

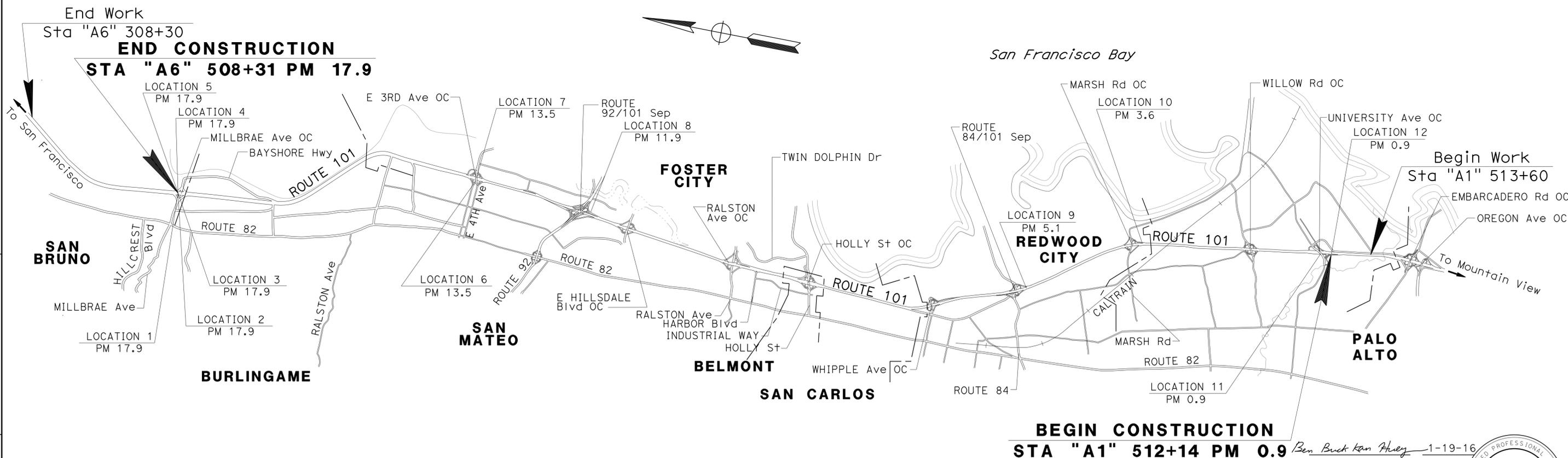
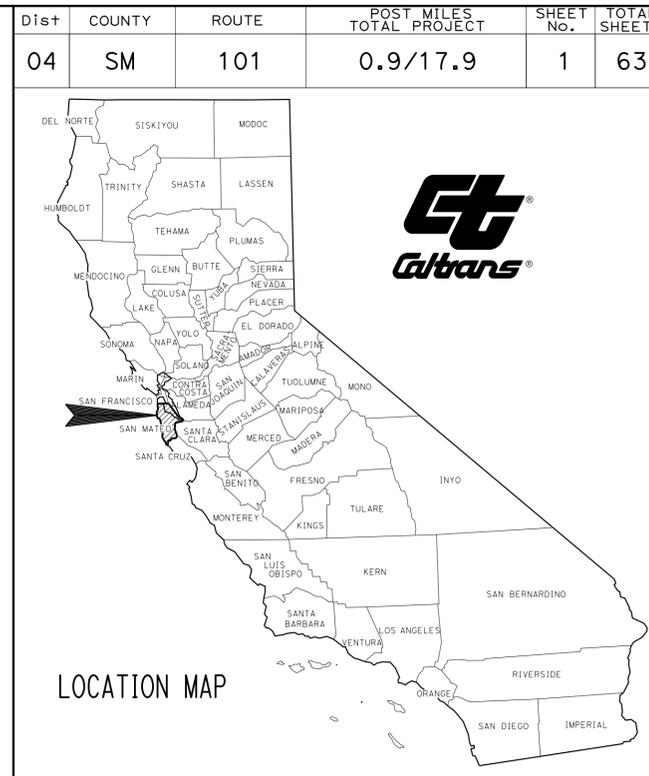
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE SHEET AND LOCATION MAP
2	LOCATIONS OF CONSTRUCTION
3 - 9	LAYOUT
10	CONSTRUCTION DETAILS
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12 - 24	CONSTRUCTION AREA SIGNS
25 - 33	SIGN PLAN AND QUANTITIES
34	SUMMARY OF QUANTITIES
35	EROSION CONTROL PLAN
36 - 40	ELECTRICAL PLANS
41 - 63	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-Q101(296)E**
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SAN MATEO COUNTY
AT VARIOUS LOCATIONS
FROM UNIVERSITY AVENUE OVERCROSSING
TO MILLBRAE AVENUE OVERCROSSING

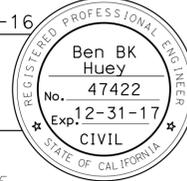
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



PROJECT MANAGER
KANNU BALAN
 DESIGN MANAGER
ARLISSA PANG

BEGIN CONSTRUCTION
STA "A1" 512+14 PM 0.9

Ben Buck Kan Huey 1-19-16
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER
March 14, 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.



NOTE:
 THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTION SHEET.

NO SCALE

CONTRACT No.	04-3G6704
PROJECT ID	0412000151

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 ARLISSA PANG

CALCULATED-DESIGNED BY
 CHECKED BY

SANDY MA
 BEN BK HUEY

REVISED BY
 DATE REVISED

SM
 1-26-16

LOCATIONS OF CONSTRUCTION

LOCATION No.	COUNTY	ROUTE	PM	DESCRIPTION	TYPE OF WORK
①	SM	101	17.9	SB ROUTE 101 OFF-RAMP TO WB/EB MILLBRAE Ave	PAVE GORE AREA
②	SM	101	17.9	SB ROUTE 101 ON-RAMP FROM WB MILLBRAE Ave	PAVE GORE AREA
③	SM	101	17.9	SB ROUTE 101 ON-RAMP FROM EB MILLBRAE Ave	PAVE GORE AREA
④	SM	101	17.9	NB ROUTE 101 OFF-RAMP TO WB/EB MILLBRAE Ave	PAVE NARROW AREA
⑤	SM	101	17.9	NB ROUTE 101 ON-RAMP FROM EB MILLBRAE Ave	PAVE GORE AREA
⑥	SM	101	13.5	SB ROUTE 101 OFF-RAMP TO EAST 3RD Ave / SB ROUTE 101 ON-RAMP FROM EB EAST 4TH Ave	PAVE COLLECTOR STRIP
⑦	SM	101	13.5	NB ROUTE 101 ON-RAMP FROM WB EAST 3RD Ave / NB ROUTE 101 OFF-RAMP TO EB EAST 3RD Ave	PAVE COLLECTOR STRIP
⑧	SM	101	11.9	NB ROUTE 101 CONNECTOR TO WB ROUTE 92	PAVE GORE AREA
⑨	SM	101	5.1	NB ROUTE 101 CONNECTOR TO WB ROUTE 84	PAVE GORE AREA
⑩	SM	101	3.6	NB ROUTE 101 OFF-RAMP TO NB/SB MARSH Rd	PAVE GORE AREA
⑪	SM	101	0.9	SB ROUTE 101 OFF-RAMP TO NB/SB UNIVERSITY Ave	PAVE NARROW AREA
⑫	SM	101	0.9	NB ROUTE 101 OFF-RAMP FROM SB UNIVERSITY Ave	PAVE COLLECTOR STRIP

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	2	63

Ben Buck Kan Huey 1-19-16
 REGISTERED CIVIL ENGINEER DATE

3-14-16
 PLANS APPROVAL DATE

Ben BK Huey
 No. 47422
 Exp. 2-31-17
 CIVIL

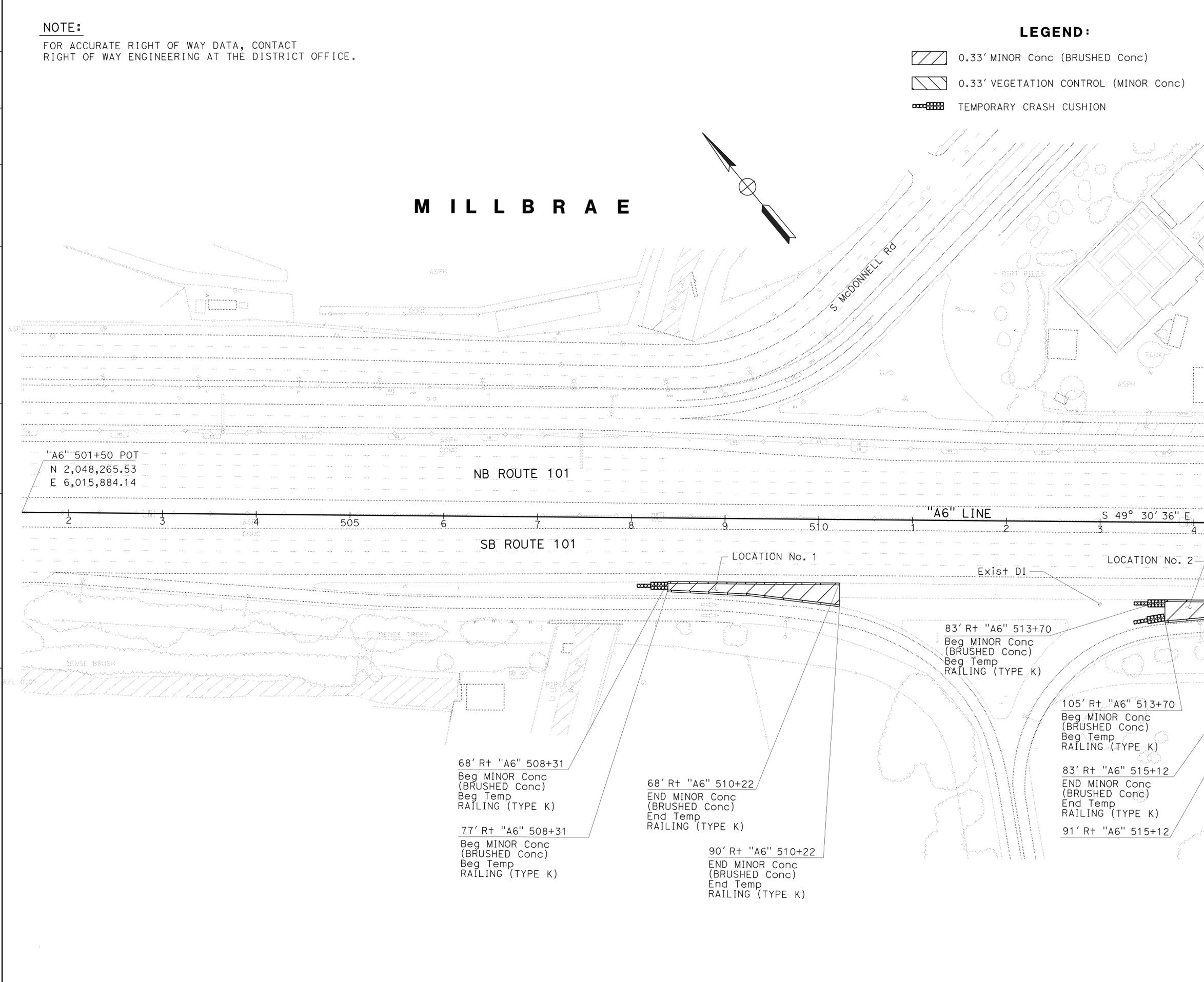
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LOCATIONS OF CONSTRUCTION

LC-1

LAST REVISION | DATE PLOTTED => 15-MAR-2016 03-11-16 | TIME PLOTTED => 14:20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN



NOTE:

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

LEGEND:

- 0.33' MINOR Conc (BRUSHED Conc)
- 0.33' VEGETATION CONTROL (MINOR Conc)
- TEMPORARY CRASH CUSHION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	3	63

Ben Buck Kan Huey 1-19-16
 REGISTERED CIVIL ENGINEER DATE

3-14-16
 PLANS APPROVAL DATE

Ben BK Huey
 No. 47422
 Exp. 2-31-17
 CIVIL

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LAST REVISION DATE PLOTTED => 15-MAR-2016 03-11-16 TIME PLOTTED => 14:20

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

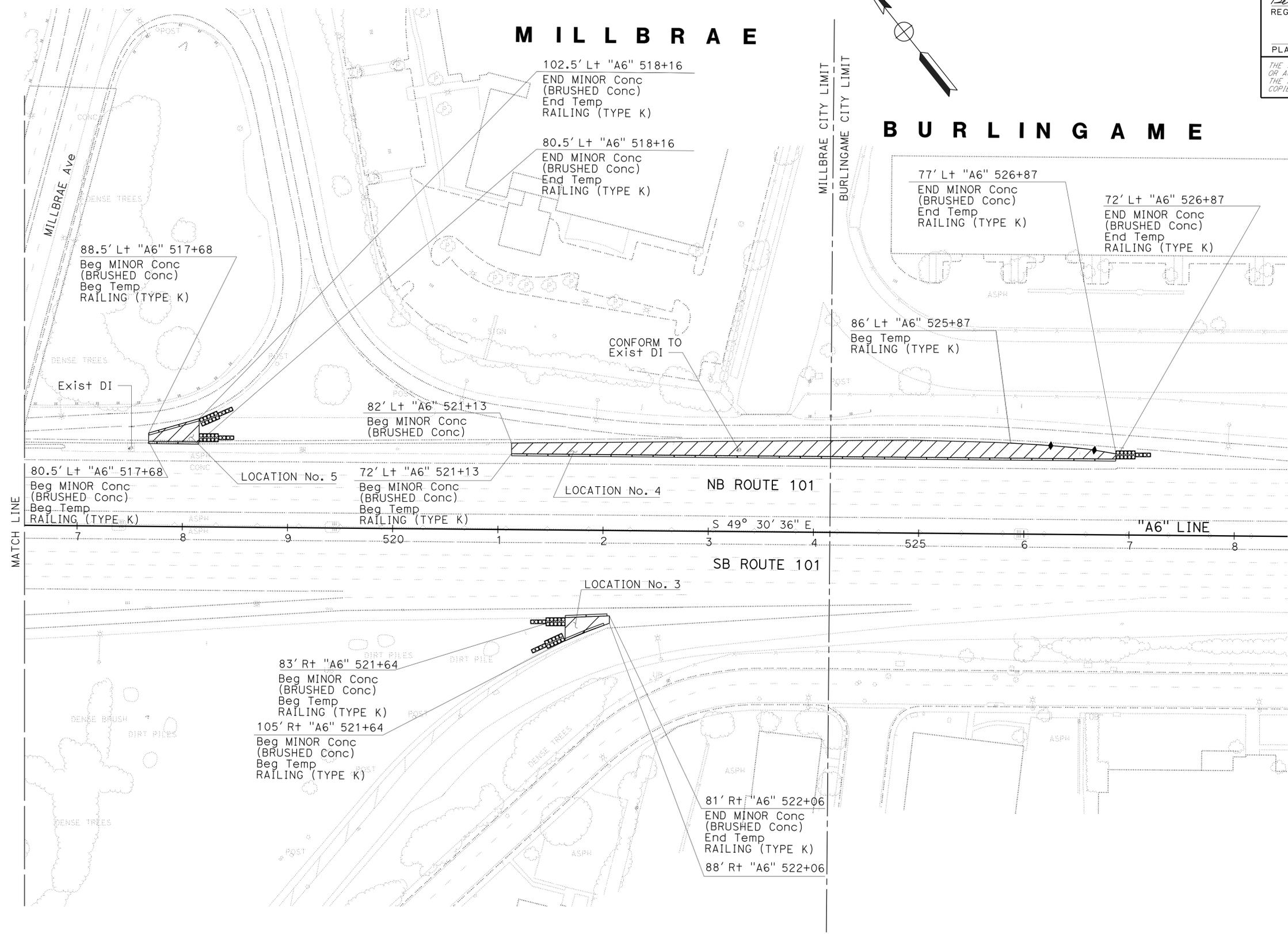
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	4	63

Ben Buck Kan Huey 1-19-16
REGISTERED CIVIL ENGINEER DATE

3-14-16
PLANS APPROVAL DATE

Ben BK Huey
No. 47422
Exp. 2-31-17
CIVIL
STATE OF CALIFORNIA

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR
ARLISSA PANG

CALCULATED/DESIGNED BY
CHECKED BY

SANDY MA
BEN BK HUEY

REVISED BY
DATE REVISED

SM
1-26-16

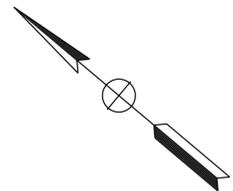
FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

LAYOUT
SCALE: 1" = 50'

L-2

NOTE:

