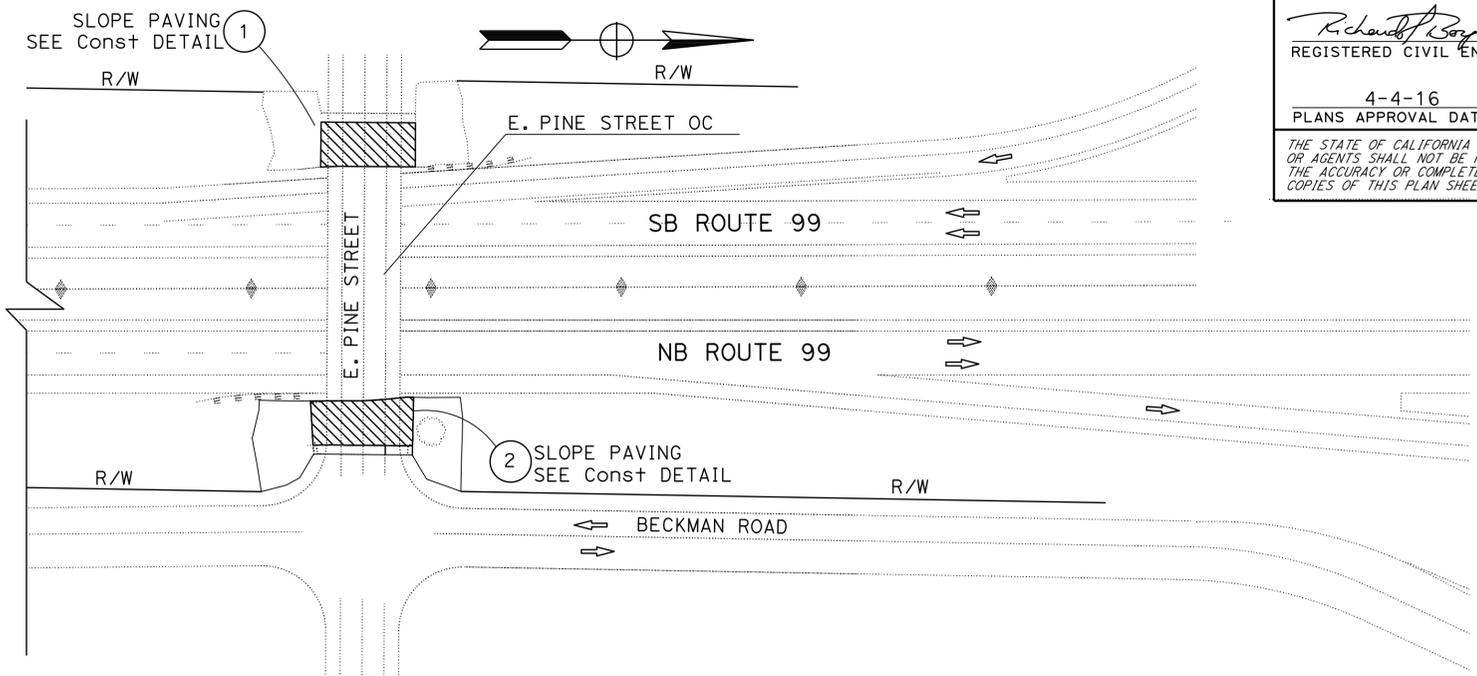
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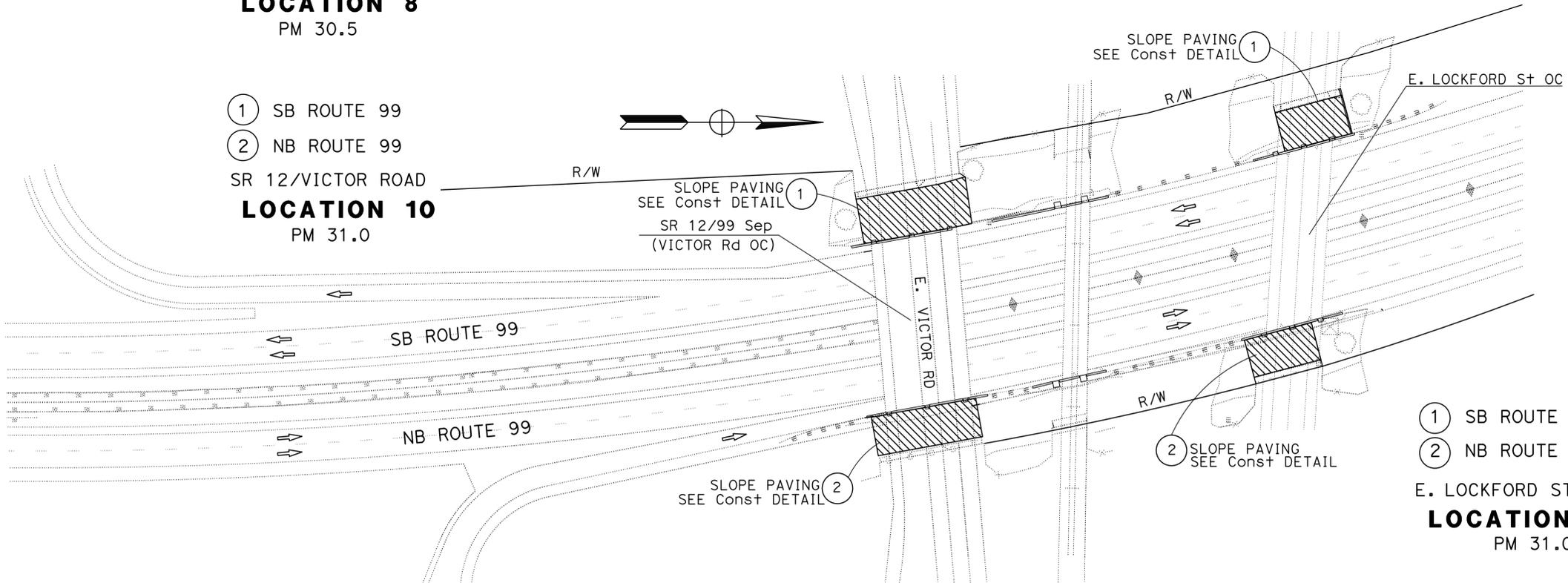
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



① SB ROUTE 99  
 ② NB ROUTE 99  
 E. LODI AVENUE  
**LOCATION 8**  
 PM 30.5



① SB ROUTE 99  
 ② NB ROUTE 99  
 E. PINE STREET  
**LOCATION 9**  
 PM 30.75



① SB ROUTE 99  
 ② NB ROUTE 99  
 SR 12/VICTOR ROAD  
**LOCATION 10**  
 PM 31.0

① SB ROUTE 99  
 ② NB ROUTE 99  
 E. LOCKFORD STREET  
**LOCATION 11**  
 PM 31.0

**SLOPE PAVING**

**LAYOUT**  
 SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	NOMER GUTIERREZ
CALCULATED-DESIGNED BY	CHECKED BY
GABE ELEFANTE	RICHARD BOYER
REVISOR	DATE
G.E.	2/16/16
G.E.	03/18/16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	9	62

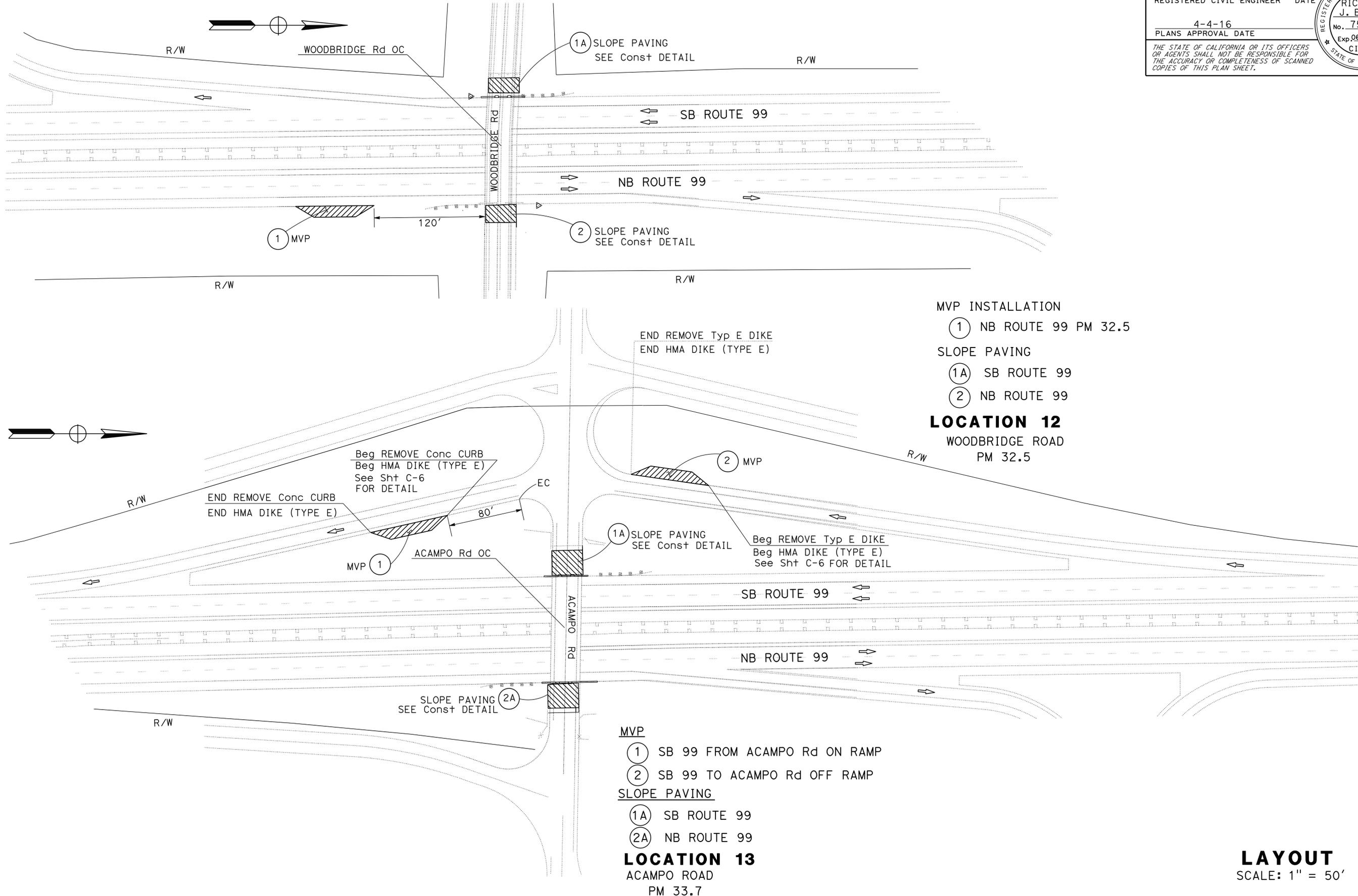
  

<i>Richard J. Boyer</i>	3/9/16
REGISTERED CIVIL ENGINEER	DATE
4-4-16	
PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	

REGISTERED PROFESSIONAL ENGINEER  
**RICHARD J. BOYER**  
 No. 75844  
 Exp. 06-30-16  
 CIVIL  
 STATE OF CALIFORNIA

**NOTES:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



- MVP INSTALLATION**
- ① NB ROUTE 99 PM 32.5
- SLOPE PAVING**
- ①A SB ROUTE 99
  - ② NB ROUTE 99
- LOCATION 12**  
WOODBRIDGE ROAD  
PM 32.5

- MVP**
- ① SB 99 FROM ACAMPO Rd ON RAMP
  - ② SB 99 TO ACAMPO Rd OFF RAMP
- SLOPE PAVING**
- ①A SB ROUTE 99
  - ②A NB ROUTE 99
- LOCATION 13**  
ACAMPO ROAD  
PM 33.7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	NOMER GUTIERREZ
CALCULATED-DESIGNED BY	CHECKED BY
GABE ELEFANTE	RICHARD BOYER
REVISED BY	DATE REVISED
G.E.	2/16/16
G.E.	03/18/16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	REVISOR	DATE
		NOMER GUTIERREZ		RICHARD BOYER	02-17-16
					03-19-16

**NOTES:**

ALL UTILITY BOXES, RAMP METERING BOXES AND LIGHT/SIGNAL POLES TO BE PROTECTED IN PLACE.

**LEGEND:**

- EXISTING UTILITY BOX
- SLOPE PAVING

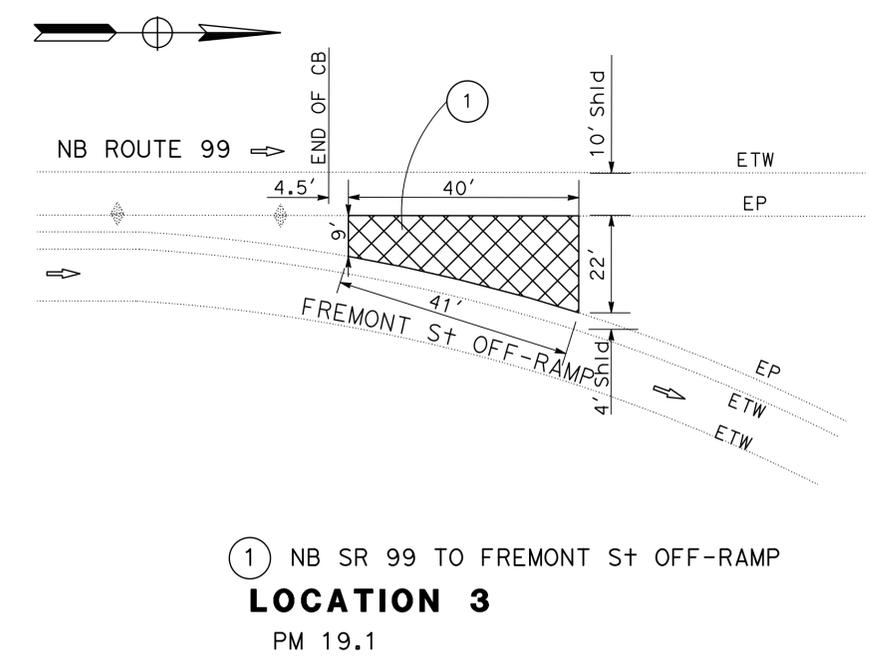
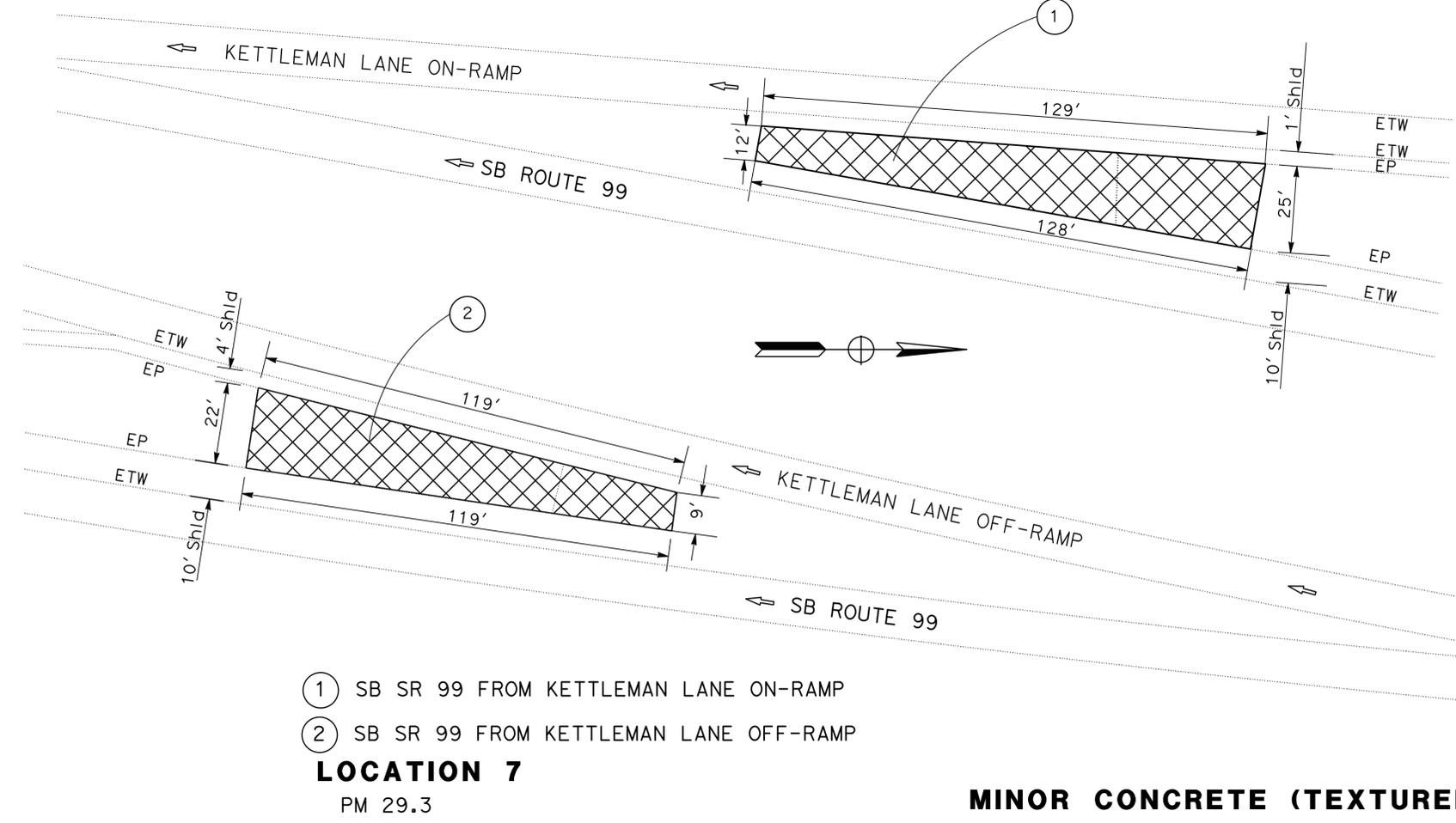
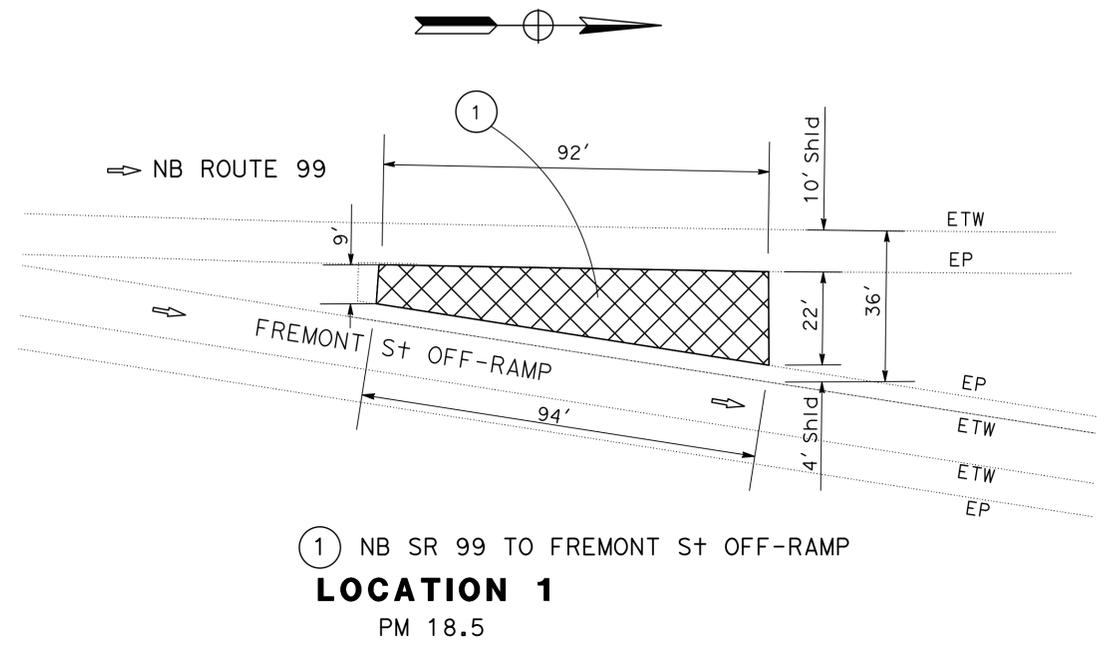
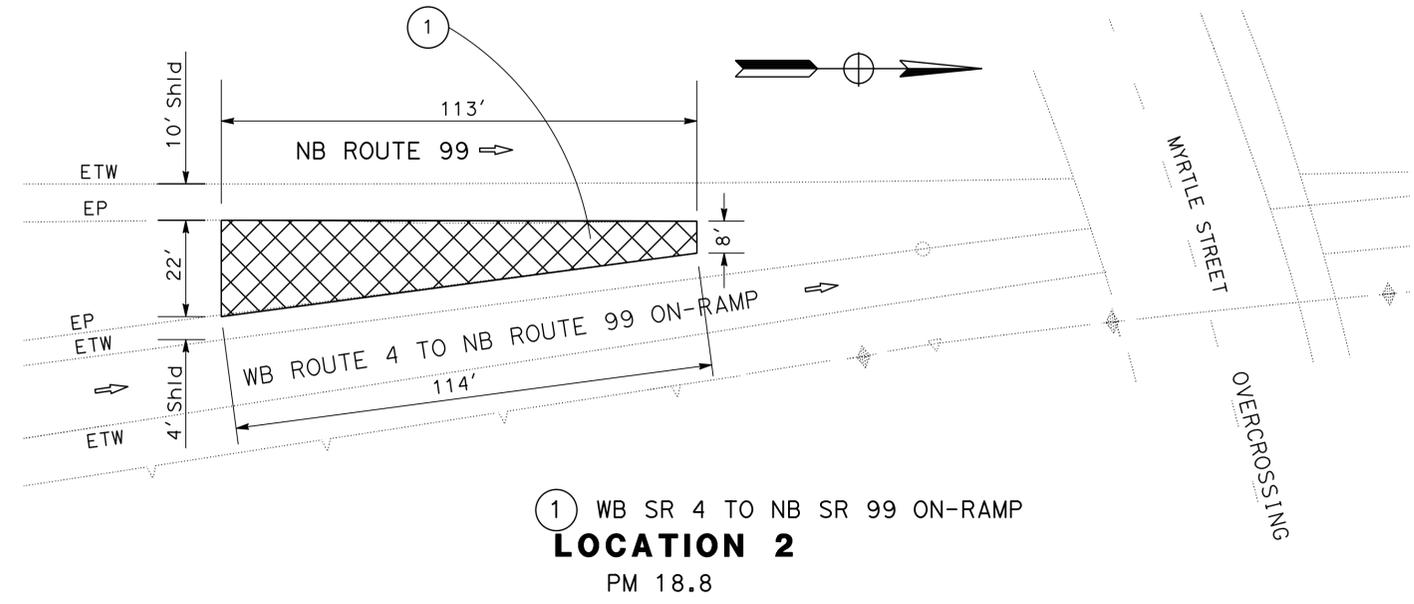
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	10	62

REGISTERED CIVIL ENGINEER RICHARD J. BOYER No. 75844 Exp. 6/30/16

3/9/16 DATE

4-4-16 PLANS APPROVAL DATE

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**MINOR CONCRETE (TEXTURED PAVING)**

**CONSTRUCTION DETAILS**

NO SCALE

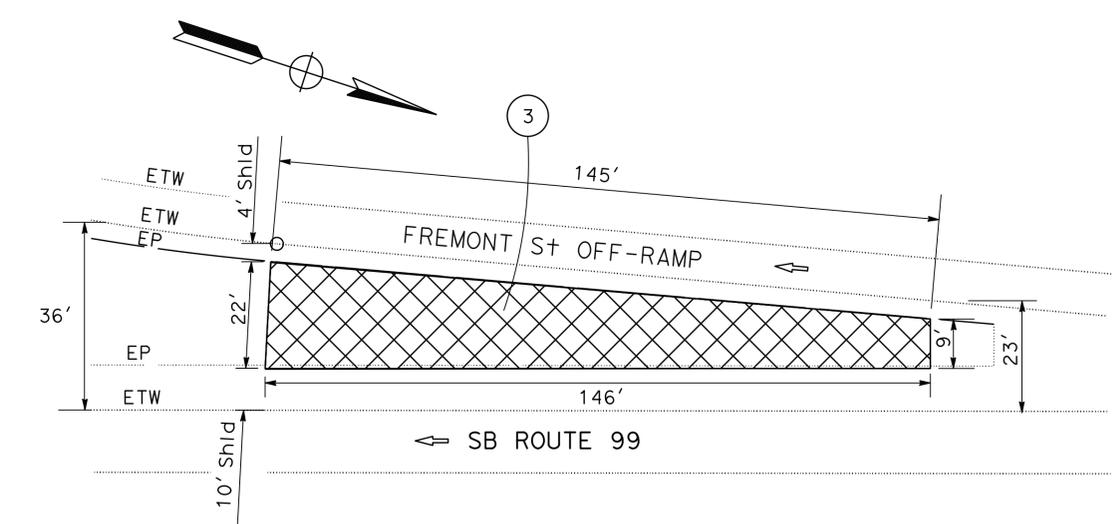
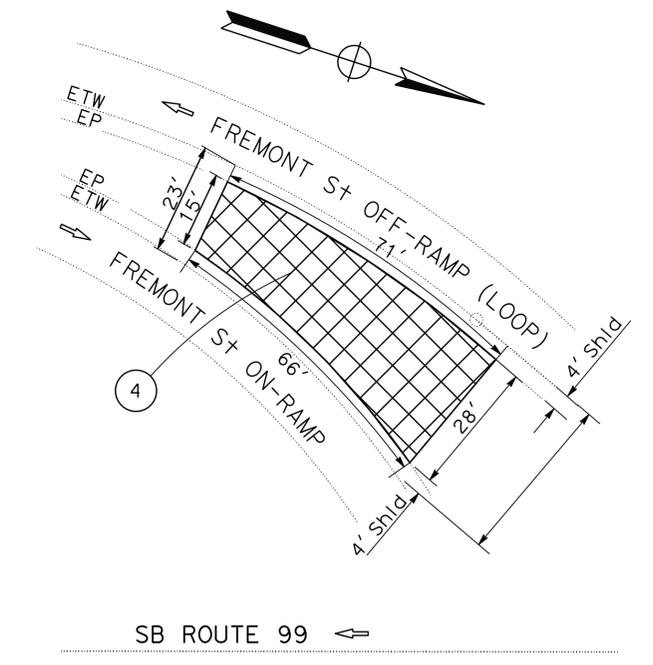
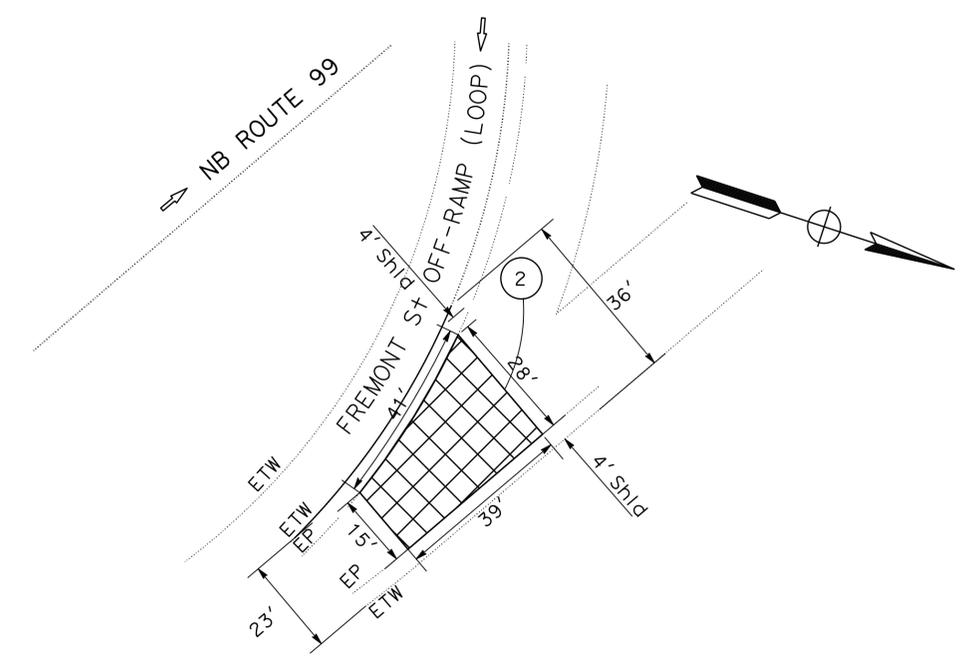
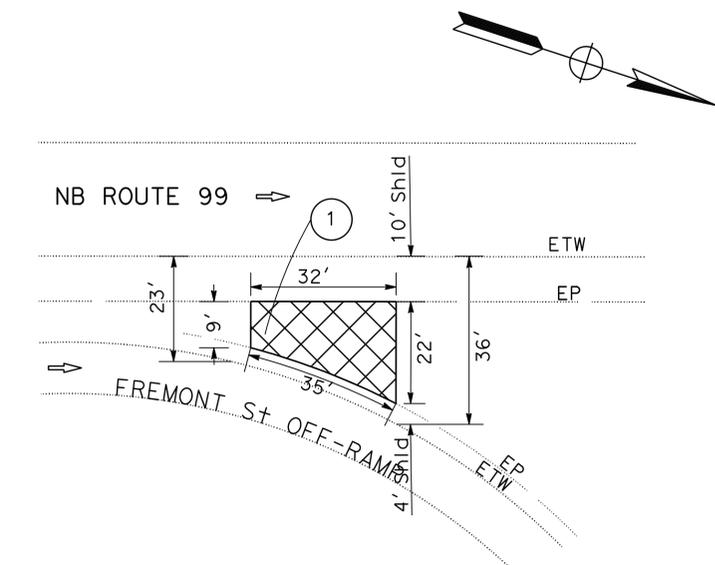
**C-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	11	62

Richard J. Boyer 3/9/16  
 REGISTERED CIVIL ENGINEER DATE  
 4-4-16  
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REGISTERED PROFESSIONAL ENGINEER  
 RICHARD J. BOYER  
 No. 75844  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA



- ① NB 99 TO FREMONT St OFF-RAMP
- ② NB 99 TO FREMONT St OFF-RAMP (LOOP)
- ③ SB 99 TO FREMONT St OFF-RAMP
- ④ SB 99 TO FREMONT St OFF-RAMP (LOOP)

**LOCATION 4**  
PM 19.25

**MINOR CONCRETE (TEXTURED PAVING)**

**CONSTRUCTION DETAILS**

NO SCALE

**C-2**

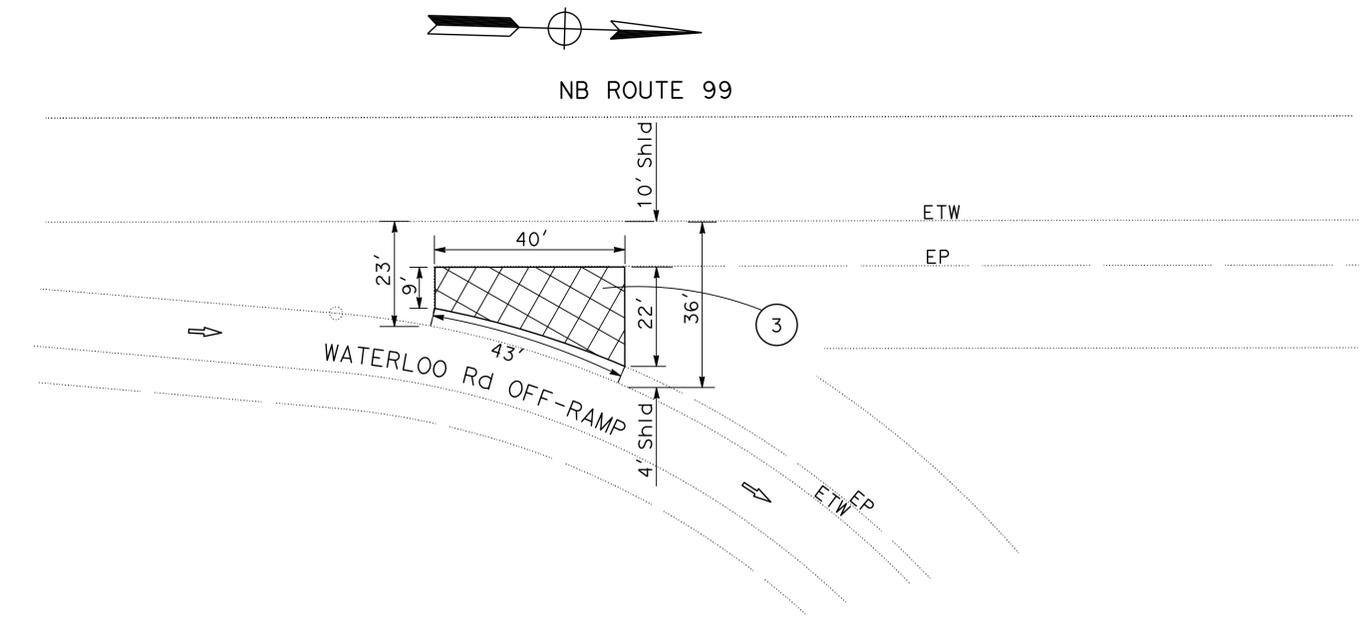
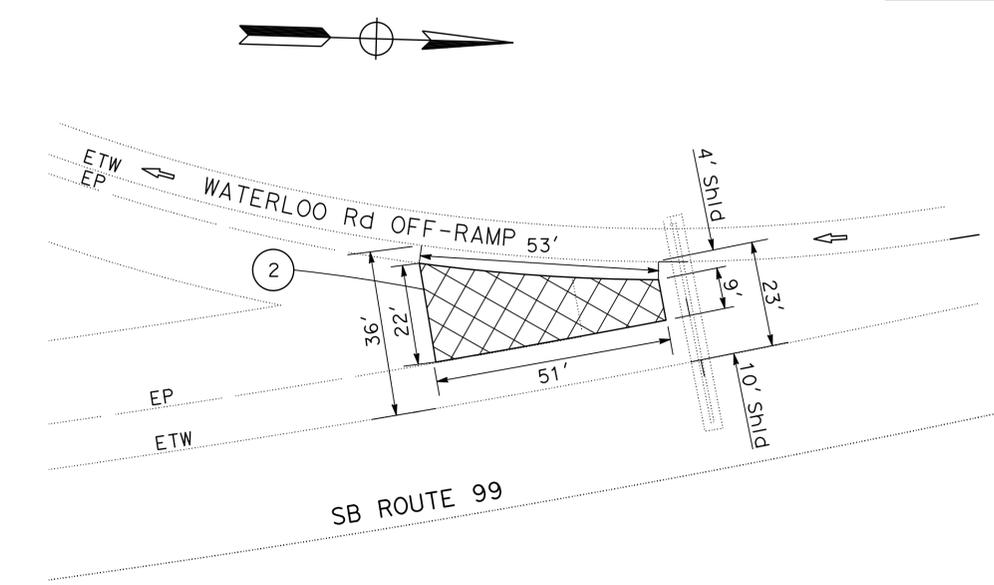
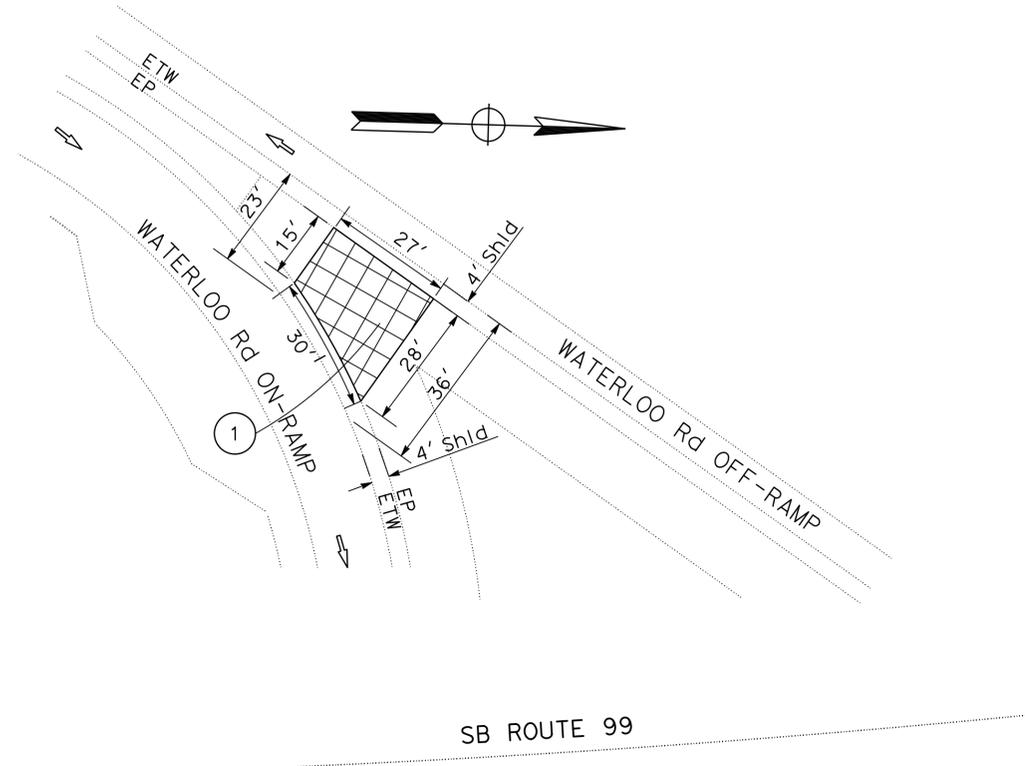
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
Caltrans	
FUNCTIONAL SUPERVISOR	NOMER GUTIERREZ
CALCULATED-DESIGNED BY	CHECKED BY
REVISOR	RICHARD BOYER
DATE	02-18-16
BY	03-18-16
REVISION	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	12	62

*Richard J. Boyer* 3/9/16  
 REGISTERED CIVIL ENGINEER DATE  
 4-4-16  
 PLANS APPROVAL DATE

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 OR AGENTS SHALL NOT BE RESPONSIBLE FOR  
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 COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 RICHARD  
 J. BOYER  
 No. 75844  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA



- ① SB 99 TO WATERLOO Rd OFF-RAMP (LOOP)
- ② SB 99 TO WATERLOO Rd OFF-RAMP
- ③ NB 99 TO WATERLOO Rd OFF-RAMP

**LOCATION 5**  
PM 20.3

**MINOR CONCRETE (TEXTURED PAVING)**

**CONSTRUCTION DETAILS**  
NO SCALE  
**C-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
Caltrans	
FUNCTIONAL SUPERVISOR	NOMER GUTIERREZ
CALCULATED-DESIGNED BY	CHECKED BY
HELEN LAM	RICHARD BOYER
REVISOR	DATE
G.E.	02-18-16
G.E.	03-18-16