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



S A N M A T E O

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	5	63

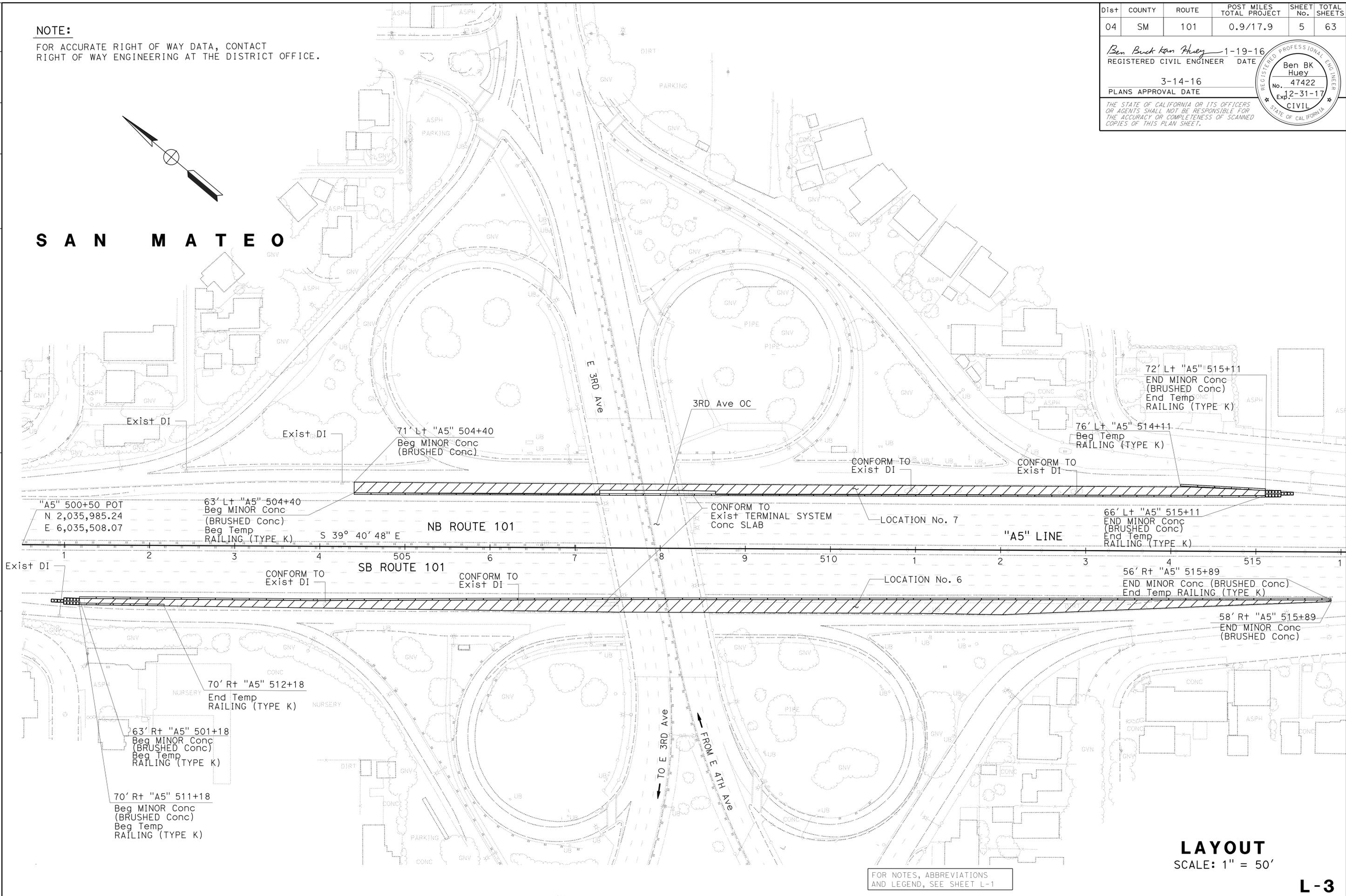
Ben Buck Kan Huey 1-19-16
REGISTERED CIVIL ENGINEER DATE

3-14-16
PLANS APPROVAL DATE

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

Ben BK Huey
No. 47422
Exp. 2-31-17
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

SM 1-26-16
SANDY MA BEN BK HUEY
CALCULATED/DESIGNED BY CHECKED BY
FUNCTIONAL SUPERVISOR ARLISSA PANG
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN



FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

LAYOUT
SCALE: 1" = 50'

L-3

LAST REVISION DATE PLOTTED => 15-MAR-2016 03-11-16 TIME PLOTTED => 14:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	6	63

Ben Buck Kan Huey	1-19-16
REGISTERED CIVIL ENGINEER	DATE
3-14-16	
PLANS APPROVAL DATE	

Ben BK Huey
No. 47422
Exp. 2-31-17
CIVIL

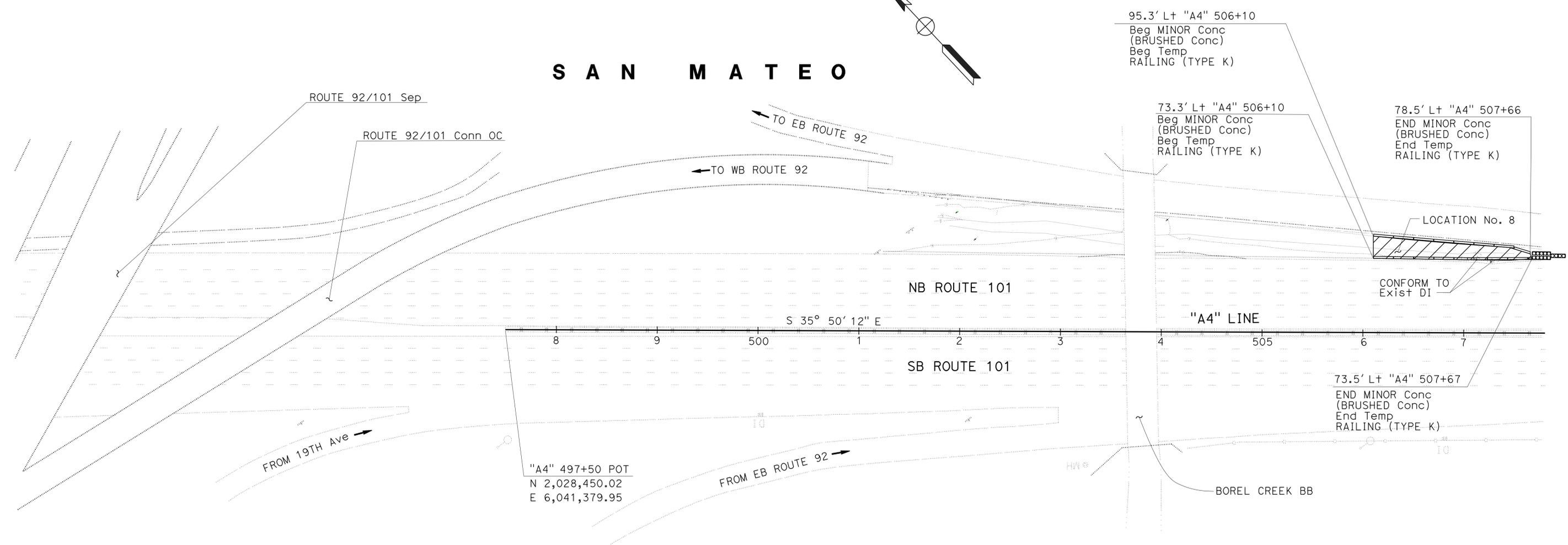
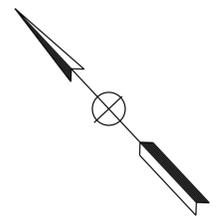
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NOTE:

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

SM	1-26-16
REVISOR	DATE
SANDY MA	BEN BK HUEY
CALCULATED/DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	ARLISSA PANG
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN

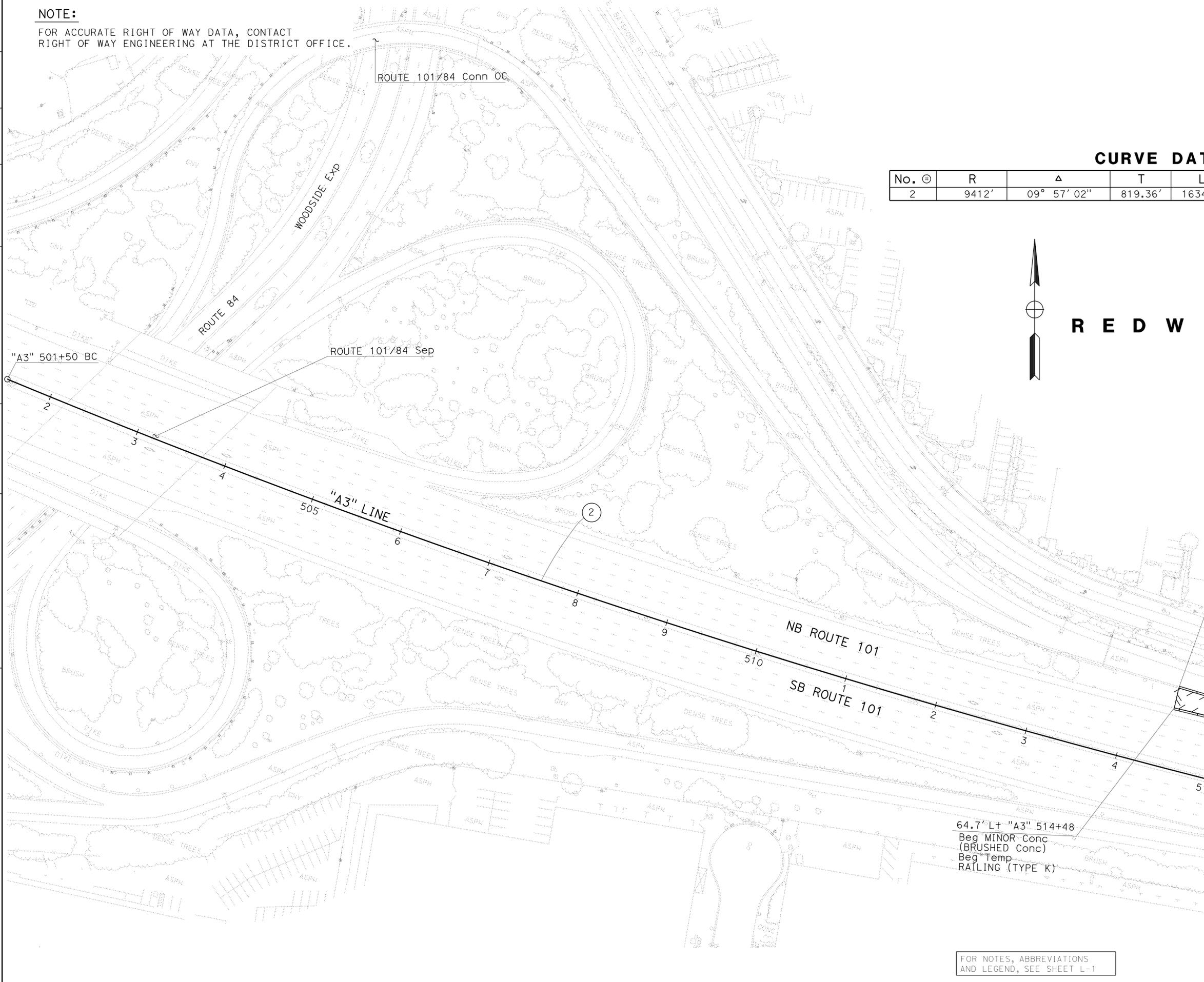
SAN MATEO



FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

LAYOUT
SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN



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
04	SM	101	0.9/17.9	7	63

Ben Buck kan Huey 1-19-16
 REGISTERED CIVIL ENGINEER DATE

3-14-16
 PLANS APPROVAL DATE

Ben BK Huey
 No. 47422
 Exp. 2-31-17
 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.

CURVE DATA

No. @	R	Δ	T	L	N-COORDINATE	E-COORDINATE
2	9412'	09° 57' 02"	819.36'	1634.6'	2013790.74	6068211.16



R E D W O O D C I T Y

86.7' Lt A3" 514+48
 Beg MINOR Conc (BRUSHED Conc)
 Beg Temp RAILING (TYPE K)

68' Lt "A3" 517+53
 END MINOR Conc (BRUSHED Conc)
 End Temp RAILING (TYPE K)
 CONFORM TO Exist DI Conc APRON

64.7' Lt "A3" 514+48
 Beg MINOR Conc (BRUSHED Conc)
 Beg Temp RAILING (TYPE K)

"A3" 517+84.60 EC

LAYOUT
 SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

L-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR: ARLISSA PANG
 SANDY MA: BEN BK HUEY
 REVISIONS: SM 1-26-16
 CALCULATED/DESIGNED BY: CHECKED BY:

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

CURVE DATA

No.	⊙	R	Δ	T	L	N-COORDINATE	E-COORDINATE
1		7550'	11° 45' 51"	777.83'	1550.2'	1996088.98	6070650.51

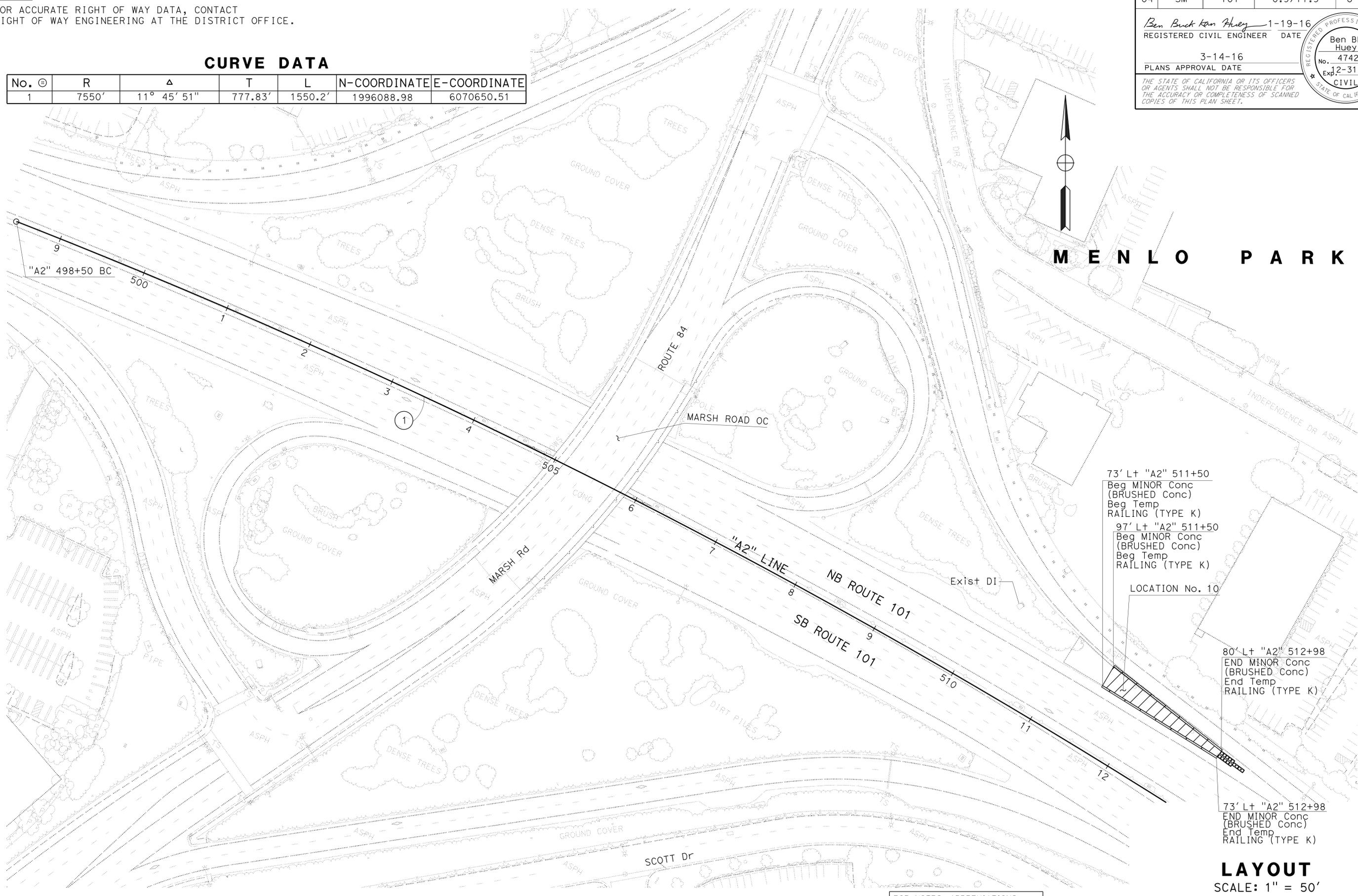
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	8	63

Ben Buck kan Huey 1-19-16
 REGISTERED CIVIL ENGINEER DATE

3-14-16
 PLANS APPROVAL DATE

Ben BK Huey
 No. 47422
 Exp. 2-31-17
 CIVIL

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- 73' Lt "A2" 511+50
 Beg MINOR Conc (BRUSHED Conc)
 Beg Temp RAILING (TYPE K)
- 97' Lt "A2" 511+50
 Beg MINOR Conc (BRUSHED Conc)
 Beg Temp RAILING (TYPE K)
- LOCATION No. 10
- 80' Lt "A2" 512+98
 END MINOR Conc (BRUSHED Conc)
 End Temp RAILING (TYPE K)
- 73' Lt "A2" 512+98
 END MINOR Conc (BRUSHED Conc)
 End Temp RAILING (TYPE K)

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

LAYOUT
 SCALE: 1" = 50'

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
04	SM	101	0.9/17.9	9	63

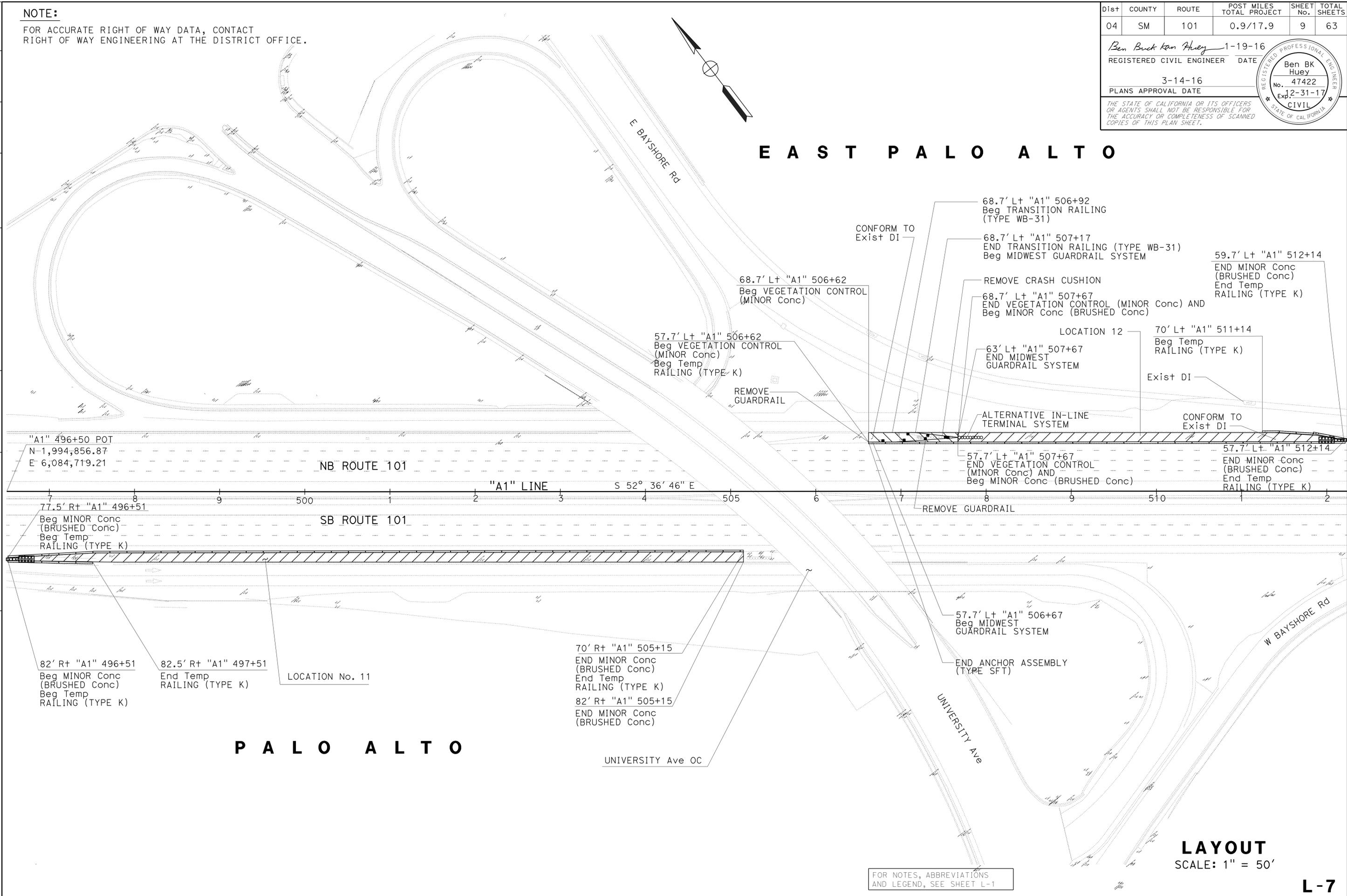
Ben Buck Kan Huey 1-19-16
REGISTERED CIVIL ENGINEER DATE

3-14-16
PLANS APPROVAL DATE

Ben BK Huey
No. 47422
Exp. 2-31-17
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.

E A S T P A L O A L T O

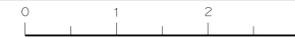


SM	1-26-16	SANDY MA	BEN BK HUEY	CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	ARLISSA PANG	DESIGN	STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
----	---------	----------	-------------	------------------------	------------	-----------------------	--------------	--------	--

P A L O A L T O

LAYOUT
SCALE: 1" = 50'

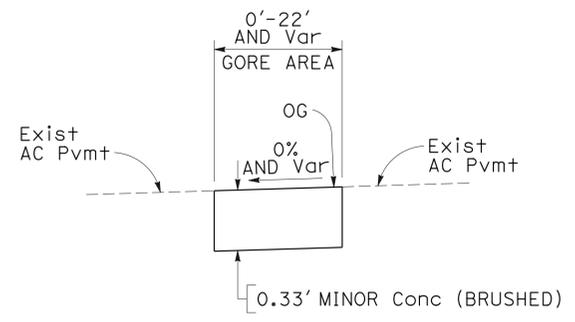
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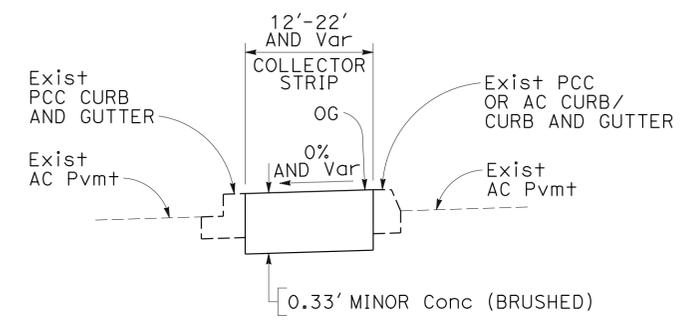
FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CHECKED BY	DESIGNED BY	REVISOR	DATE
Caltrans	ARLISSA PANG	BEN BK HUEY	SANDY MA	SM	10-23-15
DESIGN					

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	10	63
			Ben Buck Kan Huey 1-19-16 REGISTERED CIVIL ENGINEER DATE		
			3-14-16 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.					
REGISTERED PROFESSIONAL ENGINEER Ben BK Huey No. 47422 Exp. 2-31-17 CIVIL STATE OF CALIFORNIA					



GORE AREAS (TYPICAL)



COLLECTOR STRIP AREA (TYPICAL)

CONSTRUCTION DETAILS
NO SCALE

C-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	11	63

Jeng Tsai 1-21-16
 REGISTERED CIVIL ENGINEER DATE

3-14-16
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS
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 THE ACCURACY OR COMPLETENESS OF SCANNED
 COPIES OF THIS PLAN SHEET.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans WATER QUALITY
 FUNCTIONAL SUPERVISOR
 KAMRAN NAKHJURI
 CALCULATED/DESIGNED BY
 CHECKED BY
 JENG TSAI
 DENNIS CALLOWAY
 REVISED BY
 DATE REVISED
 JT
 1-26-16

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

SHEET No.	LOCATION	STATION LIMITS	TEMPORARY DRAINAGE INLET PROTECTION
			EA
L-1	2	"A6" 513+00	1
L-2	4	"A6" 523+27	1
	5	"A6" 517+50	1
L-3	6	"A5" 500+92	1
	6	"A5" 506+33	1
	7	"A5" 502+46	1
	7	"A5" 504+28	1
	7	"A5" 510+98	1
	7	"A5" 512+90	1
L-4	8	"A4" 507+14	1
	8	"A4" 507+28	1
L-5	9	"A3" 516+85	1
	9	"A3" 517+32	1
L-6	10	"A2" 510+26	1
L-7	12	"A1" 506+63	1
	12	"A1" 511+08	1
	12	"A1" 511+37	1
TOTAL			17

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

WPCQ-1

LAST REVISION | DATE PLOTTED => 15-MAR-2016
 03-11-16 TIME PLOTTED => 14:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	12	63

<i>Rajesh Oberoi</i>	1-25-16
REGISTERED CIVIL ENGINEER	DATE
3-14-16	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
Rajesh Oberoi
No. 46046
Exp. 2-31-16
CIVIL
STATE OF CALIFORNIA

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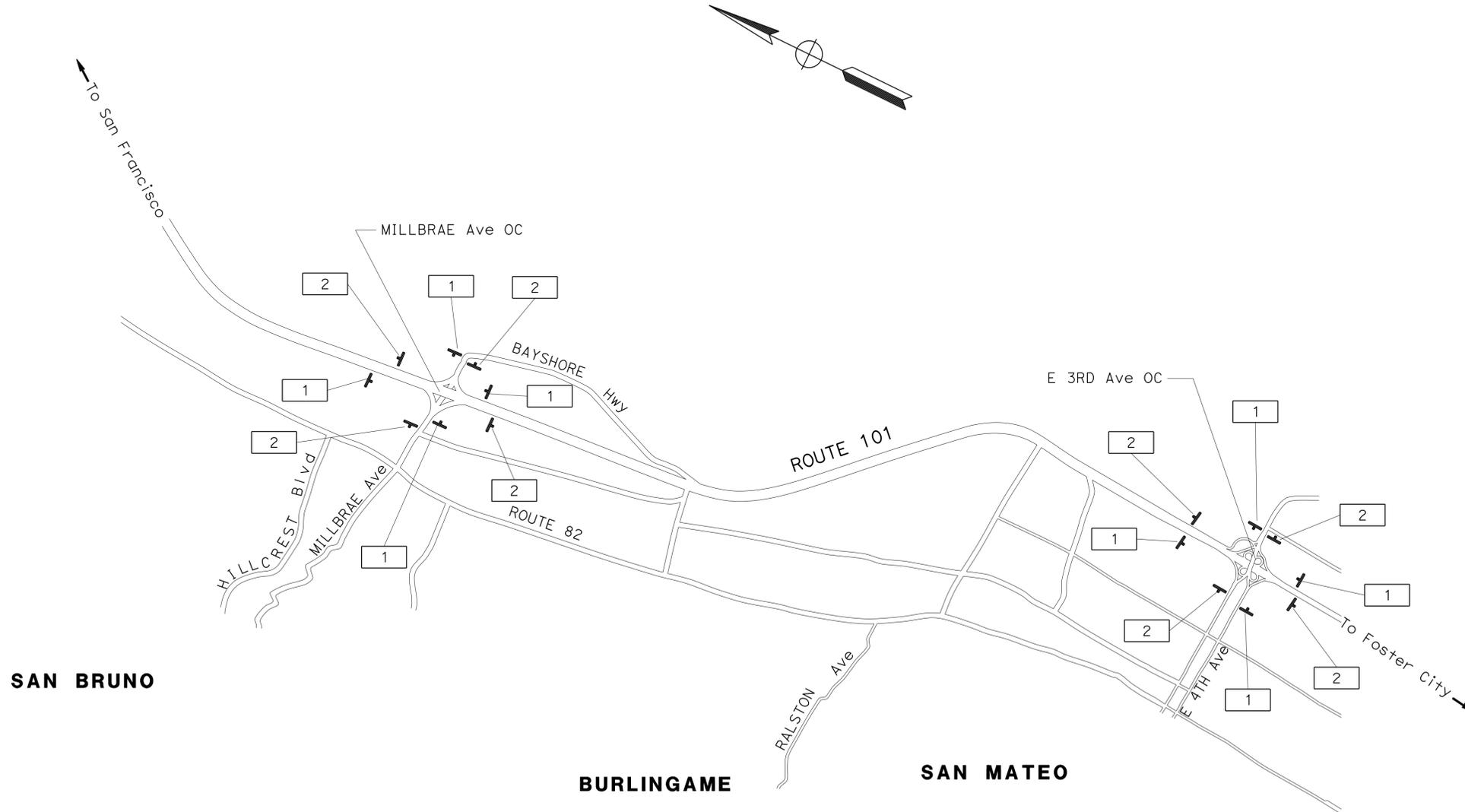
LEGEND:

No. CONSTRUCTION AREA SIGN NUMBER

NOTES:

1. EXACT LOCATION AND POSITION OF SIGNS TO BE DETERMINED BY THE ENGINEER.
2. DIMENSIONS FOR SIGN PANEL AND POST ARE IN INCHES.
3. LETTERING SIZES FOR SIGN PANEL ARE IN INCHES.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	STEPHEN LAU	REVISOR	SL
Caltrans	RAJESH OBEROI	DATE	1-21-16
FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	CHECKED BY	
ROLAND AU-YEUNG			



CONSTRUCTION AREA SIGNS
NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CS-1

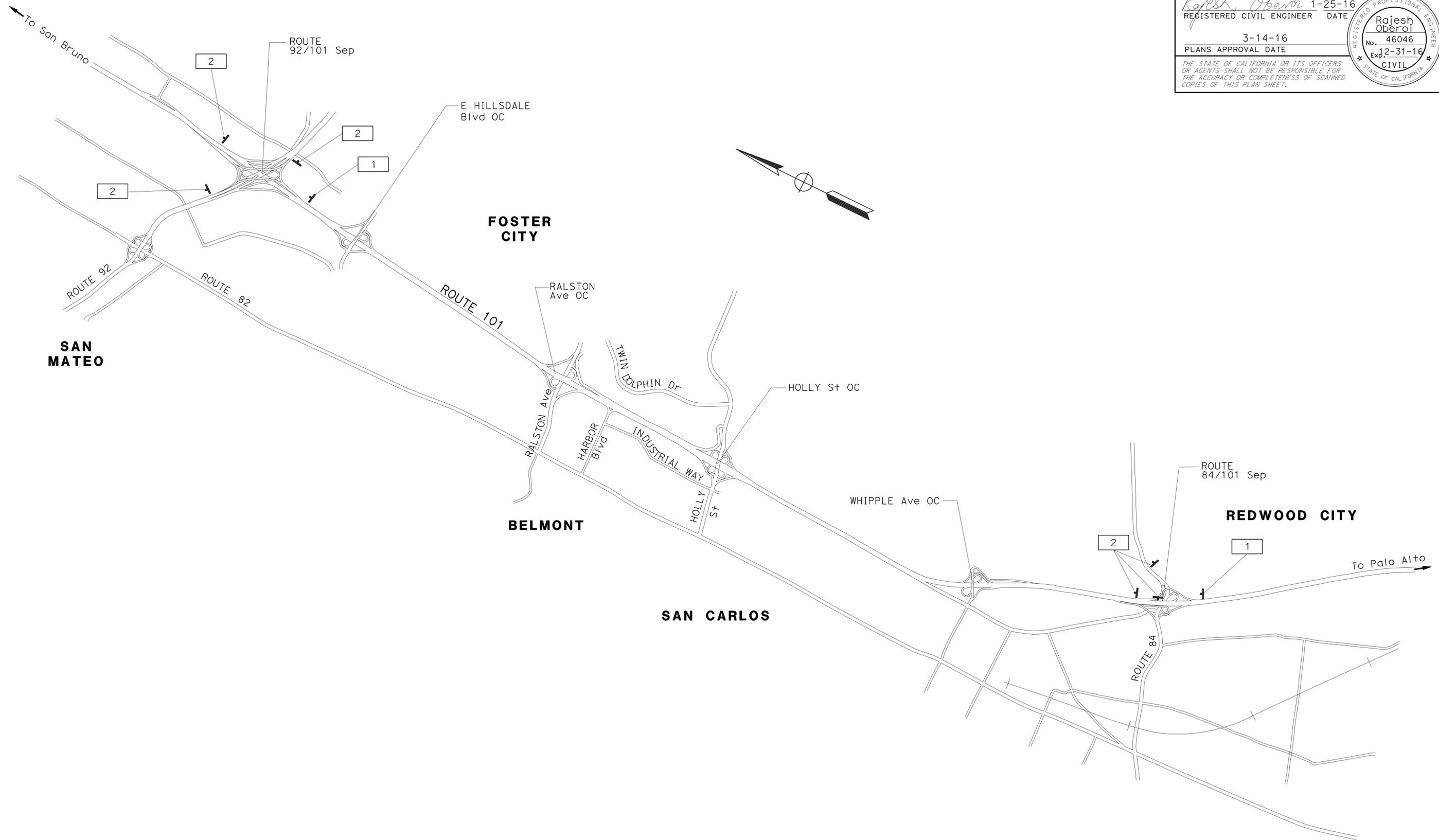


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	13	63

<i>Rajesh Oberoi</i>	1-25-16
REGISTERED CIVIL ENGINEER	DATE
3-14-16	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
Rajesh Oberoi
No. 46046
Exp. 2-31-16
CIVIL
STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans	ROLAND AU-YEUNG	STEPHEN LAU	1-21-16
TRAFFIC		RAJESH OBEROI	

CONSTRUCTION AREA SIGNS
NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

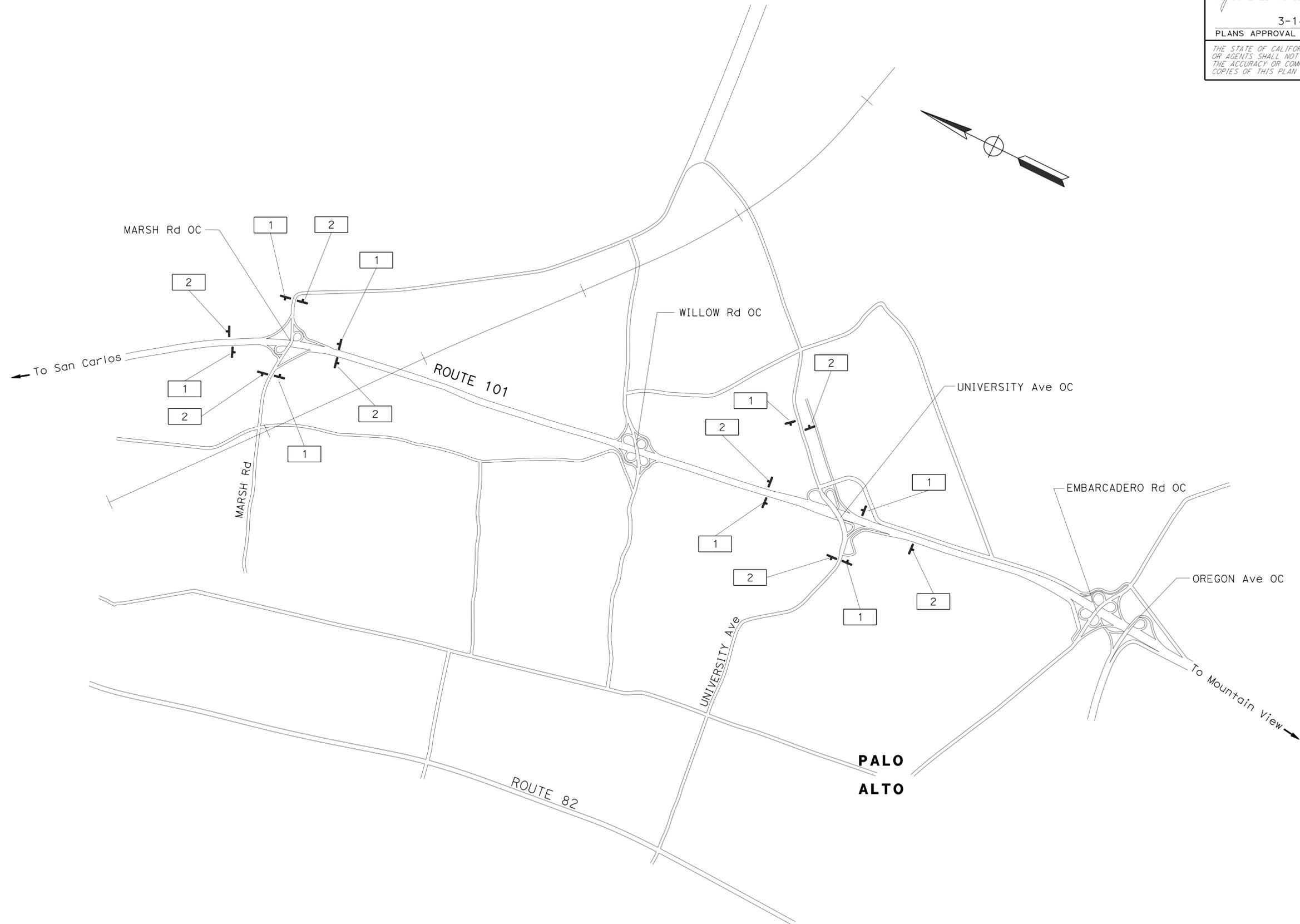
CS-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	14	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 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.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
Caltrans	ROLAND AU-YEUNG	STEPHEN LAU	SL	1-21-16
TRAFFIC		RAJESH OBEROI		
		CHECKED BY		