LAST REVISION DATE PLOTTED => 25-JUL-2016  
 02-18-16 TIME PLOTTED => 15:43

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	13	62

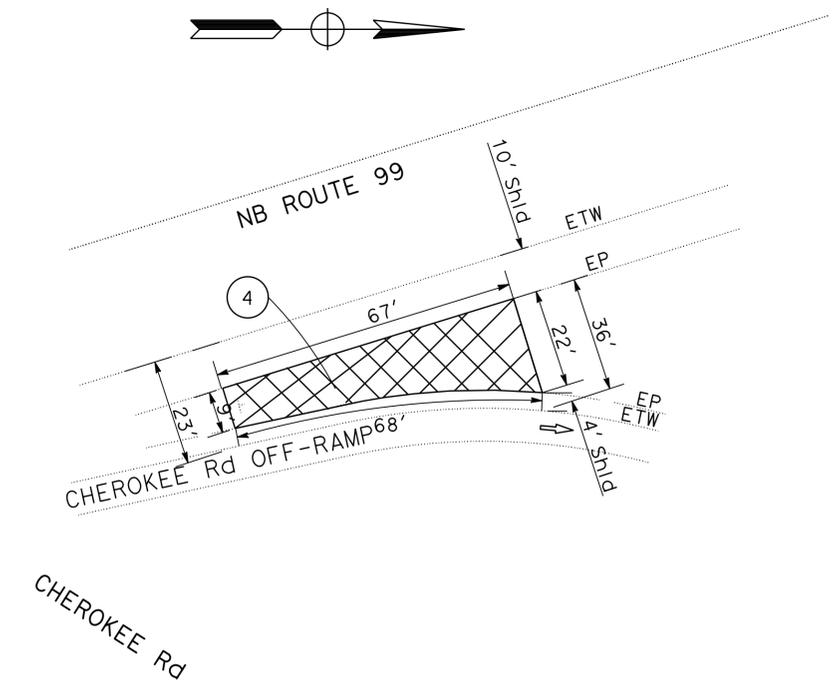
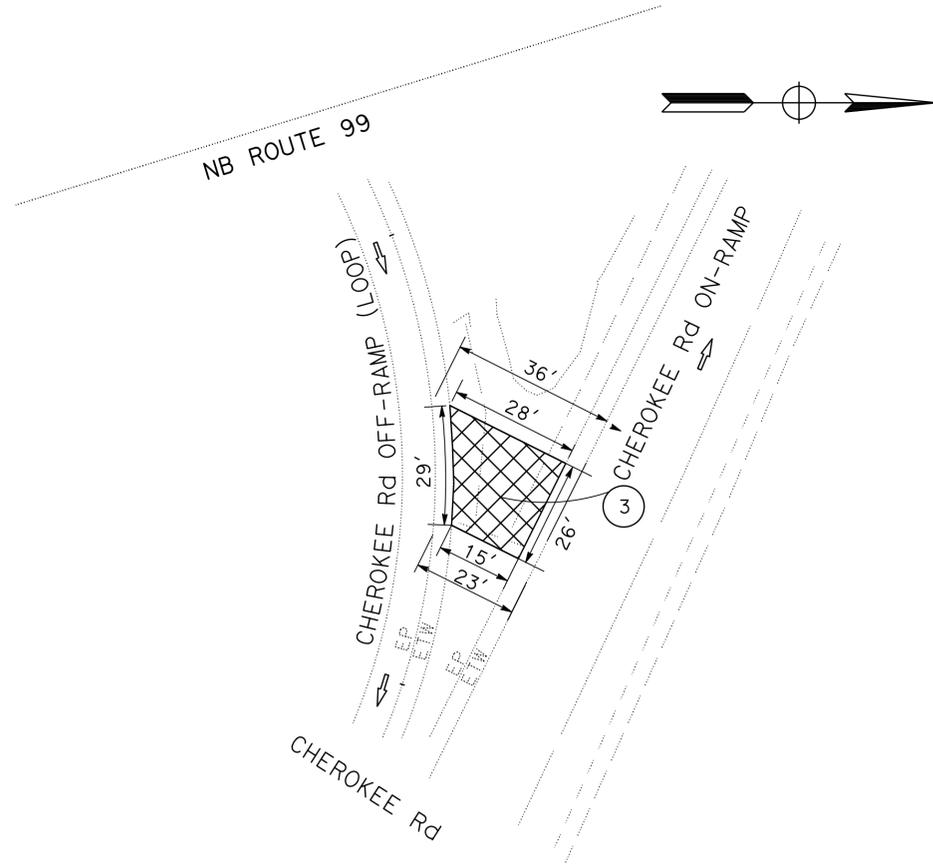
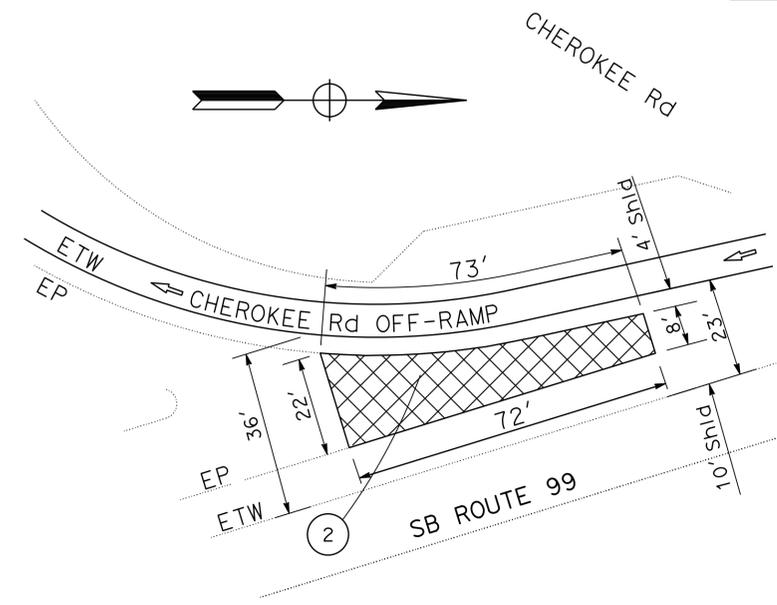
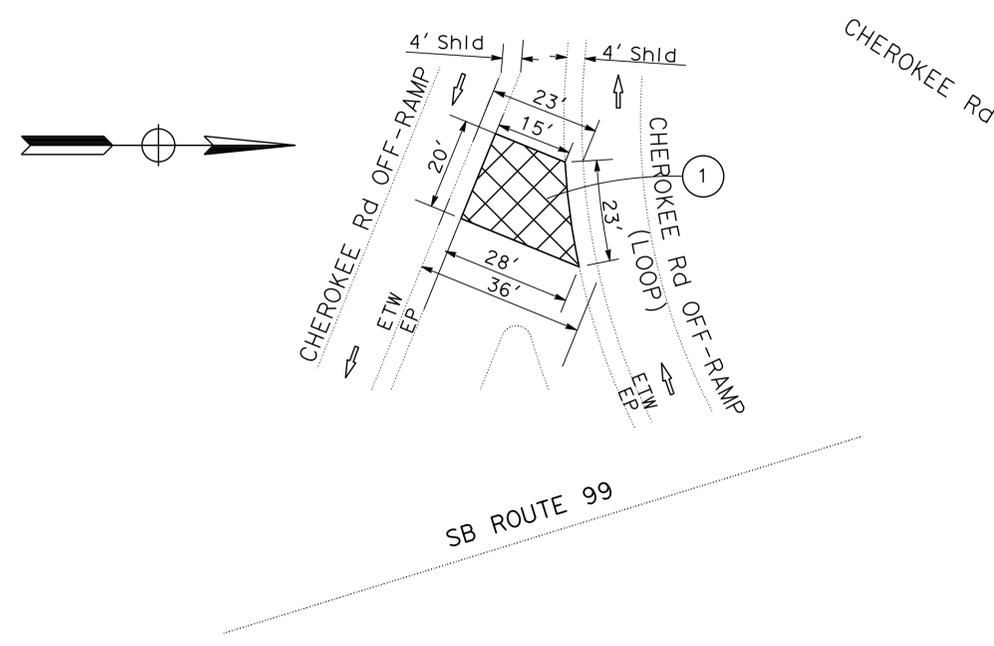
  

<i>Richard J. Boyer</i>	3/9/16
REGISTERED CIVIL ENGINEER	DATE
RICHARD J. BOYER	
No. 75844	
Exp. 6/30/16	
CIVIL	

4-4-16  
PLANS APPROVAL DATE

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- ① SB 99 TO CHEROKEE Rd OFF-RAMP (LOOP)
- ② SB 99 TO CHEROKEE Rd OFF-RAMP
- ③ NB 99 TO CHEROKEE Rd OFF-RAMP (LOOP)
- ④ NB 99 TO CHEROKEE Rd OFF-RAMP

**LOCATION 6**  
PM 20.8

**MINOR CONCRETE (TEXTURED PAVING)**

**CONSTRUCTION DETAILS**

NO SCALE

**C-4**

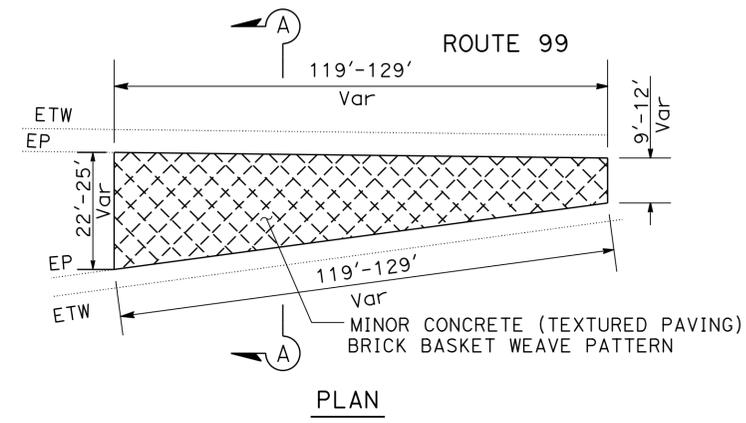
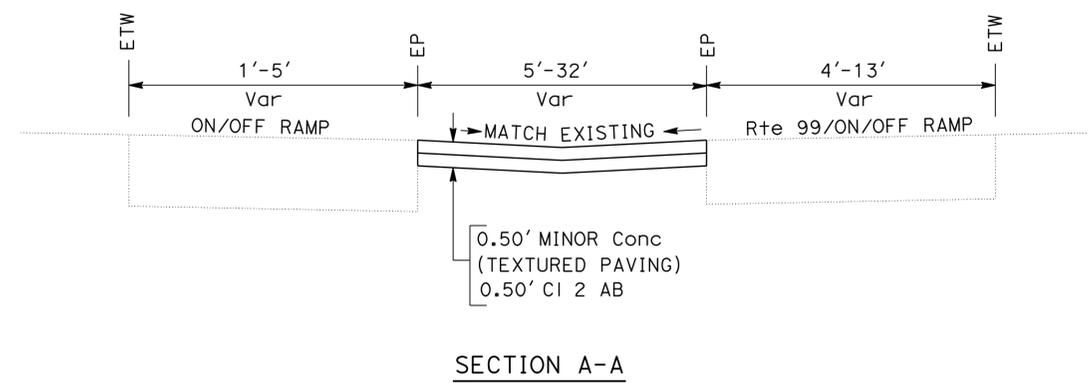
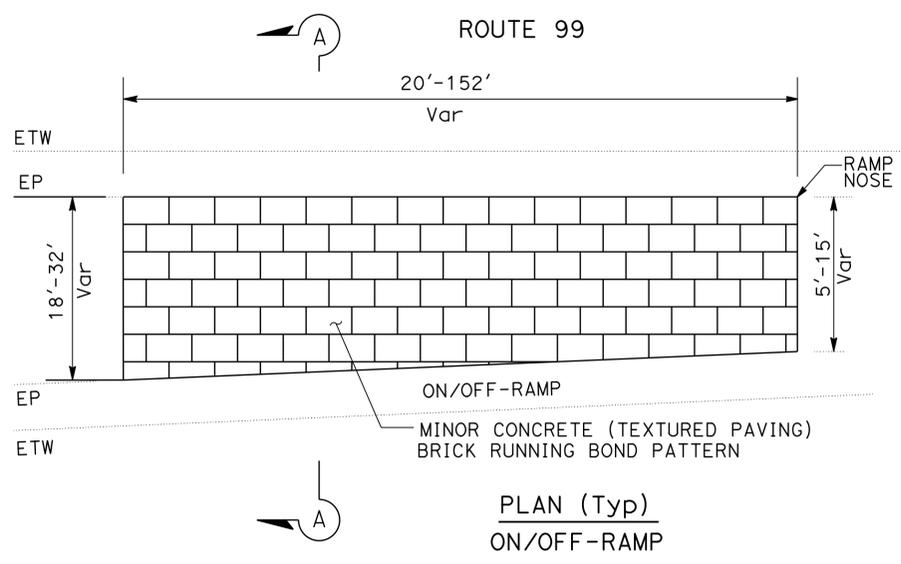
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	<b>DESIGN</b>
<i>Caltrans</i>	
FUNCTIONAL SUPERVISOR	NOMER GUTIERREZ
CALCULATED-DESIGNED BY	CHECKED BY
HELEN LAM	RICHARD BOYER
REVISED BY	DATE REVISED
G.E.	02-18-16
G.E.	03-18-16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	14	62

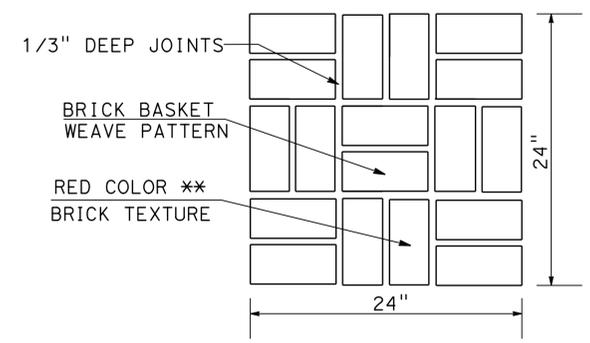
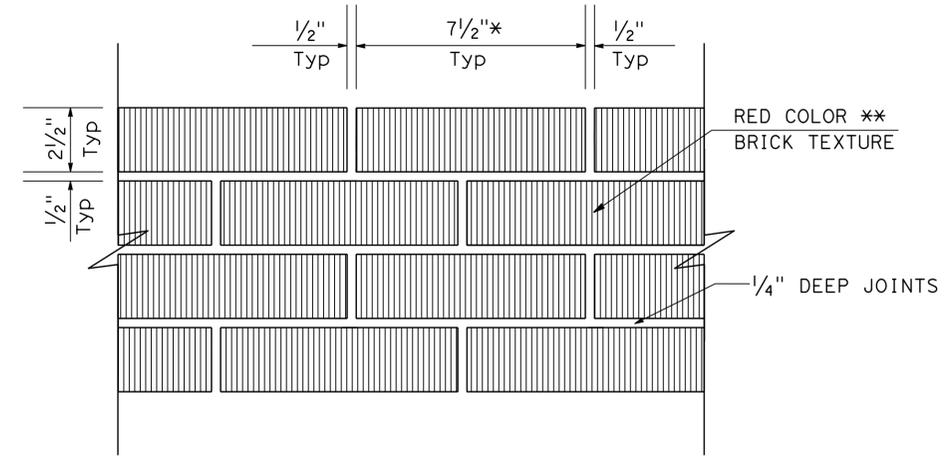
REGISTERED CIVIL ENGINEER  
 RICHARD J. BOYER  
 No. 75844  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA

3/9/16  
 DATE  
 4-4-16  
 PLANS APPROVAL DATE

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



- Loc 1 - NB 99 TO FREMONT St OFF-RAMP, PM 18.5
- Loc 2 - WB 04 TO NB 99 ON-RAMP, PM 18.8
- Loc 3 - NB 99 TO FREMONT St OFF-RAMP, PM 19.1
- Loc 4 - FREMONT St, PM 19.25
- Loc 5 - WATERLOO Rd, PM 20.3
- Loc 6 - CHEROKEE Rd, PM 20.8



**MINOR CONCRETE (TEXTURED PAVING)**

\*\* COLOR HARDENER TO INCLUDE TERRA COTTA COLOR HARDENER (CLOSE TO FEDERAL STANDARD 595C COLOR 30117) AND BRICK RED RELEASE AGENT (CLOSE TO FEDERAL STANDARD 595C COLOR 30166).

**CONSTRUCTION DETAILS**

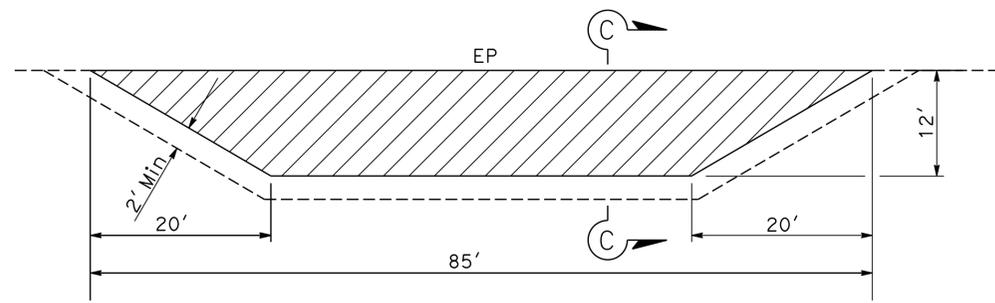
NO SCALE **C-5**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: NOMER GUTIERREZ  
 CHECKED BY: RICHARD BOYER  
 REVISIONS: G.E. 02-18-16, G.E. 03-18-16

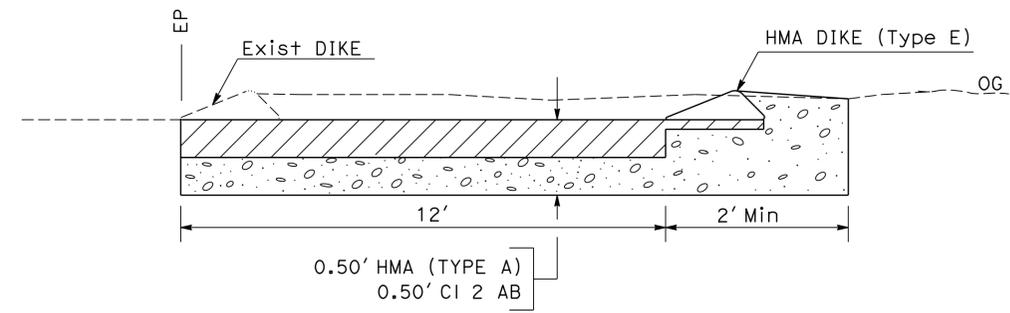
LAST REVISION DATE PLOTTED => 25-JUL-2016  
 02-18-16 TIME PLOTTED => 15:43

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	15	62

REGISTERED CIVIL ENGINEER DATE 3/9/16  
 RICHARD J. BOYER No. 75844 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA  
 4-4-16  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

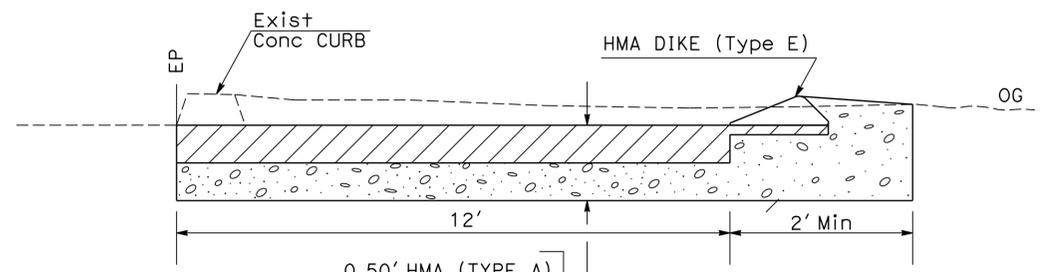


PLAN (Typ)



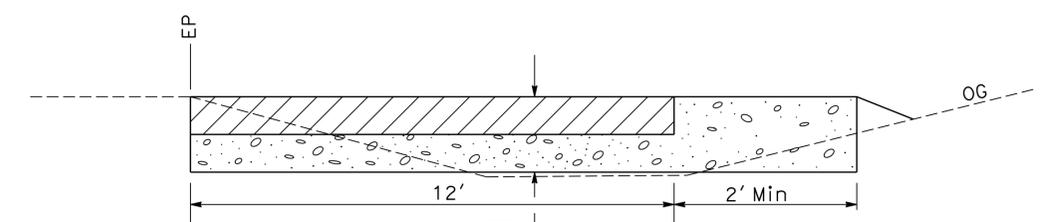
SECTION C-C

Loc 13, SB 99 TO ACAMPO Rd OFF RAMP



SECTION C-C

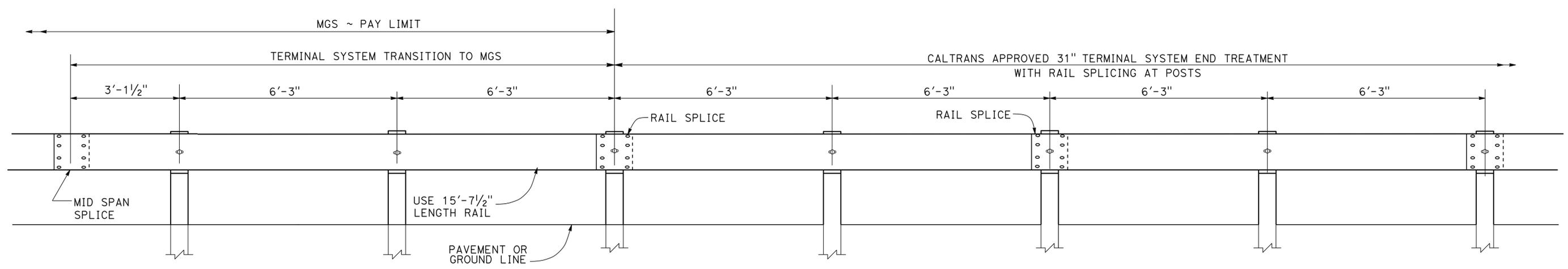
Loc 13, SB 99 FROM ACAMPO Rd ON-RAMP  
 Loc 7, NB 99 FROM KETTLEMAN LANE ON-RAMP



SECTION C-C

Loc 7, NB 99 TO KETTLEMAN LANE OFF-RAMP  
 Loc 7, SB 99 FROM KETTLEMAN LANE ON-RAMP  
 Loc 12, NB 99 AT WOODBRIDGE ROAD

**MAINTENANCE VEHICLE PULLOUT**



**TRANSITION DETAIL FOR 31" TERMINAL SYSTEM END TREATMENT WITH RAIL SPLICING AT POST TO MIDWEST GUARDRAIL SYSTEM**

**CONSTRUCTION DETAILS**

NO SCALE

**C-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	NOMER GUTIERREZ
CALCULATED-DESIGNED BY	CHECKED BY
HELEN LAM	RICHARD BOYER
REVISOR	DATE
G.E.	02-18-16
G.E.	03-18-16

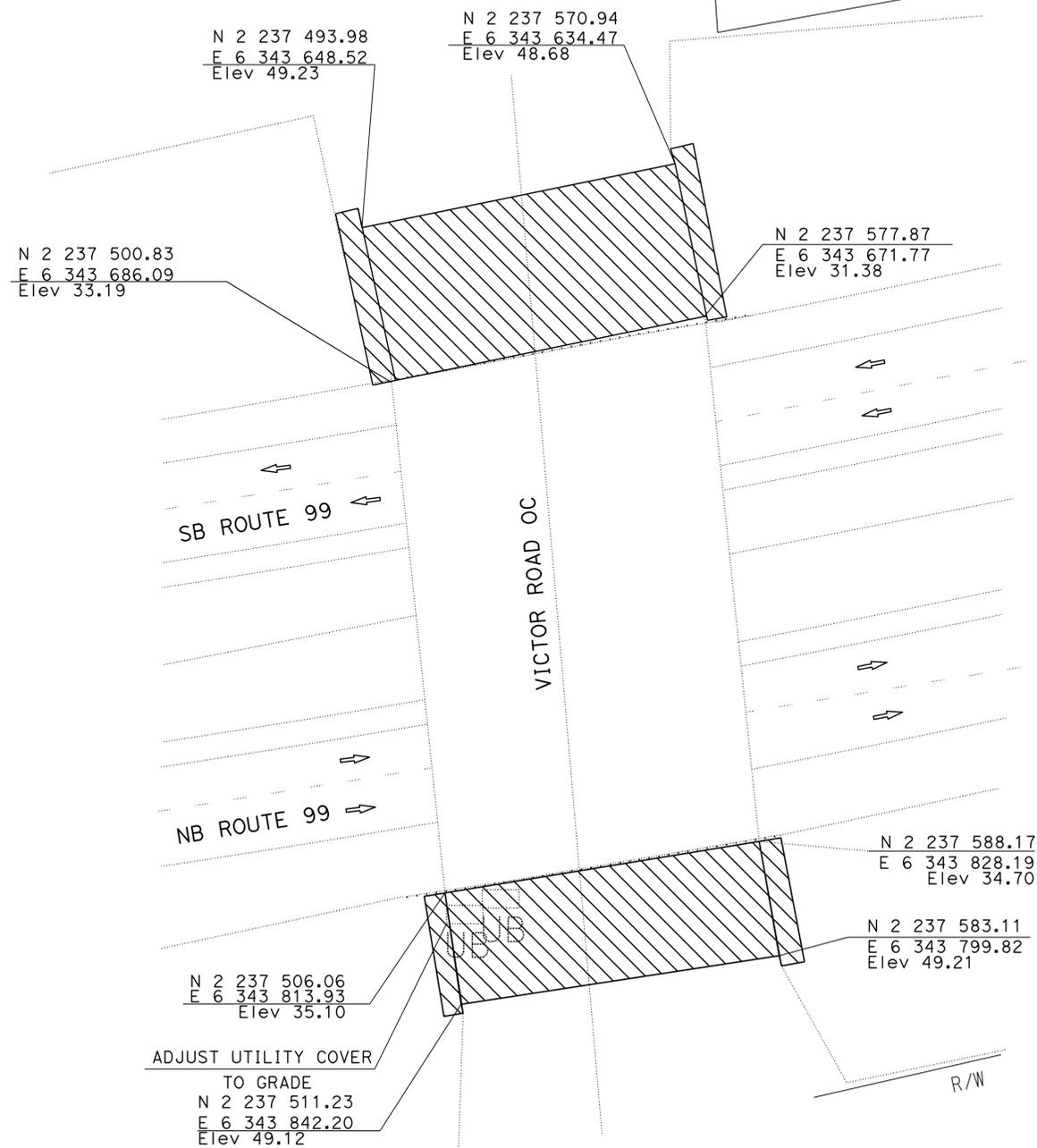




STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	ROLI ELSOTARI	REVISED BY	R.E
<b>Caltrans</b>	NOMER GUTIERREZ	CHECKED BY	RICHARD BOYER	DATE REVISED	03/21/16
<b>DESIGN</b>					

**NOTES:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



**LOCATION 10**

**CONSTRUCTION DETAILS**

SCALE: 1"=20'

**C-9**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	18	62

Richard J. Boyer 3/9/16  
 REGISTERED CIVIL ENGINEER DATE  
 4-4-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 RICHARD J. BOYER  
 No. 75844  
 Exp. 06-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	19	62

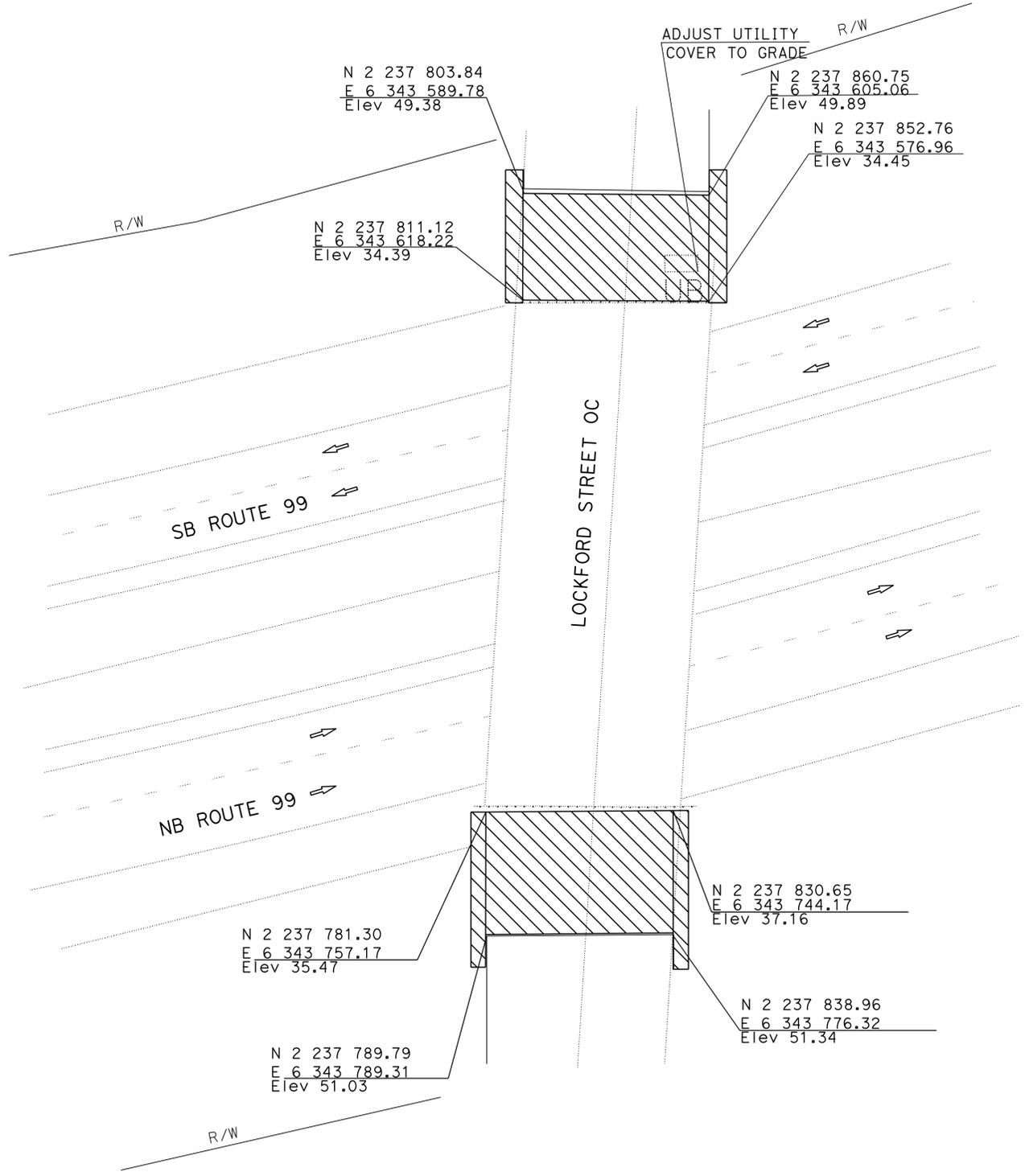
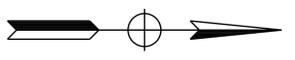
<i>Richard J. Boyer</i>	3/9/16
REGISTERED CIVIL ENGINEER	DATE
4-4-16	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER <b>RICHARD J. BOYER</b> No. 75844 Exp. 06-30-16 CIVIL STATE OF CALIFORNIA
---

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

**NOTES:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



**LOCATION 11**

**CONSTRUCTION DETAILS**  
 SCALE: 1"=20'  
**C-10**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	ROLI ELSOTARI	REVISOR	R.E	DATE	03/21/16
<b>Caltrans</b>		CHECKED BY	RICHARD BOYER	DATE REVISED	R.E		2/29/16

LAST REVISION: 2-29-16  
 DATE PLOTTED => 25-JUL-2016  
 TIME PLOTTED => 15:43

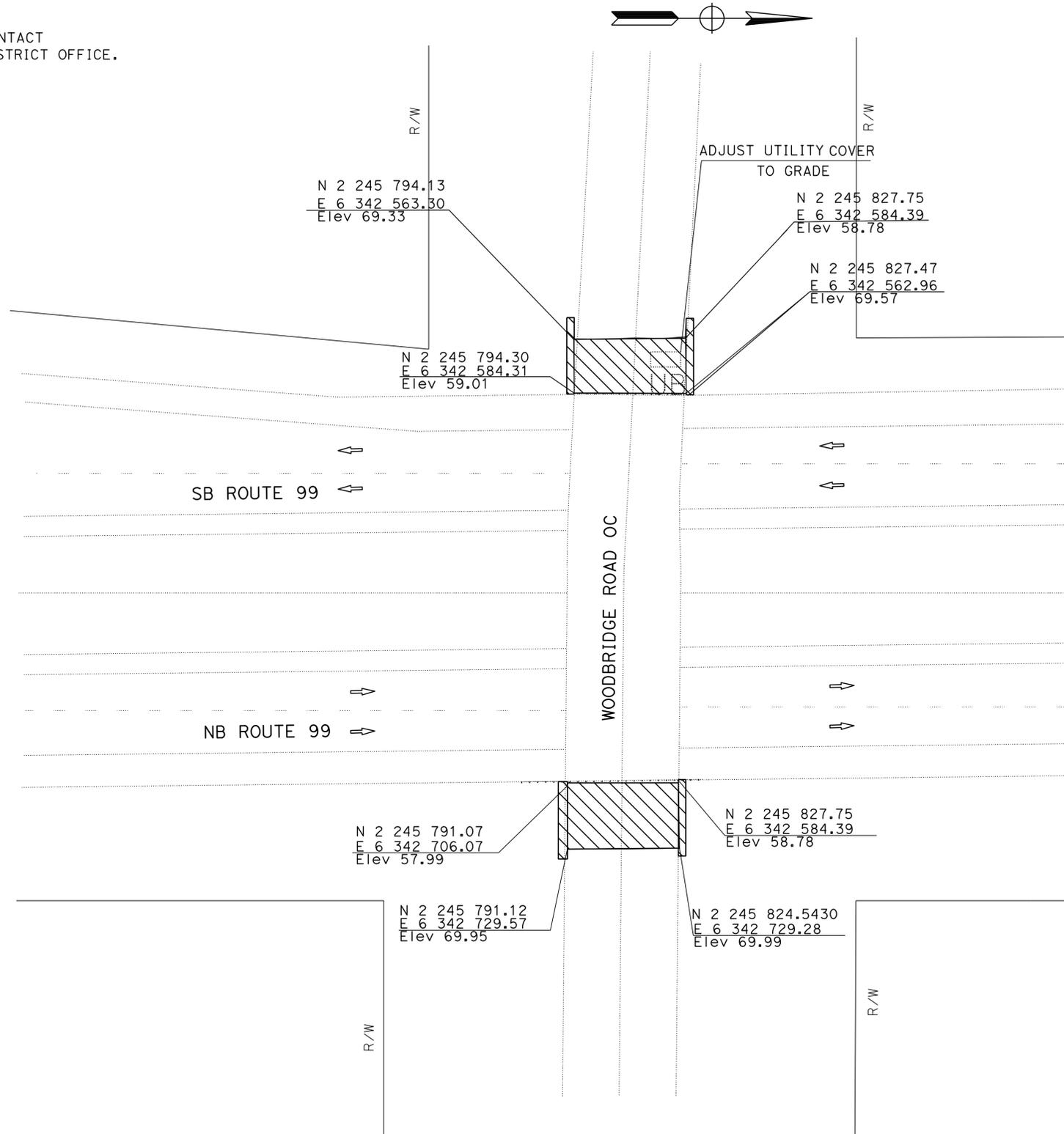
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	20	62

<i>Richard J. Boyer</i>	3/10/16
REGISTERED CIVIL ENGINEER	DATE
RICHARD J. BOYER No. 75844 Exp. 06-30-16 CIVIL STATE OF CALIFORNIA	
4-4-16	
PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	

**NOTES:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



**LOCATION 12**

**CONSTRUCTION DETAILS**

SCALE: 1"=20'

**C-11**

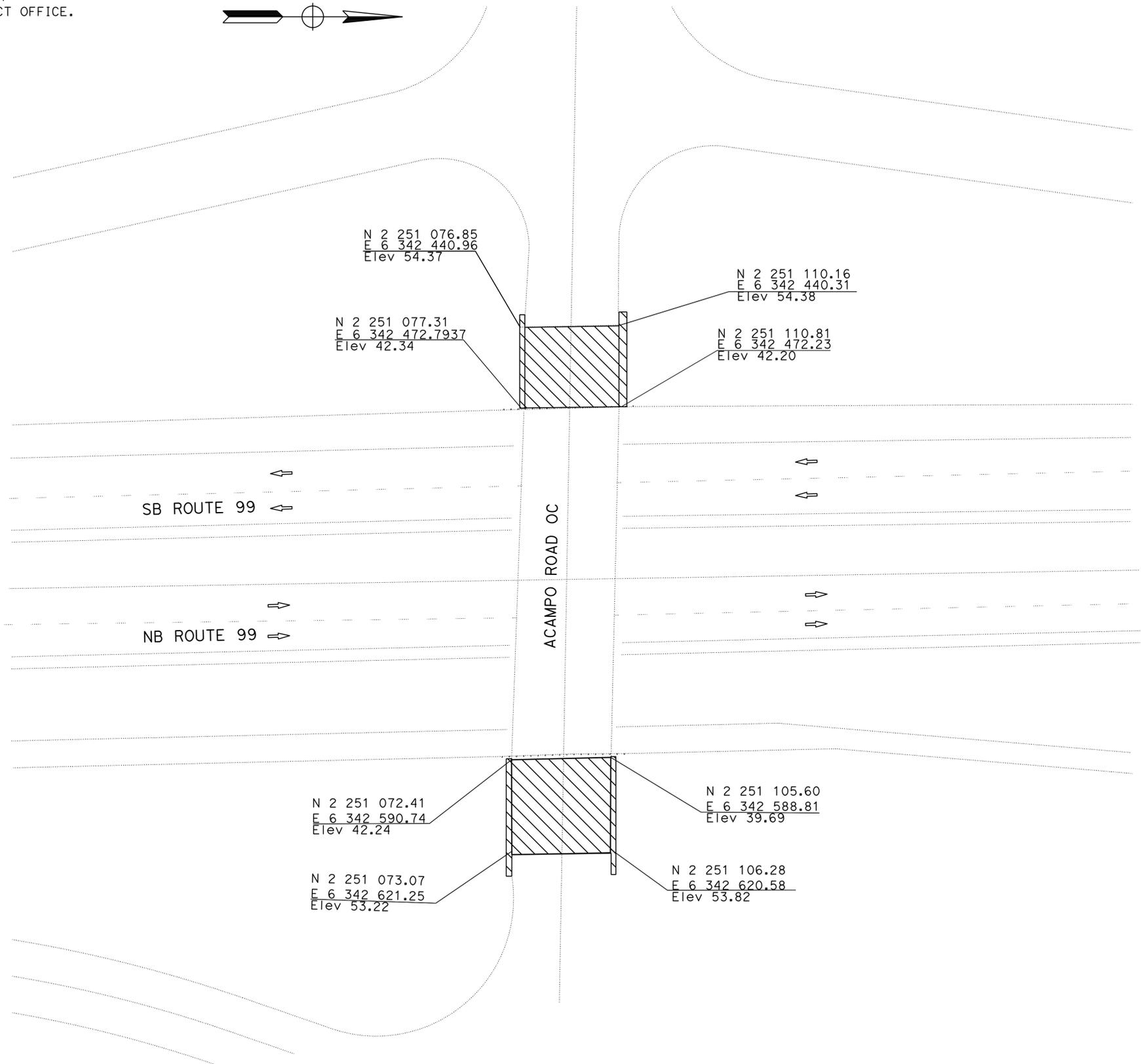
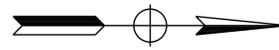
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	ROLI ELSOTARI	REVISED BY	R.E
<b>Caltrans</b>	NOMER GUTIERREZ	CHECKED BY	RICHARD BOYER	DATE REVISED	03/21/16



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN

FUNCTIONAL SUPERVISOR	CHECKED BY	REVISOR	DATE
NOMER GUTIERREZ	RICHARD BOYER	R.E.	03/21/16
CALCULATED/DESIGNED BY	DATE REVISED	R.E.	2/29/16

**NOTES:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



**LOCATION 13**

**CONSTRUCTION DETAILS**

SCALE: 1"=20'

**C-12**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	21	62

Richard J. Boyer 3/10/16  
 REGISTERED CIVIL ENGINEER DATE  
 4-4-16  
 PLANS APPROVAL DATE  
 RICHARD J. BOYER  
 No. 75844  
 Exp. 06-30-16  
 CIVIL  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