CONSTRUCTION AREA SIGNS
NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-3

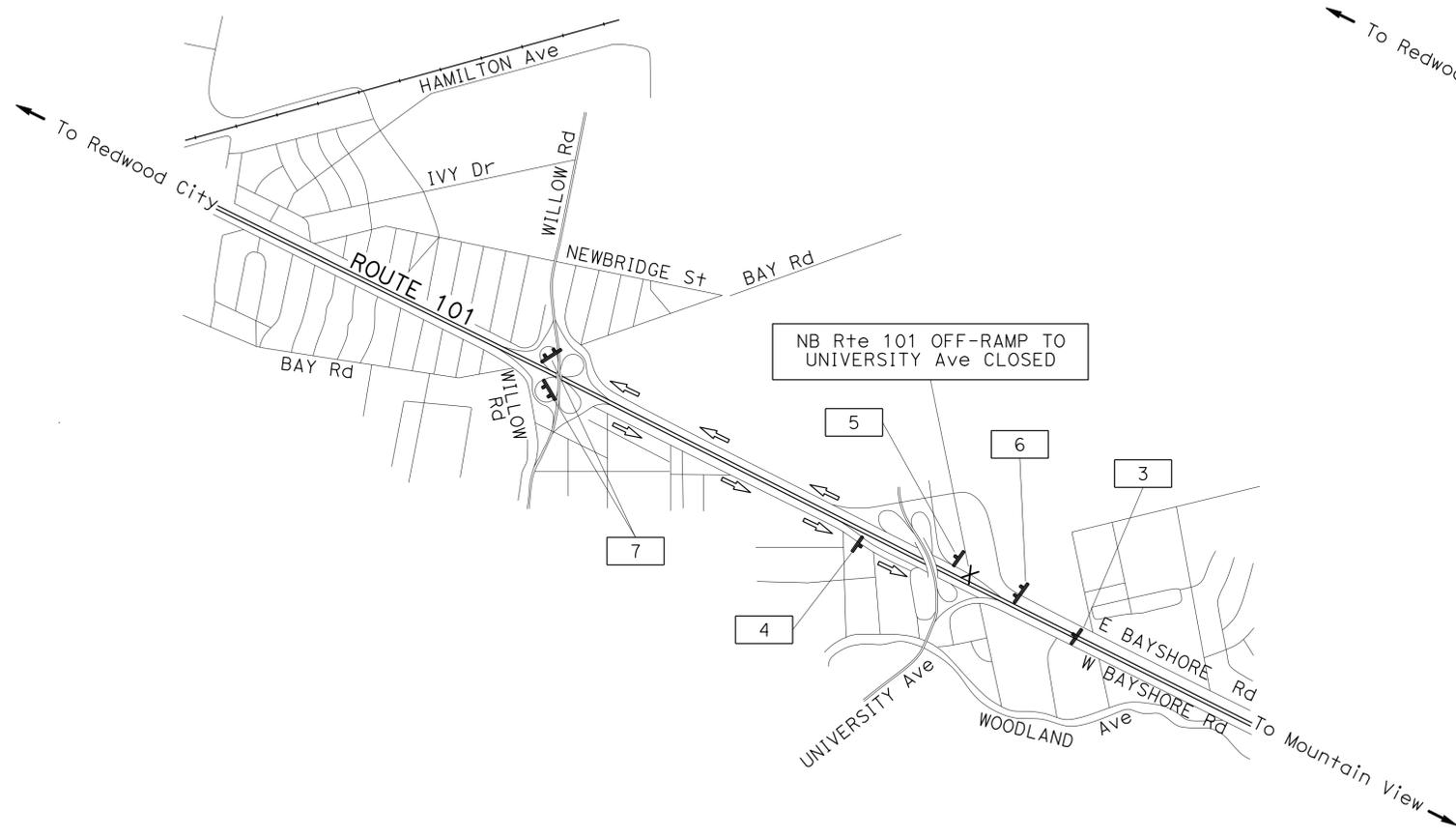


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	15	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

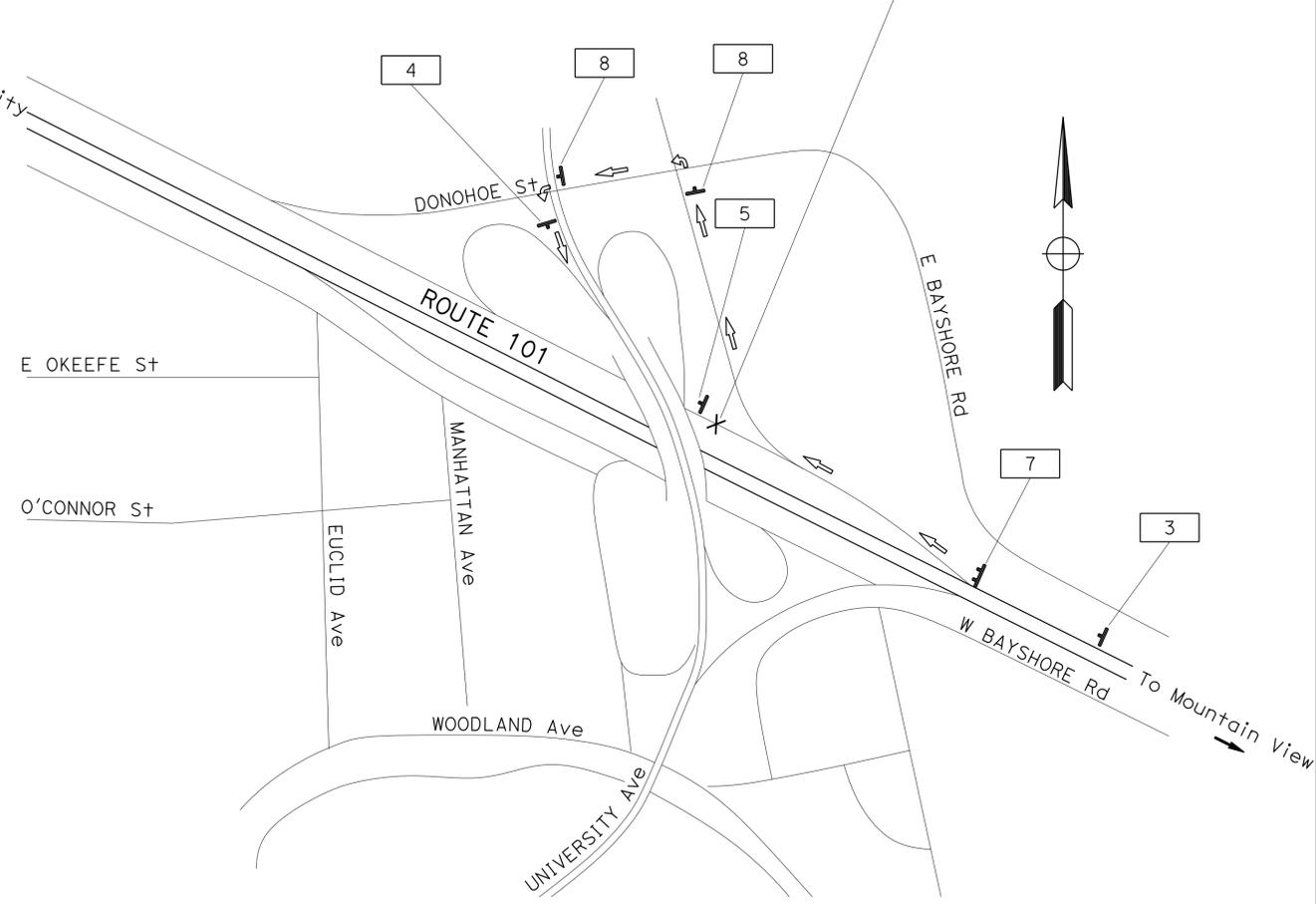
REGISTERED PROFESSIONAL ENGINEER
Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

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.



DETOUR PLAN No. 1

DETOUR VIA:
 NB Rte 101;
 LOOP OFF-RAMP TO SB WILLOW Rd/Rte 114;
 LOOP ON-RAMP TO SB Rte 101;
 SB Rte 101 TO UNIVERSITY Ave OFF-RAMP



DETOUR PLAN No. 2

DETOUR VIA:
 NB OFF-RAMP TO UNIVERSITY Ave;
 NB DONOHOE St;
 SB UNIVERSITY Ave



CONSTRUCTION AREA SIGNS
 NO SCALE

CS-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG
 CHECKED BY: RAJESH OBEROI
 REVISIONS: 1-21-16
 SL

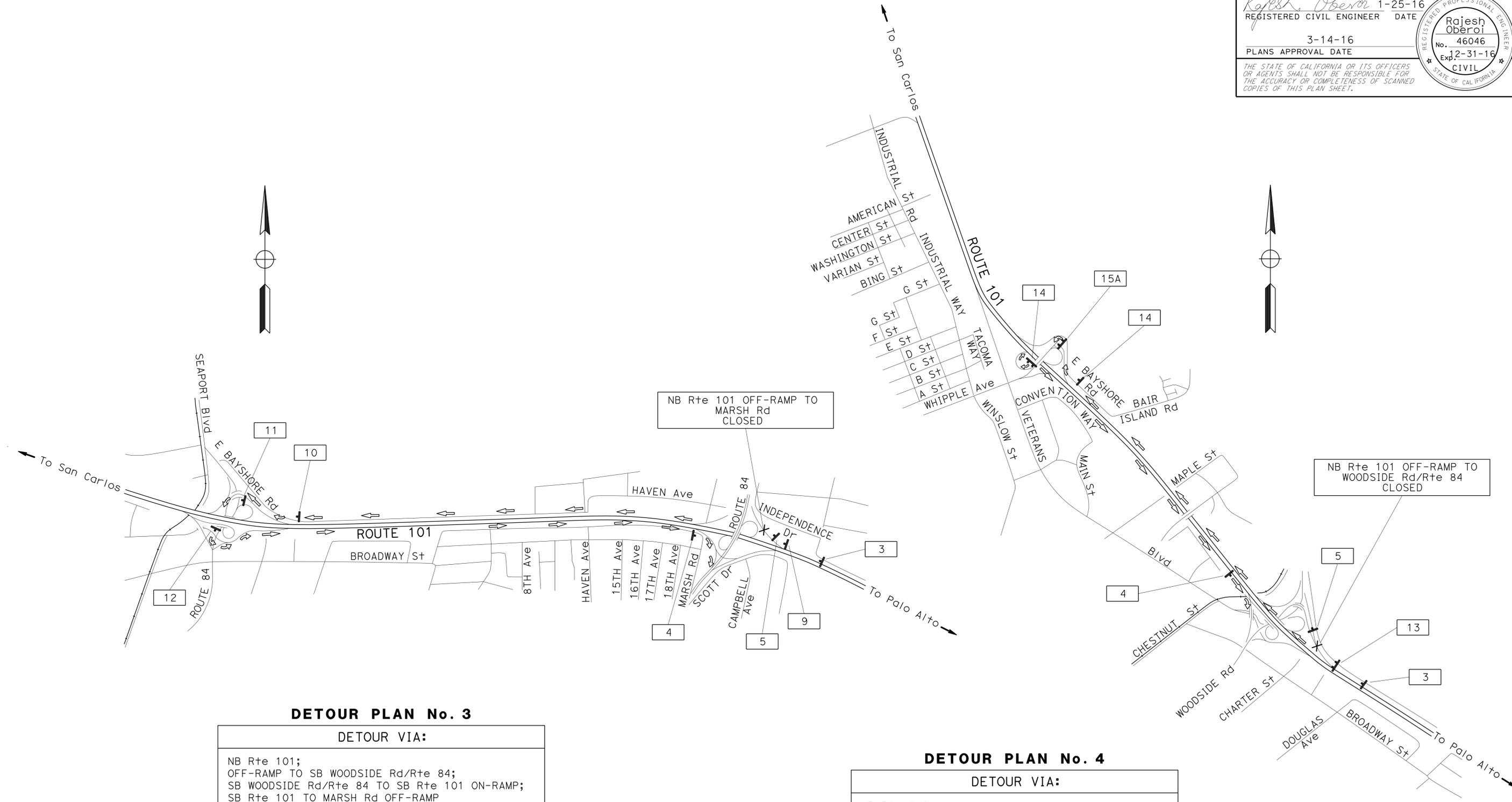
APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	16	63
		REGISTERED CIVIL ENGINEER		DATE	
		Rajesh Oberoi		1-25-16	
		PLANS APPROVAL DATE		3-14-16	
		REGISTERED PROFESSIONAL ENGINEER		No. 46046	
		STATE OF CALIFORNIA		Exp. 2-31-16	
		CIVIL			
<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>					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE
CALTRANS	ROLAND AU-YEUNG	STEPHEN LAU	SL	1-21-16
		RAJESH OBEROI		
TRAFFIC	CHECKED BY	REVISIONS	DATE	REVISIONS



DETOUR PLAN No. 3

DETOUR VIA:

NB Rte 101;
 OFF-RAMP TO SB WOODSIDE Rd/Rte 84;
 SB WOODSIDE Rd/Rte 84 TO SB Rte 101 ON-RAMP;
 SB Rte 101 TO MARSH Rd OFF-RAMP

DETOUR PLAN No. 4

DETOUR VIA:

NB Rte 101;
 OFF-RAMP TO WHIPPLE Ave;
 SB WHIPPLE Ave TO Rte 101 LOOP ON-RAMP;
 SB Rte 101 TO WOODSIDE Rd/Rte 84 OFF-RAMP

CONSTRUCTION AREA SIGNS
NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-5

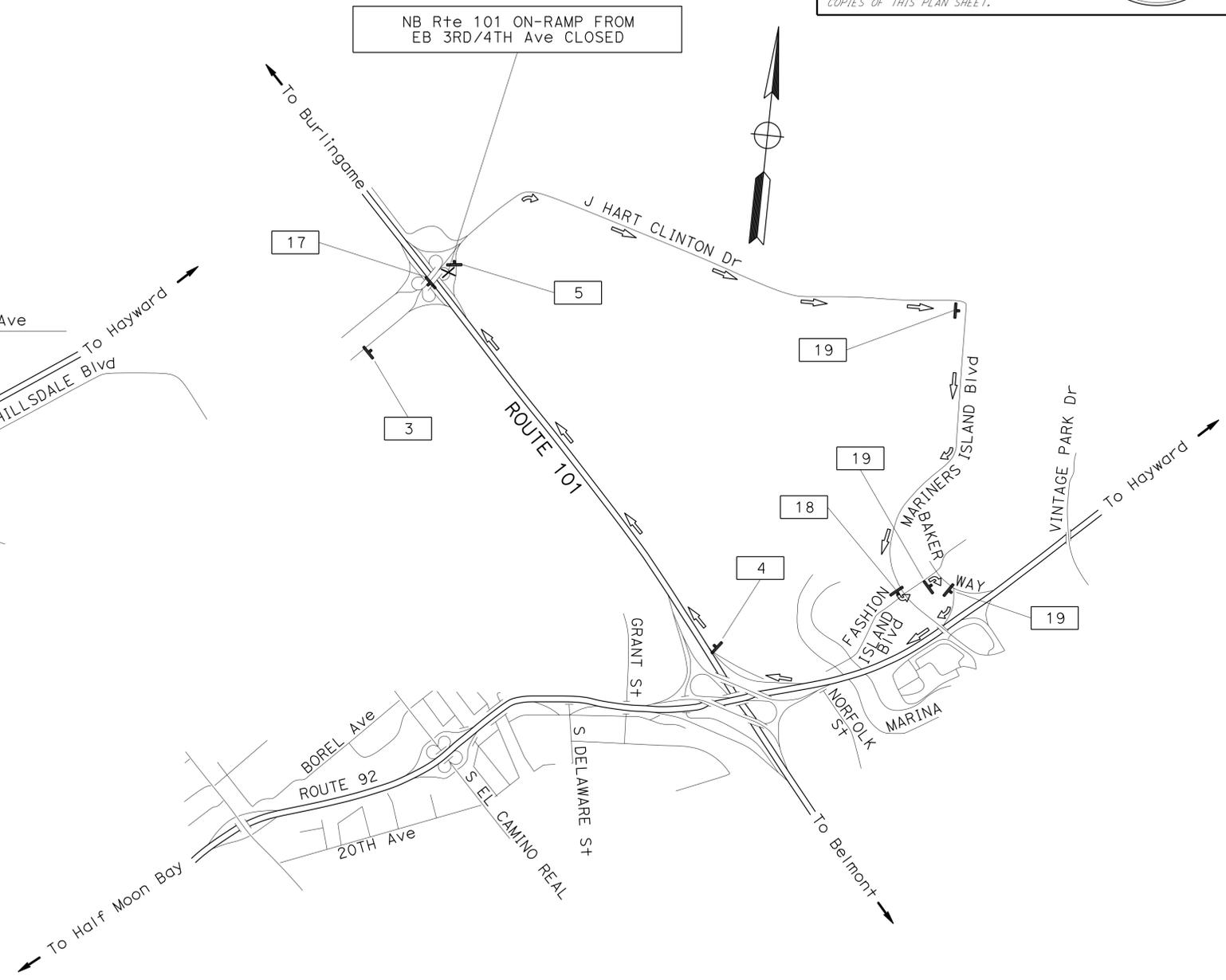
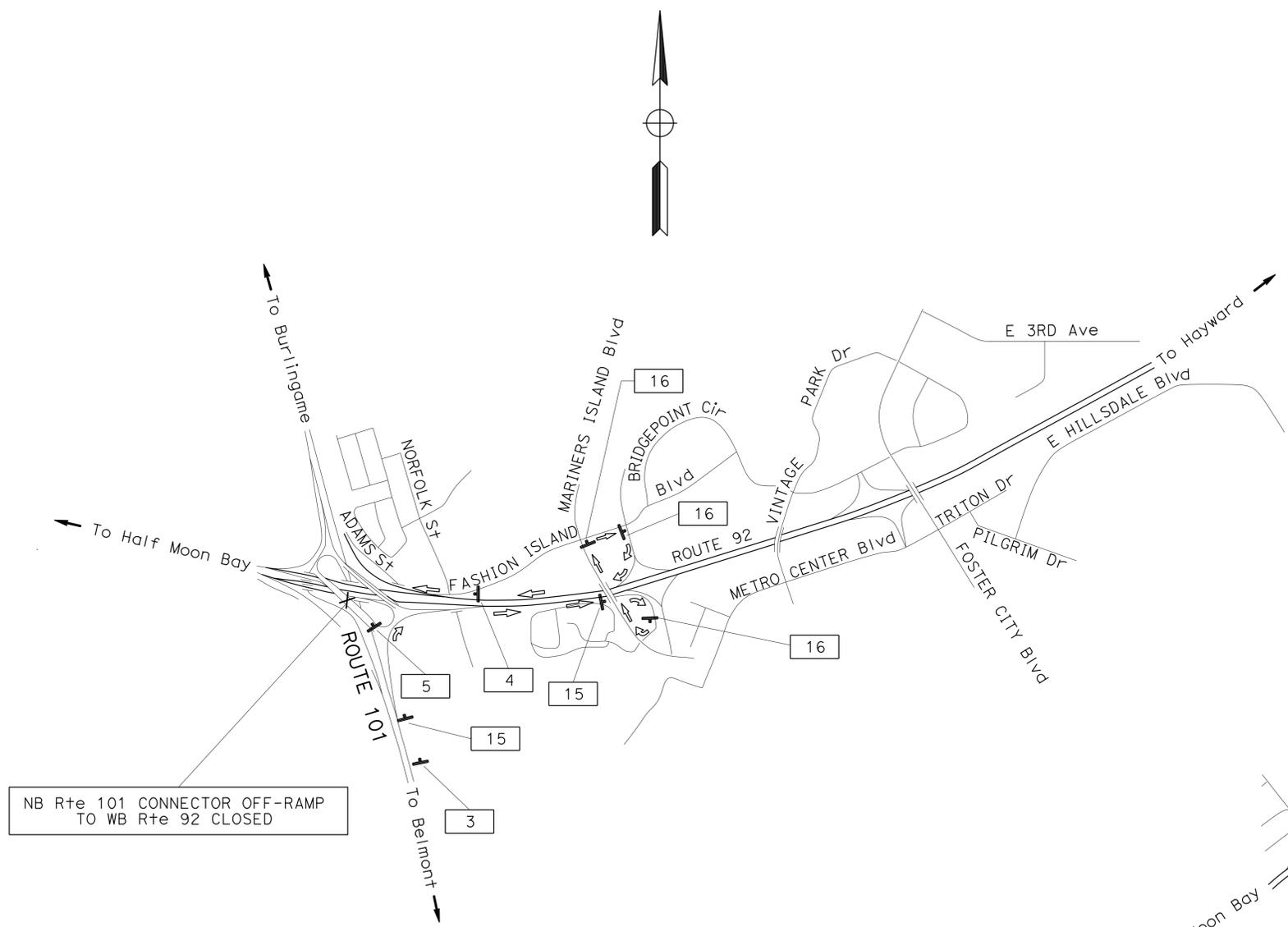
LAST REVISION | DATE PLOTTED => 15-MAR-2016 03-11-16 | TIME PLOTTED => 14:21

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG
 DESIGNED BY: STEPHEN LAU
 CHECKED BY: RAJESH OBEROI
 REVISIONS: SL 1-21-16

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	17	63

REGISTERED CIVIL ENGINEER: Rajesh Oberoi
 DATE: 1-25-16
 PLANS APPROVAL DATE: 3-14-16
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

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CONSTRUCTION AREA SIGNS
 NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-6

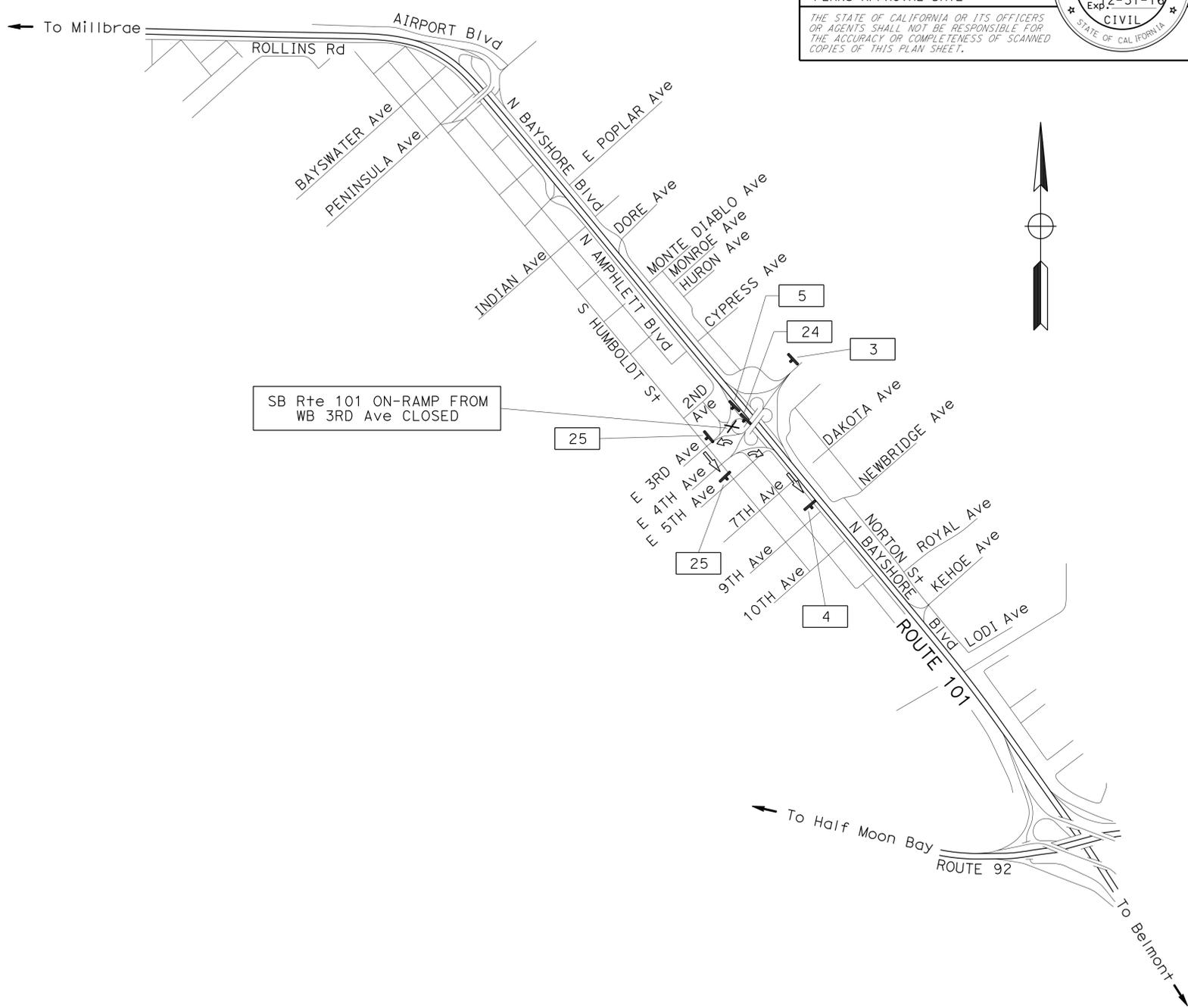
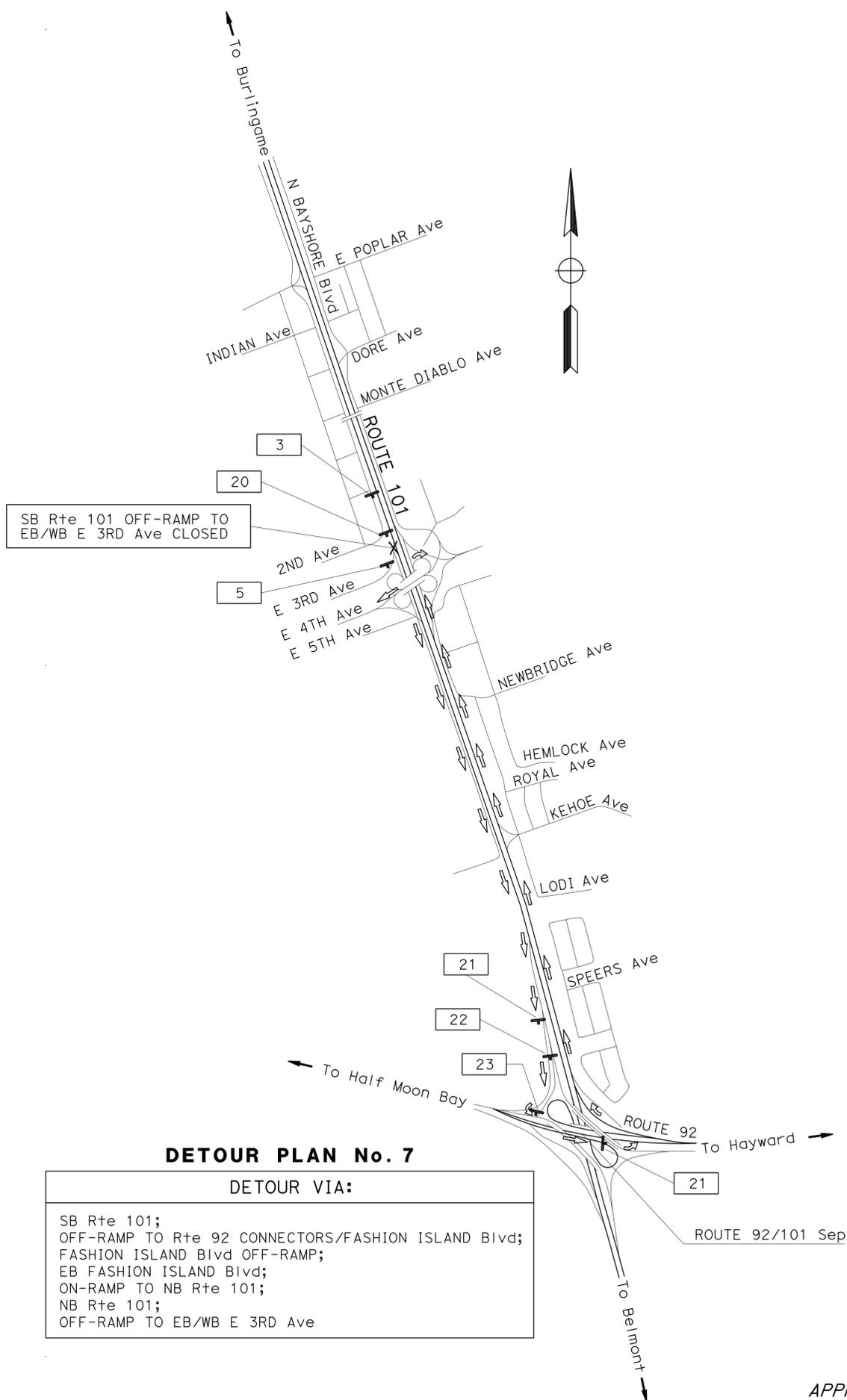
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	18	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	TRAFFIC
FUNCTIONAL SUPERVISOR	ROLAND AU-YEUNG
CALCULATED/DESIGNED BY	CHECKED BY
STEPHEN LAU	RAJESH OBEROI
REVISOR	DATE
SL	1-21-16



CONSTRUCTION AREA SIGNS
NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-7

LAST REVISION | DATE PLOTTED => 15-MAR-2016
01-21-16 TIME PLOTTED => 14:21

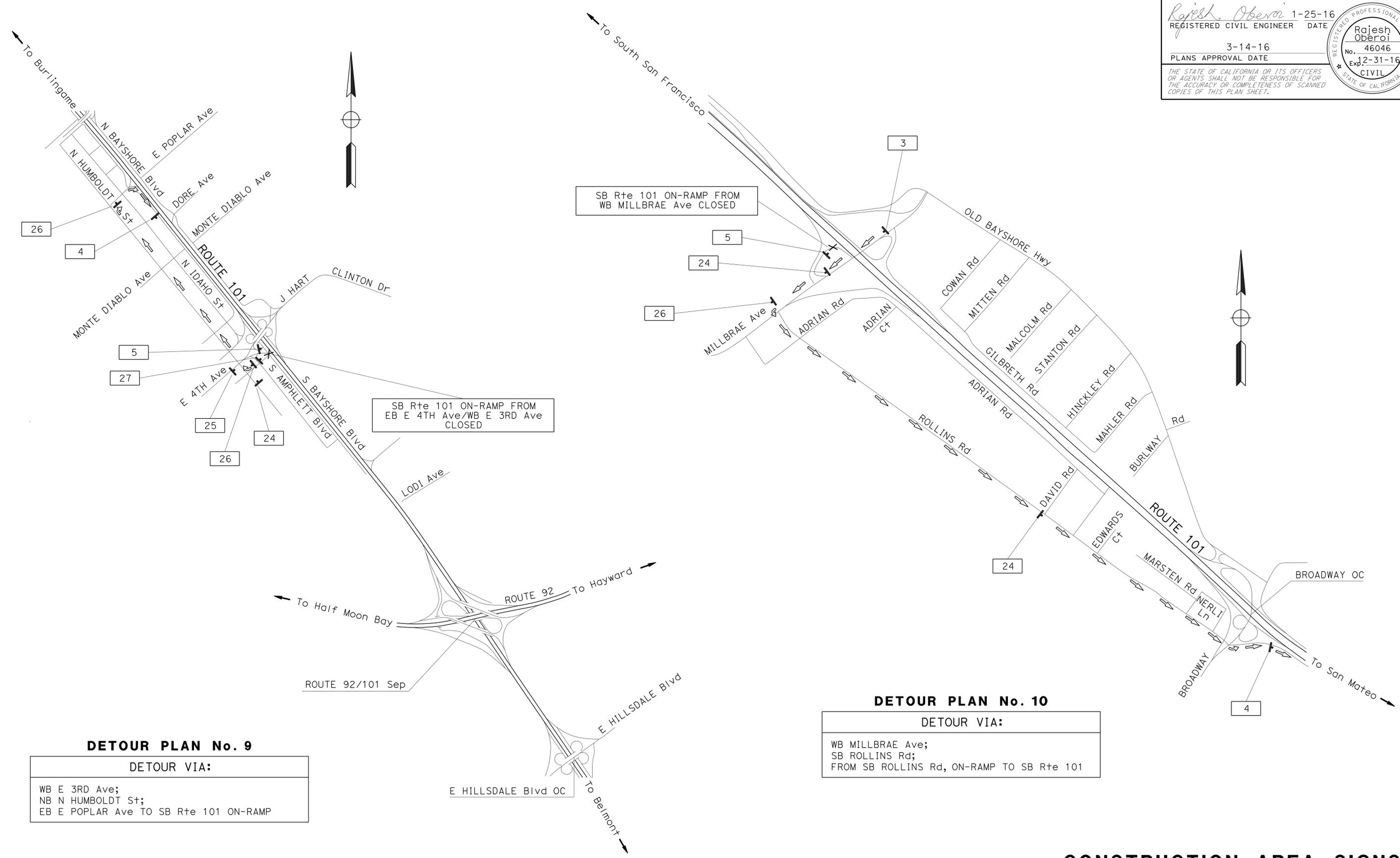
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	19	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE
TRAFFIC	ROLAND AU-YEUNG	STEPHEN LAU	SL	1-21-16
		RAJESH OBEROI		
	CHECKED BY			



DETOUR PLAN No. 9

DETOUR VIA:

WB E 3RD Ave;
 NB N HUMBOLDT St;
 EB E POPLAR Ave TO SB Rte 101 ON-RAMP

DETOUR PLAN No. 10

DETOUR VIA:

WB MILLBRAE Ave;
 SB ROLLINS Rd;
 FROM SB ROLLINS Rd, ON-RAMP TO SB Rte 101

CONSTRUCTION AREA SIGNS
 NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-8

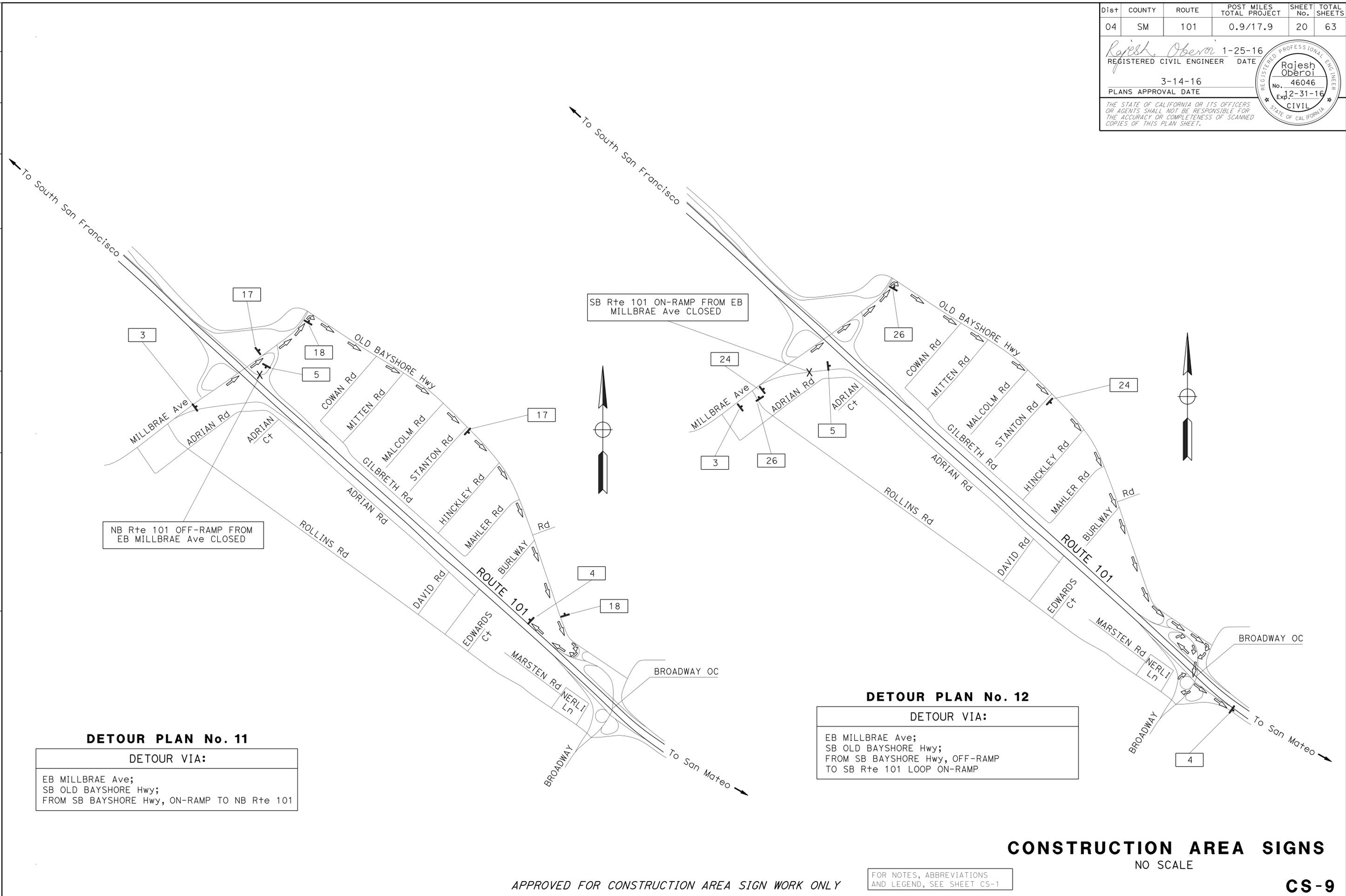
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	20	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	STEPHEN LAU	REVISOR	SL
TRAFFIC	ROLAND AU-YEUNG	CHECKED BY	RAJESH OBEROI	DATE REVISED	1-21-16



DETOUR PLAN No. 11

DETOUR VIA:

EB MILLBRAE Ave;
 SB OLD BAYSHORE Hwy;
 FROM SB BAYSHORE Hwy, ON-RAMP TO NB Rte 101

DETOUR PLAN No. 12

DETOUR VIA:

EB MILLBRAE Ave;
 SB OLD BAYSHORE Hwy;
 FROM SB BAYSHORE Hwy, OFF-RAMP
 TO SB Rte 101 LOOP ON-RAMP

CONSTRUCTION AREA SIGNS
 NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

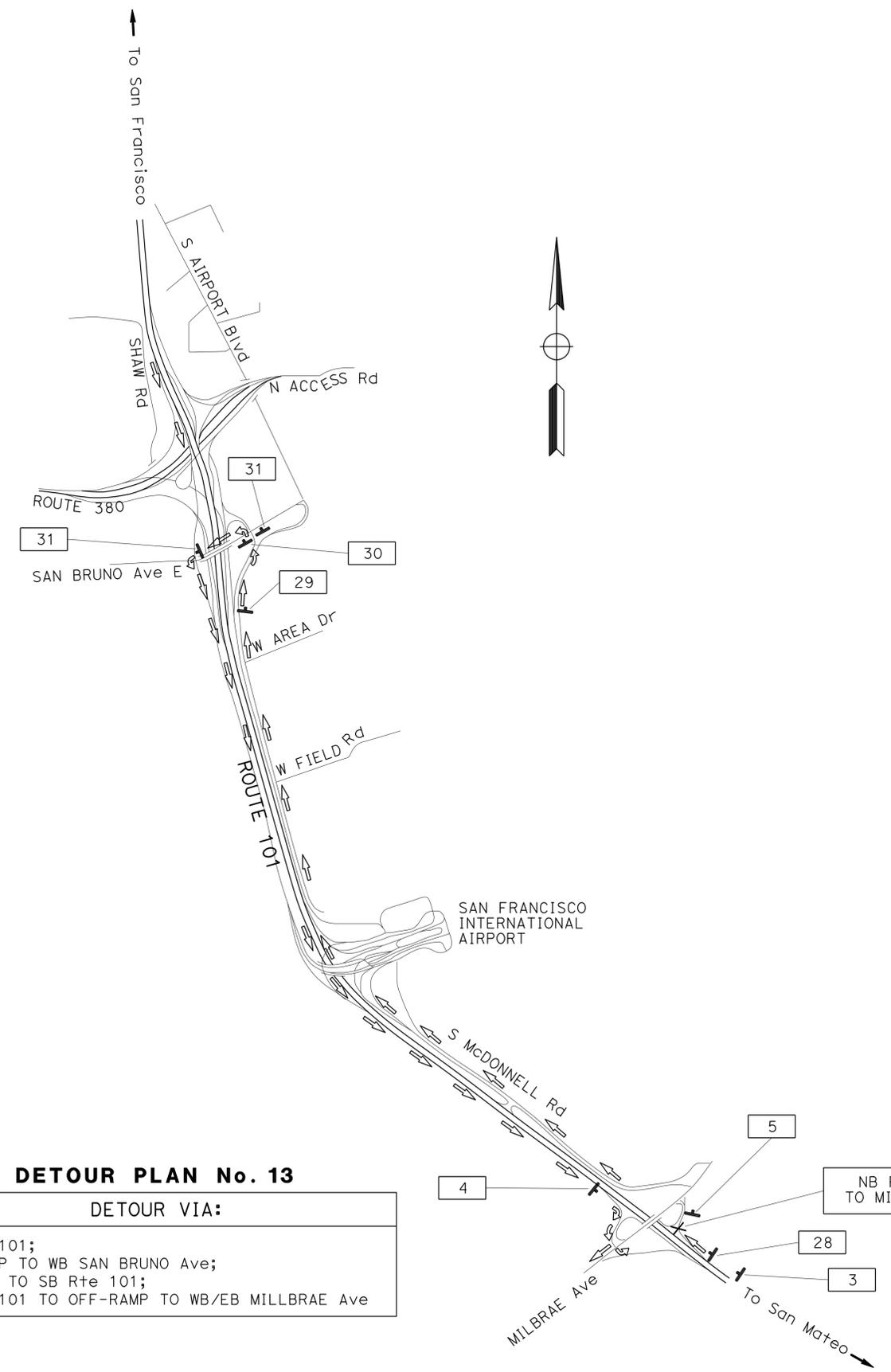
CS-9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	21	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

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DETOUR PLAN No. 13

DETOUR VIA:

NB Rte 101;
 OFF-RAMP TO WB SAN BRUNO Ave;
 ON-RAMP TO SB Rte 101;
 SB Rte 101 TO OFF-RAMP TO WB/EB MILLBRAE Ave

NB Rte 101 OFF-RAMP TO MILLBRAE Ave CLOSED

CONSTRUCTION AREA SIGNS
 NO SCALE

CS-10

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	STEPHEN LAU	REVISOR	SL
Caltrans	ROLAND AU-YEUNG	CHECKED BY	RAJESH OBEROI	DATE REVISED	1-21-16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	22	63

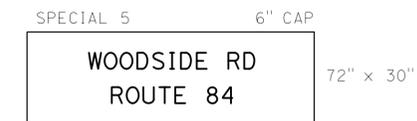
Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

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STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE		SIGN MESSAGE	PANEL SIZE	NUMBER OF POSTS AND SIZE	No. OF SIGNS
	FEDERAL	CALIFORNIA				
1	W20-1		ROAD WORK AHEAD	48" x 18"	1 - 4" x 6"	18
2	G20-2		END ROAD WORK	36" x 18"	1 - 4" x 4"	23
3	W20-2		DETOUR AHEAD	48" x 48"	1 - 4" x 4"	12
4	M4-8a		END DETOUR	24" x 18"	1 - 4" x 4"	12
5		SC6-4	RAMP CLOSED (DATE AND TIME)	48" x 60"	1 - 6" x 6"	13
6		SPECIAL 1	SEE SPECIAL 1	72" x 48"	2 - 4" x 6"	1
7		SPECIAL 2	SEE SPECIAL 2	72" x 48"	2 - 4" x 6"	3
8		SPECIAL 3	SEE SPECIAL 3	54" x 36"	1 - 4" x 6"	2
9		SC-3(↑)	DETOUR (STRAIGHT AHEAD ARROW)	48" x 18"	1 - 4" x 6"	1
		SPECIAL 4	SEE SPECIAL 4	42" x 30"		
10	M6-2(↘)		DETOUR (DIAGONAL ARROW)	21" x 18"	1 - 4" x 6"	1
		SPECIAL 4	SEE SPECIAL 4	42" x 30"		
11	M6-2(↖)		DETOUR (DIAGONAL ARROW)	21" x 18"	1 - 4" x 6"	1
		SPECIAL 4	SEE SPECIAL 4	42" x 30"		
12	M4-10(←)		DETOUR (LEFT)	48" x 18"	1 - 4" x 6"	1
		SPECIAL 4	SEE SPECIAL 4	42" x 30"		
13		SC-3(↑)	DETOUR (STRAIGHT AHEAD ARROW)	48" x 18"	2 - 4" x 6"	1
		SPECIAL 5	SEE SPECIAL 5	72" x 30"		
14	M6-2(↘)		DETOUR (DIAGONAL ARROW)	21" x 18"	2 - 4" x 6"	2
		SPECIAL 5	SEE SPECIAL 5	72" x 30"		
15	M4-8		DETOUR 2	21" x 9"		
		G28-2(92)	ROUTE SHIELD (92)	24" x 25"		
	M3-3		WEST	21" x 9"		
	M6-2(↘)		DETOUR (DIAGONAL ARROW)	21" x 15"		
15A	M4-10(←)		DETOUR (LEFT)	48" x 18"	2 - 4" x 6"	1
		SPECIAL 5	SEE SPECIAL 5	72" x 30"		



CONSTRUCTION AREA SIGNS NO SCALE

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG
 CALCULATED/DESIGNED BY: CHECKED BY:
 STEPHEN LAU RAJESH OBEROI
 REVISED BY: DATE REVISED: 1-21-16
 SL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	23	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

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STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE		SIGN MESSAGE	PANEL SIZE	NUMBER OF POSTS AND SIZE	No. OF SIGNS
	FEDERAL	CALIFORNIA				
16	M4-10(→)		DETOUR (RIGHT)	48" x 18"	1 - 4" x 6"	3
	M3-4		WEST	21" x 9"		
		G28-2(92)	ROUTE SHIELD (92)	24" x 25"		
17		SC-3(↑)	DETOUR (STRAIGHT AHEAD ARROW)	48" x 48"	1 - 4" x 6"	3
	M3-1		NORTH	21" x 9"		
		G26-2(101)	ROUTE SHIELD (101)	28" x 24"		
18	M4-10(←)		DETOUR (LEFT)	48" x 18"	1 - 4" x 6"	3
	M3-1		NORTH	21" x 9"		
		G26-2(101)	ROUTE SHIELD (101)	28" x 24"		
19	M4-10(→)		DETOUR (RIGHT)	48" x 18"	1 - 4" x 6"	3
	M3-1		NORTH	21" x 9"		
		G26-2(101)	ROUTE SHIELD (101)	28" x 24"		
20		SC-3(↑)	DETOUR (STRAIGHT AHEAD ARROW)	48" x 18"	1 - 4" x 6"	1
		SPECIAL 6	SEE SPECIAL 6	54" x 18"		
21	M6-2(↘)		DETOUR (DIAGONAL ARROW)	21" x 18"	1 - 4" x 6"	2
		SPECIAL 6	SEE SPECIAL 6	54" x 18"		
22	M6-2(↙)		DETOUR (DIAGONAL ARROW)	21" x 18"	1 - 4" x 6"	1
		SPECIAL 6	SEE SPECIAL 6	54" x 18"		
23	M4-10(←)		DETOUR (LEFT)	48" x 18"	1 - 4" x 6"	1
		SPECIAL 6	SEE SPECIAL 6	54" x 18"		
24		SC-3(↑)	DETOUR (STRAIGHT AHEAD ARROW)	48" x 18"	1 - 4" x 6"	6
	M3-3		SOUTH	21" x 9"		
		G26-2(101)	ROUTE SHIELD (101)	28" x 24"		
25	M4-10(←)		DETOUR (LEFT)	48" x 18"	1 - 4" x 6"	3
	M3-3		SOUTH	21" x 9"		
		G26-2(101)	ROUTE SHIELD (101)	28" x 24"		

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CONSTRUCTION AREA SIGNS

CS-12



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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 ROLAND AU-YEUNG
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 STEPHEN LAU
 RAJESH OBEROI
 REVISED BY
 DATE REVISED
 SL
 1-21-16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	24	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE

3-14-16
 PLANS APPROVAL DATE

Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

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STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE		SIGN MESSAGE	PANEL SIZE	NUMBER OF POSTS AND SIZE	No. OF SIGNS
	FEDERAL	CALIFORNIA				
26	M4-10(→)		DETOUR (RIGHT)	48" x 18"	1 - 4" x 6"	5
	M3-3		SOUTH	21" x 9"		
		G26-2(101)	ROUTE SHIELD (101)	28" x 24"		
27	M4-8		DETOUR	21" x 9"	1 - 4" x 6"	1
	M3-3		SOUTH	21" x 9"		
		G26-2(101)	ROUTE SHIELD (101)	28" x 24"		
28		M6-2(↘)	DETOUR (DIAGONAL ARROW)	21" x 15"	1 - 4" x 6"	1
		SC-3(→)	DETOUR (STRAIGHT AHEAD ARROW)	48" x 18"		
29		SPECIAL 7	SEE SPECIAL 7	54" x 24"	1 - 4" x 6"	1
		M4-8	DETOUR	21" x 9"		
30		M6-2(↘)	DETOUR (DIAGONAL ARROW)	21" x 15"	1 - 4" x 6"	1
		M4-8	DETOUR	21" x 9"		
31		SPECIAL 7	SEE SPECIAL 7	54" x 24"	1 - 4" x 6"	2
		M4-10(←)	DETOUR (LEFT)	48" x 18"		

CONSTRUCTION AREA SIGNS

CS-13

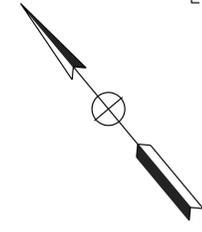
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

LAST REVISION | DATE PLOTTED => 15-MAR-2016 01-21-16 TIME PLOTTED => 14:21

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG
 CALCULATED/DESIGNED BY: STEPHEN LAU
 CHECKED BY: RAJESH OBEROI
 REVISED BY: SL
 DATE REVISED: 1-26-16

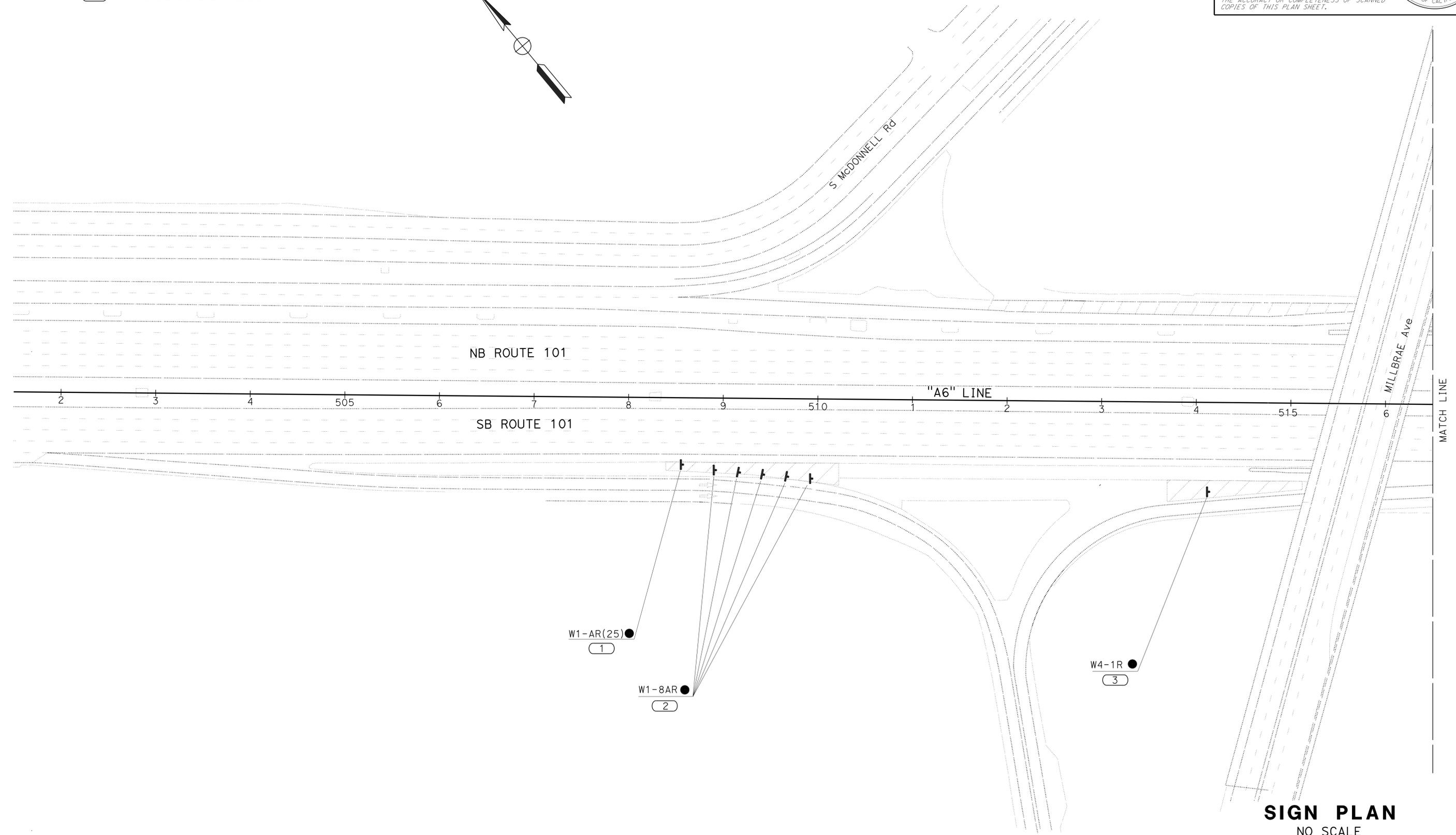
LEGEND:
 ■ REMOVE ROADSIDE SIGN
 ▲ ROADSIDE (ONE-POST)
 ● RESET ROADSIDE SIGN
 (No.) ROADSIDE SIGN NUMBER

NOTES:
 1. EXACT LOCATION AND POSITION OF ROADSIDE SIGNS TO BE DETERMINED BY THE ENGINEER.
 2. POST SIZES AND LENGTH GIVEN ARE APPROXIMATE. EXACT SIZES AND LENGTH TO BE DETERMINED BY THE ENGINEER.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	25	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 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.