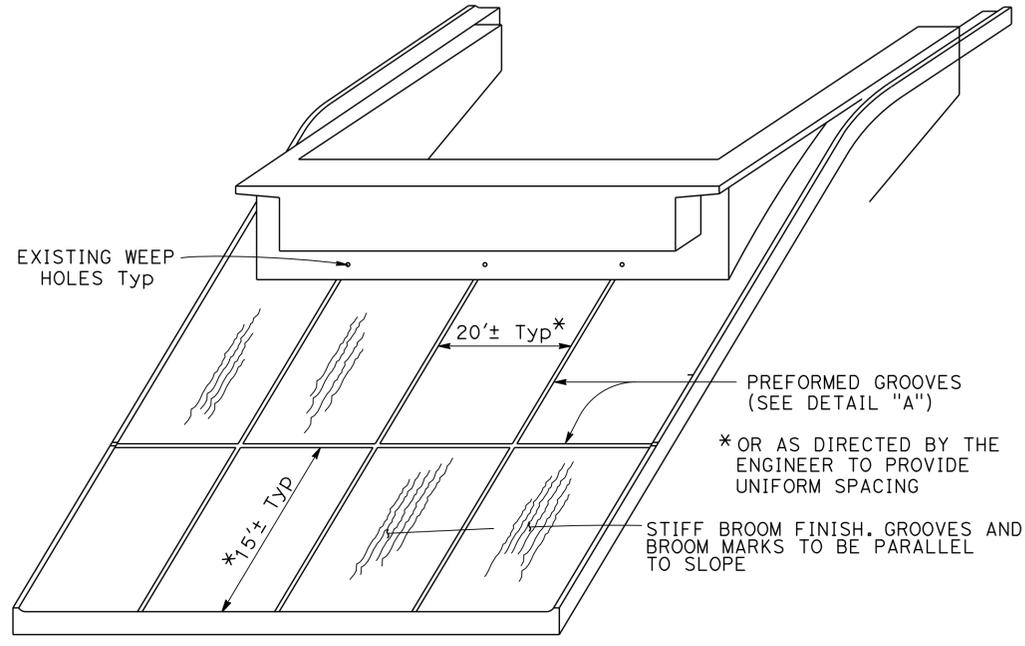
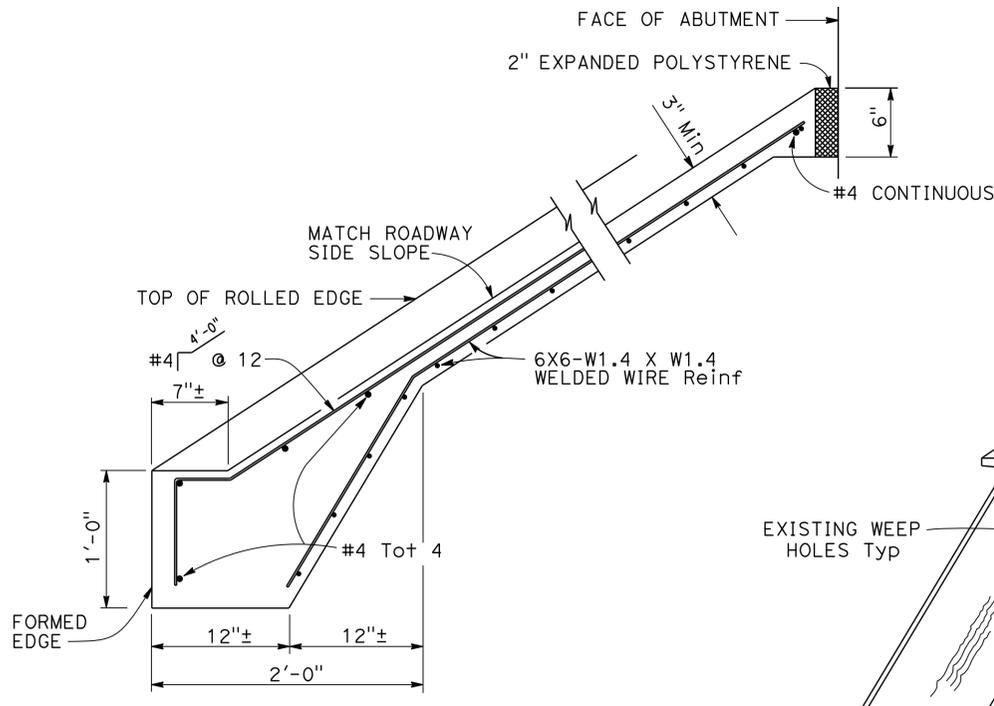
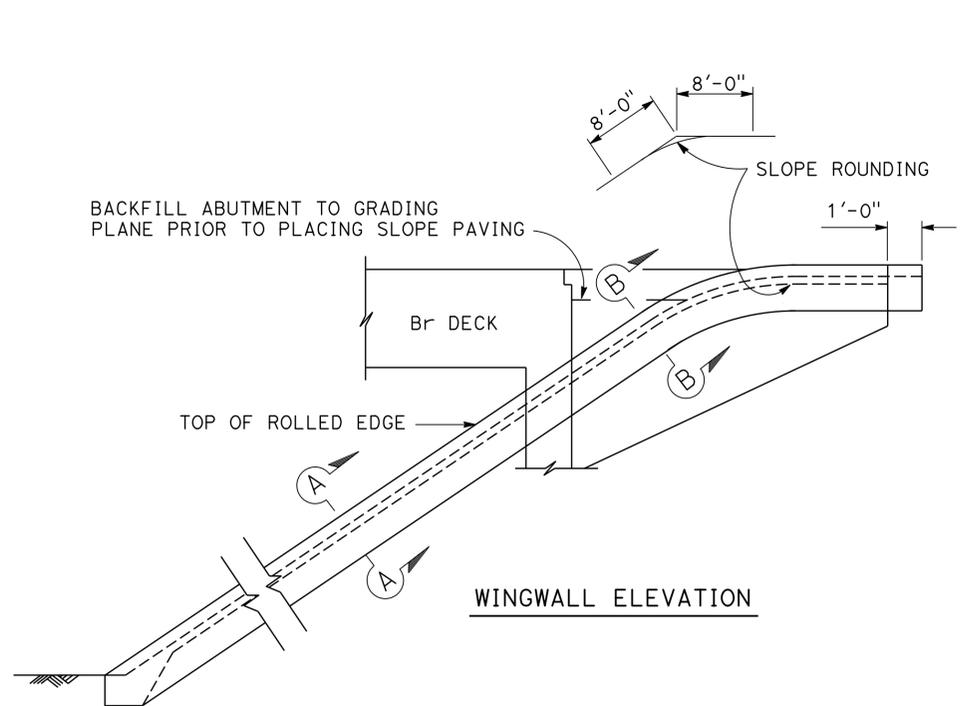
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	22	62

REGISTERED CIVIL ENGINEER DATE 3/10/16  
 RICHARD J. BOYER  
 No. 75844  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA

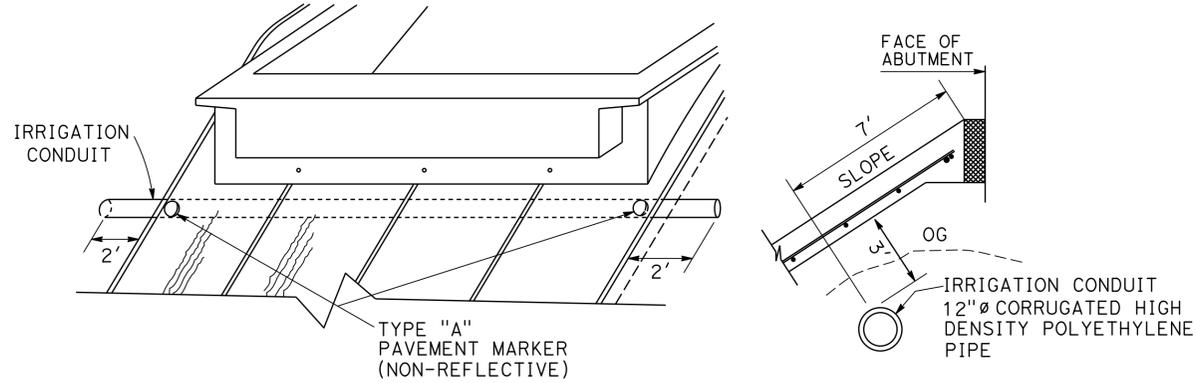
4-4-16  
 PLANS APPROVAL DATE

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

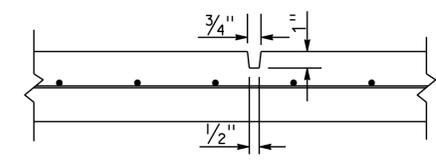
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR NOMER GUTIERREZ  
 CALCULATED/DESIGNED BY CHECKED BY  
 GABE ELEFANTE RICHARD BOYER  
 REVISED BY DATE REVISED  
 G.E. 02-18-16  
 G.E. 03-22-16



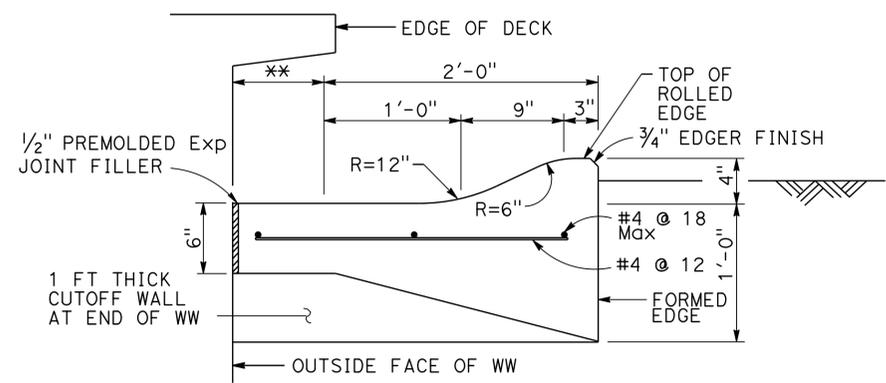
PICTORIAL VIEW OF TYPICAL INSTALLATION



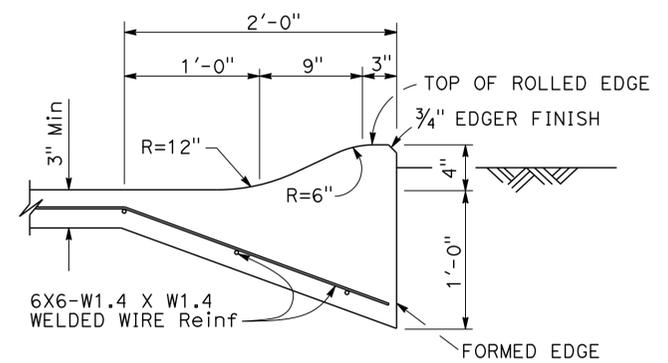
IRRIGATION CONDUIT DETAILS



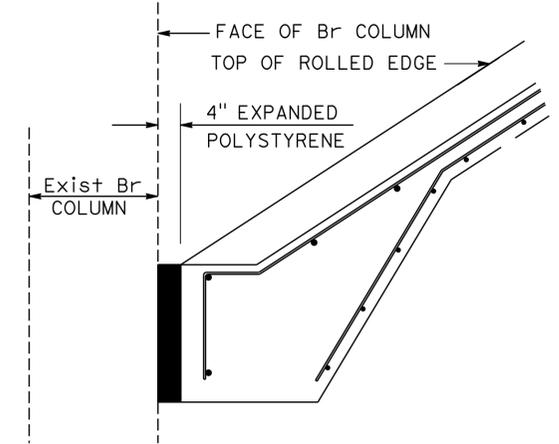
PREFORM GROOVE  
DETAIL "A"



SECTION B-B



SECTION A-A



SLOPE PAVING AT COLUMN

**CONCRETE SLOPE PAVING**

**CONSTRUCTION DETAILS**

NO SCALE

**C-13**

\*\* THIS DIMENSION BECOMES ZERO WHEN EDGE OF DECK IS AT OUTSIDE FACE OF WW

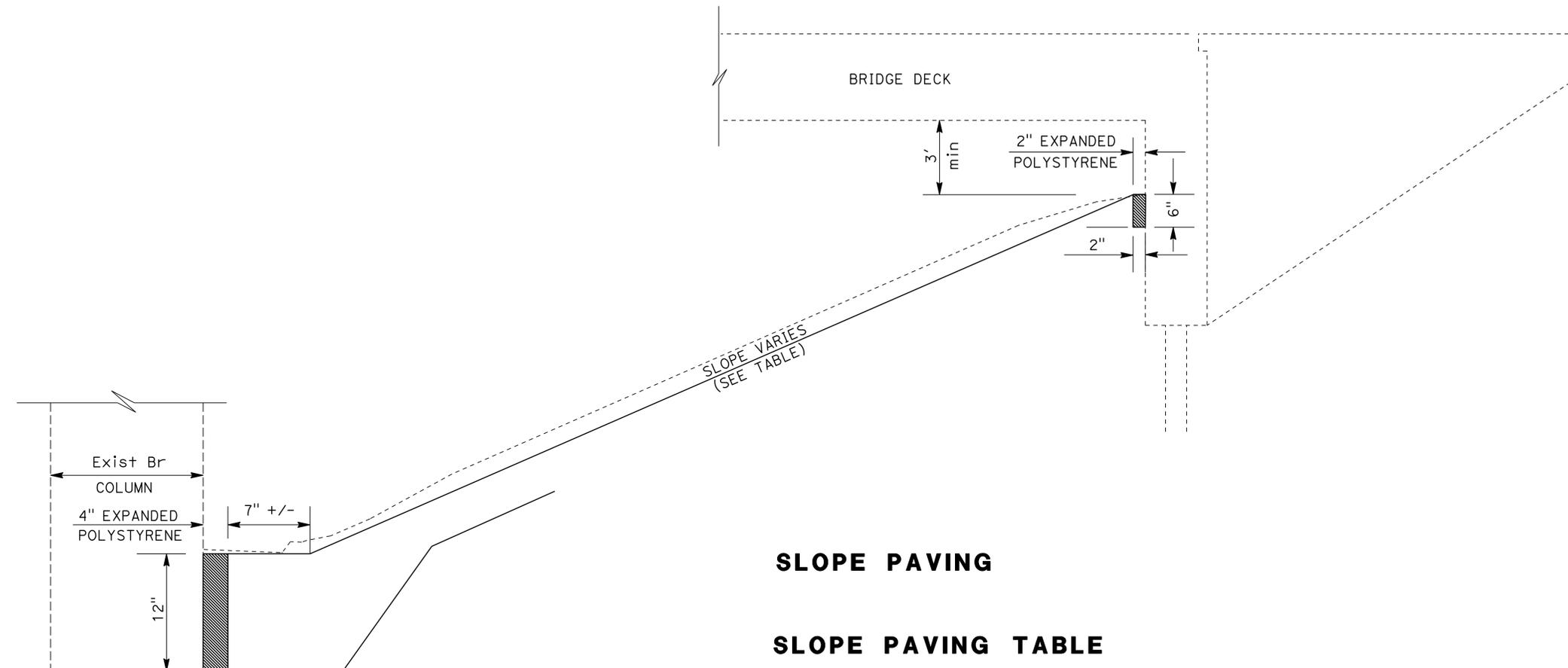
LAST REVISION | DATE PLOTTED => 25-JUL-2016  
 02-18-16 | TIME PLOTTED => 13:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	23	62

Richard J. Boyer 3/10/16  
 REGISTERED CIVIL ENGINEER DATE  
 4-4-16  
 PLANS APPROVAL DATE

RICHARD J. BOYER  
 No. 75844  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA

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



**SLOPE PAVING**

**SLOPE PAVING TABLE**

LOCATION	SLOPE	
	NB	SB
Loc 8 LODI AVENUE PM 30.5	2.41:1 - 3.00:1	2.09:1 - 2.41:1
Loc 9 PINE STREET PM 30.75	2.20:1 - 3.17:1	2.14:1 - 3.00:1
Loc 10 E. VICTOR ROAD PM 31.00	2.39:1 - 3.00:1	2.00:1 - 3.19:1
Loc 11 E. LOCKFORD STREET PM 31.00	2.13:1 - 2.71:1	2.00:1 - 2.00:1
Loc 12 WOODBRIAGE ROAD PM 32.50	2.00:1 - 2.13:1	2.00:1 - 2.13:1
Loc 13 ACAMPO ROAD PM 33.70	2.24:1 - 2.77:1	2.60:1 - 2.74:1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: NOMER GUTIERREZ  
 CALCULATED/DESIGNED BY: GABE ELEFANTE  
 CHECKED BY: RICHARD BOYER  
 REVISED BY: R.E. DATE REVISED: 3/21/16  
 R.E. DATE: 3/22/16

**CONSTRUCTION DETAILS**  
NO SCALE  
**C-14**

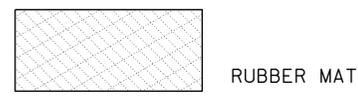
LAST REVISION:   
 DATE PLOTTED => 25-JUL-2016   
 TIME PLOTTED => 15:44

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: NOMER GUTIERREZ  
 CALCULATED/DESIGNED BY: GABE ELEFANTE  
 CHECKED BY: RICHARD BOYER  
 REVISED BY: G.E. 2/09/16  
 G.E. 03/24/16

**NOTES (SHEET C-15 AND C-16 ONLY):**

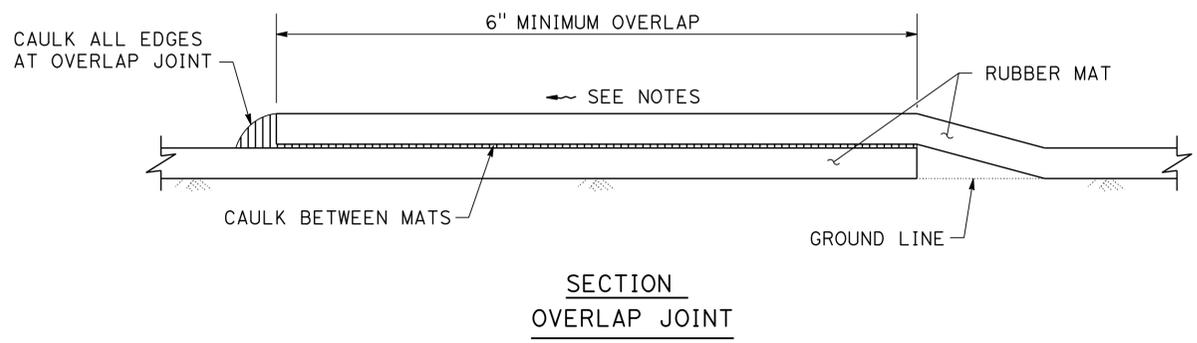
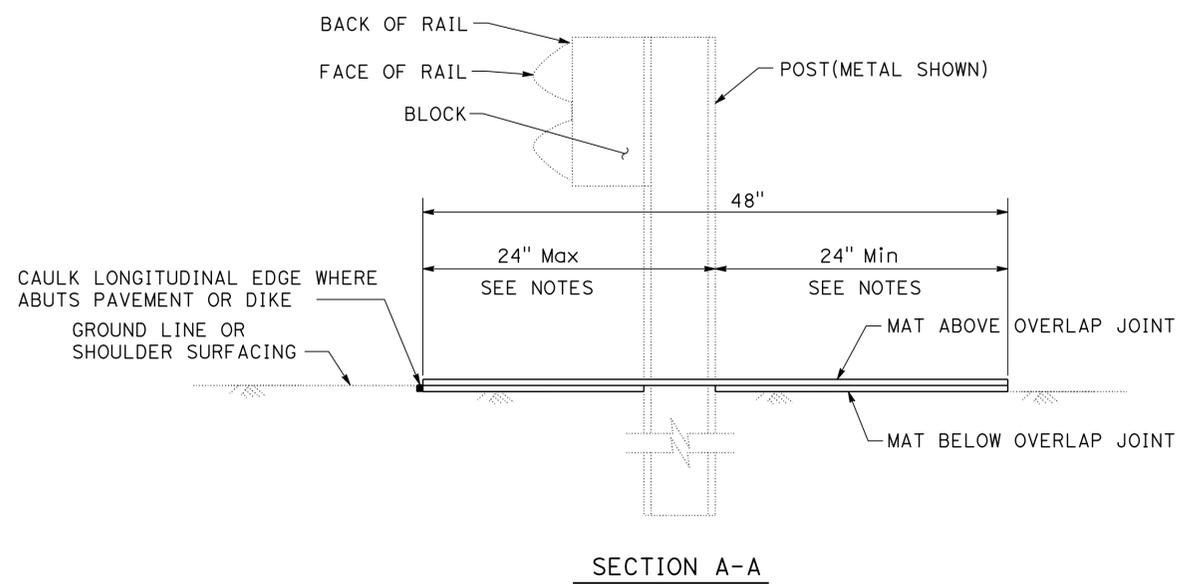
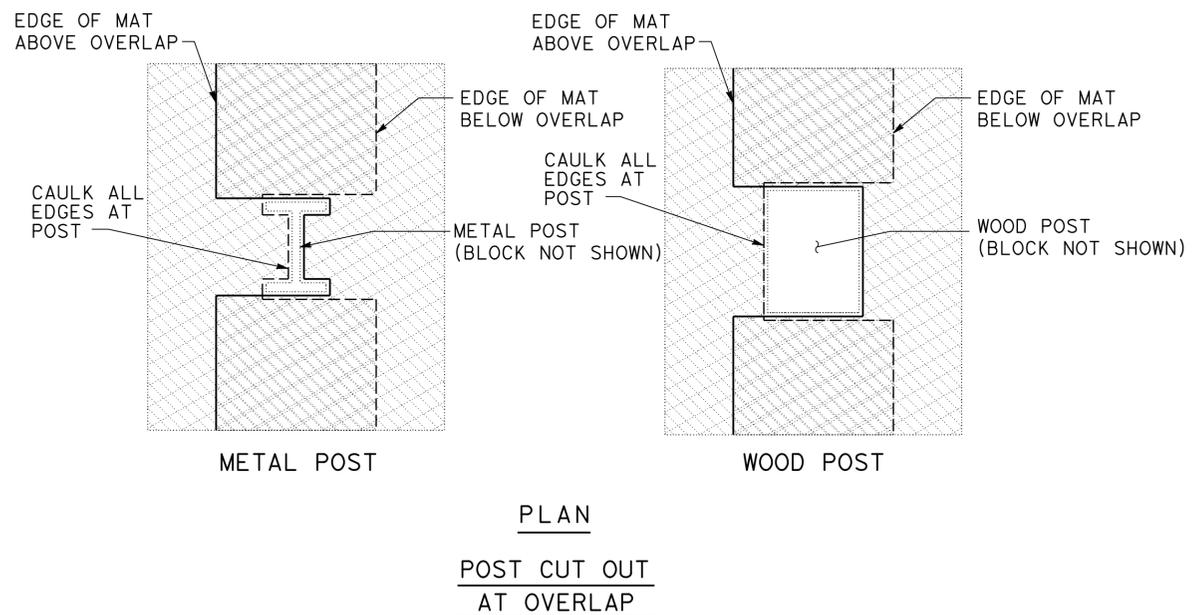
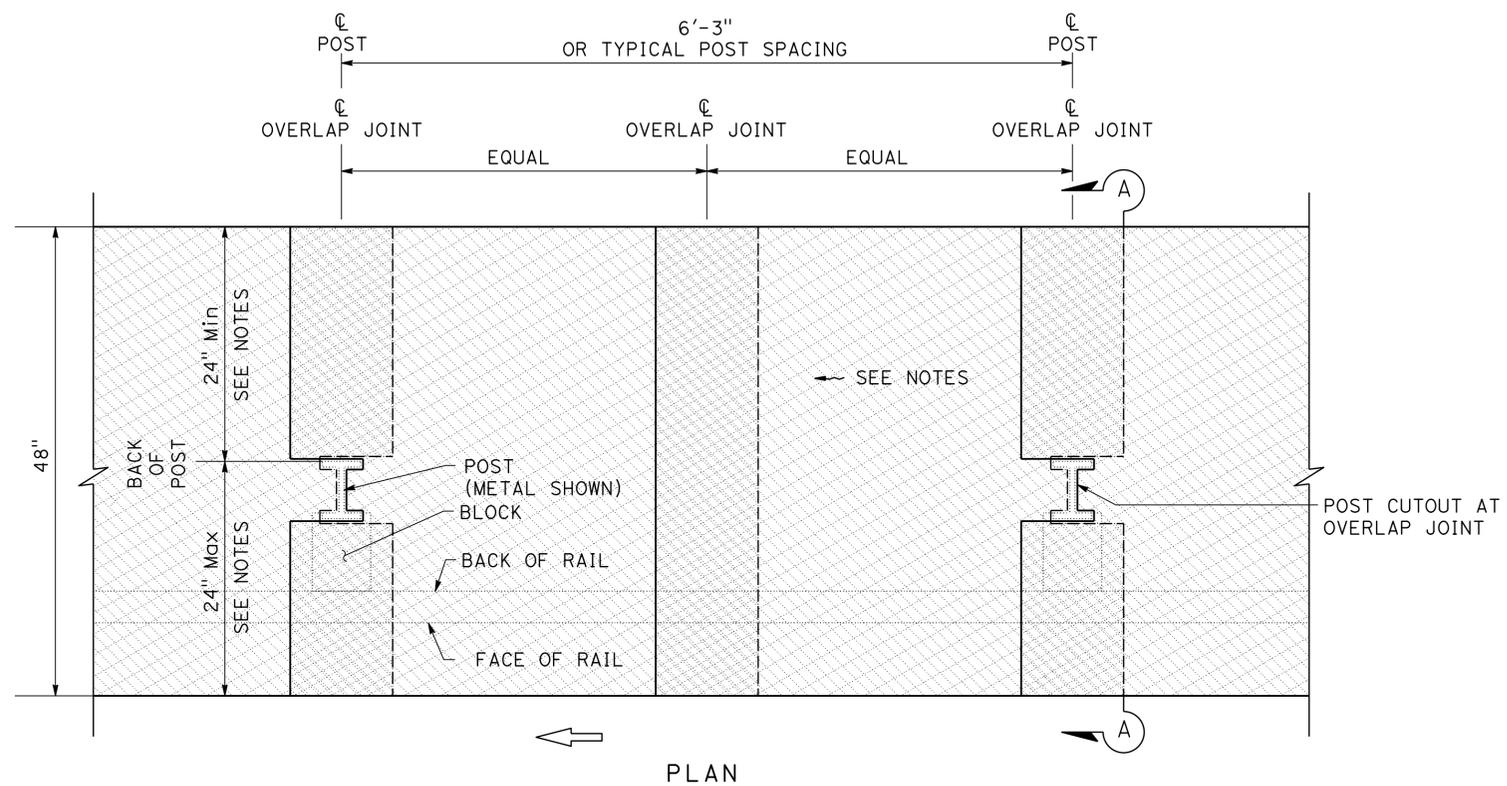
1. RUBBER MAT MUST BE 48" WIDE INDIVIDUAL MATS OR 48" WIDE CONTINUOUS ROLL PRODUCT. INDIVIDUAL MATS ARE SHOWN.
2. EDGES OF MAT TO ABUT EDGES OF POST.
3. WHERE EDGE OF PAVED SHOULDER IS MORE THAN 24" FROM BACK OF POST, EDGE OF RUBBER MAT MUST BE 24" FROM BACK OF POST. WHERE PAVED SHOULDER IS CONSTRUCTED 24" OR LESS FROM BACK OF POST, ABUT EDGE OF RUBBER MAT AGAINST EDGE OF PAVED SHOULDER. WHERE DIKE IS CONSTRUCTED UNDER RAILING, ABUT EDGE OF RUBBER MAT AGAINST BACK OF DIKE.
4. LAP RUBBER MAT IN DIRECTION OF WATER FLOW.
5. FOR CONTINUOUS ROLL PRODUCT LOCATE OVERLAP JOINT AT OR BETWEEN POSTS AS SHOWN.
6. RUBBER MAT UNDER MIDWEST GUARDRAIL SYSTEM FOR ADDITIONAL POST CUTOUT AND OVERLAP JOINT DETAILS.
7. CONTINUE ALIGNMENT OF MAT EDGE AT OFFSET FROM BACK OF POST.

**LEGEND (SHEET C-15 AND C-16 ONLY)**



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	24	62

REGISTERED CIVIL ENGINEER DATE 3/10/16  
 RICHARD J. BOYER No. 75844 Exp. 06-30-16  
 PLANS APPROVAL DATE 4-4-16  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



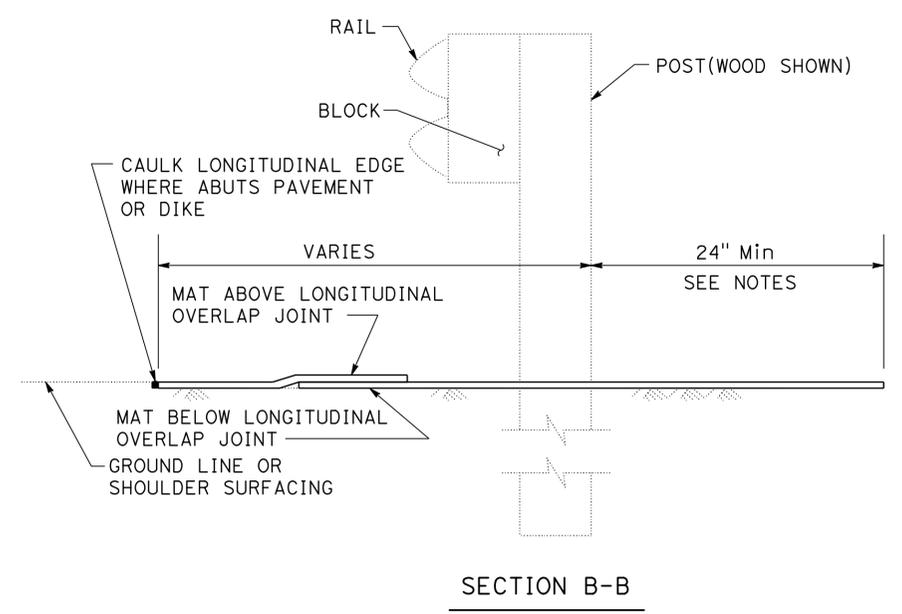
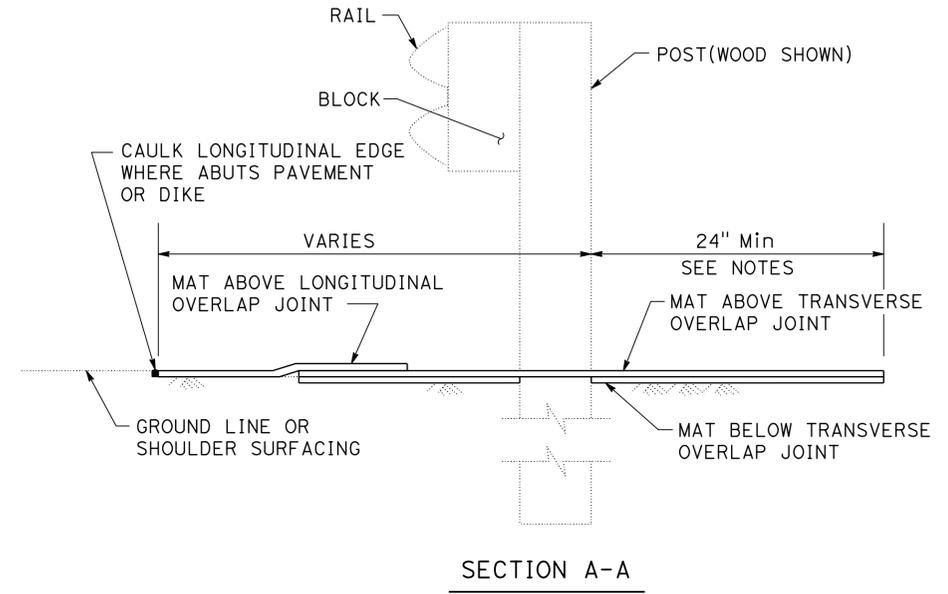
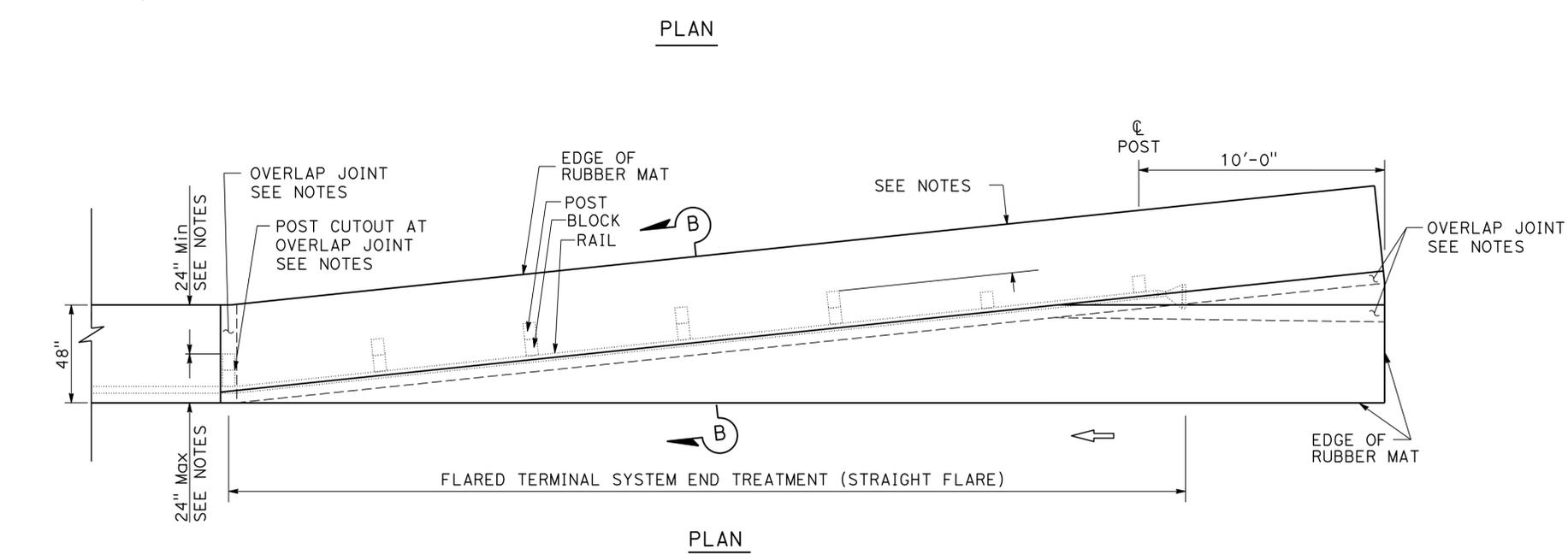
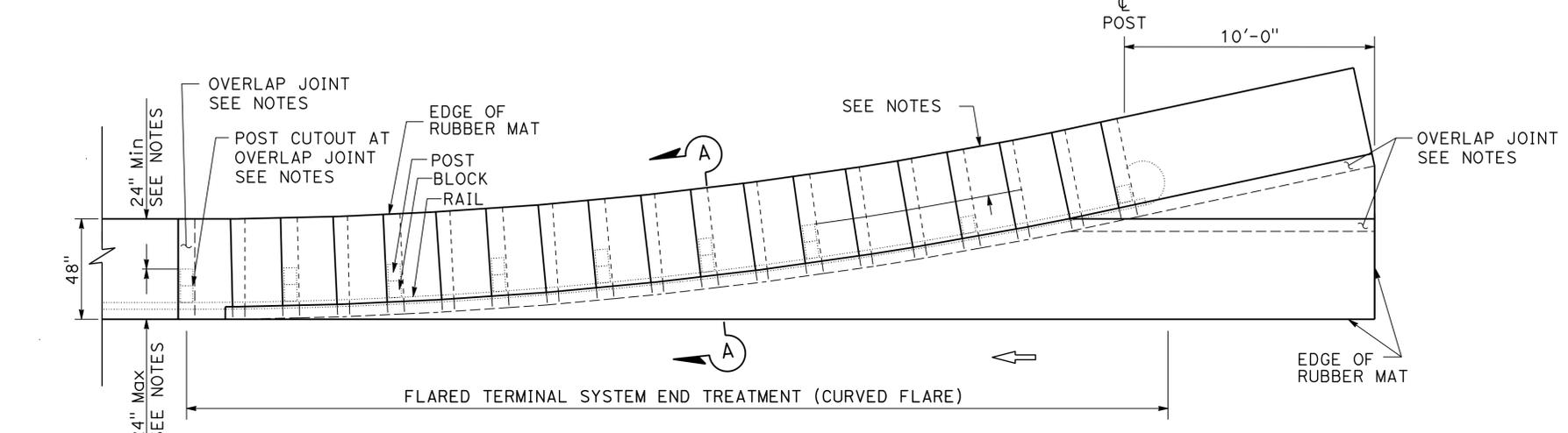
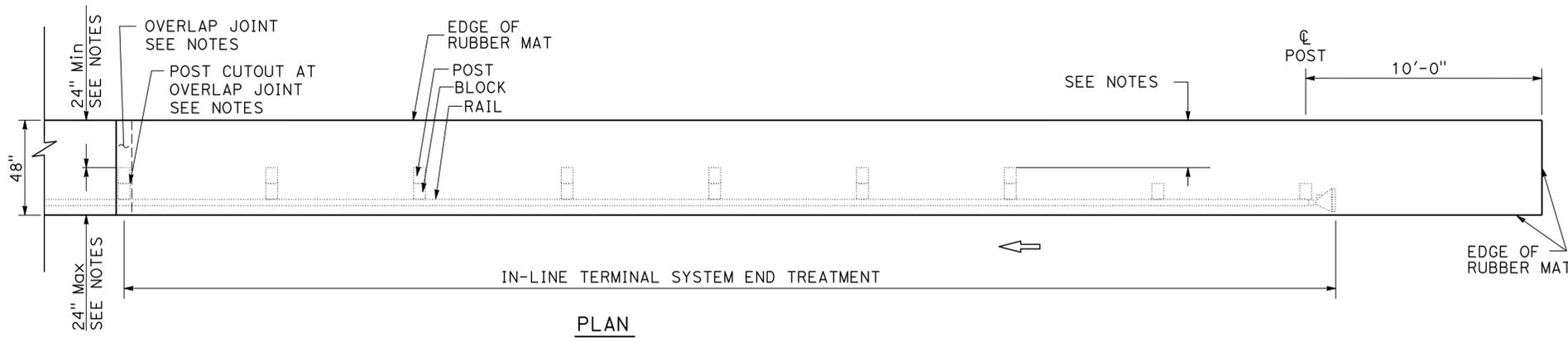
**RUBBER MAT UNDER MIDWEST GUARDRAIL SYSTEM**  
 SEE NOTES

**CONSTRUCTION DETAILS**  
 NO SCALE  
**C-15**

LAST REVISION DATE PLOTTED => 25-JUL-2016 03-09-16 TIME PLOTTED => 15:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	25	62

REGISTERED CIVIL ENGINEER DATE 3/10/16  
 RICHARD J. BOYER No. 75844 Exp. 06-30-16 CIVIL  
 4-4-16 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**RUBBER MAT UNDER TERMINAL SYSTEM END TREATMENTS**

SEE NOTES

**CONSTRUCTION DETAILS**

NO SCALE

**C-16**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 Caltrans  
 FUNCTIONAL SUPERVISOR: NOMER GUTIERREZ  
 CALCULATED/DESIGNED BY: GABE ELEFANTE  
 CHECKED BY: RICHARD BOYER  
 REVISED BY: G.E. DATE REVISED: 3/09/15  
 G.E. DATE: 03/24/16

# STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN	SIGN CODE		PANEL SIZE	No. OF POSTS AND SIZE	No. OF SIGNS	SIGN MESSAGE
	FEDERAL	CALIFORNIA				
(A)		CPFIS	90" x 60"	2 - 6" X 6"	4	CONSTRUCTION PROJECT FUNDING IDENTIFICATION SIGNS
(B)	W20-1		48" x 48"	1 - 6" X 6"	12	ROAD WORK AHEAD
(C)	W20-1		36" X 36"	1 - 4" X 6"	11	ROAD WORK AHEAD
(D)	G20-2		36" x 18"	1 - 4" X 4"	17	END ROAD WORK

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 20.3/33.7	26	62

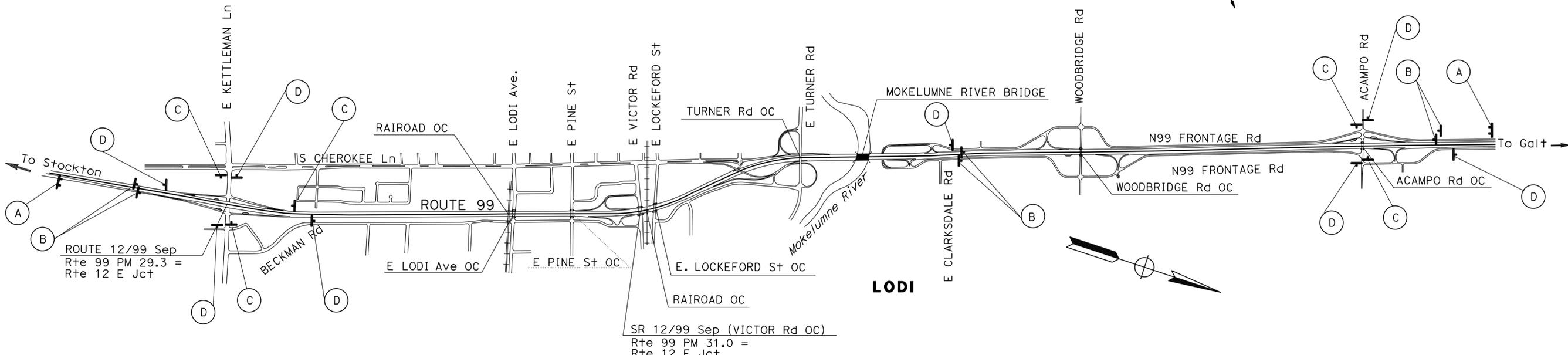
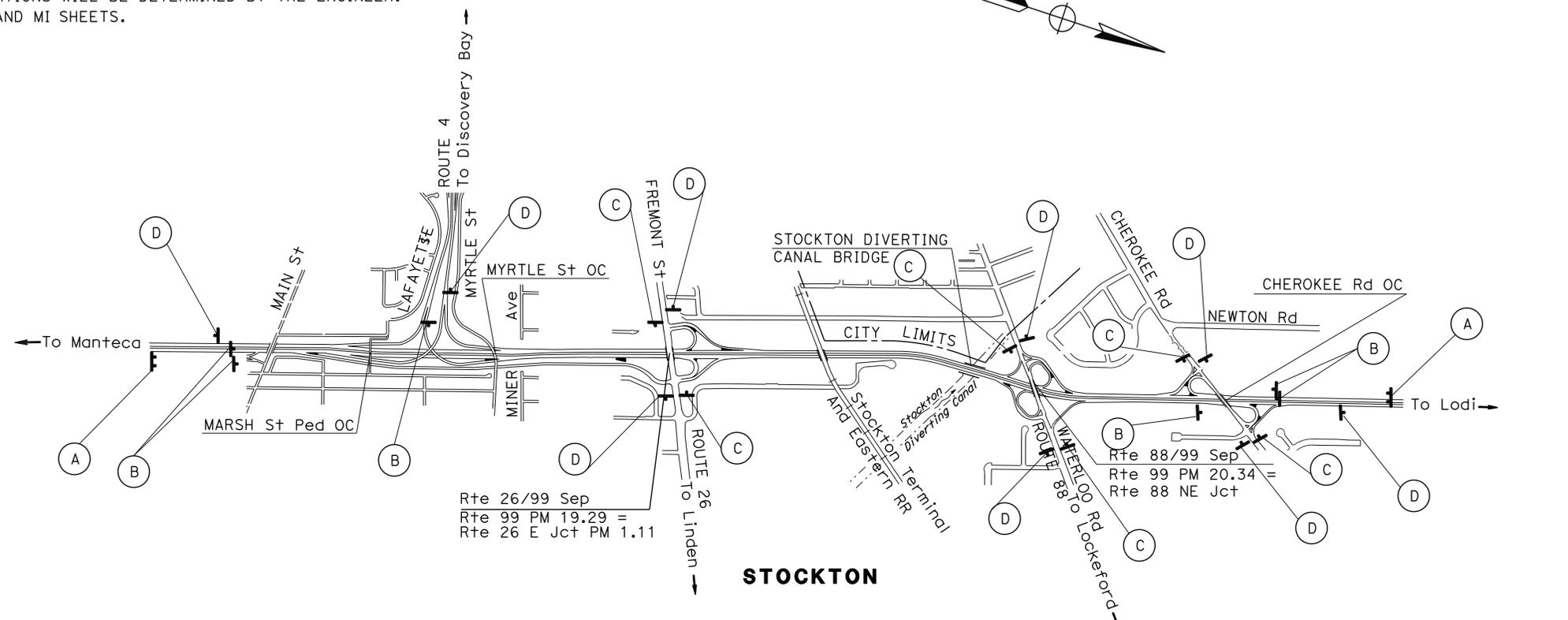
3/10/16  
 REGISTERED CIVIL ENGINEER DATE  
 4-4-16  
 PLANS APPROVAL DATE

HUE NGUYEN  
 No. 74484  
 Exp. 12/31/17  
 CIVIL  
 STATE OF CALIFORNIA

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

### NOTES:

- SIGN LOCATIONS SHOWN ARE APPROXIMATE, EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
- FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE TH AND MI SHEETS.



## CONSTRUCTION AREA SIGNS

NO SCALE CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 06-TRAFFIC DESIGN  
 MOHAMMED QATAMI  
 FUNCTIONAL SUPERVISOR  
 CHECKED BY  
 HUE NGUYEN  
 REVISOR  
 DATE  
 02-25-16  
 I A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	27	62

REGISTERED CIVIL ENGINEER		DATE
HUE NGUYEN		3/10/16
No. 74484		
Exp. 12/31/17		
CIVIL		

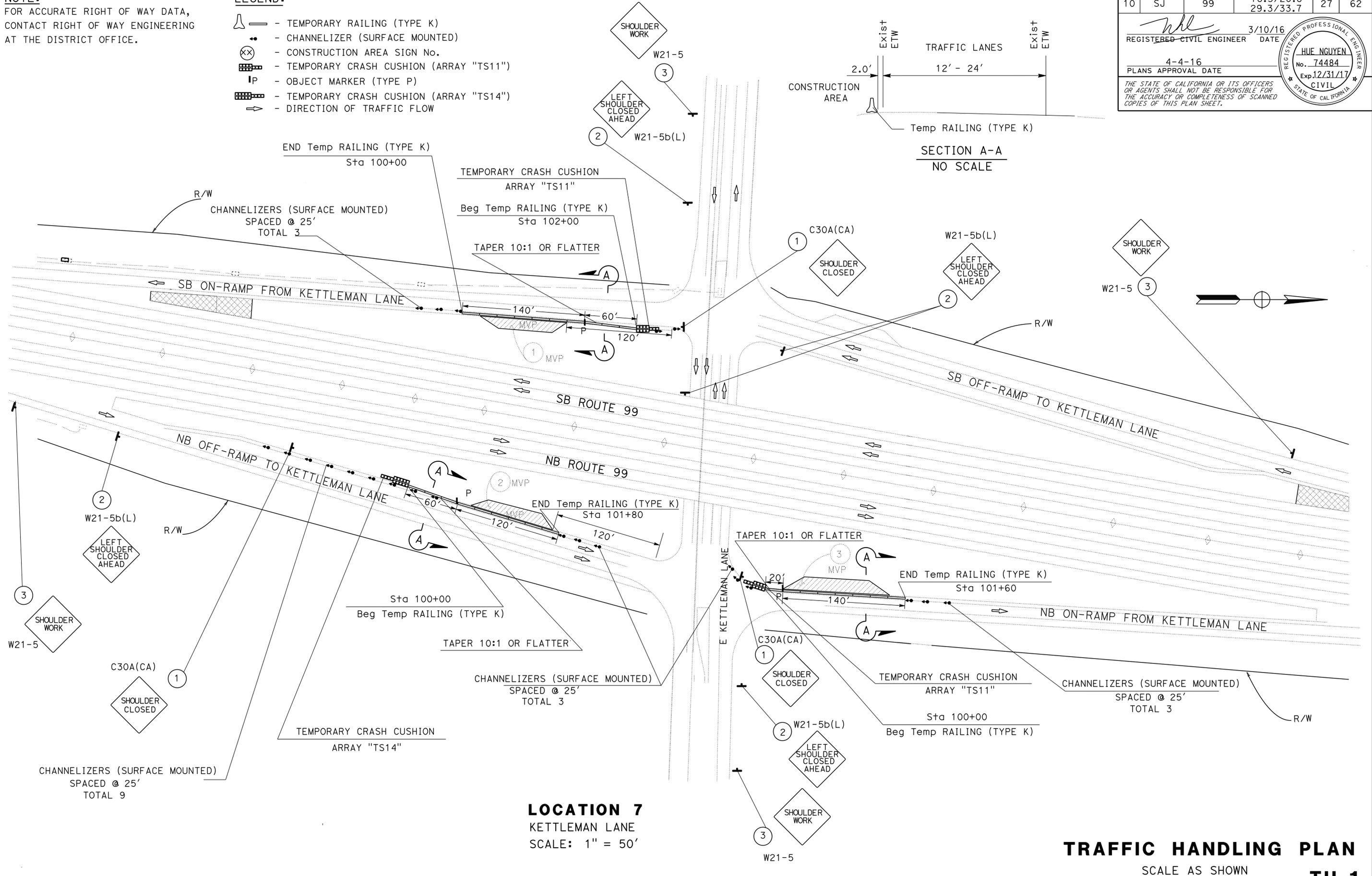
  

4-4-16  
PLANS APPROVAL DATE

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

**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA,  
CONTACT RIGHT OF WAY ENGINEERING  
AT THE DISTRICT OFFICE.

- LEGEND:**
- - TEMPORARY RAILING (TYPE K)
  - - CHANNELIZER (SURFACE MOUNTED)
  - ⊗ - CONSTRUCTION AREA SIGN No.
  - ▨ - TEMPORARY CRASH CUSHION (ARRAY "TS11")
  - IP - OBJECT MARKER (TYPE P)
  - ▨ - TEMPORARY CRASH CUSHION (ARRAY "TS14")
  - - DIRECTION OF TRAFFIC FLOW



**LOCATION 7**  
KETTLEMAN LANE  
SCALE: 1" = 50'

**TRAFFIC HANDLING PLAN**  
SCALE AS SHOWN  
**TH-1**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** 06-TRAFFIC DESIGN

REVISOR: R T  
DATE: 03-24-16

REVISOR: FERNANDO LOPEZ  
DATE: 03-24-16

DESIGNER: HUE NGUYEN

CHECKED BY: MOHAMMED QATAMI

FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI

DESIGNED BY: MOHAMMED QATAMI

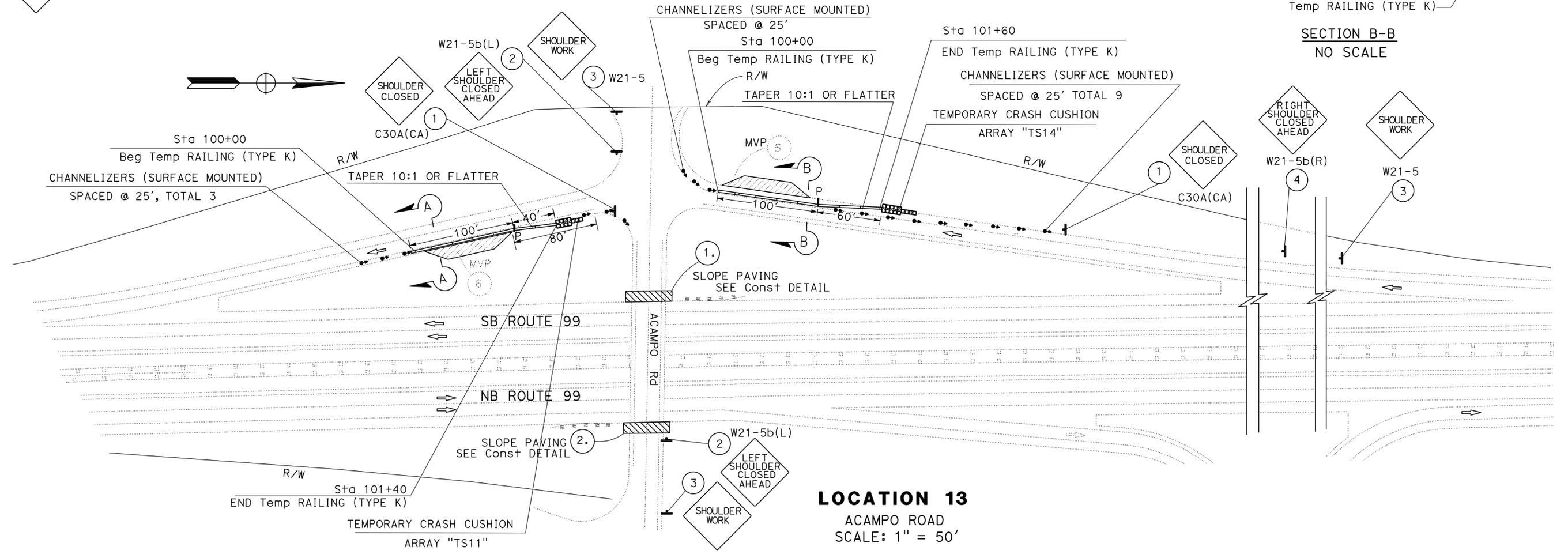
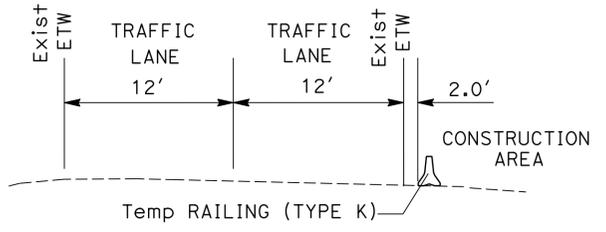
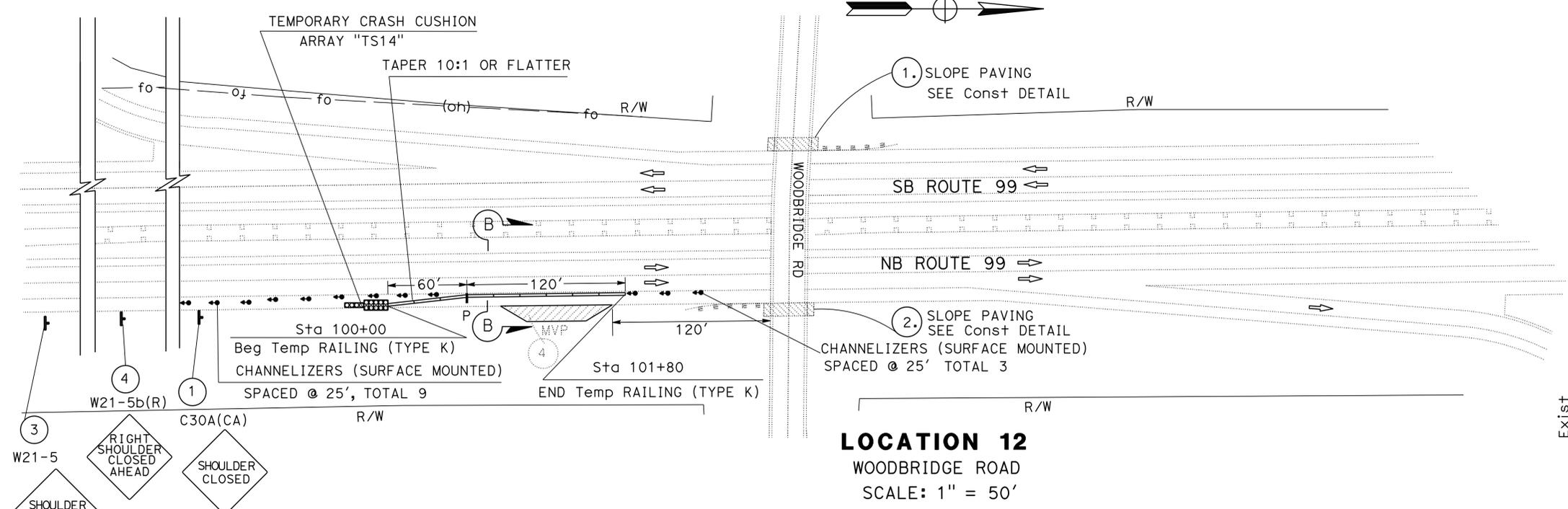
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** 06-TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI  
 CALCULATED/DESIGNED BY: FERNANDO LOPEZ  
 CHECKED BY: HUE NGUYEN  
 REVISED BY: R T  
 DATE REVISED: 03-24-16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	28	62

REGISTERED CIVIL ENGINEER: *nh* 3/10/16  
 DATE: 4-4-16  
 PLANS APPROVAL DATE: 12/31/17  
 REGISTERED PROFESSIONAL ENGINEER: HUE NGUYEN  
 No. 74484  
 Exp. 12/31/17  
 CIVIL  
 STATE OF CALIFORNIA

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

(THIS SHEET ONLY)  
**NOTES:**  
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE  
 2. SEE SHEET TH-1 FOR SECTION A-A



APPROVED FOR TRAFFIC HANDLING WORK ONLY

**TRAFFIC HANDLING PLAN**  
 SCALE AS SHOWN  
**TH-2**

LAST REVISION | DATE PLOTTED => 25-JUL-2016  
 03-25-16 TIME PLOTTED => 15:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	29	62

 3/10/16  
 REGISTERED CIVIL ENGINEER DATE

4-4-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 HUE NGUYEN  
 No. 74484  
 Exp. 12/31/17  
 CIVIL  
 STATE OF CALIFORNIA

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

**NOTE:**  
SEE CS-1 AND MI-1 SHEETS FOR ADDITIONAL CONSTRUCTION AREA SIGNS.

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SHEET No.	SIGN No.	SIGN CODE		SIGN MESSAGE	PANEL SIZE	No. POST AND SIZE	No. OF SIGNS
		FEDERAL	CALIFORNIA				
TH-1	①		C30A(CA)	SHOULDER CLOSED	48" x 48"	1 - 6" x 6"	3
	②	W21-5b(L)		LEFT SHOULDER CLOSED AHEAD	48" x 48"	1 - 6" x 6"	5
	③	W21-5		SHOULDER WORK	48" x 48"	1 - 6" x 6"	4
TH-2	①		C30A(CA)	SHOULDER CLOSED	48" x 48"	1 - 6" x 6"	3
	②	W21-5b(L)		LEFT SHOULDER CLOSED AHEAD	48" x 48"	1 - 6" x 6"	2
	③	W21-5		SHOULDER WORK	48" x 48"	1 - 6" x 6"	4
	④	W21-5b(R)		RIGHT SHOULDER CLOSED AHEAD	48" x 48"	1 - 6" x 6"	2

**TRAFFIC HANDLING DELINEATION QUANTITIES**

SHEET No.	MVP	PM	LOCATION SR 99	TEMPORARY RAILING (TYPE K)	TEMPORARY CRASH CUSHION MODULE		CHANNELIZER (SURFACE MOUNTED)	OBJECT MARKER (N) TYPE P
					ARRAY			
					'TS11'	'TS14'		
TH-1	①	29.3	SB ON-RAMP FROM KETTLEMAN LANE (LEFT SHOULDER)	200	11		5	1
	②	29.3	NB OFF-RAMP TO KETTLEMAN LANE (LEFT SHOULDER)	180		14	12	1
	③	29.3	NB ON-RAMP FROM KETTLEMAN LANE (LEFT SHOULDER)	160	11		6	1
TH-2	④	32.5	NB (RIGHT SHOULDER)	180		14	12	1
	⑤	33.7	SB OFF-RAMP TO ACAMPO RD (RIGHT SHOULDER)	160		14	12	1
	⑥	33.7	SB ON-RAMP FROM ACAMPO RD (LEFT SHOULDER)	140	11		6	1
SUBTOTAL				1,020	33	42	53	
TOTAL				1,020	75		53	

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

**TRAFFIC HANDLING QUANTITIES  
THQ-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** 06 - TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI  
 FERNANDO LOPEZ  
 HUE NGUYEN  
 I A  
 02-25-16  
 REVISOR: DATE  
 4-4-16  
 PLANS APPROVAL DATE

LAST REVISION | DATE PLOTTED => 25-JUL-2016  
 02-25-16 | TIME PLOTTED => 15:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	30	62

REGISTERED CIVIL ENGINEER	DATE
<i>nhl</i>	3/10/16
PLANS APPROVAL DATE	
4-4-16	

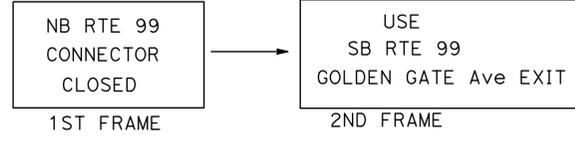
  

REGISTERED PROFESSIONAL ENGINEER
HUE NGUYEN
No. 74484
Exp. 12/31/17
CIVIL
STATE OF CALIFORNIA

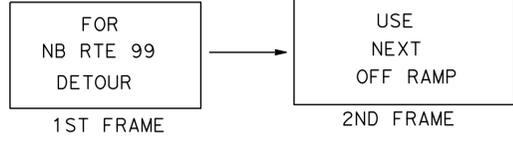
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

1. EXACT CONSTRUCTION AREA SIGN LOCATIONS TO BE DETERMINED BY ENGINEER.
2. WHEN DETOUR IS NOT IN USE, COVER ALL CONFLICTING ROADSIDE SIGNS AND CONSTRUCTION AREA SIGNS (TRAFFIC HANDLING.
3. DURING THE NB ROUTE 99 CONNECTOR CLOSURE, THE PCMS MESSAGE AT (A) SHOULD READ...



4. DURING THE NB RTE 99 CONNECTOR CLOSURE, THE PCMS MESSAGE AT (B) SHOULD READ...



5. FOR MORE CONSTRUCTION AREA SIGNS SEE PLAN SHEET CS-1, TH.

**LEGEND:**

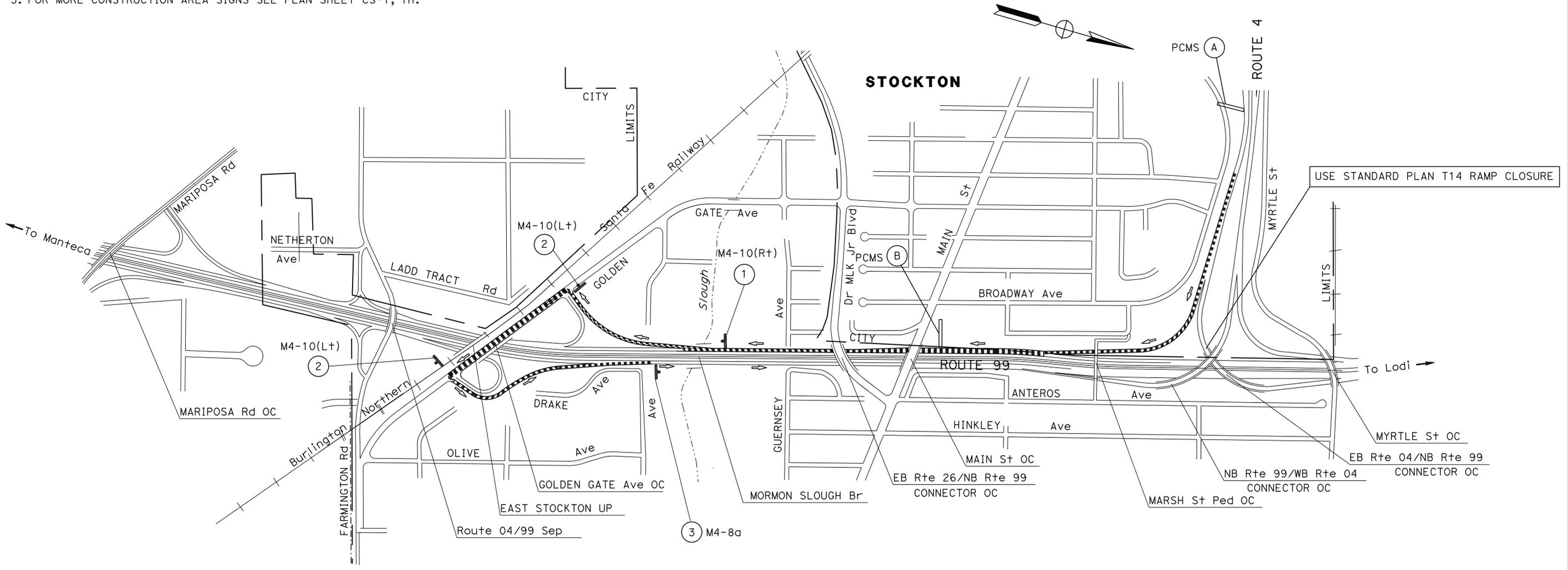
- - PORTABLE CHANGEABLE MESSAGE SIGN
- ⊗ - CONSTRUCTION AREA SIGN No.
- ← - DETOUR TRAFFIC FLOW

**CONSTRUCTION AREA SIGNS (PORTABLE)**

SIGN No.	SIGN TYPE	PANEL SIZE	No. OF POST AND SIZE	DESCRIPTION
1	M4-10(R+)	48" x 18"	1 - 4" x 4"	"DETOUR INSIDE (ARROW)"
	M4-10(L+)	48" x 18"		"DETOUR INSIDE (ARROW)"
2	G27-2(4)	24" x 24"	1 - 4" x 6"	99 MARKER
	M3-3	30" x 15"		"NORTH"
3	M4-8a	24" x 18"	1 - 4" x 4"	"END DETOUR"

**TRAFFIC DETOUR PLAN**

NB ROUTE 99 CONNECTOR CLOSED  
CONTINUE TO SB ROUTE 99 CONNECTOR  
TAKE SB OFF-RAMP TO GOLDEN GATE Ave  
TURN LEFT ONTO GOLDEN GATE Ave  
TURN LEFT ON TO NB ROUTE 99 ON-RAMP



**MOTORIST INFORMATION PLAN MI-1**

APPROVED FOR MOTORIST INFORMATION WORK ONLY

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - **Caltrans** 06-TRAFFIC DESIGN

USERNAME => s120300  
DGN FILE => 1013000083mg001.dgn

RELATIVE BORDER SCALE IS IN INCHES

UNIT 1512

PROJECT NUMBER & PHASE

10130000831

LAST REVISION DATE PLOTTED => 25-JUL-2016  
03-25-16 TIME PLOTTED => 15:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	31	62

<i>nhl</i>	3/10/16
REGISTERED CIVIL ENGINEER	DATE
4-4-16	
PLANS APPROVAL DATE	

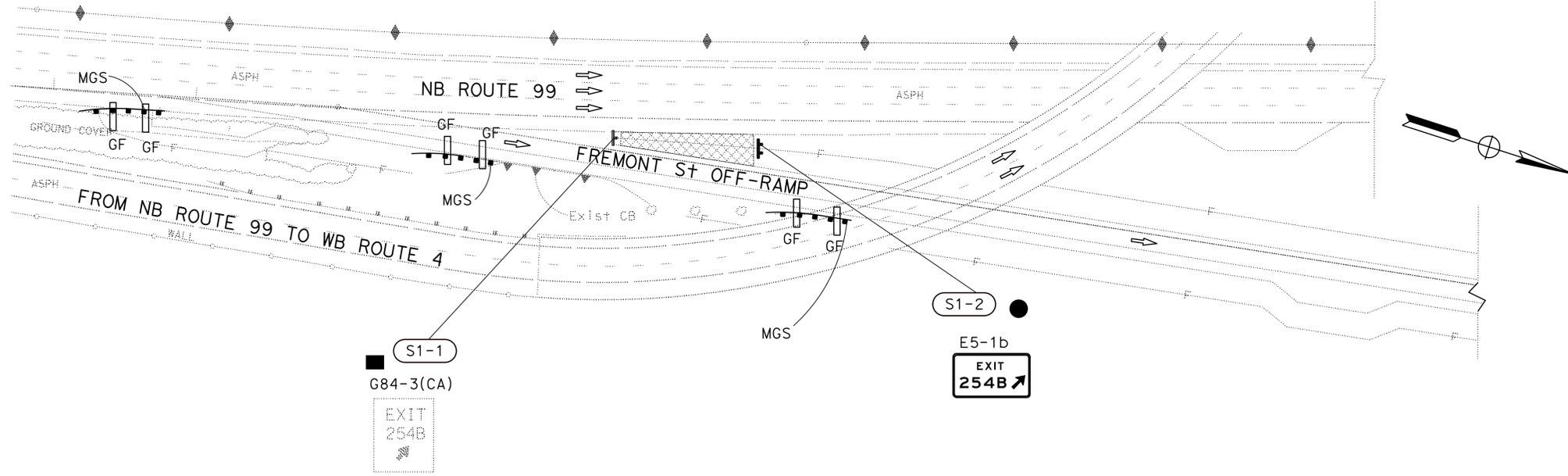
  

REGISTERED PROFESSIONAL ENGINEER	
HUE NGUYEN	
No. 74484	
Exp. 12/31/17	
CIVIL	
STATE OF CALIFORNIA	

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

**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

- LEGEND:**
- - ROADSIDE SIGN
  - △ - RELOCATE ROADSIDE SIGN
  - - REMOVE ROADSIDE SIGN
  - ▭<sub>G, F</sub> - GUARD RAILING DELINEATOR TYPE (CLASS 1) F, G



**LOCATION 1**

**SIGN PLAN**  
SCALE: 1"=50'

**S-1**

APPROVED FOR SIGN WORK ONLY

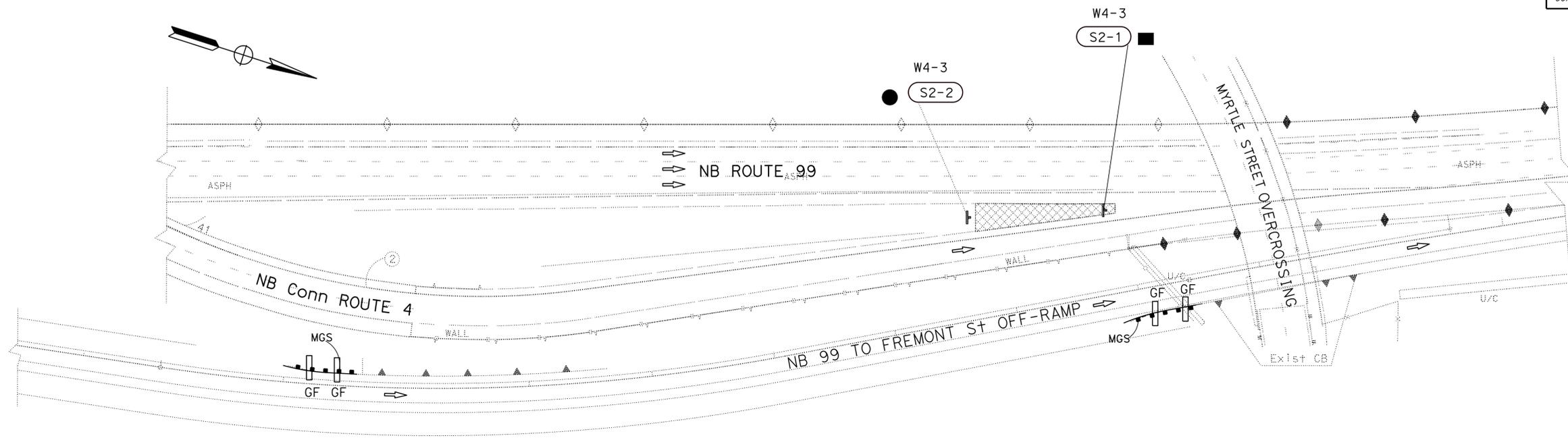
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
<b>Caltrans</b> 06-TRAFFIC DESIGN	MOHAMMED QATAMI	MOHAMMED QATAMI	FERNANDO LOPEZ	03-24-16
		CHECKED BY	HUE NGUYEN	

LAST REVISION DATE PLOTTED => 25-JUL-2016 15:44

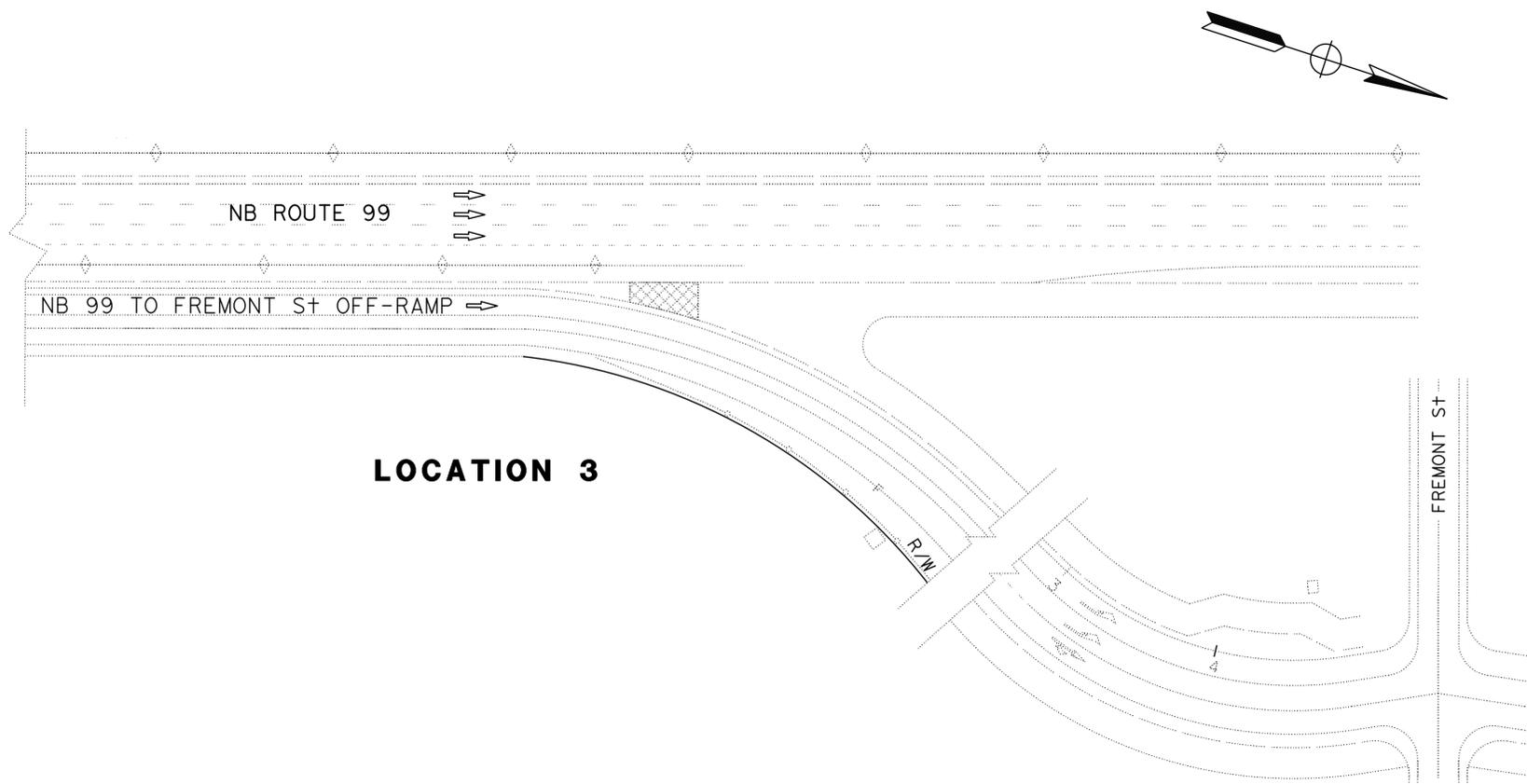
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	32	62
			3/10/16	DATE	
REGISTERED CIVIL ENGINEER			DATE		
4-4-16			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
<b>Caltrans</b> 06-TRAFFIC DESIGN	MOHAMMED OATAMI	MOHAMMED OATAMI	FERNANDO LOPEZ	03-24-16
		CHECKED BY	REVISOR	DATE
		HUE NGUYEN	HUE NGUYEN	03-24-16



**LOCATION 2**



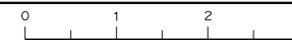
**LOCATION 3**

**SIGN PLAN**

SCALE: 1"=50'

**S-2**

APPROVED FOR SIGN WORK ONLY

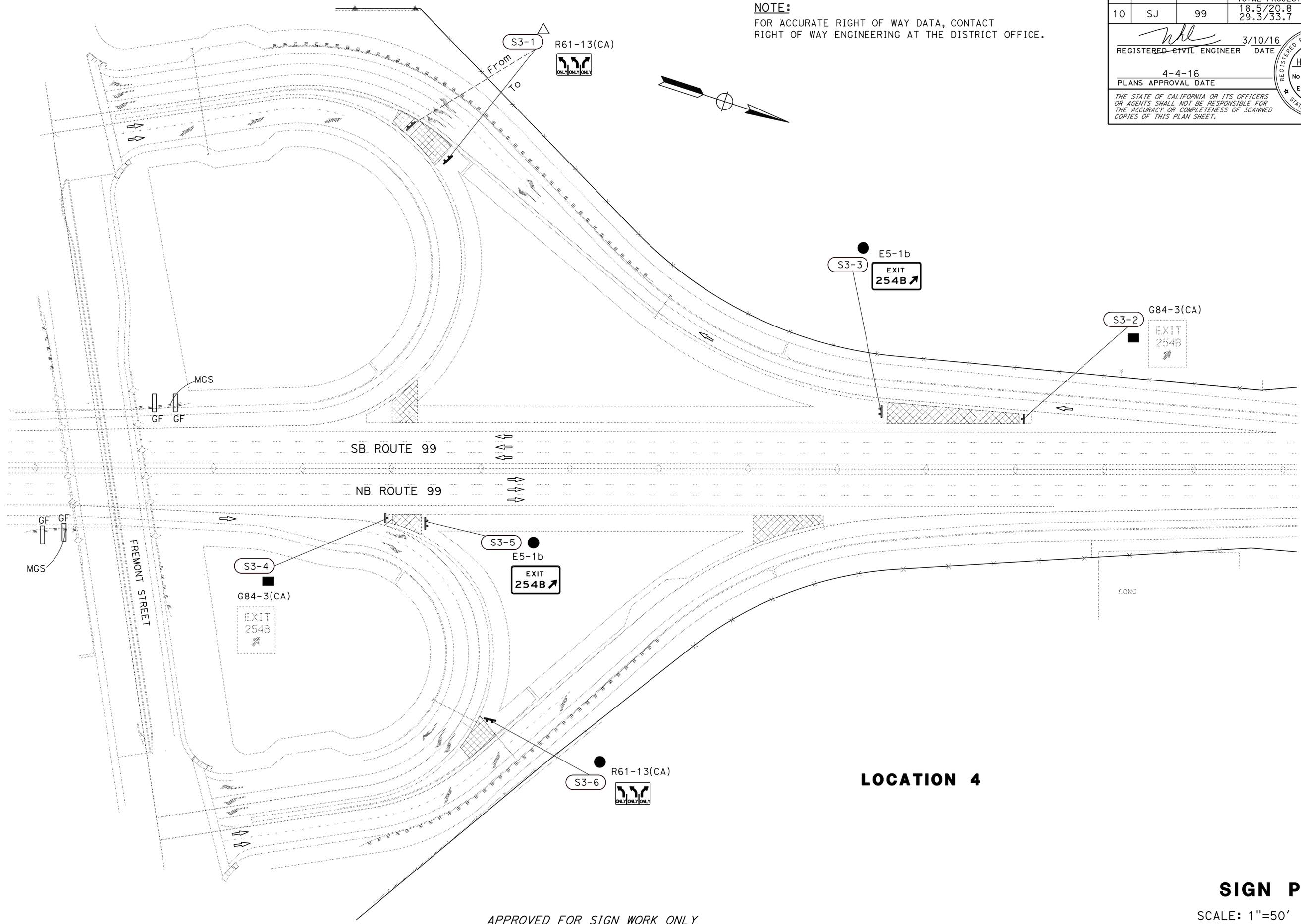


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI  
 CALCULATED/DESIGNED BY: CHECKED BY:  
 FERNANDO LOPEZ HUE NGUYEN  
 REVISED BY: DATE REVISED: 03-24-16  
 R T

**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	33	62

REGISTERED CIVIL ENGINEER DATE: 3/10/16  
 HUE NGUYEN No. 74484 Exp. 12/31/17  
 PLANS APPROVAL DATE: 4-4-16  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**LOCATION 4**

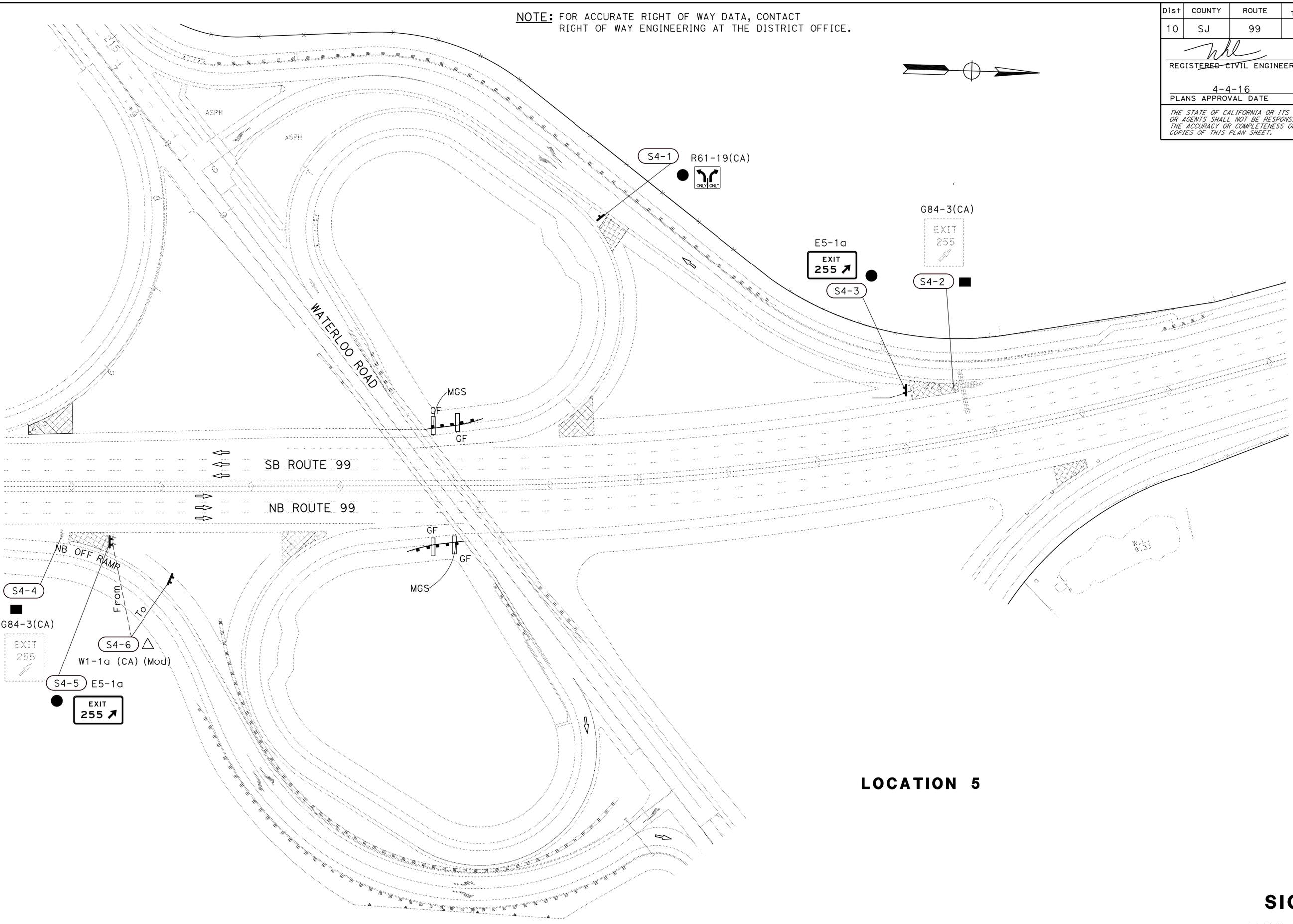
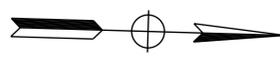
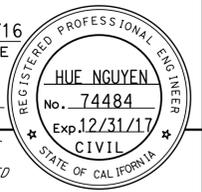
APPROVED FOR SIGN WORK ONLY