SIGN PLAN
 NO SCALE

APPROVED FOR SIGN WORK ONLY

S-1

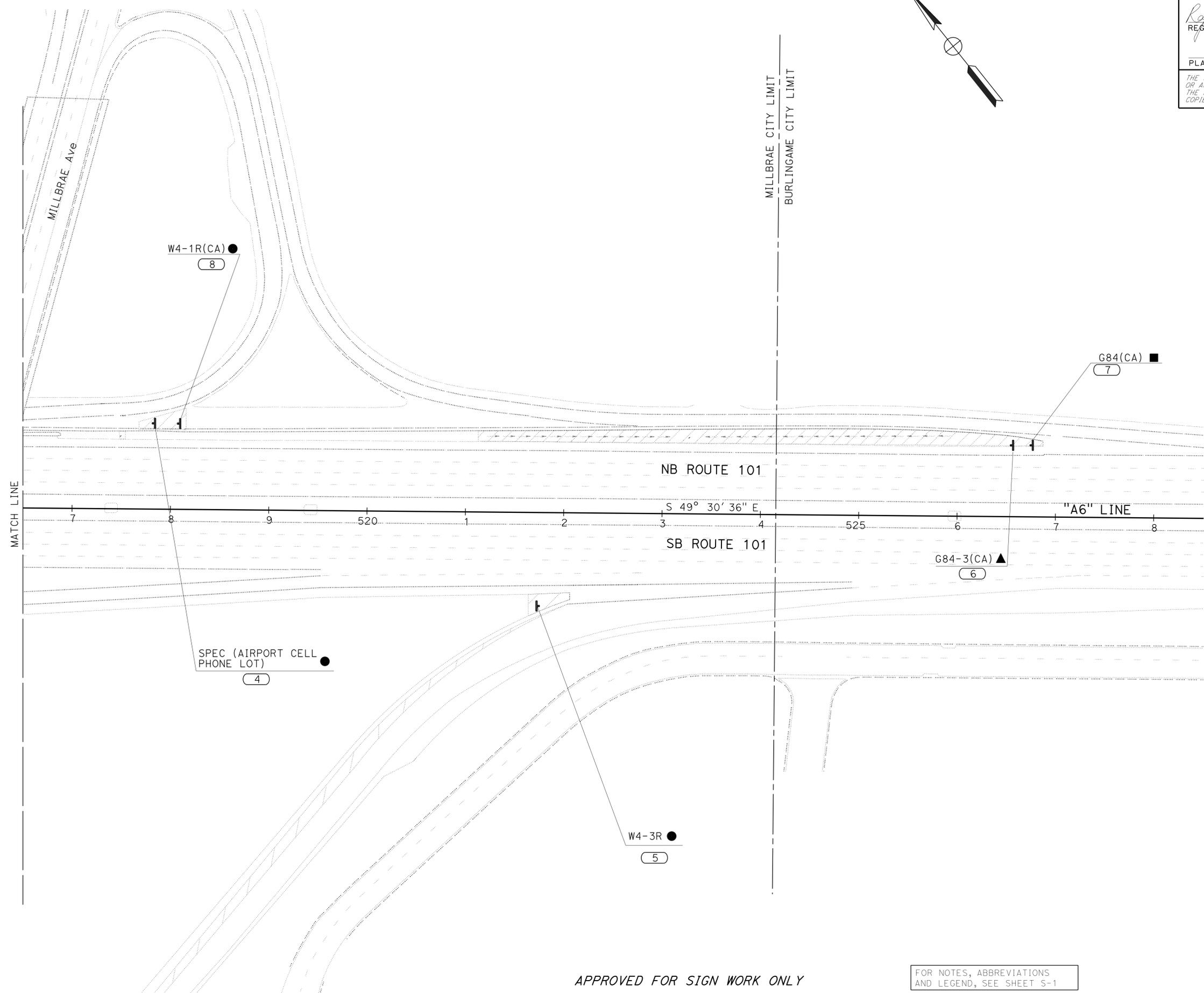
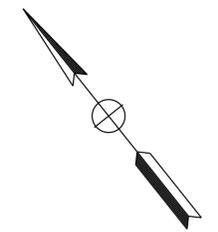
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	STEPHEN LAU	REVISOR	SL
	ROLAND AU-YEUNG	CHECKED BY	RAJESH OBEROI	DATE REVISED	1-26-16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	26	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA



APPROVED FOR SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET S-1

SIGN PLAN
NO SCALE

S-2

LAST REVISION | DATE PLOTTED => 15-MAR-2016
 01-26-16 | TIME PLOTTED => 14:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	27	63

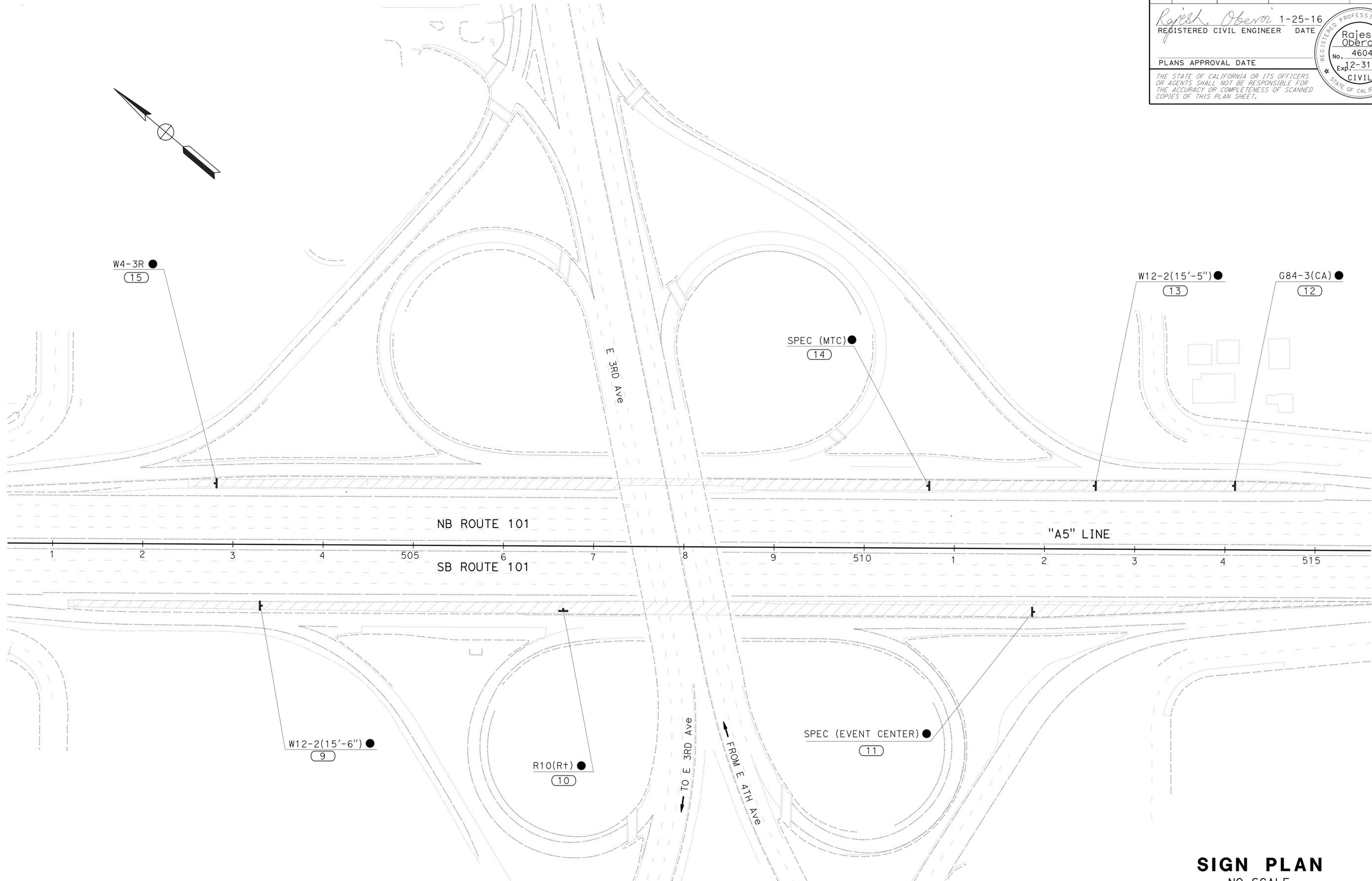
Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG
 CALCULATED/DESIGNED BY: STEPHEN LAU
 CHECKED BY: RAJESH OBEROI
 REVISED BY: SL
 DATE REVISED: 1-26-16



SIGN PLAN
NO SCALE

APPROVED FOR SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET S-1

S-3

LAST REVISION | DATE PLOTTED => 15-MAR-2016
 03-14-16 | TIME PLOTTED => 14:21

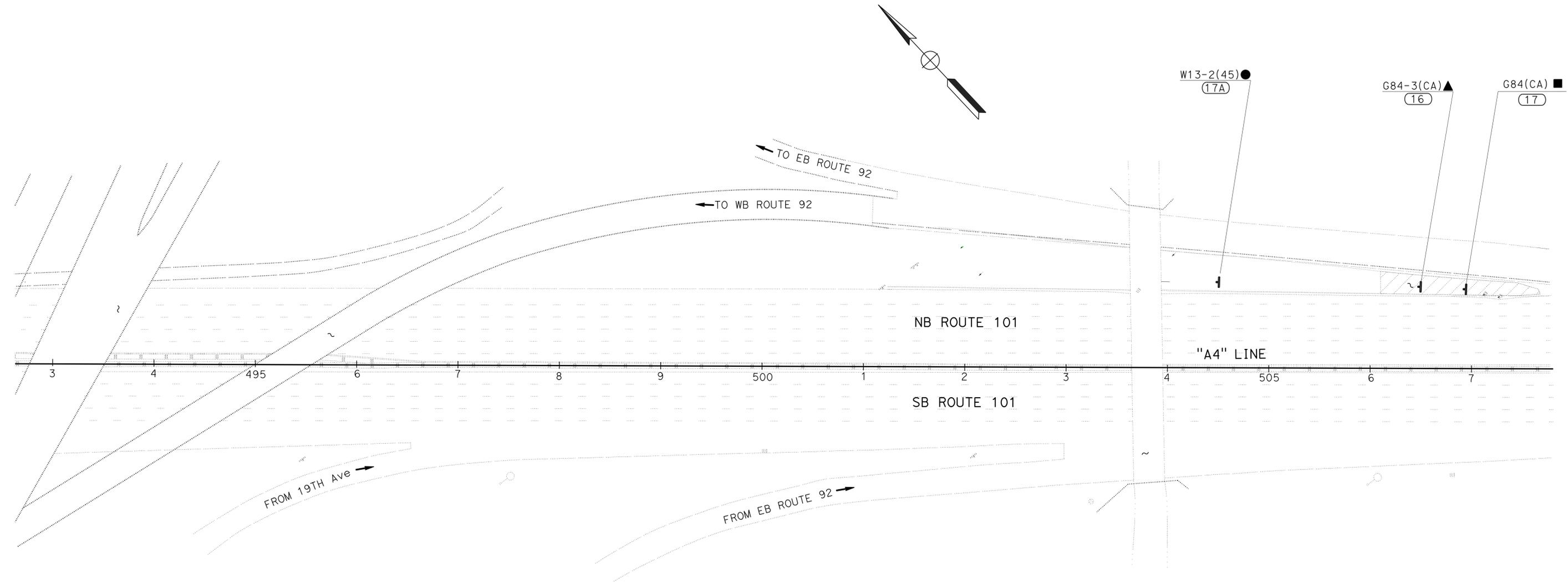
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG
 CALCULATED/DESIGNED BY: CHECKED BY:
 STEPHEN LAU RAJESH OBEROI
 REVISED BY: DATE REVISED:
 SL 1-26-16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	28	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

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APPROVED FOR SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET S-1

SIGN PLAN
 NO SCALE

S-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 TRAFFIC

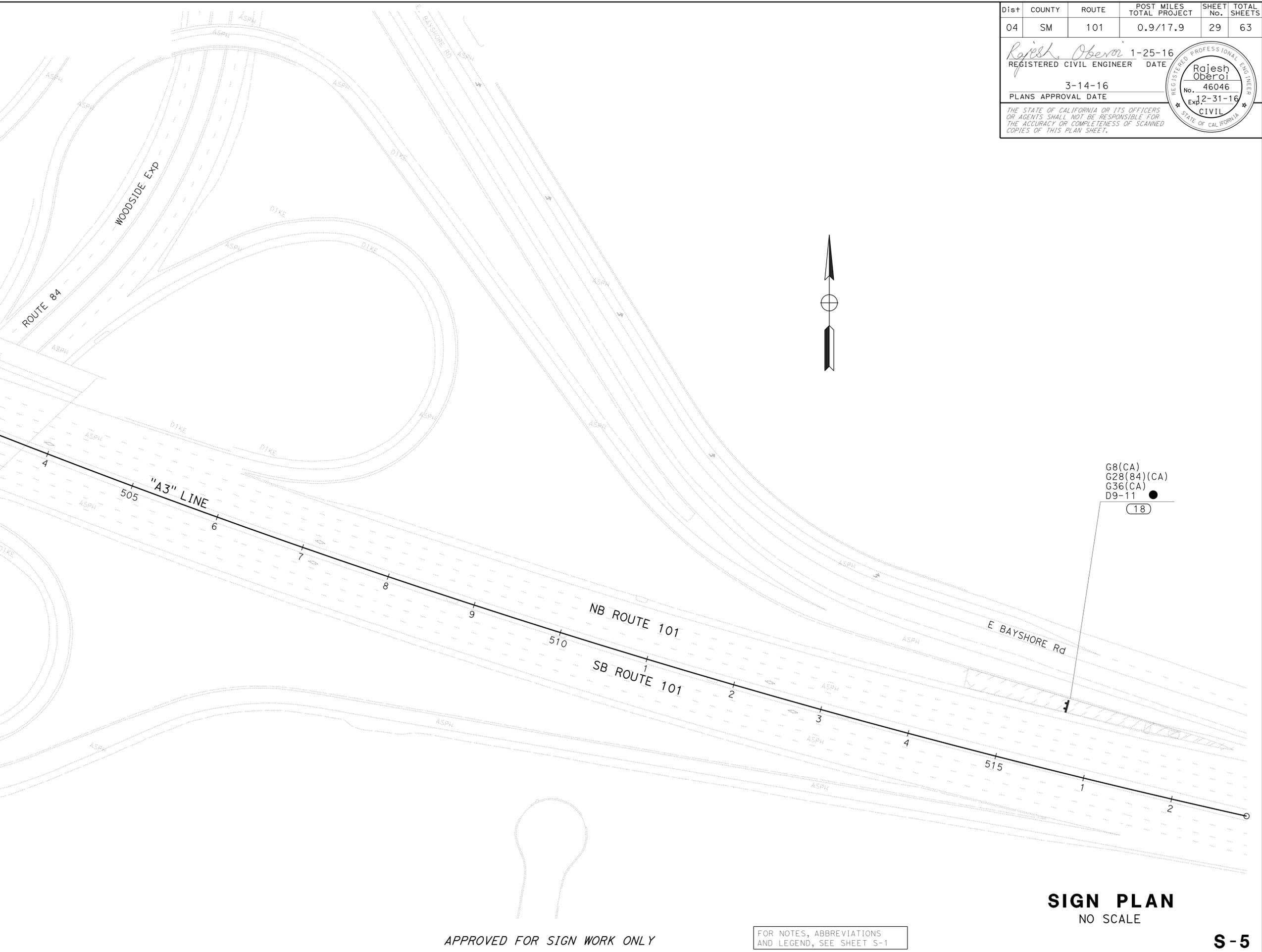
FUNCTIONAL SUPERVISOR
 ROLAND AU-YEUNG

CALCULATED/DESIGNED BY
 CHECKED BY

STEPHEN LAU
 RAJESH OBEROI

REVISOR BY
 DATE REVISED

SL
 1-26-16



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	29	63

Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 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.

G8(CA)
 G28(84)(CA)
 G36(CA)
 D9-11 ●
 (18)

SIGN PLAN
 NO SCALE

APPROVED FOR SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET S-1

S-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	30	63

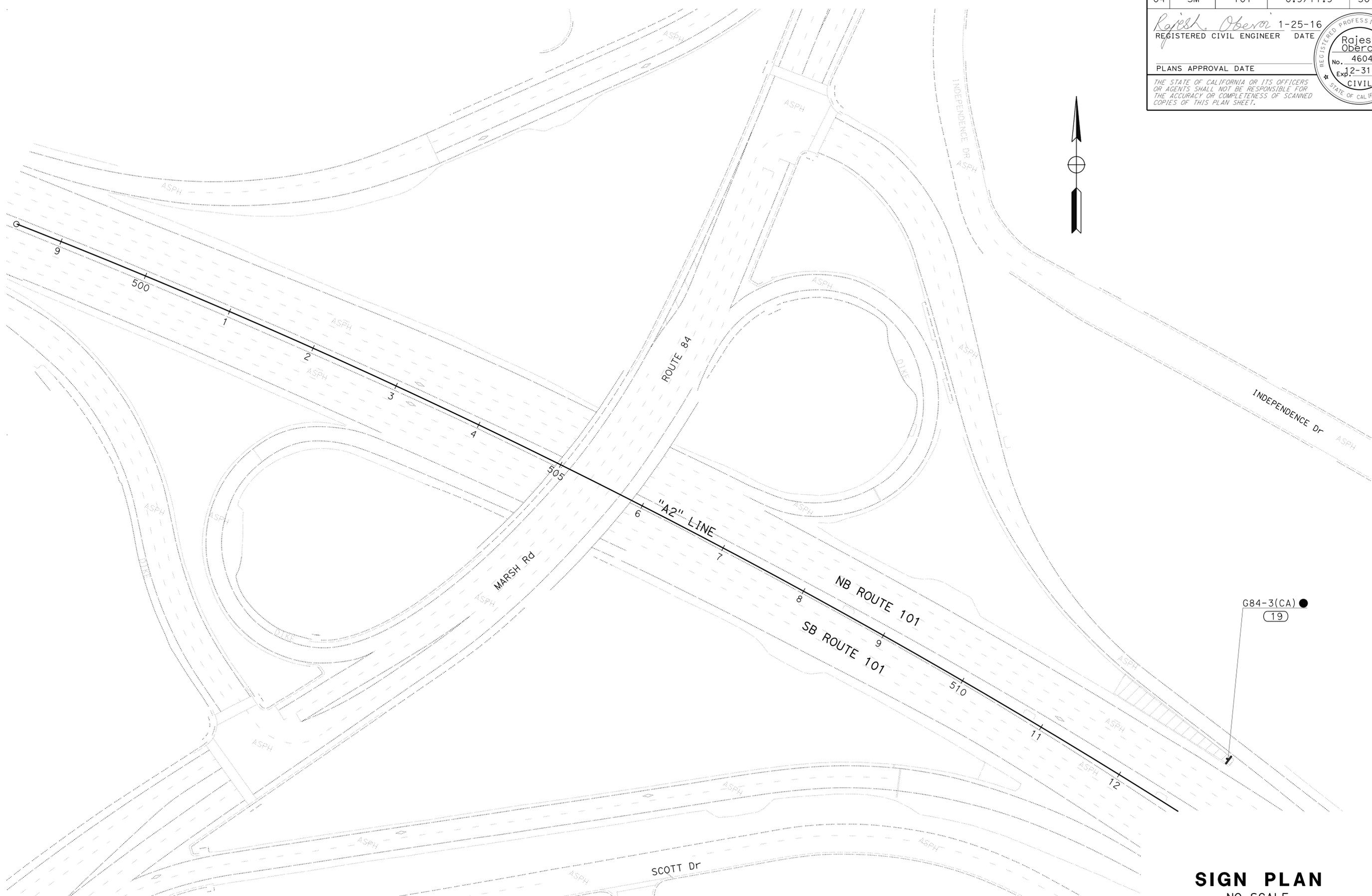
Rajesh Oberoi 1-25-16
 REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Rajesh Oberoi
 No. 46046
 Exp. 2-31-16
 CIVIL
 STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	STEPHEN LAU	REVISOR	SL
Caltrans	ROLAND AU-YEUNG	CHECKED BY	RAJESH OBEROI	DATE REVISED	1-26-16