**SIGN PLAN**  
 SCALE: 1"=50' **S-3**

LAST REVISION DATE PLOTTED => 25-JUL-2016 03-25-16 TIME PLOTTED => 15:44

NOTE: FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	34	62
			3/10/16	DATE	
			REGISTERED CIVIL ENGINEER	DATE	
			4-4-16	PLANS APPROVAL DATE	
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



LOCATION 5

**SIGN PLAN**  
SCALE: 1"=50' **S-4**

APPROVED FOR SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Caltrans</b> 06 - TRAFFIC DESIGN	MOHAMMED QATAMI	FERNANDO LOPEZ	03-24-16
		HUE NGUYEN	

BORDER LAST REVISED 7/2/2010

USERNAME => s120300  
DGN FILE => 10130000830a004.dgn

RELATIVE BORDER SCALE IS IN INCHES

UNIT 1512

PROJECT NUMBER & PHASE

10130000831

LAST REVISION | DATE PLOTTED => 25-JUL-2016  
03-25-16 | TIME PLOTTED => 15:44

NOTE: FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	35	62

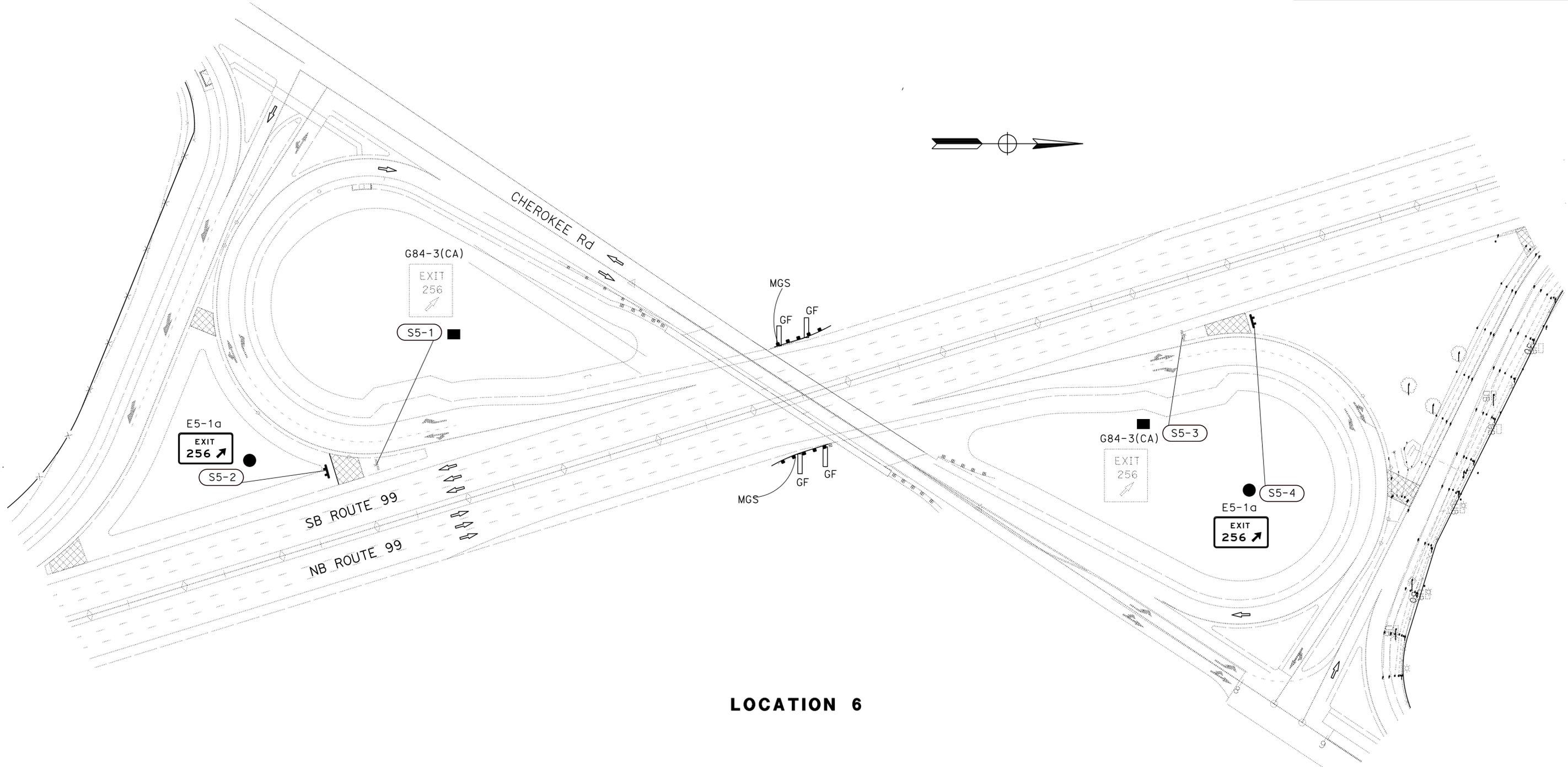
<i>nhl</i>	3/10/16
REGISTERED CIVIL ENGINEER	DATE
4-4-16	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
HUE NGUYEN
No. 74484
Exp. 12/31/17
CIVIL
STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Caltrans</b> 06-TRAFFIC DESIGN	MOHAMMED QATAMI	FERNANDO LOPEZ	03-24-16
	CHECKED BY	REVISOR	DATE
	HUE NGUYEN	FERNANDO LOPEZ	03-24-16



LOCATION 6

**SIGN PLAN**  
SCALE: 1"=50' **S-5**

APPROVED FOR SIGN WORK ONLY

LAST REVISION | DATE PLOTTED => 25-JUL-2016 03-25-16 | TIME PLOTTED => 15:44

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	36	62

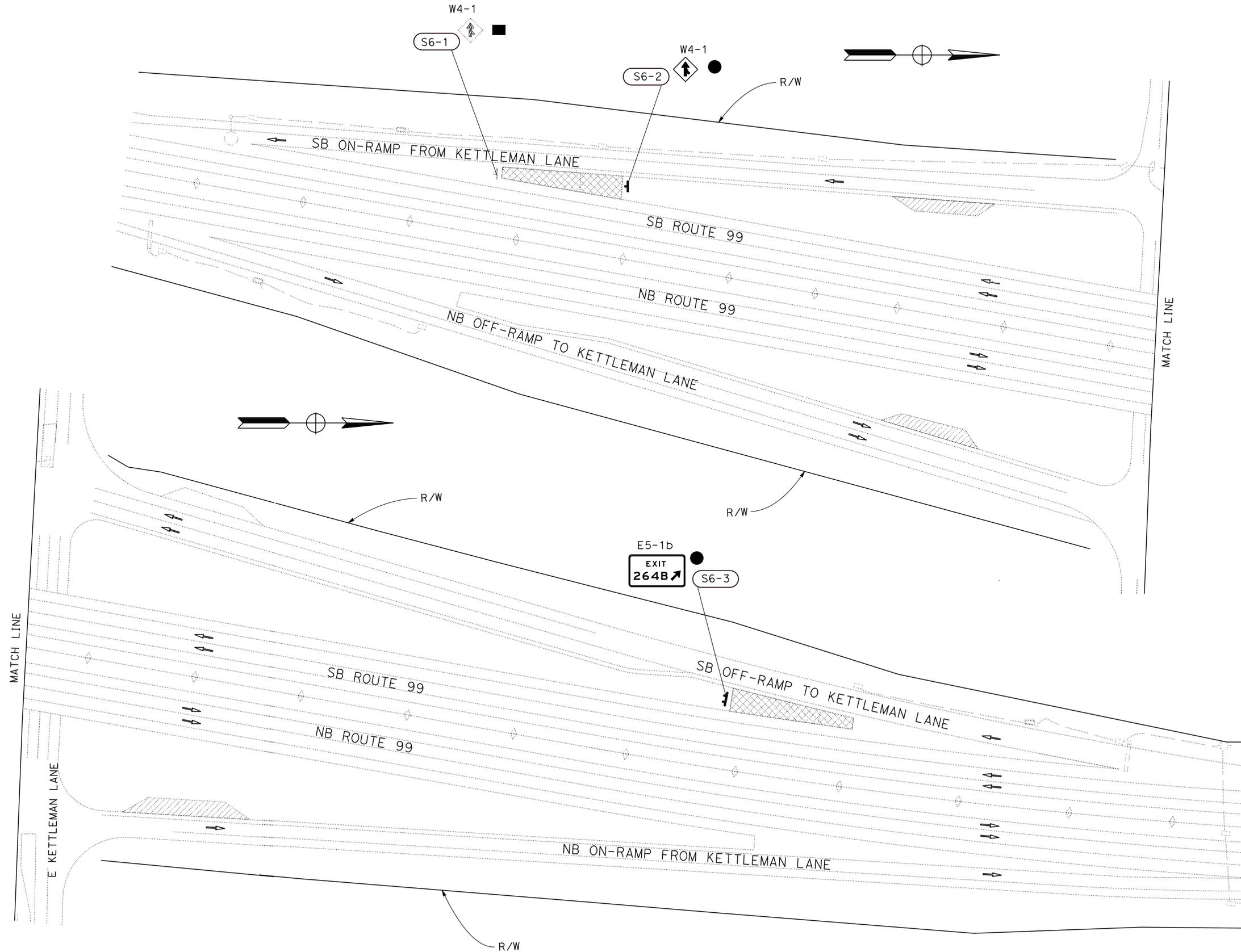
  

<i>nh</i>	3/10/16
REGISTERED CIVIL ENGINEER	DATE
4-4-16	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER	HUE NGUYEN
No. 74484	
Exp. 12/31/17	
CIVIL	

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



**LOCATION 7**

**SIGN PLAN**  
SCALE: 1"=50' **S-6**

APPROVED FOR SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Caltrans</b> 06-TRAFFIC DESIGN	MOHAMMED QATAMI	FERNANDO LOPEZ	03-24-16
		HUE NGUYEN	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	37	62

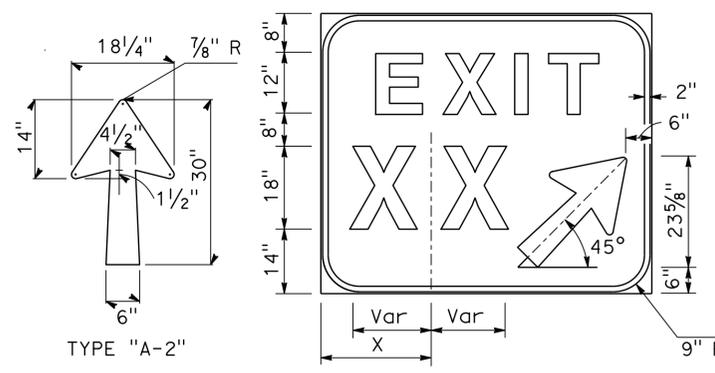
REGISTERED CIVIL ENGINEER DATE 3/10/16  
 4-4-16  
 PLANS APPROVAL DATE

HUE NGUYEN  
 No. 74484  
 Exp. 12/31/17  
 CIVIL

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

**NOTES:**

- EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
- SIGN POST LENGTH ARE APPROXIMATE, EXACT SIZE AND LENGTH WILL BE DETERMINATED BY THE ENGINEER.



SIGN No.	BOARD SIZE	No. OF DIGITS	X	ARROW		
				WIDTH	LENGTH	TYPE
E5-1a	90"x60"	3*	33"	18 1/4"	30"	A-2
E5-1b	108"x60"	4*	42"	18 1/4"	30"	A-2

\* REDUCE SPACING 25% BETWEEN NUMERALS

**ROADSIDE SIGN ITEMS**

SHEET NUMBER	SIGN NUMBER (SIGN-No)	SIGN CODE		SIGN MESSAGE	PANEL SIZE	No. OF POST AND SIZE	BACKGROUND		LEGEND		FURNISH SINGLE SHEET ALUMINIUM SIGN				REMOVE ROADSIDE SIGN	ROADSIDE SIGN-ONE POST	ROADSIDE SIGN-TWO POST	RELOCATE ROADSIDE SIGN	TREATED WOOD WASTE	GUARD RAILING DELINEATOR		
		FEDERAL	CALIFORNIA				SHEETING COLOR	RETROREFLECTIVITY ASTM TYPE	SHEETING COLOR	RETROREFLECTIVITY ASTM TYPE	PREMIUM GRAFFITI FILM	RETROREFLECTIVE SHEETING (TYPE XI)	FOR RETROREFLECTIVE SHEETING (TYPE XI)									
												0.063"-UNFRAMED	0.063"-FRAMED	UNFRAMED							FRAMED	
										SQFT		SQFT		SQFT		EA	EA	EA	EA	LB	EA	
S-1	S1-1		G84-3(CA)																			
	S1-2	E5-1b		EXIT 254B WITH ARROW	108" x 60"	2 - 6" x 6"	GREEN	XI	WHITE	XI	X	45									80	6
S-2	S2-1	W4-3																				
	S2-2	W4-3		ADDED LANE SYMBOL	48" x 48"	1 - 6" x 6"	YELLOW	XI	BLACK		X	16			16						120	4
S-3	S3-1		R61-13(CA)	INTERSECTION LN CONTROL																		
	S3-2		G84-3(CA)																		80	
	S3-3	E5-1b		EXIT 254B WITH ARROW	108" x 60"	2 - 6" x 6"	GREEN	XI	WHITE	XI	X	45										
	S3-4		G84-3(CA)																		80	
	S3-5	E5-1b		EXIT 254B WITH ARROW	108" x 60"	2 - 6" x 6"	GREEN	XI	WHITE	XI	X	45										
	S3-6		R61-13(CA)	INTERSECTION LN CONTROL	72" x 45"	2 - 6" x 6"	WHITE	IX	BLACK		X			22.5								4
S-4	S4-1		R61-19(CA)	INTERSECTION LN CONTROL	36" x 30"	1 - 4" x 4"	WHITE	IX	BLACK		X			7.5								
	S4-2		G84-3(CA)																		80	
	S4-3	E5-1a		EXIT 255 WITH ARROW	90" x 60"	2 - 6" x 6"	GREEN	XI	WHITE	XI	X	37.5										
	S4-4		G84-3(CA)																		80	
	S4-5	E5-1a		EXIT 255 WITH ARROW	90" x 60"	2 - 6" x 6"	GREEN	XI	WHITE	XI	X	37.5										
	S4-6		W1-1a(CA)(Mod)	Combination Horizontal Align/Advisory Speed																		1
S-5	S5-1		G84-3(CA)	EXIT 256 WITH ARROW																	80	
	S5-2	E5-1a		EXIT 256 WITH ARROW	90" x 60"	2 - 6" x 6"	GREEN	XI	WHITE	XI	X	37.5										
	S5-3		G84-3(CA)	EXIT 256 WITH ARROW																	80	
	S5-4	E5-1a		EXIT 256 WITH ARROW	90" x 60"	2 - 6" x 6"	GREEN	XI	WHITE	XI	X	37.5										
S-6	S6-1	W4-1																				
	S6-2	W4-1		MERGE	48" x 48"	1 - 6" x 6"	YELLOW	XI	BLACK		X	16			16							
	S6-3	E5-1b		EXIT 264B WITH ARROW	108" x 60"	2 - 6" x 6"	GREEN	XI	WHITE	XI	X	45										
TOTAL												362.0	7.5	22.5	32	330.0	9	3	9	2	680	22

**SIGN QUANTITIES SQ-1**

LAST REVISION DATE PLOTTED => 25-JUL-2016 02-25-16 TIME PLOTTED => 15:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	38	65

*Richard J. Boyer* 3/10/16  
 REGISTERED CIVIL ENGINEER DATE  
 RICHARD J. BOYER  
 No. 75844  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA  
 4-4-16  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

### ROADWAY ITEMS

Loc No	PM	LOCATION	HMA (TYPE A)	TACK COAT	CI 2 AB	ROADWAY EXCAVATION	IMPORT BORROW	MINOR Conc (TEXTURED PAVING)	SLOPE PAVING CONCRETE
			TON	TON	CY	CY	CY	CY	CY
1	18.5	NB 99 TO FREMONT St OFF RAMP (GORE)			27	54		27	
2	18.8	WB 04 TO NB 99 ON RAMP (GORE)			33	66		33	
3	19.1	NB 99 TO FREMONT St OFF RAMP (GORE)			13	25		13	
4	19.3	FREMONT STREET (GORE PAVING)							
		NB 99 TO FREMONT St OFF RAMP			9	18		9	
		NB 99 TO FREMONT St OFF RAMP (LOOP)			16	31		16	
		SB 99 TO FREMONT St OFF RAMP			46	92		46	
5	20.3	SB 99 TO FREMONT St OFF RAMP (LOOP)			29	57		29	
		WATERLOO ROAD (GORE PAVING)							
		SB 99 TO WATERLOO Rd OFF RAMP (LOOP)			10	21		10	
		SB 99 TO WATERLOO Rd OFF RAMP			14	29		14	
6	20.8	NB 99 TO WATERLOO Rd OFF RAMP			11	22		11	
		CHEROKEE ROAD (GORE PAVING)							
		SB 99 TO CHEROKEE Rd OFF RAMP (LOOP)			8	16		8	
		SB 99 TO CHERPKEE Rd OFF RAMP			17	35		17	
7	29.3	NB 99 TO CHEROKEE Rd OFF RAMP (LOOP)			13	21		13	
		NB 99 TO CHEROKEE Rd OFF RAMP			17	33		17	
		KETTLEMAN LANE (GORE/SLOPE PAVING)							
		SB 99 FROM KETTLEMAN LANE ON RAMP (GORE)			37	73		37	
8	30.5	SB 99 TO KETTLEMAN LANE OFF RAMP (GORE)			37	73		37	
		SB 99 FROM KETTLEMAN LANE ON RAMP (MVP)	30	0.1	22	29			
		NB 99 TO KETTLEMAN LANE OFF RAMP (MVP)	30	0.1	22	29			
		NB 99 FROM KETTLEMAN LANE ON RAMP (MVP)	30	0.1	22	29			
9	30.7	E LODI AVENUE							
		NB 99 (SLOPE PAVING)				11.38	15.04		16.4
10	31.0	SB 99 (SLOOP PAVING)				19.41	7.22		8.1
		E PINE STREET							
11	31.0	NB 99 (SLOPE PAVING)				27.68	3.74		13.8
		SB 99 (SLOOP PAVING)				25.55	4.56		13.9
12	32.5	ROUTE 12/99 Sep (VICTOR Rd)							
		NB 99 (SLOPE PAVING)				20.1	40.6		26.5
13	33.7	SB 99 (SLOOP PAVING)				96.99	25.44		29.5
		E LOCKFORD STREET							
		NB 99 (SLOPE PAVING)				14.6	14.57		17.1
		SB 99 (SLOOP PAVING)				18.95	18.24		20.5
13	33.7	WOODBRIDGE ROAD							
		NB 99 (SLOPE PAVING)				34.01	2		9.4
		SB 99 (SLOOP PAVING)				18.39			19.3
		NB 99 AT WOODBRIDGE Rd (MVP)	30	0.1	22	29			
13	33.7	ACAMPO ROAD							
		NB 99 (SLOPE PAVING)				32.93	1.27		22.1
		SB 99 (SLOOP PAVING)				13.96	8.3		10.0
		SB 99 FROM ACAMPO Rd ON RAMP (MVP)	30	0.1	22	29			
13	33.7	SB 99 TO ACAMPO Rd OFF RAMP (MVP)	30	0.1	22	29			
		DIKE PAD	9.6						
		FROM DIKE QUANTITIES	10.2						
		TOTAL	199.8	0.6	469	1174	141	337	207

#### NOTES:

- 1- \* - QUANTITY INCLUDED IN ROADWAY ITEMS TABLE.
- 2- (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
- 3- SEE CONSTRUCTION DETAILS FOR MORE INFORMATION
- 4- ON VEGETATION CONTROL (MINOR CONCRETE).

#### ABBREVIATIONS:

- CCTV - CLOSED CIRCUIT TELEVISION CAMERA
- MVDS - MICROWAVE VEHICLE DETECTION SYSTEM
- RWIS - ROADSIDE WEATHER INFORMATION SYSTEM
- TMS - TRAFFIC MONITORING STATION
- N/O - NORTH OFF
- S/O - SOUTH OFF

#### DIKE QUANTITIES

Loc No	PM	LOCATION	PLACE HMA DIKE (TYPE E)	HMA
			LF	TON
7	29.3	NB ON RAMP FROM KETTLEMAN LN	131	3.4
13	33.7	SB ON RAMP FROM ACAMPO RD	131	3.4
13	33.7	SB OFF RAMP TO ACAMPO RD	131	3.4
		TOTAL	393	10.2*

## SUMMARY OF QUANTITIES Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 G. E. 03-23-16  
 G. E. 2-16-16  
 REVISED BY DATE  
 GABE ELEFANTE RICHARD BOYER  
 CALCULATED/DESIGNED BY CHECKED BY  
 NOMER GUTIERREZ  
 FUNCTIONAL SUPERVISOR  
 DESIGN

LAST REVISION DATE PLOTTED => 25-JUL-2016  
 TIME PLOTTED => 13:44

## MIDWEST GUARDRAIL SYSTEM

SHEET	LOCATION		MIDWEST GUARDRAIL SYSTEM (WOOD POST)	REMOVE GUARDRAIL	ALTERNATIVE IN-LINE TERMINAL SYSTEM	ALTERNATIVE FLARED TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)	LAYOUT TYPE	TREATED WOOD WASTE	TRANSITION RAILING (TYPE WB-31)	END CAP (TYPE TC)	CONC BARRIER (TRANSITION)	RUBBER MAT
			LF	LF	EA	EA	EA		LB	EA	EA	LF	SQYD
L-1	1	NB 99 TO FREMONT S+ OFF-RAMP PM 18.5	50	65		1	1	16B	1321				35.3
			50	65		1		12B	1321	1	1		35.3
			50	65		1	1	16B	1321				35.3
L-2	2	NB 99 TO FREMONT S+ OFF-RAMP PM 18.8	50	65	1			12A	1321	1	1		26.7
			50	65		1	1	12B	1321	1	1		35.3
L-3	4	FREMONT STREET											
		NB	50	65				12B	1304	1	1		35.3
		SB	50	65				12B	1304	1	1		35.3
L-4	5	WATERLOO ROAD											
		NB	50	65				12B	1304	1	1		35.3
		SB	50	65				12B	1304	1	1		35.3
L-5	6	CHEROKEE ROAD											
		NB	120	125				16B	2455	1	1	9.4	66.4
		SB	120	125				16B	2640	1	1	9.4	66.4
SUBTOTAL									16,912				
FROM Sht SQ-1									680				
TOTAL			690	835	1	10	3		17,592	9	9	18.8	441.9

## IRRIGATION CONDUIT

LOCATION No.	LOCATION		SIDE		PLASTIC PIPE (CLASS 315) (SUPPLY LINE)	(N) ELECTRICAL CONDUIT	CORRUGATED HIGH DENSITY POLYETHYLENE PIPE				
							CONDUIT SIZE (INCH)		2-1/2"	3"	12"
							LINE	STATION			
8	NB 99	PM 30.5 LODI AVENUE		X	68	68	68				
9	NB 99	PM 30.75 E. PINE STREET		X	64	64	64				
10	NB 99	PM 31.0 E. VICTOR ROAD		X	90	90	90				
11	NB 99	PM 31.0 E. LOCKEFORD ROAD		X	63	63	63				
12	NB 99	PM 32.5 WOODBRIDGE ROAD		X	42	42	42				
13	NB 99	PM 33.0 ACAMPO ROAD		X	40	40	40				
8	SB 99	PM 30.5 LODI AVENUE	X		66	66	66				
9	SB 99	PM 30.75 E. PINE STREET	X		61	61	61				
10	SB 99	PM 31.0 E. VICTOR ROAD	X		90	90	90				
11	SB 99	PM 31.0 E. LOCKEFORD ROAD	X		63	63	63				
12	SB 99	PM 32.5 WOODBRIDGE ROAD	X		42	42	42				
13	SB 99	PM 33.0 ACAMPO ROAD	X		40	40	40				
TOTAL					729 **		729				

X - DENOTES REQUIREMENT  
 \*\* - QUANTITY INCLUDED IN LANDSCAPE QUANTITIES SHEET

## ADJUST UTILITY COVER TO GRADE

LOCATION	NB	SB
	EA	EA
Loc 10 E. VICTOR ROAD PM 31.00	2	
Loc 11 E. LOCKFORD STREET PM 31.00		1
Loc 12 WOODBRIDGE ROAD PM 32.50		1
SUBTOTAL	2	2
TOTAL	4	

## SUMMARY OF QUANTITIES Q-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	39	62

3/10/16  
 REGISTERED CIVIL ENGINEER DATE  
 RICHARD J. BOYER  
 No. 75844  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA

4-4-16  
 PLANS APPROVAL DATE

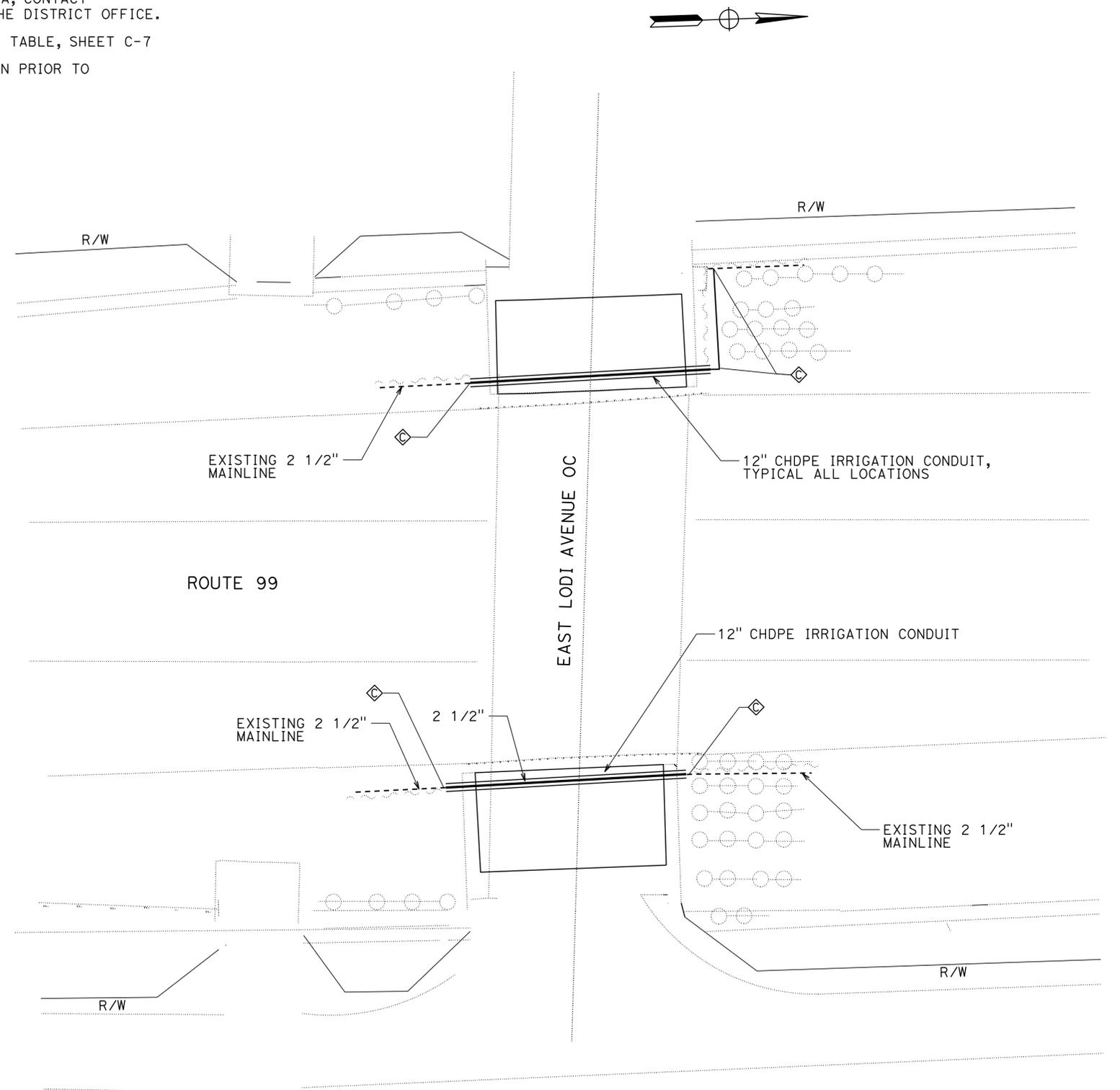
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	40	62

*Agustin Escutia*  
 LICENSED LANDSCAPE ARCHITECT  
 4-4-16  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE REMOVE IRRIGATION FACILITY TABLE, SHEET C-7
3. CUT AND CAP EXISTING IRRIGATION PRIOR TO CLEARING AND GRUBBING.



**LOCATION 8**  
PM R30.5

APPROVED FOR IRRIGATION WORK ONLY

**IRRIGATION PLAN**  
SCALE: 1"=20'  
**IP-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	GUS ESCUTIA	REVISOR	G.E.
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	BRAD COLE	CHECKED BY	ROBYN FONG	DATE REVISED	01-07-15
					03-10-16
					03-21-16



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	GUS ESCUTIA	REVISED BY	G.E.	G.E.
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	BRAD COLE	CHECKED BY	ROBYN FONG	DATE REVISED	1-07-15	03-21-16

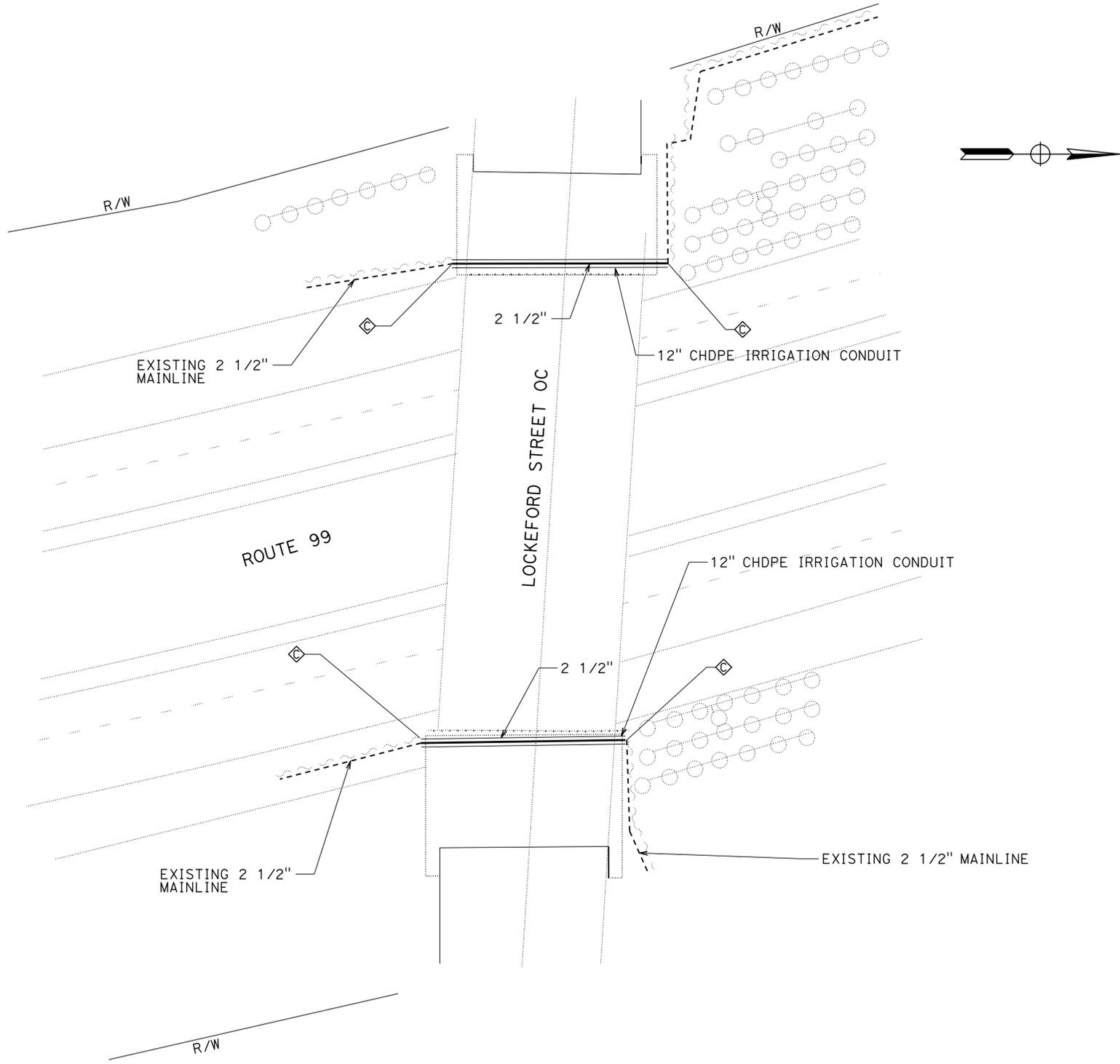
**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	42	62

Signature: *Agustin Escutia*  
 LICENSED LANDSCAPE ARCHITECT  
 Signature Date: 5/31/16  
 Renewal Date: 03/21/16  
 State of California

4-4-16  
 PLANS APPROVAL DATE

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



**LOCATION 11**  
PM R31.0

APPROVED FOR IRRIGATION WORK ONLY

**IRRIGATION PLAN**  
SCALE: 1"=20'  
**IP-3**

LAST REVISION | DATE PLOTTED => 25-JUL-2016  
 03-21-16 | TIME PLOTTED => 15:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	43	62

*Agustin Escutia*  
LICENSED LANDSCAPE ARCHITECT

4-4-16  
PLANS APPROVAL DATE

*Agustin Escutia*  
Signature  
5/31/16  
Renewal Date  
03/21/16  
Date

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

### LANDSCAPE QUANTITIES

SHEET	LOCATION No.	DESCRIPTION	PLASTIC PIPE (CLASS 315) (SUPPLY LINE)	WOOD MULCH		REMARKS
			2-1/2"	CY	(N) SQFT	
NOT SHOWN ON PLANS	8	PM 30.5 Lodi Avenue	82	13.0	1400	APPLY WOOD CHIP MULCH TO A UNIFORM DEPTH OF 3 INCHES ON DISTURBED SOIL AREAS TO APPROXIMATELY 10 FEET FROM EDGE OF PAVED SLOPE.
	9	PM 30.75 E. Pine Street		11.2	1200	
	10	PM 31.0 E. Victor Road	102	13.0	1400	
	11	PM 31.0 E. Lockeford Road		13.9	1500	
	12	PM 32.5 Woodbridge Road		8.2	880	
	13	PM 33.0 Acampo Road		13.0	1400	
	IRRIGATION CONDUIT TABLE TOTAL			729		
TOTAL			913	72.3		

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

## LANDSCAPE QUANTITIES LQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 FUNCTIONAL SUPERVISOR  
 BRAD COLE  
 CALCULATED-DESIGNED BY  
 CHECKED BY  
 GUS ESCUTIA  
 ROBYN FONG  
 REVISED BY  
 DATE REVISED  
 G.E.  
 01-07-15  
 G.E.  
 03-09-16  
 G.E.  
 03-21-16

	<b>M</b>	
Maint	MAINTENANCE	
Max	MAXIMUM	
MB	METAL BEAM	
MBB	METAL BEAM BARRIER	
MBGR	METAL BEAM GUARD RAILING	
Med	MEDIAN	
MGS	MIDWEST GUARDRAIL SYSTEM	
MH	MANHOLE	
Min	MINIMUM	
Misc	MISCELLANEOUS	
Misc I & S	MISCELLANEOUS IRON AND STEEL	
Mkr	MARKER	
Mod	MODIFIED, MODIFY	
Mon	MONUMENT	
MP	METAL PLATE	
MPGR	METAL PLATE GUARD RAILING	
MR	MOVEMENT RATING	
MSE	MECHANICALLY STABILIZED EMBANKMENT	
Mt	MOUNTAIN, MOUNT	
MtI	MATERIAL	
MVP	MAINTENANCE VEHICLE PULLOUT	
	<b>N</b>	
N	NORTH	
NB	NORTHBOUND	
No.	NUMBER (MUST HAVE PERIOD)	
Nos.	NUMBERS (MUST HAVE PERIOD)	
NPS	NOMINAL PIPE SIZE	
NS	NEAR SIDE	
NSP	NEW STANDARD PLAN	
NTS	NOT TO SCALE	
	<b>O</b>	
Obir	OBLITERATE	
OC	OVERCROSSING	
OD	OUTSIDE DIAMETER	
OF	OUTSIDE FACE	
OG	ORIGINAL GROUND	
OGAC	OPEN GRADED ASPHALT CONCRETE	
OGFC	OPEN GRADED FRICTION COURSE	
OH	OVERHEAD	
OHWM	ORDINARY HIGH WATER MARK	
O-O	OUT TO OUT	
Opp	OPPOSITE	
OSD	OVERSIDE DRAIN	
	<b>P</b>	
p	PAGE	
PAP	PERFORATED ALUMINUM PIPE	
PB	PULL BOX	
PC	POINT OF CURVATURE, PRECAST	
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE	
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN	
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE	
PCVC	POINT OF COMPOUND VERTICAL CURVE	
PEC	PERMIT TO ENTER AND CONSTRUCT	
Ped	PEDESTRIAN	
Ped OC	PEDESTRIAN OVERCROSSING	
Ped UC	PEDESTRIAN UNDERCROSSING	
Perm MtI	PERMEABLE MATERIAL	

	<b>P continued</b>	
PG	PROFILE GRADE	
PI	POINT OF INTERSECTION	
PJP	PARTIAL JOINT PENETRATION	
Pkwy	PARKWAY	
PL, PL	PLATE	
P/L	PROPERTY LINE	
PM	POST MILE, TIME FROM NOON TO MIDNIGHT	
PN	PAVING NOTCH	
POC	POINT OF HORIZONTAL CURVE	
POT	POINT OF TANGENT	
POVC	POINT OF VERTICAL CURVE	
PP	PIPE PILE, PLASTIC PIPE, POWER POLE	
PPL	PREFORMED PERMEABLE LINER	
PPP	PERFORATED PLASTIC PIPE	
PRC	POINT OF REVERSE CURVE	
PRF	PAVEMENT REINFORCING FABRIC	
PRVC	POINT OF REVERSE VERTICAL CURVE	
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES	
PS, P/S	PRESTRESSED	
PSP	PERFORATED STEEL PIPE	
PT	POINT OF TANGENCY	
PVC	POLYVINYL CHLORIDE	
Pvmt	PAVEMENT	
	<b>Q</b>	
Qty	QUANTITY	
	<b>R</b>	
R	RADIUS	
R & D	REMOVE AND DISPOSE	
R & S	REMOVE AND SALVAGE	
R/C	RATE OF CHANGE	
RCA	REINFORCED CONCRETE ARCH	
RCB	REINFORCED CONCRETE BOX	
RCP	REINFORCED CONCRETE PIPE	
RCPA	REINFORCED CONCRETE PIPE ARCH	
Rd	ROAD	
Reinf	REINFORCED, REINFORCEMENT, REINFORCING	
Rel	RELOCATE	
Repl	REPLACEMENT	
Ret	RETAINING	
Rev	REVISED, REVISION	
Rdwy	ROADWAY	
RHMA	RUBBERIZED HOT MIX ASPHALT	
Riv	RIVER	
RM	ROAD-MIXED	
RP	RADIUS POINT, REFERENCE POINT	
RR	RAILROAD	
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN	
Rt	RIGHT	
Rte	ROUTE	
RW	REDWOOD, RETAINING WALL	
R/W	RIGHT OF WAY	
Rwy	RAILWAY	

	<b>S</b>	
S	SOUTH, SUPPLEMENT	
SAE	STRUCTURE APPROACH EMBANKMENT	
Salv	SALVAGE	
SAPP	STRUCTURAL ALUMINUM PLATE PIPE	
SB	SOUTHBOUND	
SC	SAND CUSHION	
SCSP	SLOTTED CORRUGATED STEEL PIPE	
SD	STORM DRAIN	
Sec	SECOND, SECTION	
Sep	SEPARATION	
SG	SUBGRADE	
Shld	SHOULDER	
Sht	SHEET	
Sim	SIMILAR	
SL	STATION LINE	
SM	SELECTED MATERIAL	
Spec	SPECIAL, SPECIFICATIONS	
SPP	SLOTTED PLASTIC PIPE	
SS	SLOPE STAKE	
SSBM	STRAP AND SADDLE BRACKET METHOD	
SSD	STRUCTURAL SECTION DRAIN	
SSPA	STRUCTURAL STEEL PLATE ARCH	
SSPP	STRUCTURAL STEEL PLATE PIPE	
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH	
SSRP	STEEL SPIRAL RIB PIPE	
St	STREET	
Sta	STATION	
STBB	SINGLE THRIE BEAM BARRIER	
Std	STANDARD	
Str	STRUCTURE	
Surf	SURFACING	
SW	SIDEWALK, SOUND WALL	
Swr	SEWER	
Sym	SYMMETRICAL	
S4S	SURFACE 4 SIDES	
	<b>T</b>	
T	SEMI-TANGENT	
Tan	TANGENT	
TBB	THRIE BEAM BARRIER	
Tbr	TIMBER	
TC	TOP OF CURB	
TCB	TRAFFIC CONTROL BOX	
TCE	TEMPORARY CONSTRUCTION EASEMENT	
TeI	TELEPHONE	
Temp	TEMPORARY	
TG	TOP OF GRADE	
Tot	TOTAL	
TP	TELEPHONE POLE	
TPB	TREATED PERMEABLE BASE	
TPM	TREATED PERMEABLE MATERIAL	
Trans	TRANSITION	

	<b>T continued</b>	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL	
Typ	TYPICAL	
	<b>U</b>	
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	
	<b>V</b>	
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	
	<b>W</b>	
W	WEST, WIDTH	
WB	WESTBOUND	
WH	WEEP HOLE	
WM	WIRE MESH	
WS	WATER SURFACE	
WSP	WELDED STEEL PIPE	
Wt	WEIGHT	
WV	WATER VALVE	
WW	WINGWALL	
WWL	WINGWALL LAYOUT LINE	
	<b>X</b>	
X Sec	CROSS SECTION	
Xing	CROSSING	
	<b>Y</b>	
Yr	YEAR	
Yrs	YEARS	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	44	62

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Grace M. Tsushima  
 No. C49814  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 4-4-16

**UNIT OF MEASUREMENT SYMBOLS:**

Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

**TABLE A**

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

Some of the symbols used in the plans other than in the project plan quantity tables are:

**TABLE B**

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft <sup>3</sup> , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
Ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kip	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

\* For use on a sign panel only

STATE OF CALIFORNIA  
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**ABBREVIATIONS  
(SHEET 2 OF 2)**

NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B  
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	45	62

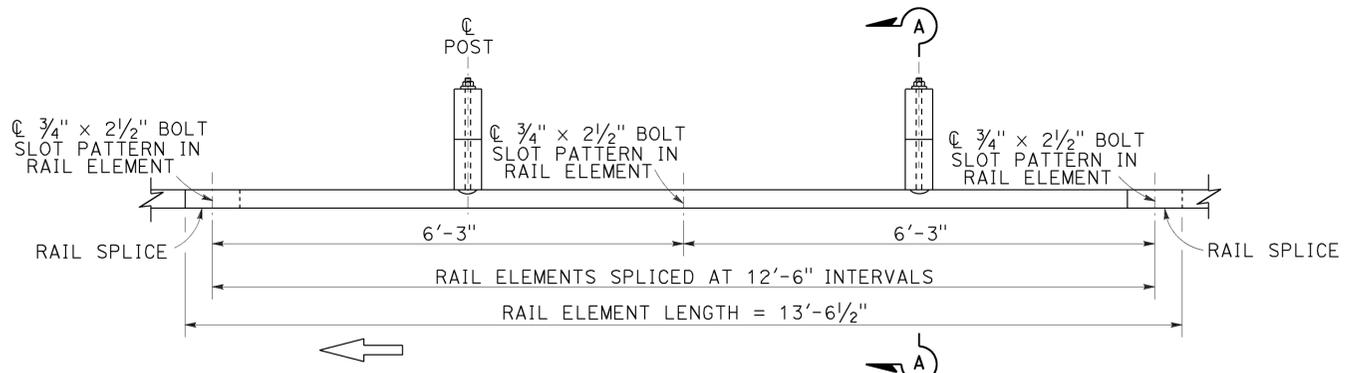
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

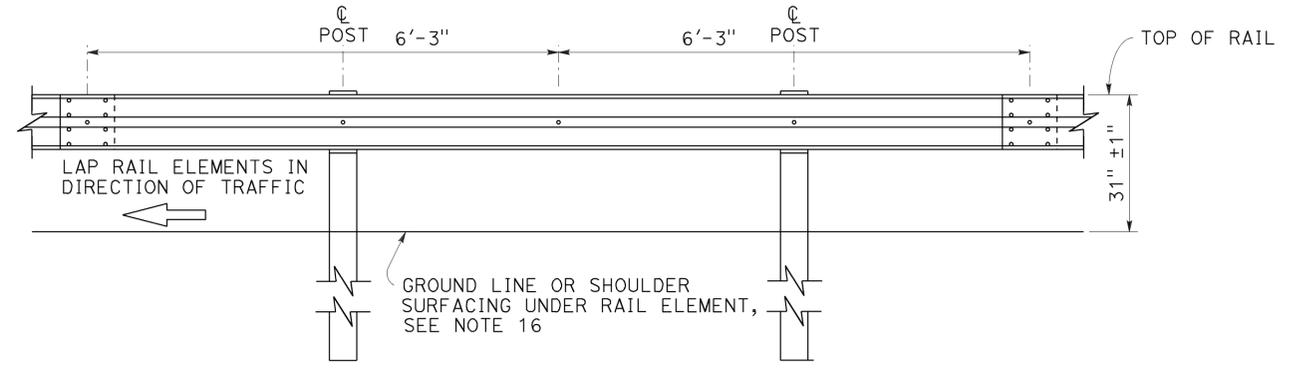
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STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 4-4-16

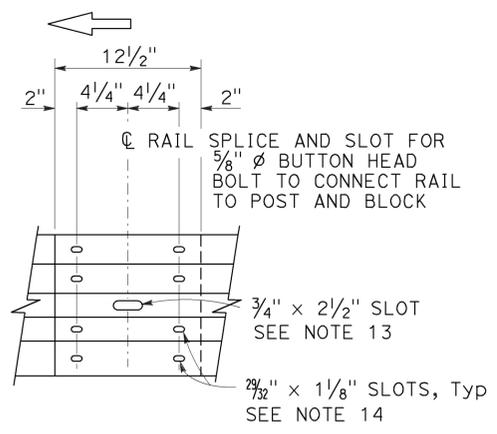


PLAN



ELEVATION

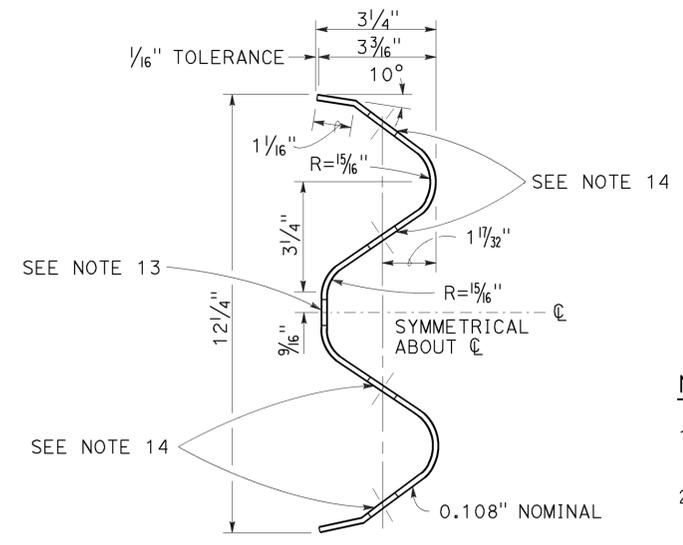
MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS



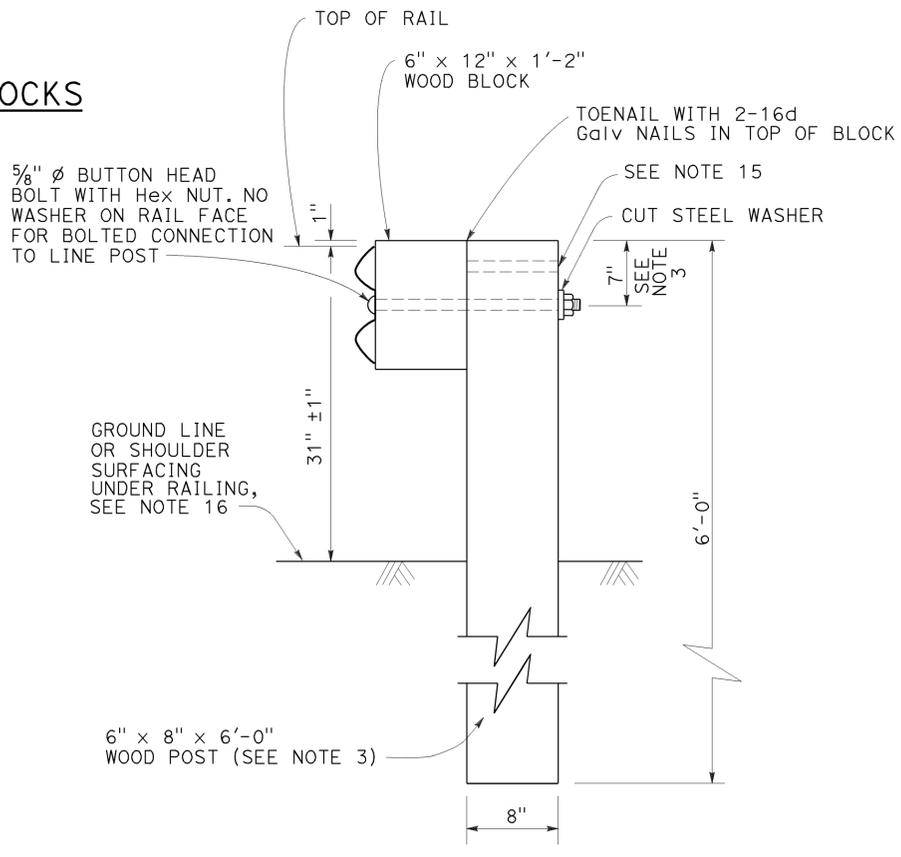
ELEVATION

RAIL ELEMENT SPLICE DETAIL

- Connect the over lapped end of the rail elements with  $\frac{5}{8}$ "  $\phi$  x  $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the  $\frac{7}{32}$ " x  $1\frac{1}{8}$ " slots and bolted together with  $\frac{5}{8}$ "  $\phi$  recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



SECTION THRU RAIL ELEMENT



SECTION A-A  
TYPICAL WOOD LINE POST INSTALLATION

See Note 4

NOTES:

- For details of steel post installations, see Revised Standard Plan RSP A77L2.
- For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
- For details of wood posts and wood blocks used to construct MGS, see Revised Standard Plan RSP A77N1.
- For additional installation details, see Revised Standard Plan RSP A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MSG connection to bridge railing, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
- For MGS connection details to abutments and walls, see Revised Standard Plan RSP A77U3.
- For typical MGS delineation and dike positioning details, see Revised Standard Plan RSP A77N4.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Revised Standard Plan RSP A77N1.
- Install posts in soil.

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MIDWEST GUARDRAIL SYSTEM  
STANDARD RAILING SECTION  
(WOOD POST WITH WOOD BLOCK)

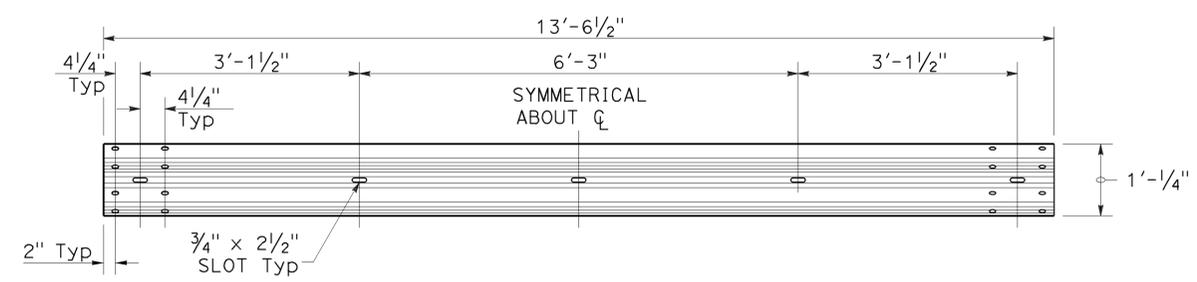
NO SCALE

RSP A77L1 DATED JULY 19, 2013 SUPPLEMENTS STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L1

2010 REVISED STANDARD PLAN RSP A77L1

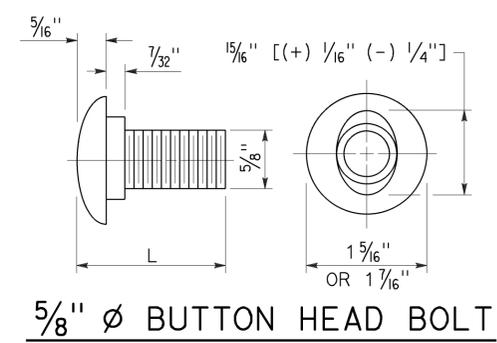
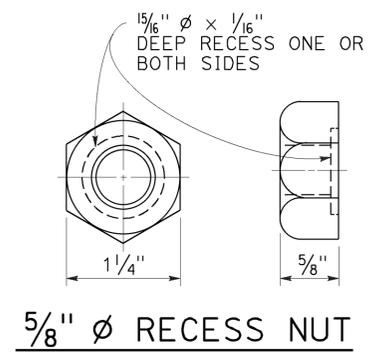
TO ACCOMPANY PLANS DATED 4-4-16



TYPICAL RAIL ELEMENT

**NOTE:**

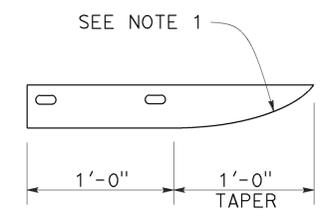
1. Slotted holes for splice bolts to overlap ends of rail element.



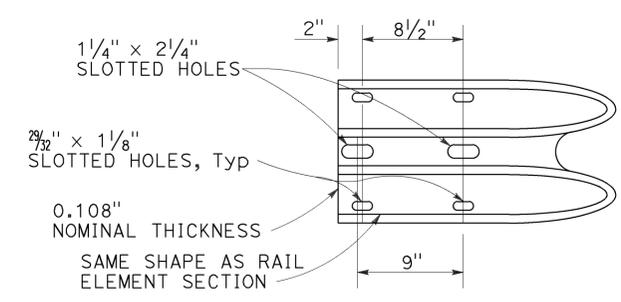
**BUTTON HEAD BOLT**

L	THREAD LENGTH
1 3/8"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" Min THREAD LENGTH
18"	4" Min THREAD LENGTH
20"	4" Min THREAD LENGTH
22"	4" Min THREAD LENGTH
26"	4" Min THREAD LENGTH
36"	4" Min THREAD LENGTH
** 2 3/4"	2" Min THREAD LENGTH
** 19"	4" Min THREAD LENGTH

\*\* For nested rail applications.



PLAN



ELEVATION  
END CAP  
(TYPE A)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
STANDARD HARDWARE**

NO SCALE

RSP A77M1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77M1**

2010 REVISED STANDARD PLAN RSP A77M1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	47	62

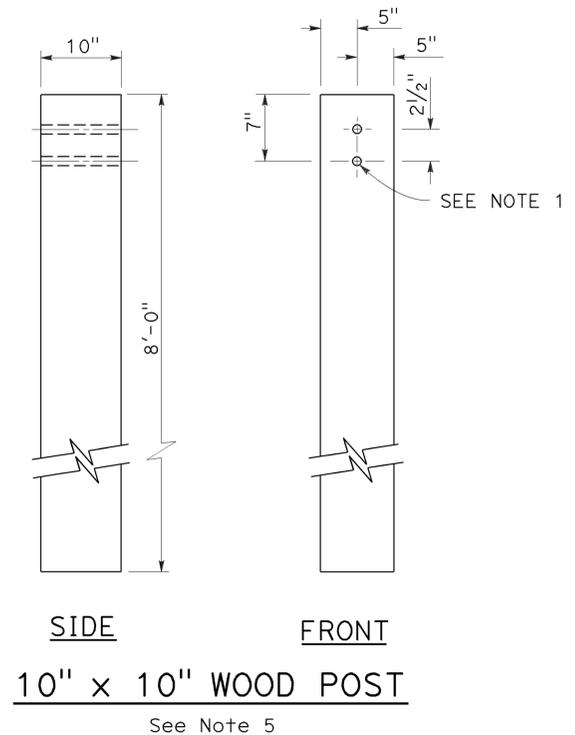
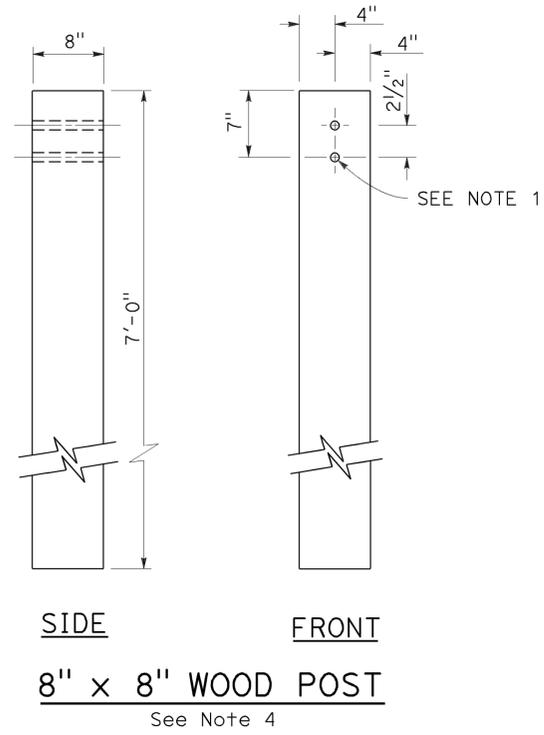
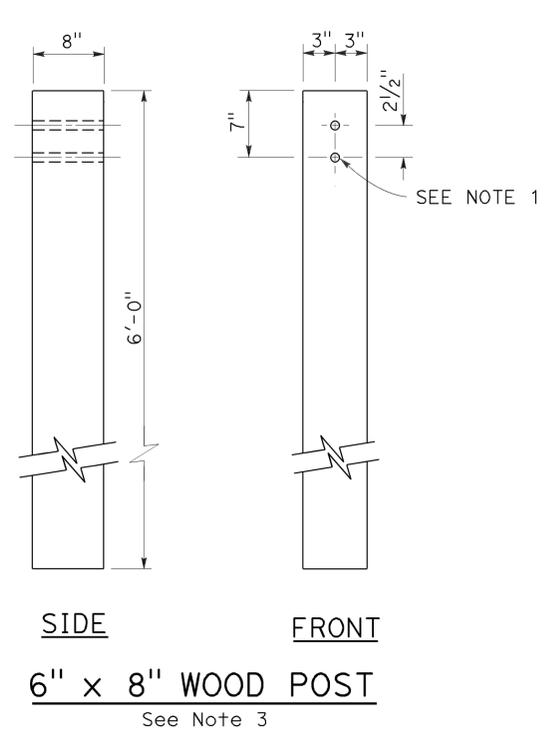
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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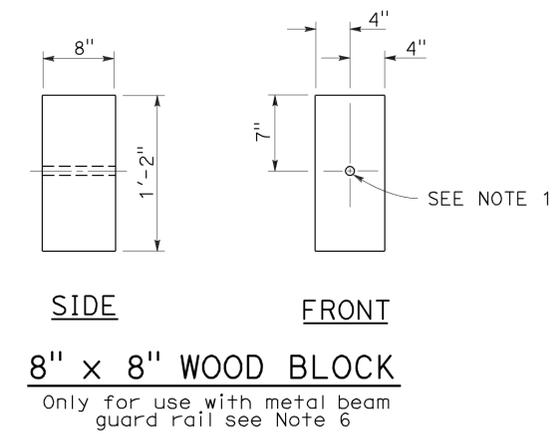
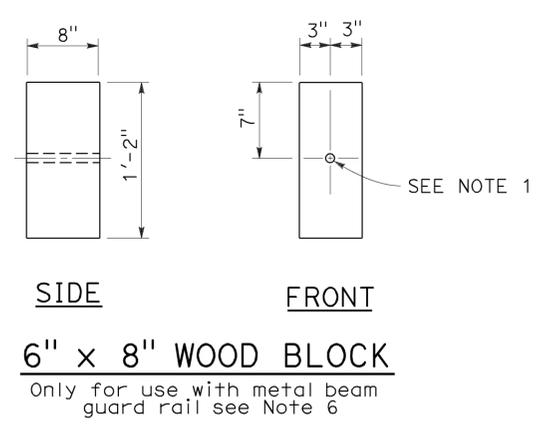
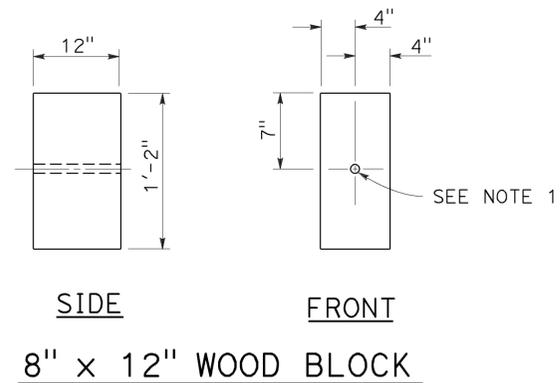
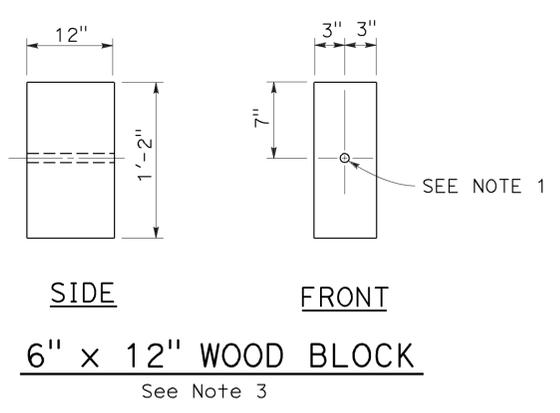
REGISTERED PROFESSIONAL ENGINEER  
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CIVIL  
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 4-4-16



**NOTES:**

1. All holes in wood posts and blocks shall be  $\frac{3}{4}$ " Dia  $\pm$   $\frac{1}{16}$ ".
2. Dimensions shown for wood post are nominal.
3. This post and block combination used for standard line post sections of MGS.
4. This post and 8" x 12" block combination used for line post sections of MGS on narrow roadways.
5. This post and 8" x 12" block combination is typically used where strengthened line post sections of MGS are warranted to shield fixed objects.
6. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" wood blocks.



STATE OF CALIFORNIA  
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**MIDWEST GUARDRAIL SYSTEM  
WOOD POST AND  
WOOD BLOCK DETAILS**

NO SCALE

RSP A77N1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N1**

2010 REVISED STANDARD PLAN RSP A77N1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	48	62

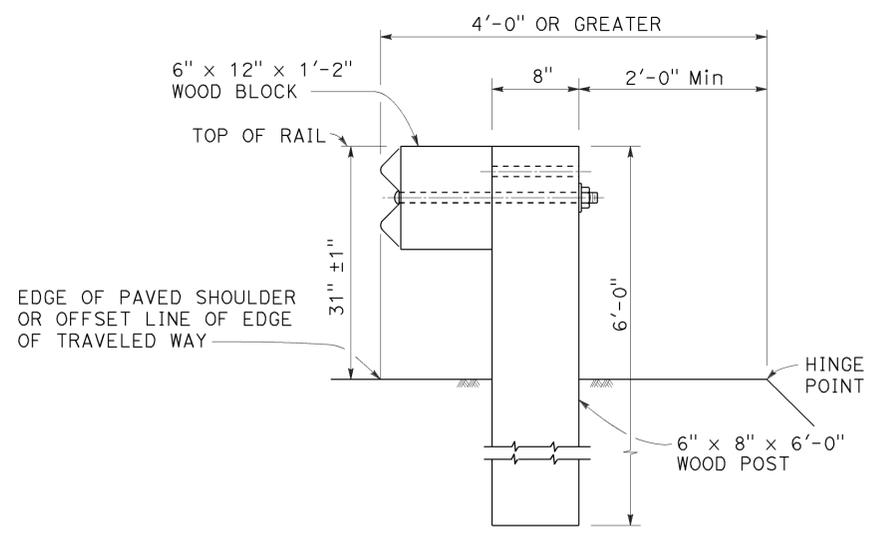
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

November 15, 2013  
PLANS APPROVAL DATE

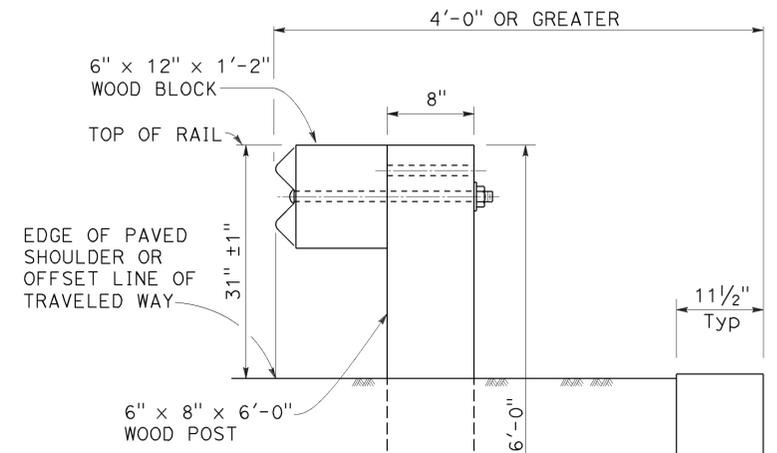
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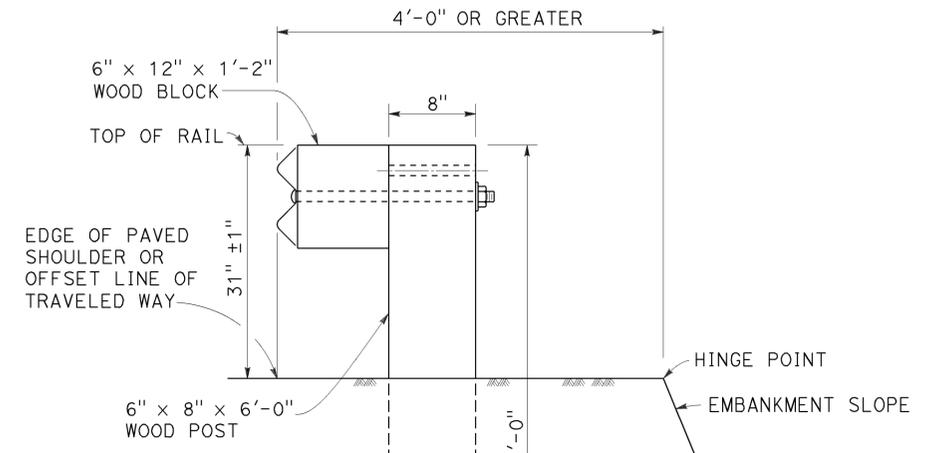
TO ACCOMPANY PLANS DATED 4-4-16



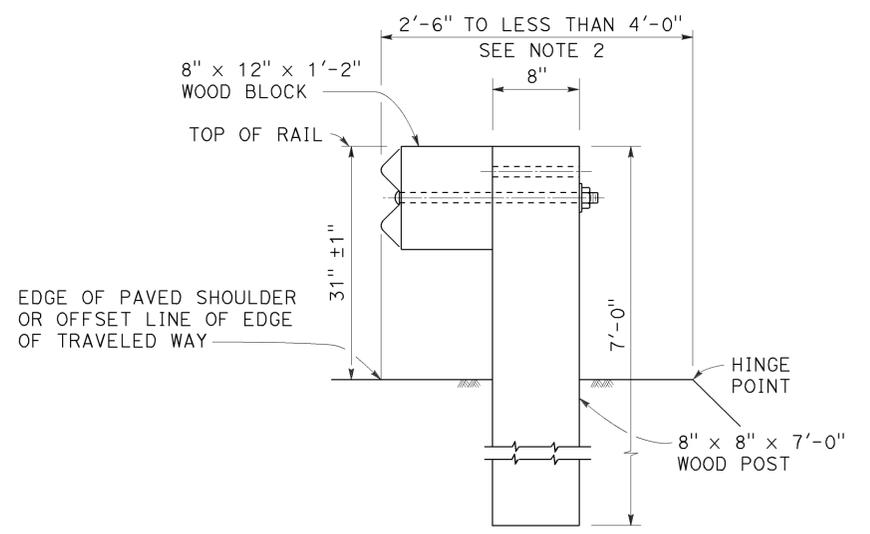
**DETAIL A**  
**TYPICAL ROADWAY**  
**INSTALLATION**  
See Note 1



**DETAIL C**



**DETAIL D**



**DETAIL B**  
**NARROW ROADWAY**  
**INSTALLATION**  
See Note 1

**POST EMBEDMENT**

**INSTALLATION AT EARTH RETAINING WALLS**

**NOTES:**

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 8.5 or W6 x 9 steel post, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 15 steel post, 8'-0" in length, with 8" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Revised Standard Plan RSP A77L1 and RSP A77L2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-6", see the Project Plans for special details.
3. For dike positioning with MGS installations, see Revised Standard Plan RSP A77N4.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM**  
**TYPICAL LINE POST**  
**EMBEDMENT AND**  
**HINGE POINT OFFSET DETAILS**

NO SCALE

RSP A77N3 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N3  
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N3**

2010 REVISED STANDARD PLAN RSP A77N3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	49	62

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

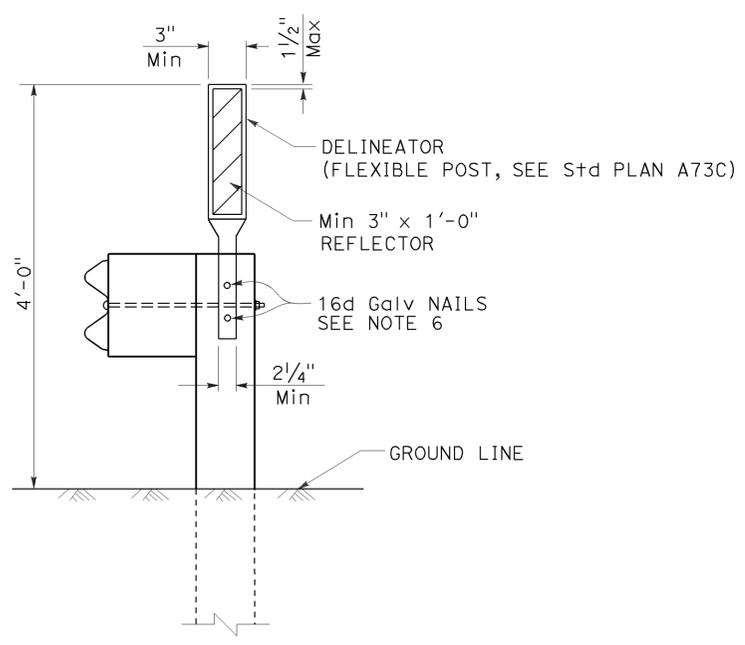
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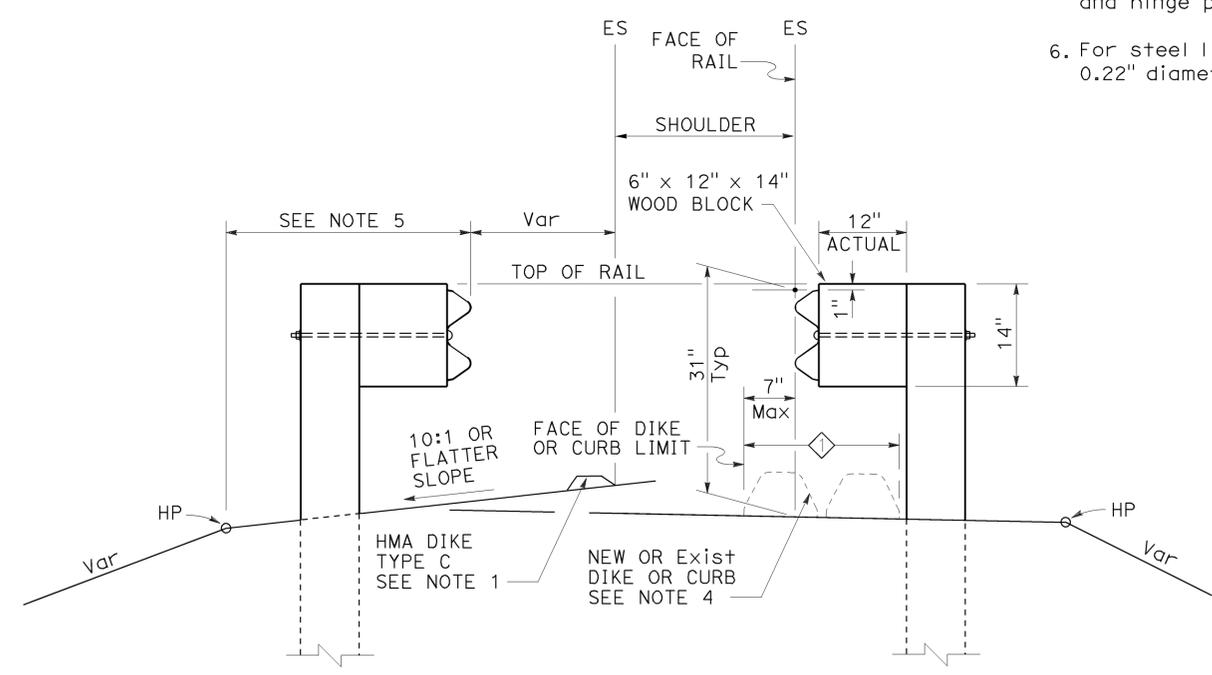
TO ACCOMPANY PLANS DATED 4-4-16

**NOTES:**

1. When necessary to place dike more than 7" in front of face of MGS, only Type C dike may be used. For dike details, see Revised Standard Plan RSP A87B.
2. For standard railing post embedment, see Revised Standard Plan RSP A77N3.
3. MGS delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under MGS, the maximum height of the dike or curb shall be 6". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and RSP A87B.
5. For details of typical distance between the face of rail and hinge point, see Revised Standard Plan RSP A77N3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



**MGS DELINEATION**  
See Note 3



**DIKE POSITIONING**  
See Note 1

◇ PERMISSIBLE DIKE OR CURB PLACEMENT AREA

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TYPICAL RAILING DELINEATION  
AND DIKE POSITIONING DETAILS**  
NO SCALE

RSP A77N4 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A77N4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	50	62

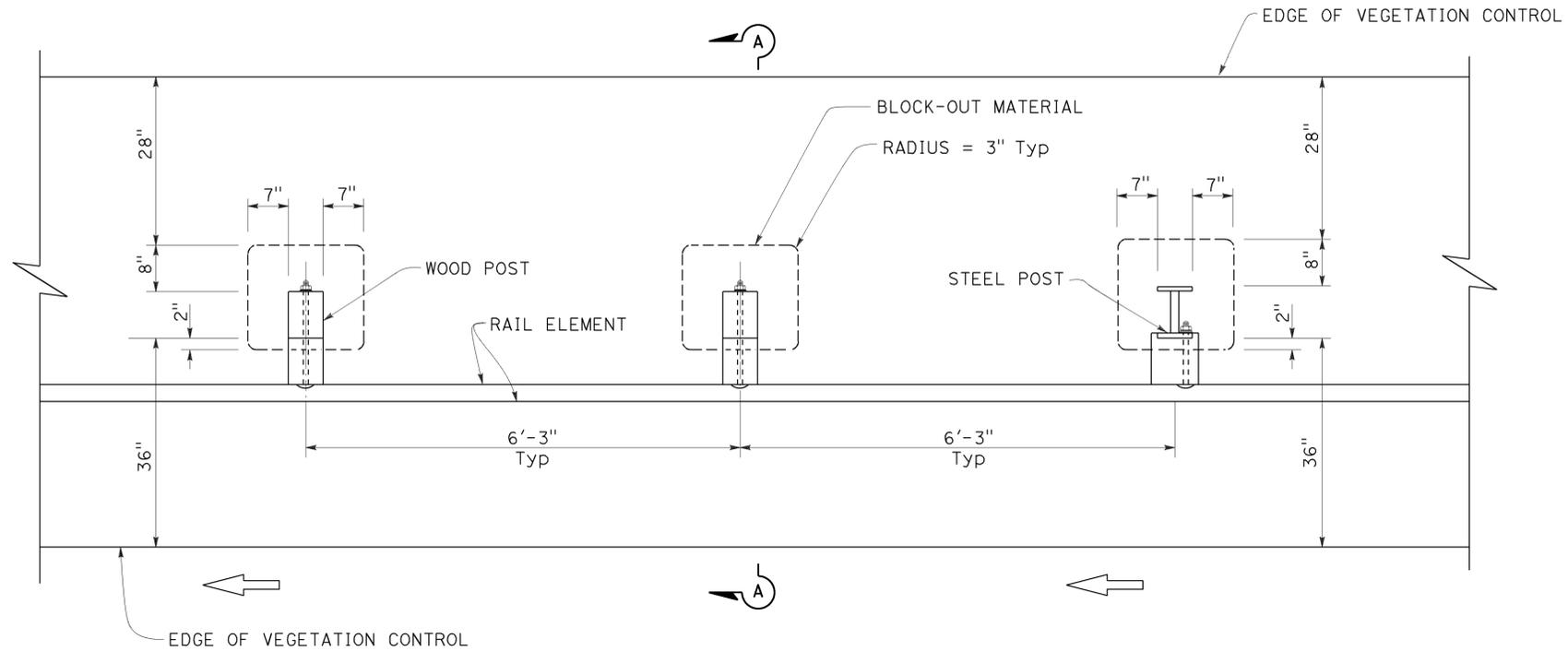
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July 19, 2013  
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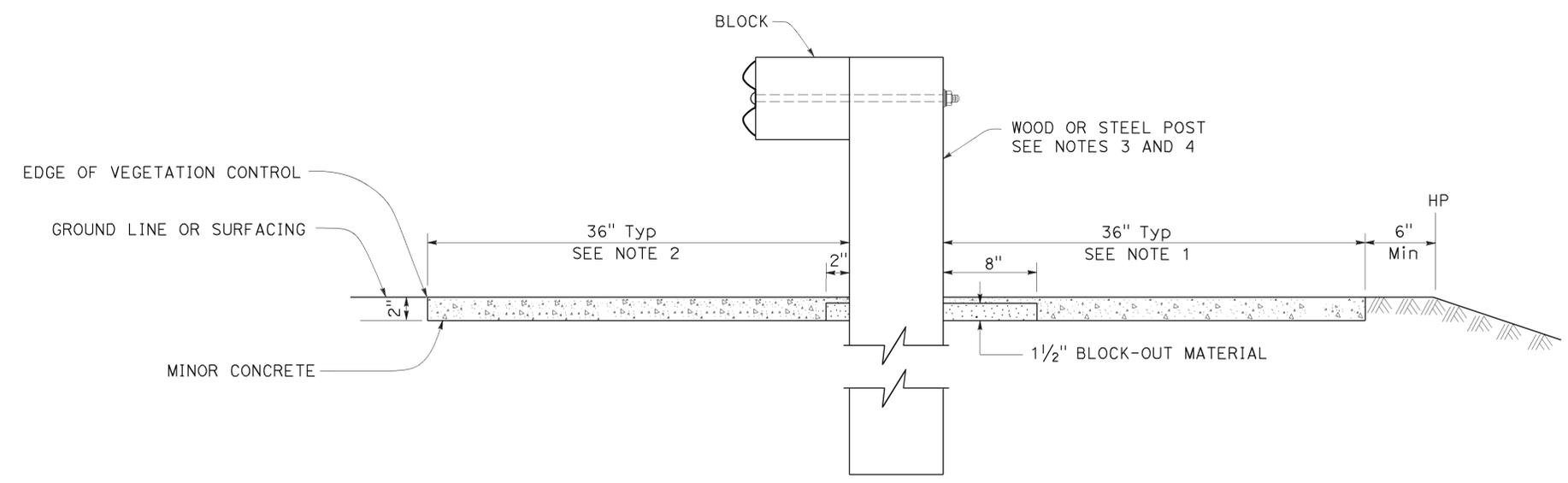
TO ACCOMPANY PLANS DATED 4-4-16



**PLAN**

**NOTES:**

1. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.
3. For wood post sizes, see Revised Standard Plan RSP A77N1.
4. For steel post sizes, see Revised Standard Plan RSP A77N2.
5. For details not shown, see Revised Standard Plans RSP A77L1 and RSP A77L2.



**SECTION A-A**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TYPICAL VEGETATION CONTROL  
STANDARD RAILING SECTION**

NO SCALE

RSP A77N5 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N5**

2010 REVISED STANDARD PLAN RSP A77N5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	51	62

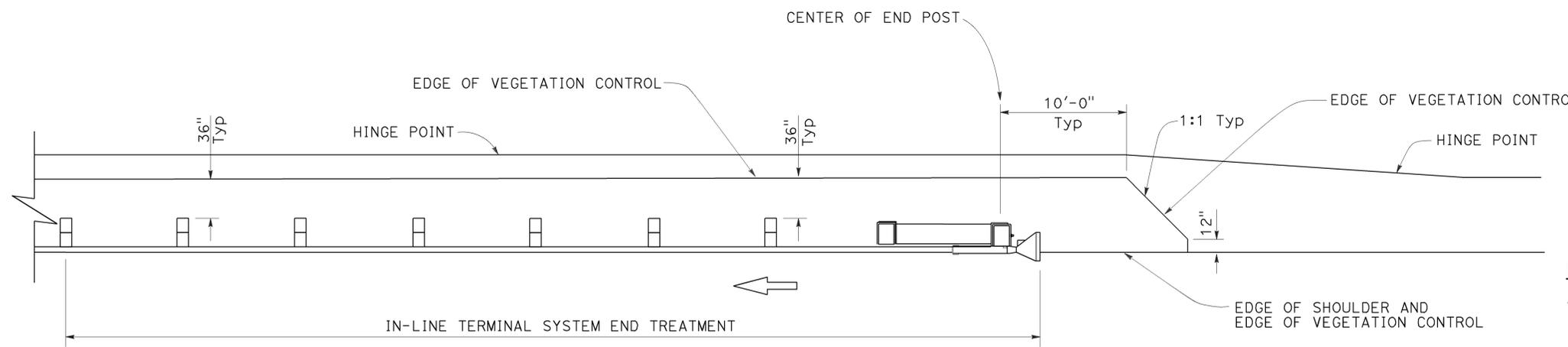
*Randell D. Hiatt*  
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July 19, 2013  
PLANS APPROVAL DATE

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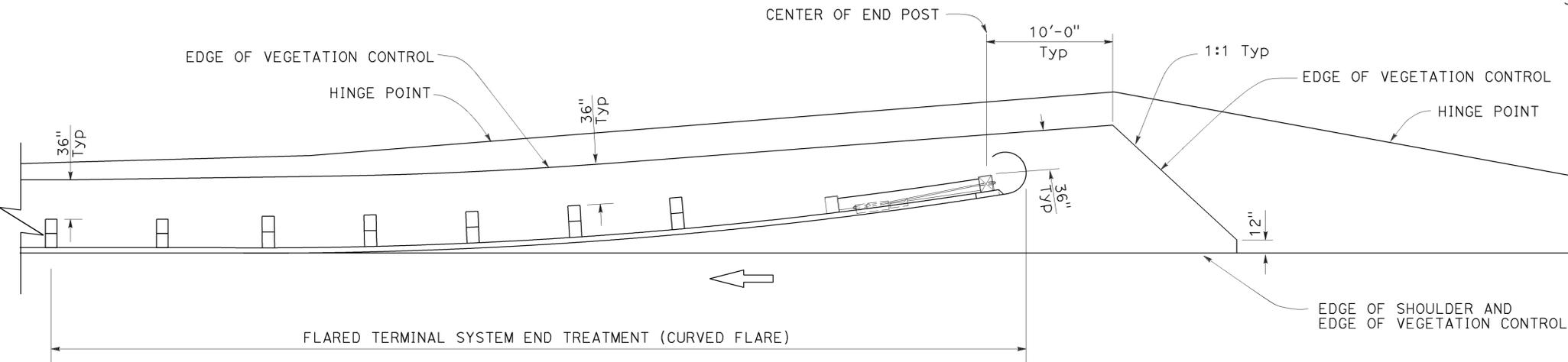
TO ACCOMPANY PLANS DATED 4-4-16



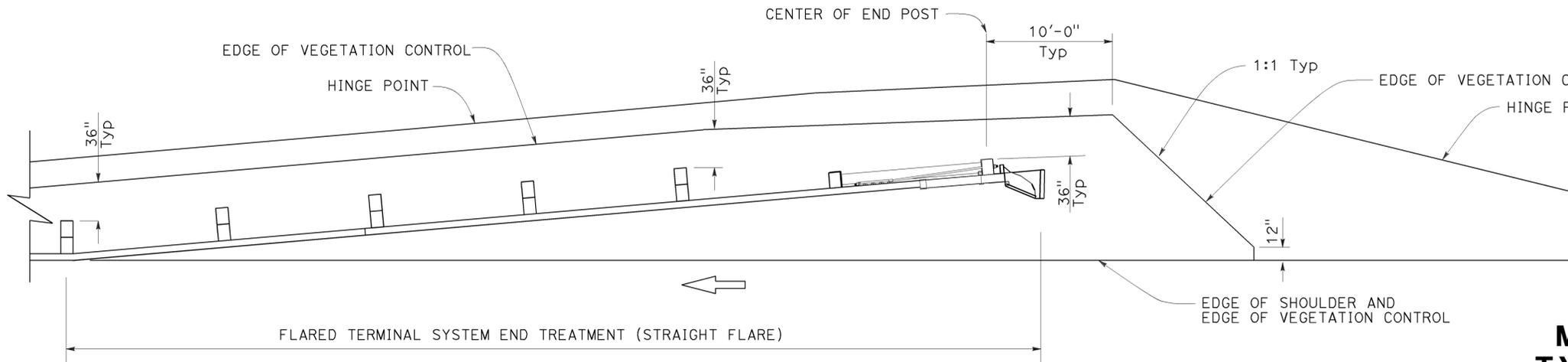
PLAN

NOTES:

1. See Revised Standard Plan RSP A77N5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.



PLAN



PLAN

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TYPICAL VEGETATION CONTROL  
FOR TERMINAL SYSTEM END TREATMENTS**

NO SCALE

RSP A77N6 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N6**

2010 REVISED STANDARD PLAN RSP A77N6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	52	62

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

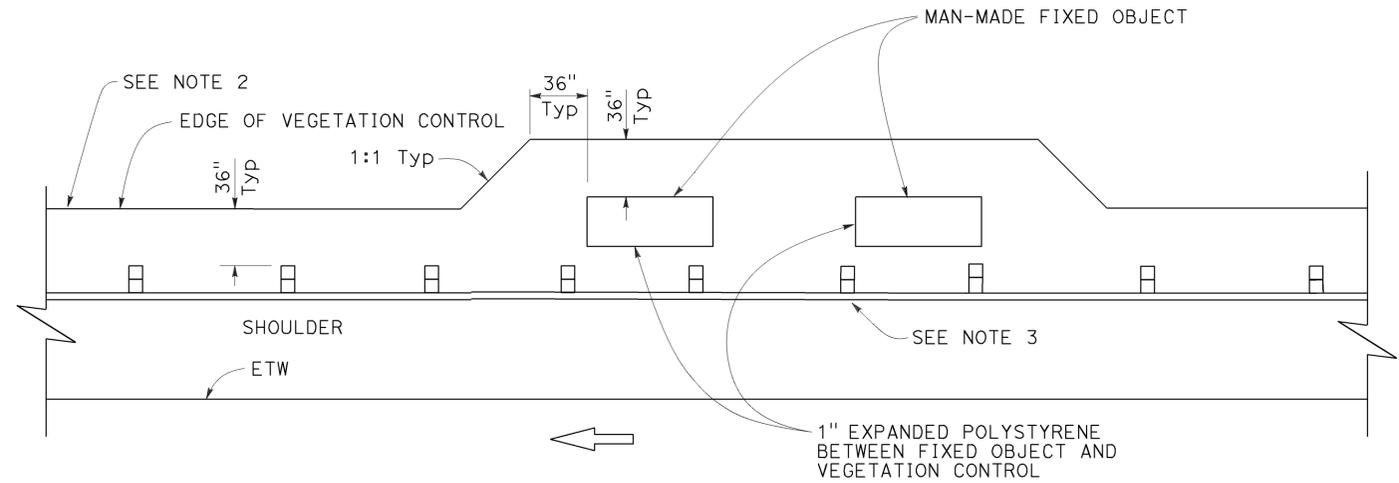
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TO ACCOMPANY PLANS DATED 4-4-16

**NOTES:**

1. See Revised Standard Plan RSP A77N5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.



**PLAN**  
Fixed object(s) on shoulder

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**MIDWEST GUARDRAIL SYSTEM  
TYPICAL VEGETATION CONTROL  
AT FIXED OBJECT**

NO SCALE

RSP A77N8 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N8**

2010 REVISED STANDARD PLAN RSP A77N8

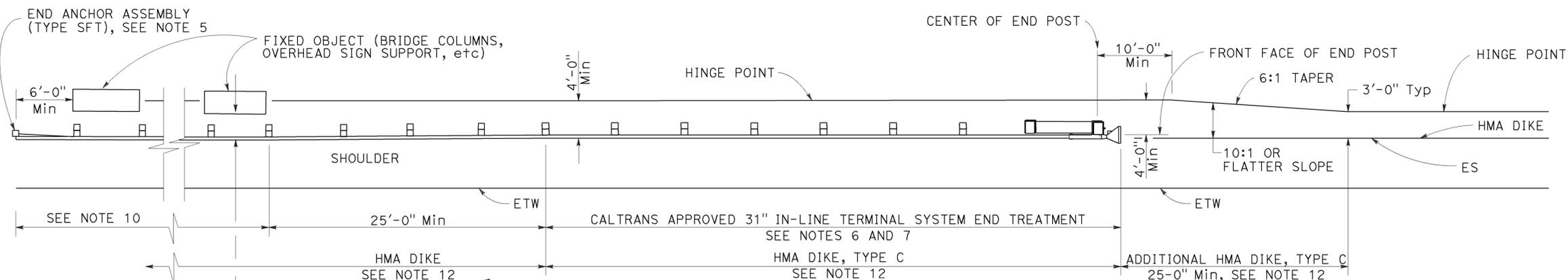
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	53	62

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

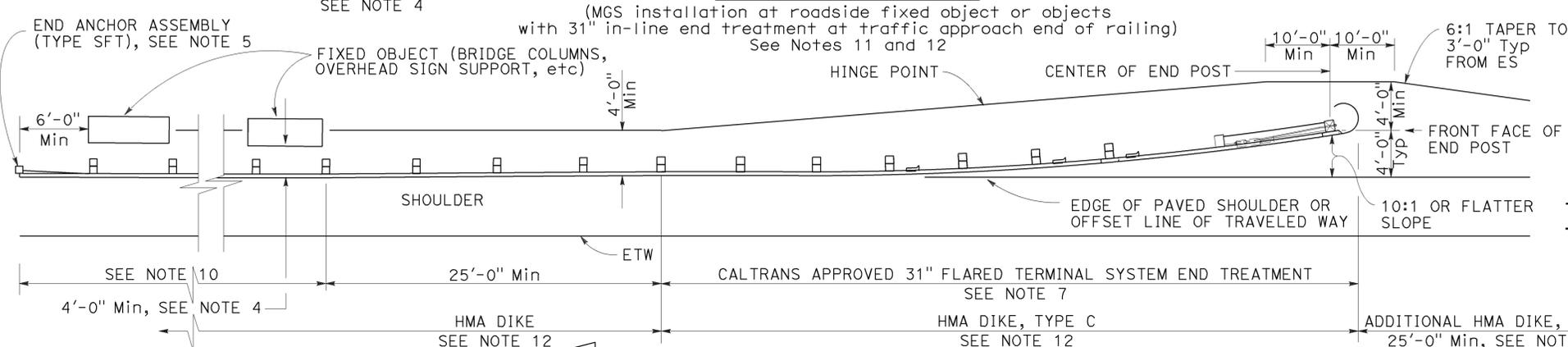
July 19, 2013  
PLANS APPROVAL DATE

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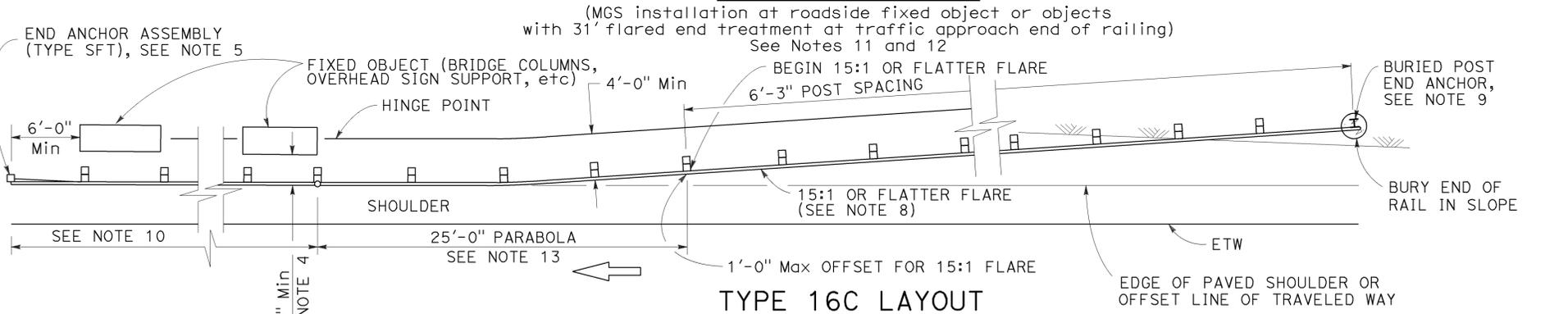
REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA



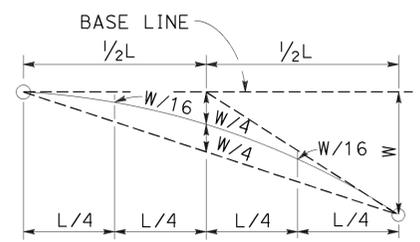
**TYPE 16A LAYOUT**



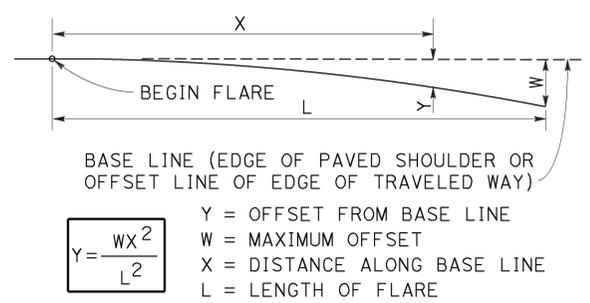
**TYPE 16B LAYOUT**



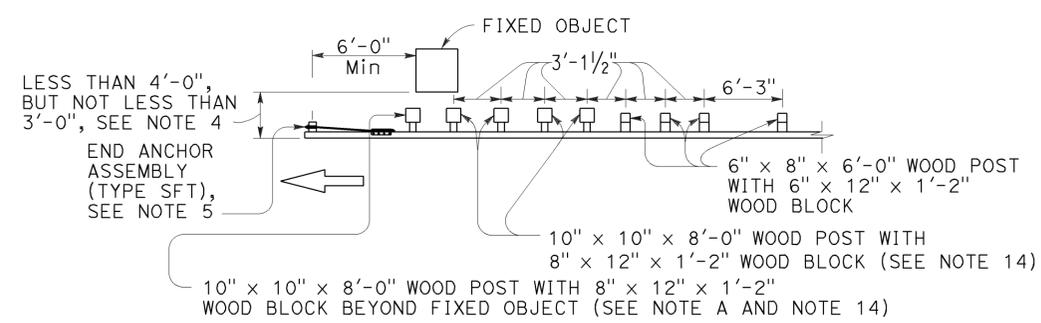
**TYPE 16C LAYOUT**



**TYPICAL PARABOLIC LAYOUT**



**PARABOLIC FLARE OFFSETS**



**NOTE A:** For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 12" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed objects.

**STRENGTHENED MIDWEST GUARDRAIL SYSTEM SECTIONS FOR FIXED OBJECT**

**NOTES:**

- Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 12" x 1'-2" wood blocks. W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind MGS sections with post spacing of 6'-3". Construct MGS as shown in the detail "Strengthened Midwest Guardrail System Sections for Fixed Object" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 3'-0". Where the clearance is less than 3'-0", a concrete wall or barrier should be constructed to shield the fixed object(s).
- For End Anchor Assembly (Type SFT) details, see Revised Standard Plan RSP A77S1.
- 31" in-line terminal system end treatments are used where site conditions will not accommodate a 31" flared end treatment.
- The type of 31" terminal system to be used will be shown on the Project Plans.
- The 15:1 or flatter flare used with Type 16C Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of MGS within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the Buried Post End Anchor used with Type 16C Layout, see Revised Standard Plan RSP A77T2.
- As site conditions dictate, construct additional MGS to shield fixed object(s). Additional MGS length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
- Layout Types 16A, 16B or 16C are typically used where MGS is recommended to shield roadside fixed object(s) and a crashworthy 31" end treatment is required for only one direction of traffic.
- Where placement of dike is required with MGS, see Revised Standard Plan RSP A77N4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77P1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 12" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 12" x 1'-2" wood block shown in the detail "Strengthened Midwest Guardrail System Sections for Fixed Object".

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**MIDWEST GUARDRAIL SYSTEM  
TYPICAL LAYOUTS FOR  
ROADSIDE FIXED OBJECTS**

NO SCALE

RSP A77R3 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77R3**

2010 REVISED STANDARD PLAN RSP A77R3

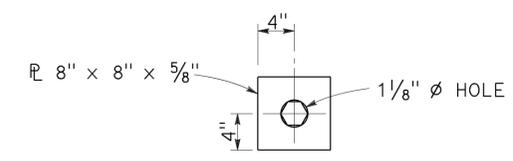
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	54	62

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

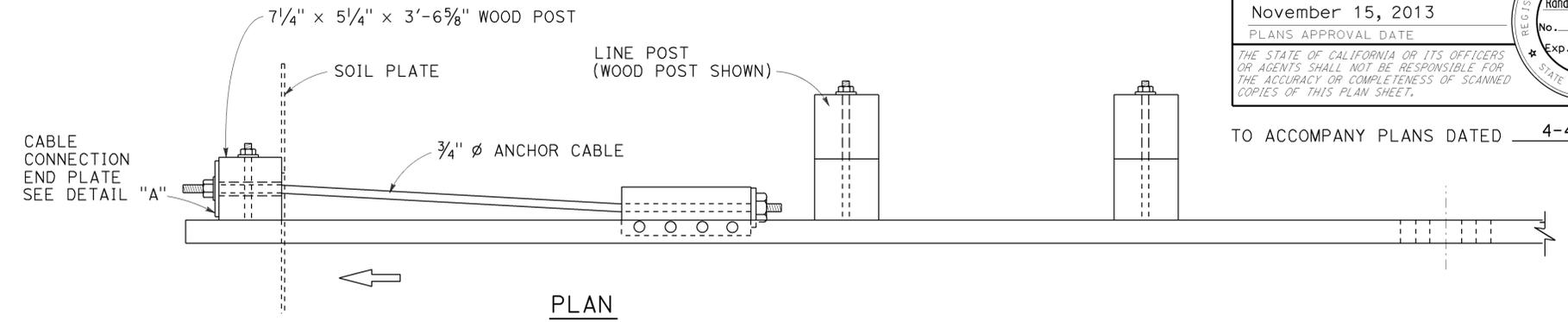
November 15, 2013  
PLANS APPROVAL DATE

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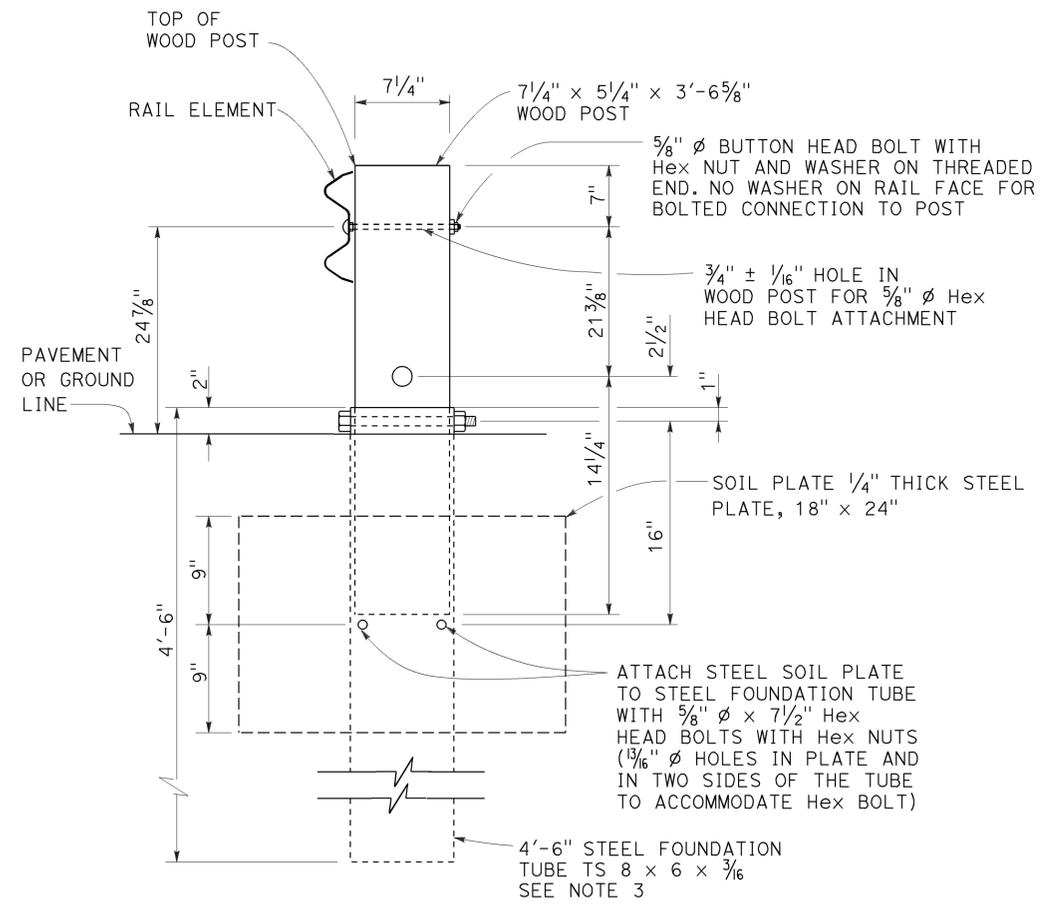
TO ACCOMPANY PLANS DATED 4-4-16



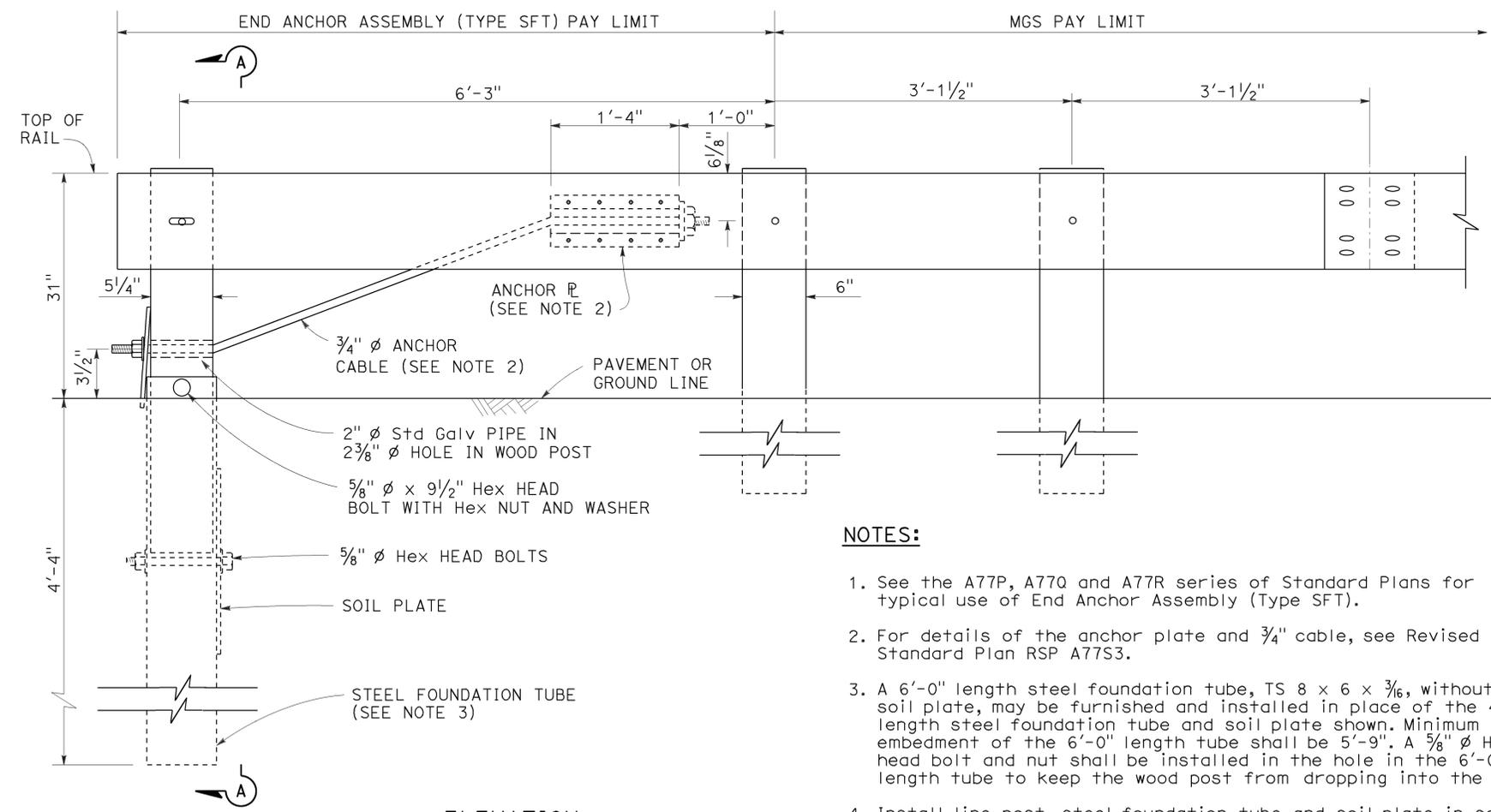
**DETAIL "A"**  
**CABLE CONNECTION**  
**END PLATE**



**PLAN**



**SECTION A-A**



**ELEVATION**

**END ANCHOR**  
**ASSEMBLY (TYPE SFT)**  
See Note 1

**NOTES:**

1. See the A77P, A77Q and A77R series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4 inch cable, see Revised Standard Plan RSP A77S3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8 inch diameter hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**MIDWEST GUARDRAIL SYSTEM**  
**END ANCHOR ASSEMBLY**  
**(TYPE SFT)**

NO SCALE

RSP A77S1 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77S1  
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77S1**

**2010 REVISED STANDARD PLAN RSP A77S1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	55	62

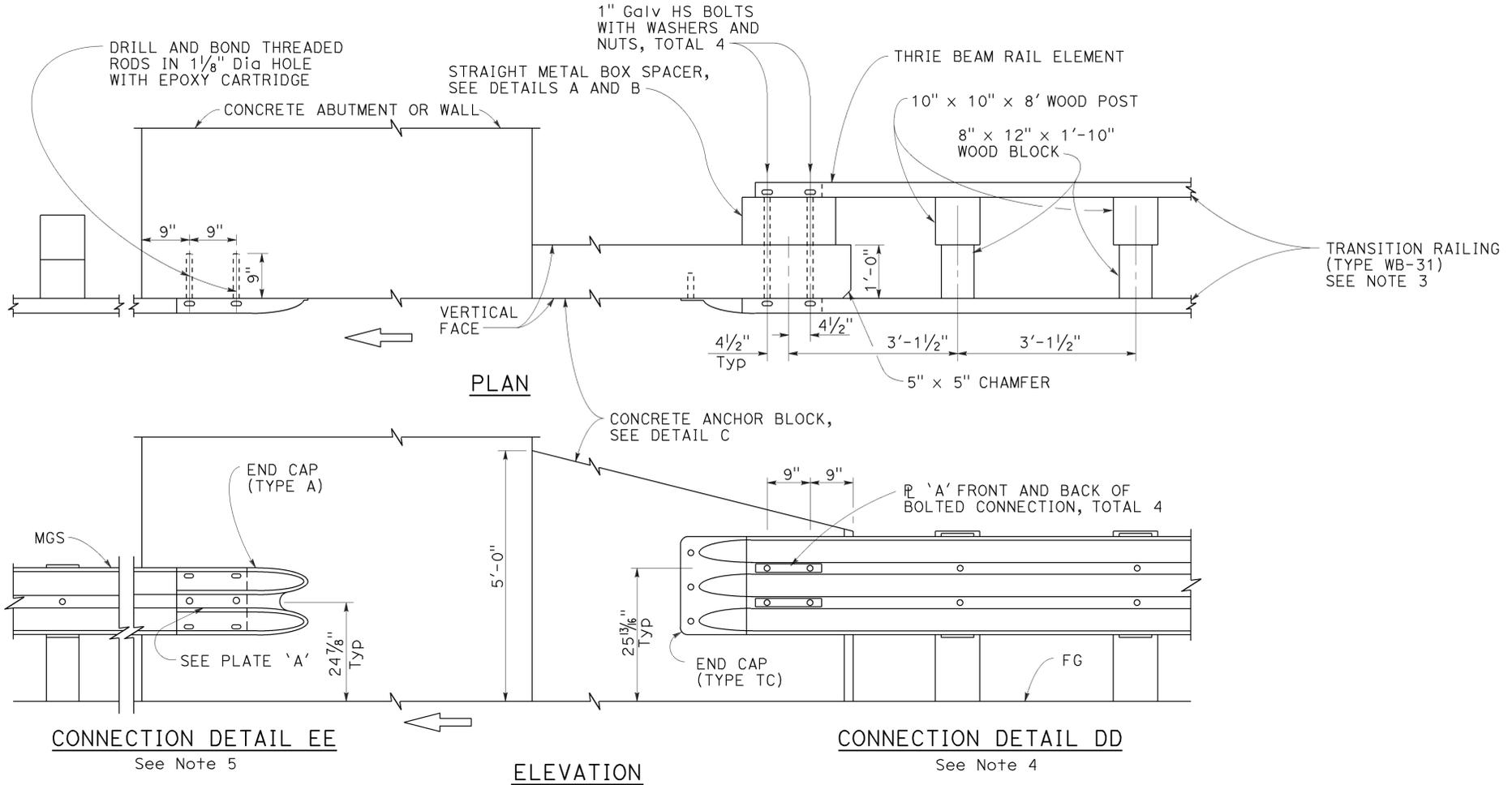
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

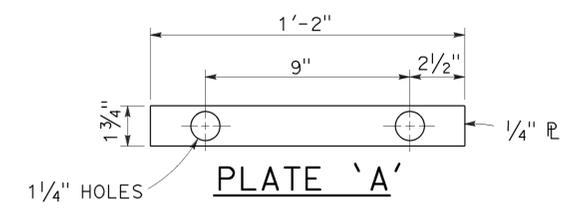
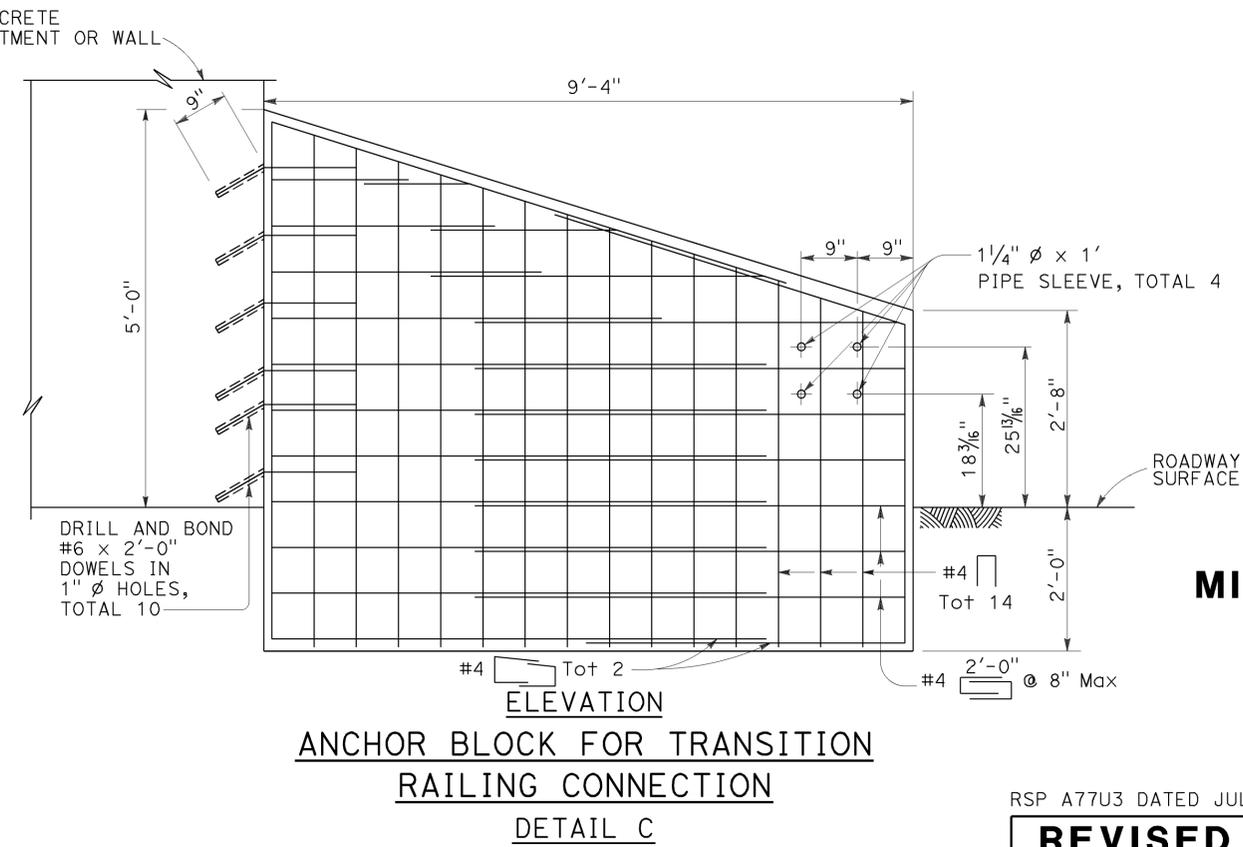
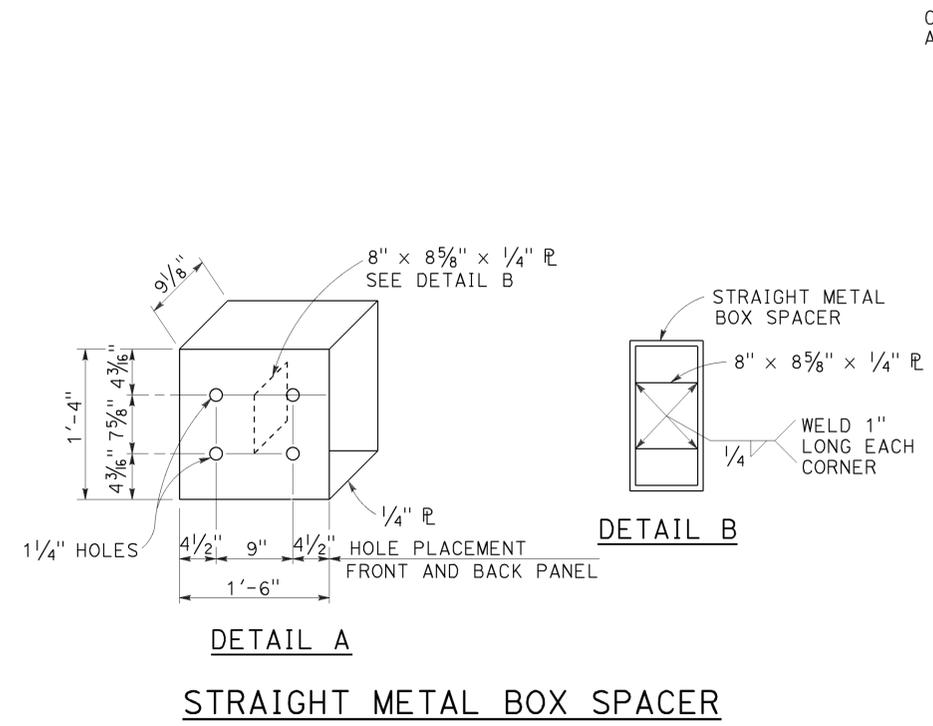
TO ACCOMPANY PLANS DATED 4-4-16



**NOTES:**

1. These connection details apply to abutments and walls.
2. Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
3. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete anchor block.
4. For typical use of Connection Details DD, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1 and Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2.
5. For typical use of Connection Detail EE, see Layout Type 12D on Revised Standard Plan RSP A77Q2 and Layout Type 12DD on Revised Standard Plan RSP A77Q5.

**MIDWEST GUARDRAIL SYSTEM CONNECTION TO ABUTMENT OR WALL**



**MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO ABUTMENTS AND WALLS**

NO SCALE

RSP A77U3 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77U3**

2010 REVISED STANDARD PLAN RSP A77U3

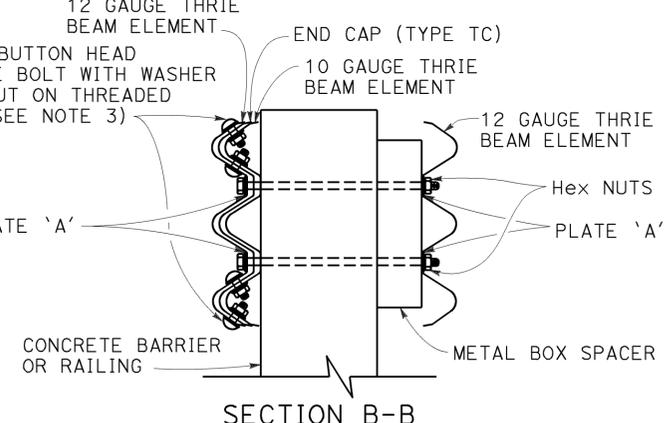
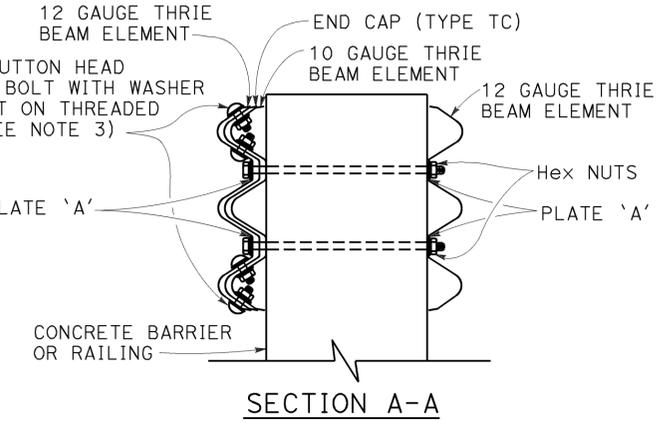
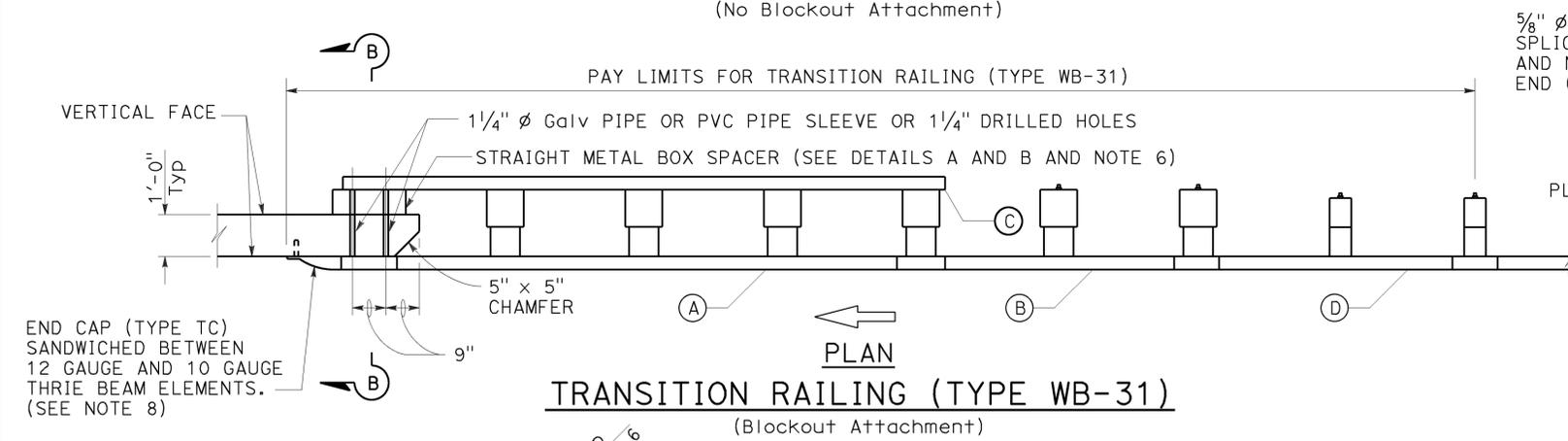
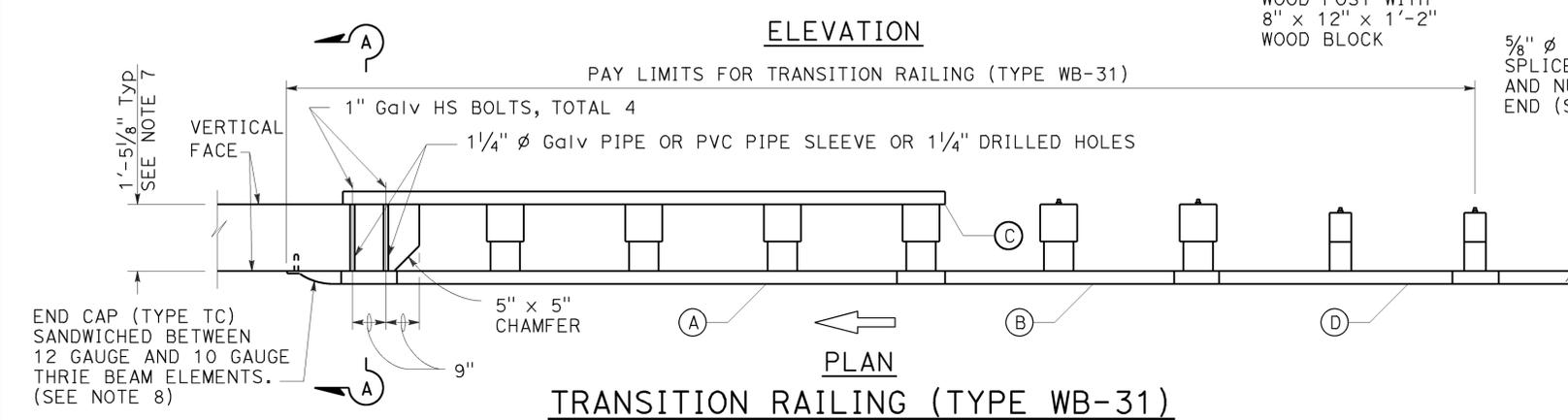
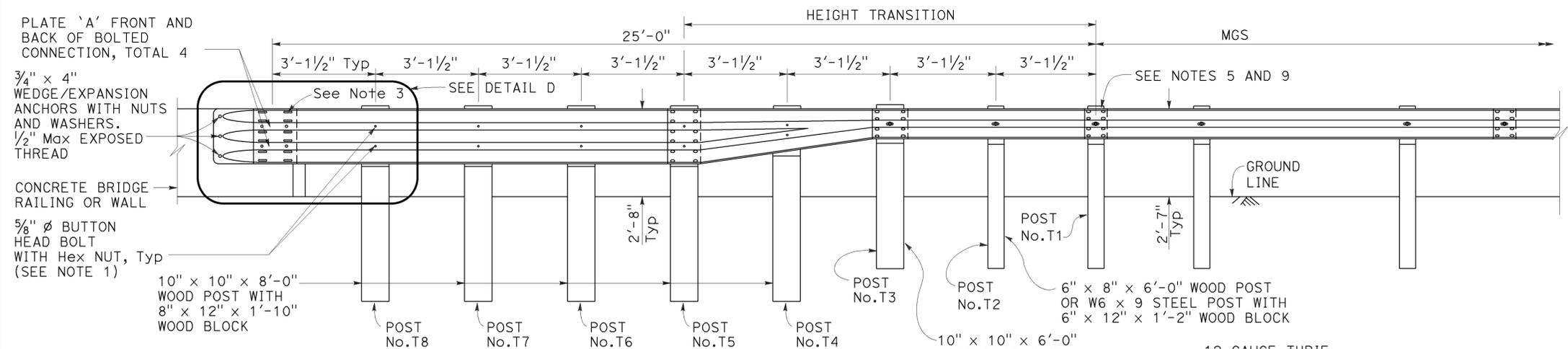
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	56	62

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

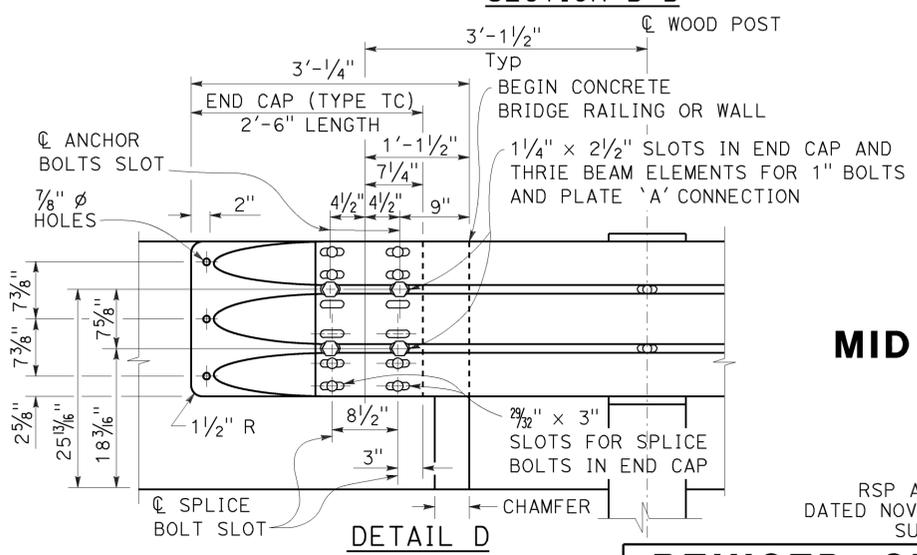
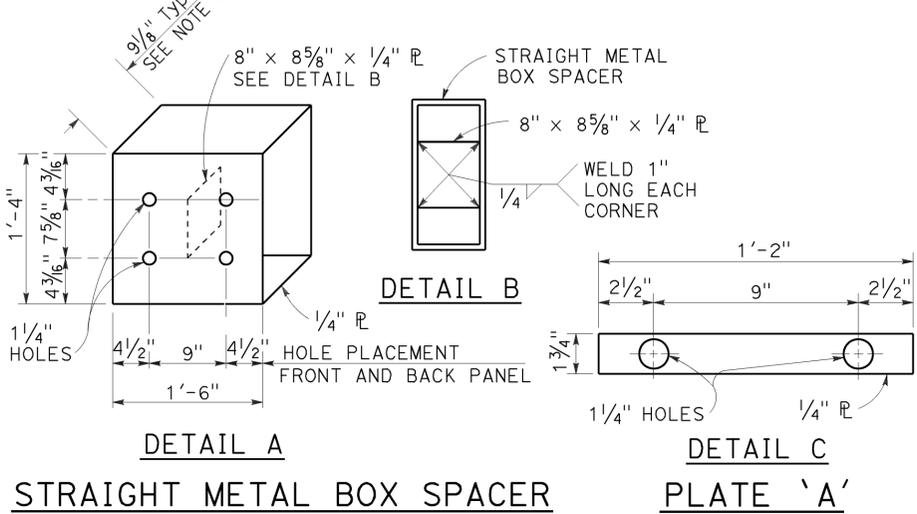
January 23, 2015  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA



- LEGEND:**
- (A) NESTED THRIE BEAM ELEMENTS (ONE 12 GAUGE ELEMENT NESTED OVER ONE 10 GAUGE ELEMENT).
  - (B) ONE ASYMMETRICAL 10 GAUGE "W" BEAM TO THRIE BEAM ELEMENT.
  - (C) ONE 12 GAUGE THRIE BEAM ELEMENT.
  - (D) ONE 10 GAUGE "W" BEAM RAIL ELEMENT (7'-3/2" LENGTH)
- 10 GAUGE = 0.138" THICK  
12 GAUGE = 0.108" THICK



- NOTES:** TO ACCOMPANY PLANS DATED 4-4-16
1. Use 5/8"  $\phi$  Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
  2. The nested rail elements, end cap, and 'W' beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
  3. Exterior splice bolt holes for rail element splices at Post No. T5 and the connection to the concrete barrier or railing shall be the standard 29/32" x 1 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1 1/4"  $\phi$ . Only the top 4 and the bottom 4 splice bolts with washers and nuts are required for rail splices at Post No. T5 and the connection to the concrete barrier or railing.
  4. The top elevation of Posts No. T2 through No. T7 shall not project more than 1" above the top elevation of the rail element.
  5. Typically, the railing connected to Transition Railing (Type WB-31) will be either standard railing section of MGS with height transition ratio of 150:1 or a Caltrans approved 31" end treatment attached to Post No. T1.
  6. The depth of the metal box spacer varies from the 9/8" to 1 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 21 1/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1 1/2", metal plates similar to Plate 'A' are to be used as spacers.
  7. Where the width of the concrete railing or wall is greater than 17 1/8", wood blocks are to be used to fill the space created between the backside of Posts No. T5 through No. T8 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
  8. End cap may be installed over 12 gauge and 10 gauge thrie beam elements where transition railing is installed on the departure end of bridge railing.
  9. Conform standard railing section height to 31" at Post No. T1 using height transition ratio of 150:1.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TRANSITION RAILING  
(TYPE WB-31)**

NO SCALE

RSP A77U4 DATED JANUARY 23, 2015 SUPERSEDES RSP A77U4 DATED NOVEMBER 15, 2013 AND RSP A77U4 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77U4**

2010 REVISED STANDARD PLAN RSP A77U4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	57	62

  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



TO ACCOMPANY PLANS DATED 4-4-16

2010 REVISED STANDARD PLAN RSP H1

**A**

AB AGGREGATE BASE  
 ABS ACRYLONITRILE-BUTADIENE-STYRENE  
 AC ASPHALT CONCRETE  
 ACC ARMOR-CLAD CONDUCTORS  
 Adj ADJACENT/ADJUSTABLE  
 AIC AUXILIARY IRRIGATION CONTROLLER  
 Alt ALTERNATIVE  
 AMEND AMENDMENT  
 ARV AIR RELEASE VALVE  
 AUTO AUTOMATIC  
 AUX AUXILIARY  
 AVB ATMOSPHERIC VACUUM BREAKER

**B**

B&B BALLED AND BURLAPPED  
 B/B BRASS/BRONZE  
 B/B/PL BRASS/BRONZE/PLASTIC  
 B/PL BRASS/PLASTIC  
 BFM BONDED FIBER MATRIX  
 Bit Ctd BITUMINOUS COATED  
 BP BOOSTER PUMP  
 BPA BACKFLOW PREVENTER ASSEMBLY  
 BPE BACKFLOW PREVENTER ENCLOSURE  
 BV BALL VALVE

**C**

C CONDUIT  
 CAP CORRUGATED ALUMINUM PIPE  
 CARV COMBINATION AIR RELEASE VALVE  
 CB COUPLING BAND  
 CCA CAM COUPLER ASSEMBLY  
 CEC CONTROLLER ENCLOSURE CABINET  
 CHDPE CORRUGATED HIGH DENSITY POLYETHYLENE  
 CL CHAIN LINK  
 CNC CONTROL AND NEUTRAL CONDUCTORS  
 Conc CONCRETE  
 CP COPPER PIPE  
 CS COMPOST SOCK  
 CSP CORRUGATED STEEL PIPE  
 CST CENTER STRIP  
 CV CHECK VALVE

**D**

Dia DIAMETER  
 DIP DUCTILE IRON PIPE  
 DIT DRIP IRRIGATION TUBING  
 DG DECOMPOSED GRANITE  
 DN DIAMETER NOMINAL  
 DVA DRIP VALVE ASSEMBLY

**E**

EC EROSION CONTROL  
 ECTC EROSION CONTROL TECHNOLOGY COUNCIL  
 Elect ELECTRIC/ELECTRICAL  
 Elev ELEVATION  
 ELL ELBOW  
 ENCL ENCLOSURE  
 EP EDGE OF PAVEMENT  
 ES EDGE OF SHOULDER  
 EST END STRIP  
 ESTB ESTABLISHMENT  
 ETW EDGE OF TRAVELED WAY

**F**

F FULL CIRCLE  
 F/P FULL/PART CIRCLE  
 FCV FLOW CONTROL VALVE  
 FERT FERTILIZER  
 FG FINISHED GRADE  
 FH FLEXIBLE HOSE  
 FIPT FEMALE IRON PIPE THREAD  
 FIS FERTILIZER INJECTOR SYSTEM  
 FL FLOW LINE  
 FR FIBER ROLL  
 FS FLOW SENSOR  
 FSC FLOW SENSOR CABLE  
 FV FLUSH VALVE

**G**

Galv GALVANIZED  
 GARV GARDEN VALVE  
 GARVA GARDEN VALVE ASSEMBLY  
 GM GRAVEL MULCH  
 GPH GALLONS PER HOUR  
 GPM GALLONS PER MINUTE  
 GSP GALVANIZED STEEL PIPE  
 GV GATE VALVE

**H**

H HALF CIRCLE  
 HDPE HIGH DENSITY POLYETHYLENE  
 HP HORSEPOWER/HINGE POINT  
 HPL HIGH PRESSURE LINE  
 Hwy HIGHWAY

**I**

IC IRRIGATION CONTROLLER  
 ICC IRRIGATION CONTROLLER(S)  
 IN CONTROLLER ENCLOSURE CABINET  
 ID INSIDE DIAMETER  
 IFS IRRIGATION FILTRATION SYSTEM  
 IPS IRON PIPE SIZE  
 IPT IRON PIPE THREAD  
 Irr IRRIGATION

**L**

L LENGTH

**M**

Max MAXIMUM  
 MBGR METAL BEAM GUARD RAILING  
 MCV MANUAL CONTROL VALVE  
 MIC MASTER IRRIGATION CONTROLLER  
 Min MINIMUM  
 MIPT MALE IRON PIPE THREAD  
 Misc MISCELLANEOUS  
 MtI MATERIAL  
 MVP MAINTENANCE VEHICLE PULLOUT

**N**

NCN NO COMMON NAME  
 NL NOZZLE LINE  
 No. NUMBER  
 NPT NATIONAL PIPE THREAD

**O**

O/C ON CENTER  
 OD OUTSIDE DIAMETER  
 OL OVERLAP

**P**

P PART CIRCLE  
 PB PULL BOX  
 PCC PORTLAND CEMENT CONCRETE  
 PE POLYETHYLENE  
 PKt PACKET  
 PL PLASTIC  
 PLS PURE LIVE SEED  
 PLT PLANT/PLANTING  
 PLT ESTB PLANT ESTABLISHMENT  
 PM POST MILE  
 PR PRESSURE RATED  
 PRLV PRESSURE RELIEF VALVE  
 PRV PRESSURE REGULATING VALVE  
 PVC POLYVINYL CHLORIDE  
 PvmT PAVEMENT

**Q**

Q QUARTER CIRCLE  
 QCV QUICK COUPLING VALVE

**NOTE:**  
 For additional abbreviations,  
 see Standard Plans A10A and A10B.

**R**

R RADIUS  
 RCP REINFORCED CONCRETE PIPE  
 RCV REMOTE CONTROL VALVE  
 RCVM REMOTE CONTROL VALVE (MASTER)  
 RCVMF REMOTE CONTROL VALVE (MASTER) W/FLOW SENSOR  
 RCVP REMOTE CONTROL VALVE W/PRESSURE REGULATOR  
 RCW RECYCLED WATER  
 RECP ROLLED EROSION CONTROL PRODUCT  
 REQ REQUIRED  
 RICS REMOTE IRRIGATION CONTROL SYSTEM  
 R/W RIGHT OF WAY

**S**

S SLIP  
 SCH SCHEDULE  
 SF STATE-FURNISHED  
 Shld SHOULDER  
 Sq SQUARE  
 SST SIDE STRIP  
 Sta STATION  
 Std STANDARD  
 SW SIDEWALK/SOUND WALL

**T**

T THIRD CIRCLE/THREAD  
 TLS TRUCK LOADING STANDPIPE  
 TQ THREE QUARTER CIRCLE  
 TRM TURF REINFORCEMENT MAT  
 TT TWO-THIRDS CIRCLE  
 TWSA TREE WELL SPRINKLER ASSEMBLY  
 Typ TYPICAL

**U**

UG UNDERGROUND

**W**

W WIDTH  
 W/ WITH  
 WM WATER METER  
 WS WYE STRAINER  
 WSA WYE STRAINER ASSEMBLY  
 WSP WELDED STEEL PIPE  
 WWM WELDED WIRE MESH

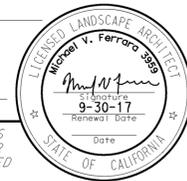
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE AND  
 EROSION CONTROL ABBREVIATIONS**  
 NO SCALE

RSP H1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H1  
 DATED MAY 20, 2011 - PAGE 218 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	58	62

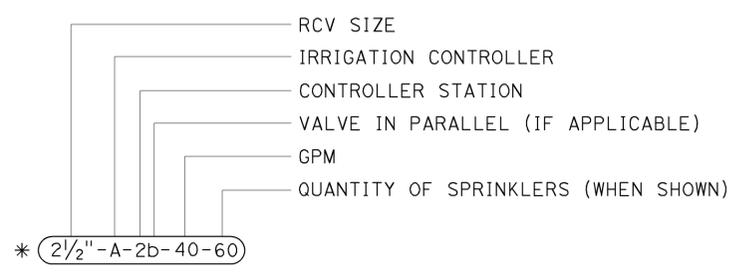
  
 LICENSED LANDSCAPE ARCHITECT  
 July 15, 2016  
 PLANS APPROVAL DATE  
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TO ACCOMPANY PLANS DATED 4-4-16

EXISTING	NEW	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ENCLOSURE (BPE)
		BOOSTER PUMP (BP)
		TRUCK LOADING STANDPIPE (TLS)
		FLOW SENSOR (FS)
		MASTER IRRIGATION CONTROLLER (MIC)
		AUXILIARY IRRIGATION CONTROLLER (AIC)
		IRRIGATION CONTROLLER (IC) IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR) IRRIGATION CONTROLLER (IC) (TWO WIRE)
		IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		ARMOR-CLAD CONDUCTORS (ACC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		IRRIGATION CONDUIT
		IRRIGATION SLEEVE
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (SUPPLY LINE) (LATERAL)
		COPPER PIPE (SUPPLY LINE)
		DRIP IRRIGATION TUBING
		REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		REMOTE CONTROL VALVE W/PRESSURE REGULATOR (RCVP)
		EXISTING MANUAL CONTROL VALVE (MCV)
		DRIP VALVE ASSEMBLY (DVA)
		WYE STRAINER ASSEMBLY (WSA)

EXISTING	NEW	ITEM DESCRIPTION
		GATE VALVE (GV)
		BALL VALVE (BV)
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		GARDEN VALVE ASSEMBLY (GARVA)
		PRESSURE REGULATING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		EXISTING NOZZLE LINE W/TURNING UNION
		EXISTING IRRIGATION SYSTEM
		EXISTING IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING
		FIBER ROLL
		COMPOST SOCK



**VALVE CODE**

\* VALVE CODES FOR EXISTING VALVES ARE SHOWN IN A DASHED ENCLOSURE.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE AND EROSION  
CONTROL SYMBOLS**  
NO SCALE

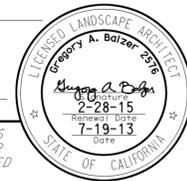
RSP H2 DATED JULY 15, 2016 SUPERSEDES RSP H2 DATED NOVEMBER 15, 2013 AND RSP H2 DATED JULY 19, 2013 AND STANDARD PLAN H2 DATED MAY 20, 2011 - PAGE 219 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H2**

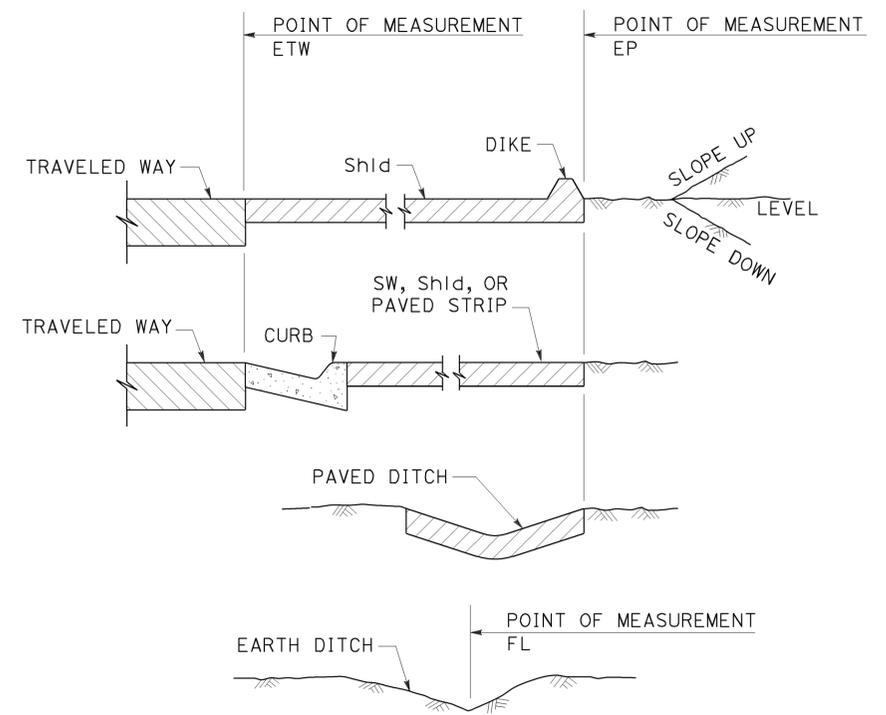
2010 REVISED STANDARD PLAN RSP H2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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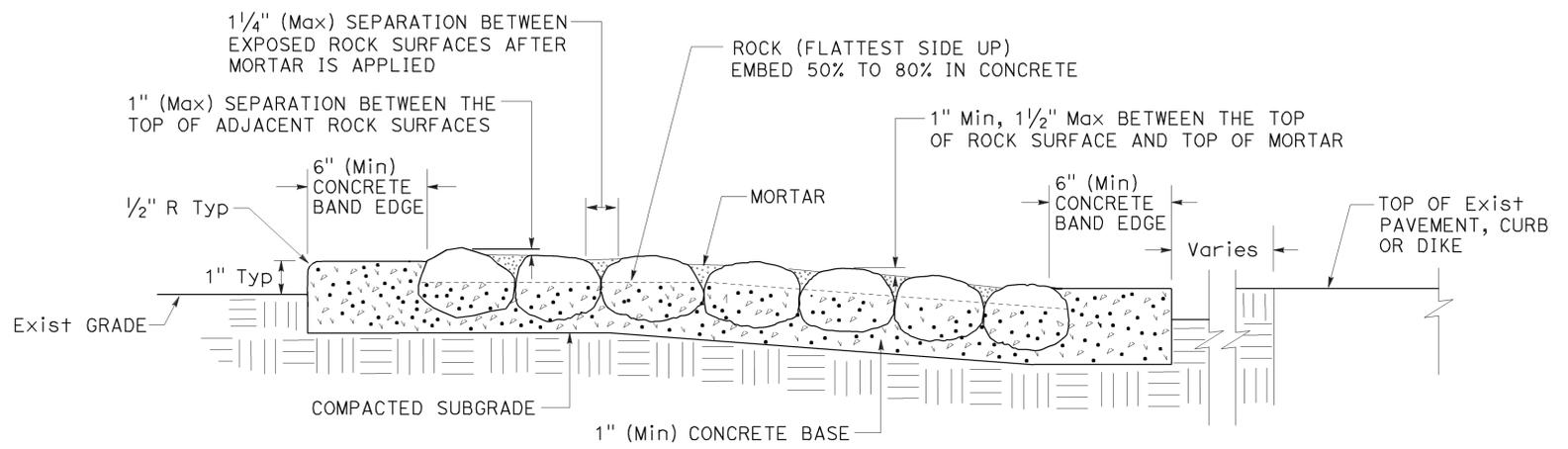
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
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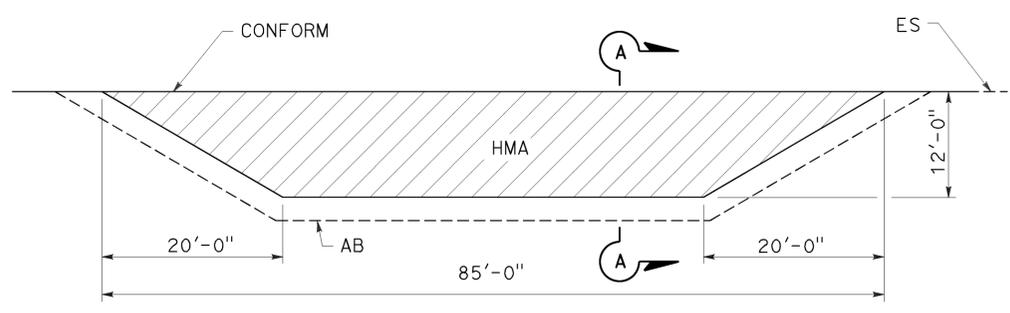
TO ACCOMPANY PLANS DATED 4-4-16



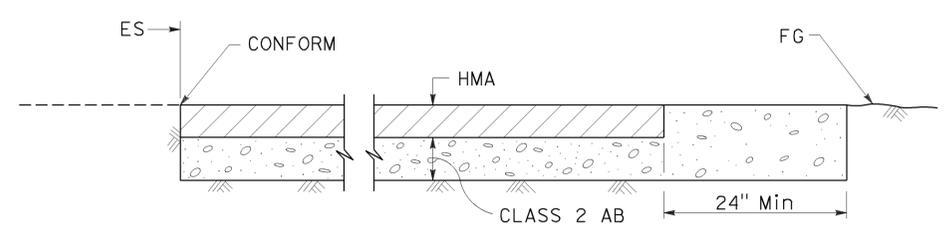
**SECTION  
POINTS OF MEASUREMENT**



**SECTION  
ROCK BLANKET**



**PLAN**



**SECTION A-A  
MAINTENANCE VEHICLE PULLOUT**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**  
 NO SCALE

RSP H9A DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H9A**

2010 REVISED STANDARD PLAN RSP H9A

TO ACCOMPANY PLANS DATED 4-4-16

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING							
SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	X	Y	Z **
					TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

\* - For other offsets, use the following merging taper length formula for L:  
 For speed of 40 mph or less,  $L = WS^2/60$   
 For speed of 45 mph or more,  $L = WS$

Where: L = Taper length in feet  
 W = Width of offset in feet  
 S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
		ft	ft	ft
mph	ft	ft	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph  
 \*\* - Longitudinal buffer space or flagger station spacing  
 \*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING			
ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

\* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM TABLES  
 FOR LANE AND RAMP CLOSURES**

NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013  
 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

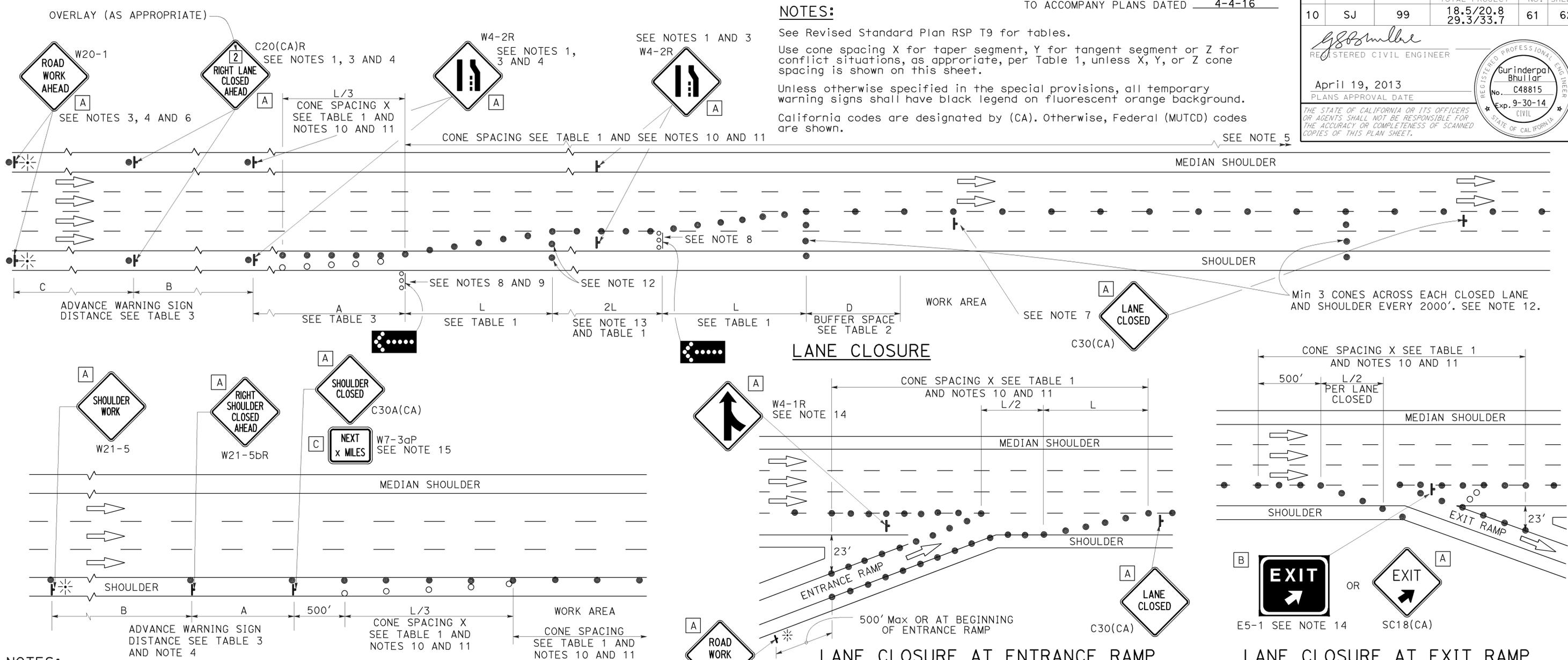
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	61	62

REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE  
 Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 4-4-16

**NOTES:**

See Revised Standard Plan RSP T9 for tables.  
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.  
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.  
 California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



**NOTES:**

- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
- Duplicate sign installations are not required:
  - On opposite shoulder if at least one-half of the available lanes remain open to traffic.
  - In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
- Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.

**SHOULDER CLOSURE**

- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA)L and W4-2L signs shall be used.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

**LEGEND**

- TRAFFIC CONE
  - TRAFFIC CONE (OPTIONAL TAPER)
  - † TEMPORARY TRAFFIC CONTROL SIGN
  - FLASHING ARROW SIGN (FAS)
  - FAS SUPPORT OR TRAILER
  - ⚡ PORTABLE FLASHING BEACON
- Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
  - Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
  - Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
  - A W7-3aP "NEXT \_\_\_\_\_ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

**SIGN PANEL SIZE (Min)**

A	48" x 48"
B	72" x 60"
C	36" x 30"

**TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS**

NO SCALE

RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

# TYPICAL RAMP CLOSURES

## SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 30"
- C 36" x 36"
- D 48" x 36"

## LEGEND

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ‡ BARRICADES
- ⚡ PORTABLE FLASHING BEACON

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	18.5/20.8 29.3/33.7	62	62

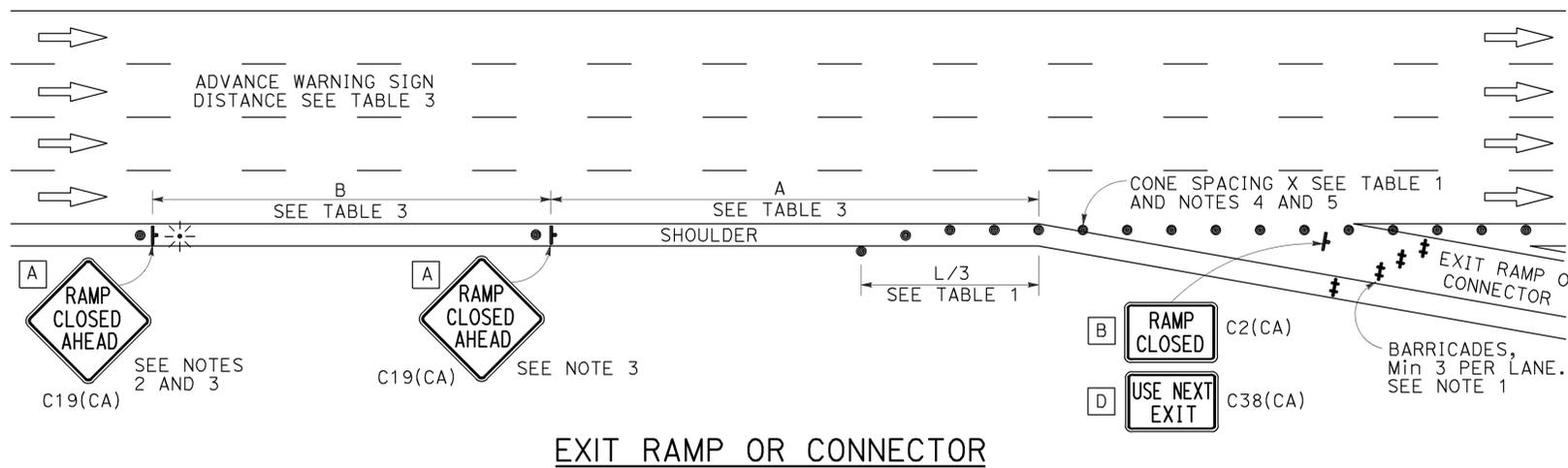
*Gurinderpal Bhullar*  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

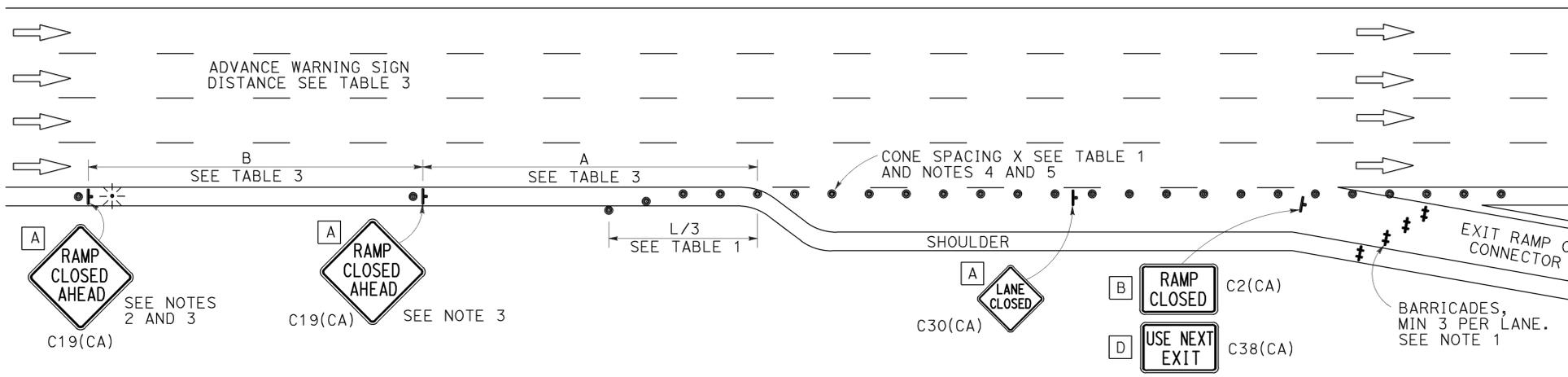
TO ACCOMPANY PLANS DATED 4-4-16

## NOTES:

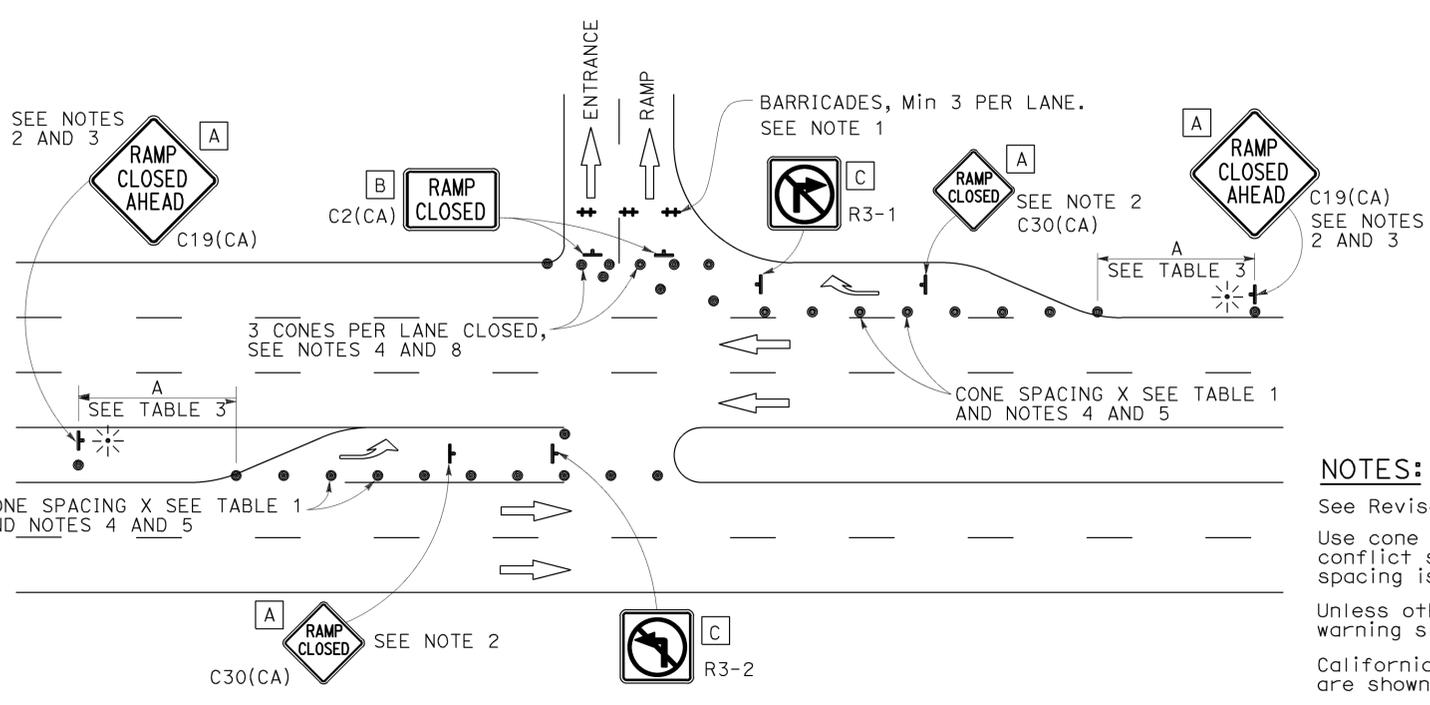
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed by the Engineer, on all guide signs that refer to the closed ramp. The letter size on the overlay shall be the same as the guide sign.
- Each advance C19(CA) "RAMP CLOSED AHEAD" sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. A flashing beacon shall be placed on top of the first C19(CA) sign during hours of darkness.
- All cones used for ramp closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime ramp closures only.
- At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
- The existing "EXIT" signs shall be covered during ramp closures.
- A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.



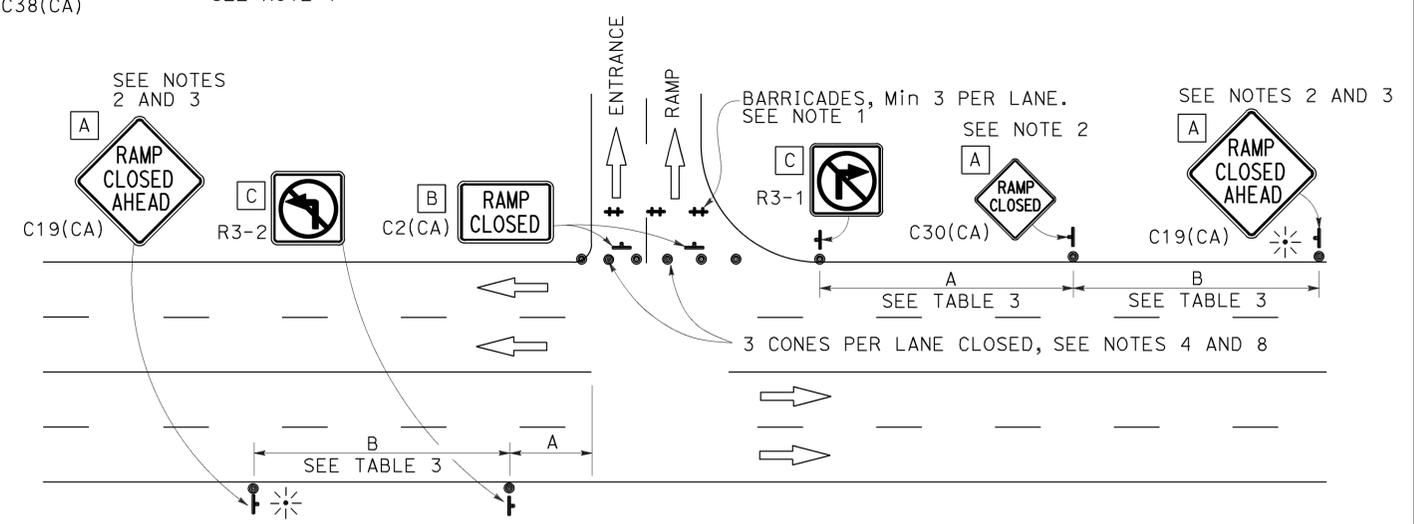
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR RAMP CLOSURE**  
 NO SCALE

RSP T14 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T14  
 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T14**

2010 REVISED STANDARD PLAN RSP T14