APPROVED FOR SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET S-1

SIGN PLAN
NO SCALE

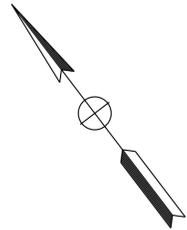
S-6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	31	63

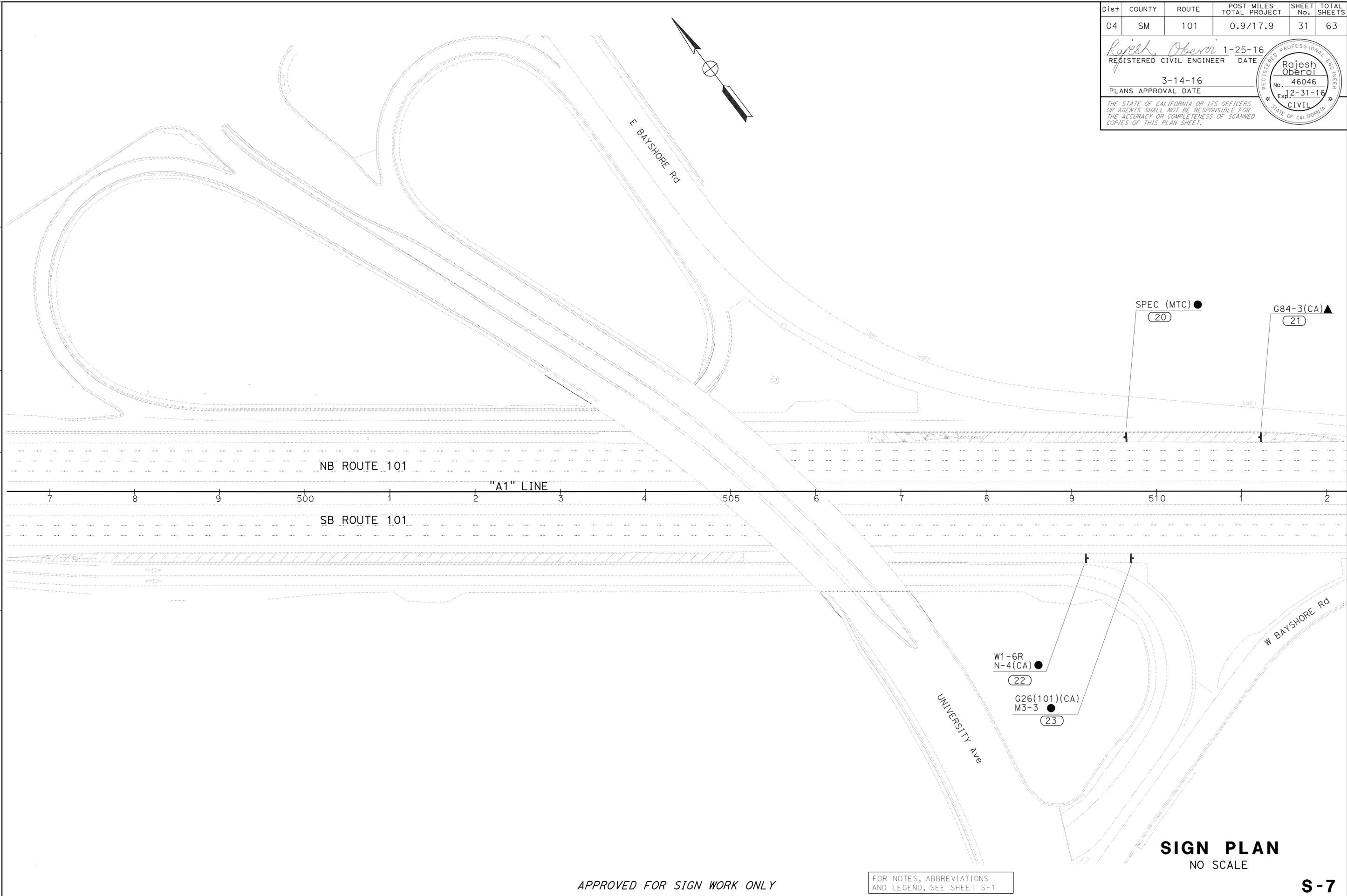
<i>Rajesh Oberoi</i>	1-25-16
REGISTERED CIVIL ENGINEER	DATE
3-14-16	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
Rajesh Oberoi
No. 46046
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	STEPHEN LAU	REVISOR	SL
Caltrans	ROLAND AU-YEUNG	CHECKED BY	RAJESH OBEROI	DATE	1-26-16
TRAFFIC					



SIGN PLAN
NO SCALE

APPROVED FOR SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET S-1

S-7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	32	63

Rajesh Oberoi 1-25-16
REGISTERED CIVIL ENGINEER DATE

3-14-16
PLANS APPROVAL DATE

Rajesh Oberoi
No. 46046
Exp. 2-31-16
CIVIL

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ROADSIDE SIGN QUANTITIES AND SIGN PANEL SUMMARY

SHEET No.	SIGN No.	SIGN CODE	PANEL SIZE	SIGN AREA	SINGLE FACE	BACKGROUND		LEGEND		PROTECTIVE FILM	ROADSIDE SIGNS				POST TYPE SIZE AND LENGTH	REMARKS	
						SHEETING COLOR	SHEETING COLOR	RETROREFLECTIVE	PREMIUM	SINGLE SHEET		REMOVE ROADSIDE SIGN	RESET ROADSIDE SIGN	WOOD POST (INCH x INCH)			
										UNFRAMED ALUMINUM	0.063"				ONE POST		EA
INCH x INCH	SQFT	SQFT	EA	ft													
S-1	1	W1-AR(25)															
	2	W1-8AR															
	3	W4-1R															
S-2	4	SPECIAL (AIRPORT CELL PHONE LOT)															
	5	W4-3R															
	6	G84-3(CA)	48 x 60	20	X	GREEN	WHITE	PLAIN	X	20	1			16		EXIT No. 420	
	7	G84(CA)										1					
S-3	8	W4-1R(CA)															
	9	W12-2 (15'-6")															
	10	R10(R+)															
	11	SPECIAL (EVENT CENTER)															
	12	G84-3(CA)															EXIT No. 416
S-4	13	W12-2 (15'-5")															
	14	SPECIAL (MTC)															"FREEWAY ASSIST" TO BE RESET BY MTC
	15	W4-3R															
S-4	16	G84-3(CA)	48 x 60	20	X	GREEN	WHITE	PLAIN	X	20	1			16		EXIT No. 414B	
	17	G84(CA)										1					
S-5	17A	W13-2(45)															
	18	G8(CA)															
		G28(84)(CA)															
S-5		G36(CA)															
		D9-11															
S-6	19	G84-3(CA)															EXIT No. 406
SHEET TOTAL											40	2	2	19			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG
 CALCULATED/DESIGNED BY: STEPHEN LAU
 CHECKED BY: RAJESH OBEROI
 REVISED BY: SL
 DATE REVISED: 3-9-16

SIGN QUANTITIES

SQ-1

LAST REVISION | DATE PLOTTED => 15-MAR-2016
 03-09-16 | TIME PLOTTED => 14:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	33	63

Rajesh Oberoi 1-25-16
REGISTERED CIVIL ENGINEER DATE

3-14-16
PLANS APPROVAL DATE

Rajesh Oberoi
No. 46046
Exp. 2-31-16
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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG
 CALCULATED/DESIGNED BY: CHECKED BY:
 DESIGNER: STEPHEN LAU
 CHECKER: RAJESH OBEROI
 REVISIONS: SL 3-9-16
 DATE REVISED: 3-9-16

ROADSIDE SIGN QUANTITIES AND SIGN PANEL SUMMARY

SHEET No.	SIGN No.	SIGN CODE	PANEL SIZE INCH x INCH	SIGN AREA SQFT	SINGLE FACE X	BACKGROUND	LEGEND		PROTECTIVE FILM	ROADSIDE SIGNS				POST TYPE SIZE AND LENGTH	REMARKS	
						SHEETING COLOR	SHEETING COLOR	RETROREFLECTIVE	PREMIUM	SINGLE SHEET		REMOVE ROADSIDE SIGN	RESET ROADSIDE SIGN	WOOD POST (INCH x INCH)		
										UNFRAMED ALUMINUM	0.063"			ONE POST		EA
SHEET TOTAL										20	1		3			
S-7	20	SPECIAL (MTC)													"FREEWAY ASSIST" TO BE RESET BY MTC	
	21	G84-3(CA)	48 x 60	20	X	GREEN	WHITE	PLAIN	X	20	1		1		EXIT No. 40	
	22	W1-6R												1		
		N-4(CA)														
23	G26(101)(CA) M3-3												1			
TOTAL FROM SHEET SQ-1										40	2	2	19			
GRAND TOTAL										60	3	2	22			

SIGN QUANTITIES

SQ-2

LAST REVISION: DATE PLOTTED => 15-MAR-2016
01-26-16 TIME PLOTTED => 14:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	34	63

Ben Buck Kan Huey 1-19-16
 REGISTERED CIVIL ENGINEER DATE

3-14-16
 PLANS APPROVAL DATE

Ben BK Huey
 No. 47422
 Exp. 2-31-17
 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.

ROADWAY QUANTITIES

SHEET No.	LOCATION	STATION LIMITS	ROADWAY EXCAVATION (TYPE 2) (AERIALY DEPOSITED LEAD)	MINOR CONCRETE (BRUSHED CONCRETE)	VEGETATION CONTROL (MINOR CONCRETE)	REMOVE GUARDRAIL	REMOVE CRASH CUSHION (SAND FILLED)	TREATED WOOD WASTE	MIDWEST GUARDRAIL SYSTEM (WOOD POST)	TRANSITION RAILING (TYPE WB-31)	END ANCHOR ASSEMBLY (TYPE SFT)	ALTERNATIVE IN-LINE TERMINAL SYSTEM	TEMPORARY RAILING (TYPE K)	TEMPORARY CRASH CUSHION
			CY	SQFT	SQYD	LF	EA	LB	LF	EA	LF	EA		
L-1	1	"A6" 508+31 TO 510+22	31	2527									360	1
	2	"A6" 513+70 TO 515+12	28	2237									280	2
L-2	3	"A6" 521+64 TO 522+06	9	686									80	2
	4	"A6" 521+13 TO 526+87	99	8075									680	1
	5	"A6" 517+68 TO 518+16	10	756									80	2
L-3	6	"A5" 501+18 TO 515+89	204	16695									1580	1
	7	"A5" 504+40 TO 515+11	148	12090									1180	1
L-4	8	"A4" 506+10 TO 507+66	34	2785									320	1
L-5	9	"A3" 514+48 TO 517+53	53	4324									600	1
L-6	10	"A2" 511+50 TO 512+98	25	2040									320	1
L-7	11	"A1" 496+51 TO 505+15	127	10372									960	1
	12	"A1" 506+62 TO 512+14	60	4874	135	100	1	630	150	1	1	1	660	1
TOTAL			828	67461	135	100	1	630	150	1	1	1	7100	15

SUMMARY OF QUANTITIES

Q-1

LAST REVISION DATE PLOTTED => 15-MAR-2016 01-26-16 TIME PLOTTED => 14:21

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans WATER QUALITY
 SENIOR LANDSCAPE ARCHITECT DAVID YAM
 CALCULATED/DESIGNED BY CHECKED BY DAVID YAM
 ANGELA KWAN DAVID YAM
 REVISED BY DATE REVISED AK 1-19-16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	35	63

LICENSED LANDSCAPE ARCHITECT
 3-14-16
 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.

EROSION CONTROL TYPE 1

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE	REMARKS
		DESCRIPTION	TYPE		
STEP 1	COMPOST	COMPOST	MEDIUM	270 CY/ACRE	-
STEP 2	EROSION CONTROL (DRY SEED)	DRY SEED	MIX 1	40 LB/ACRE	-

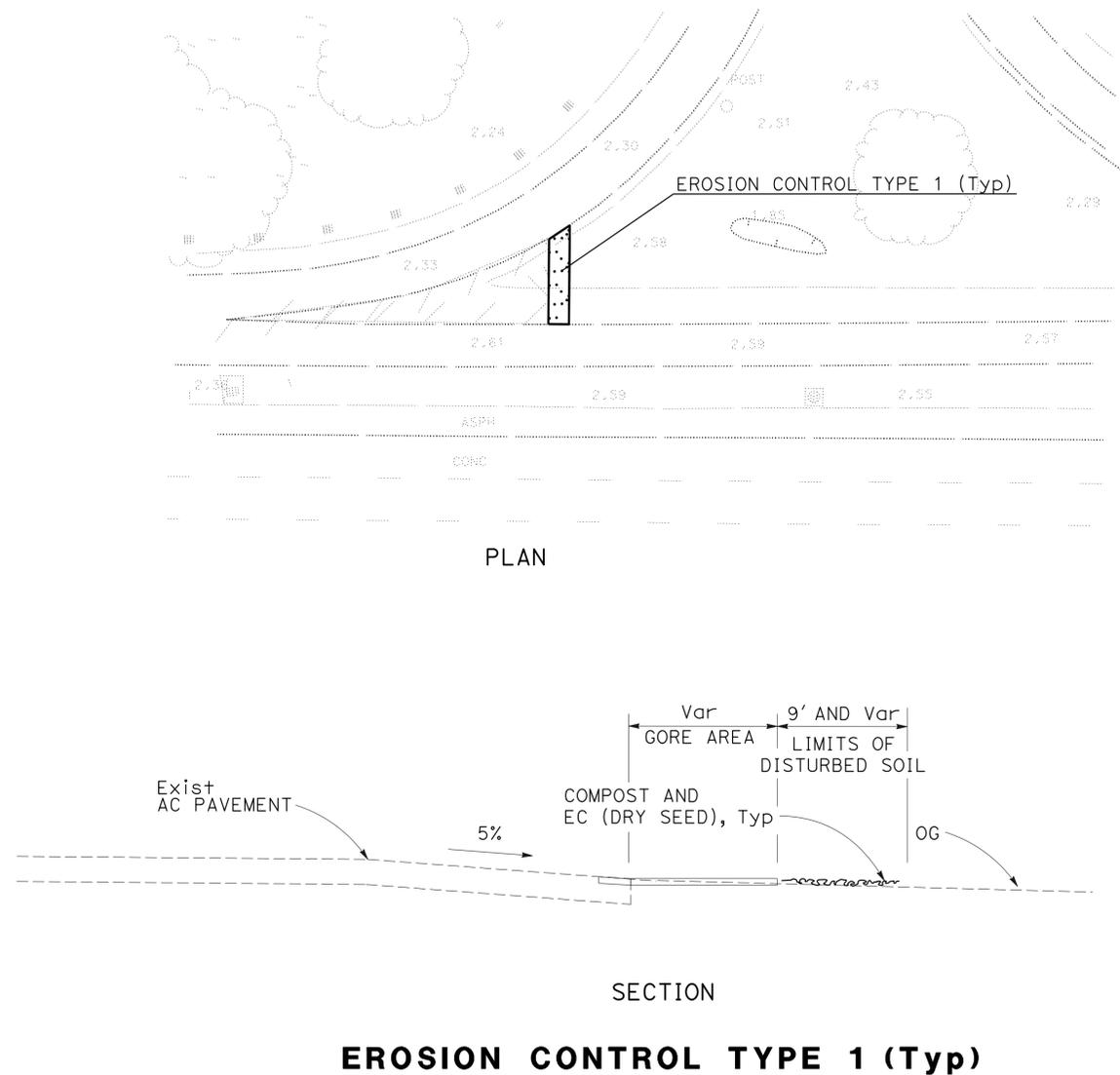
SEED MIX

SEED	BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
MIX 1	ESCHSCHOLZIA CALIFORNICA (CALIFORNIA POPPY)	47	3
	FESTUCA RUBRA-MOLATE (MOLATE RED FESCUE)	47	9
	LAYIA PLATYGLOSSA (COMMON TIDY TIPS)	40	3
	NASSELLA PULCHRA (PURPLE NEEDLEGRASS)	40	10
	TRIFOLIUM WILLDENOVII ¹ (TOMCAT CLOVER)	40	4
	VULPIA MICROSTACHYS (THREE WEEKS FESCUE)	45	11
TOTAL			40

¹ SEED PRODUCED IN CALIFORNIA ONLY.

EROSION CONTROL QUANTITIES

LOCATION No.	STATION LIMITS	COMPOST	EROSION CONTROL (DRY SEED)
		SQFT	
1	"A6" 508+31 TO 510+22	200	200
2	"A6" 513+70 TO 515+12	200	200
3	"A6" 521+64 TO 522+06	200	200
5	"A6" 517+68 TO 518+16	200	200
8	"A4" 506+10 TO 507+66	200	200
9	"A3" 514+48 TO 517+53	200	200
10	"A2" 511+50 TO 512+98	200	200
12	"A1" 506+62 TO 512+14	200	200
TOTAL		1,600	1,600



EROSION CONTROL TYPE 1 (Typ)

APPROVED FOR EROSION CONTROL WORK ONLY

**EROSION CONTROL PLAN
 EC-1**

LAST REVISION DATE PLOTTED => 15-MAR-2016 TIME PLOTTED => 14:21

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

FUNCTIONAL SUPERVISOR
 KENNETH Y. XU

CALCULATED/DESIGNED BY
 CHECKED BY

KENNETH CHAN
 KENNETH Y. XU

REVISED BY
 DATE REVISED

KC
 3-9-16

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

- LEGEND:**
- 1 [RC] Exist PULL BOX, INSTALL NEW TRAFFIC PULL BOX (T).
 - 2 LEVEL ALL BOX TO NEW GRADE.
 - 3 EXISTING 1 1/2" C, 2#8 TO REMAIN IN PLACE.
 - 4 EXISTING 2" C 7 DLC TO REMAIN IN PLACE.
 - 5 EXISTING DETECTOR LOOPS TO REMAIN IN PLACE.
 - 6 EXISTING 2" C 2#2/0 3#1.
 - 7 EXISTING 1 1/2" C, 2 TELEPHONE CABLES.
 - 8 SPLICE EXISTING DLC TO NEW LOOP CONDUCTORS IN EXISTING PULL BOX.

- GENERAL NOTES:**
1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF EXISTING DETECTORS, CONDUITS, PULL BOXES, AND OTHER ELECTRICAL FACILITIES BEFORE USING TOOLS OR EQUIPMENT THAT MAY DAMAGE THOSE FACILITIES OR INTERFERE WITH AN ELECTRICAL SYSTEM.
 2. EXISTING PULL BOXES SHALL REMAIN EXPOSED AND CLEAR ACCESS TO REMOVE PULL BOX LID.

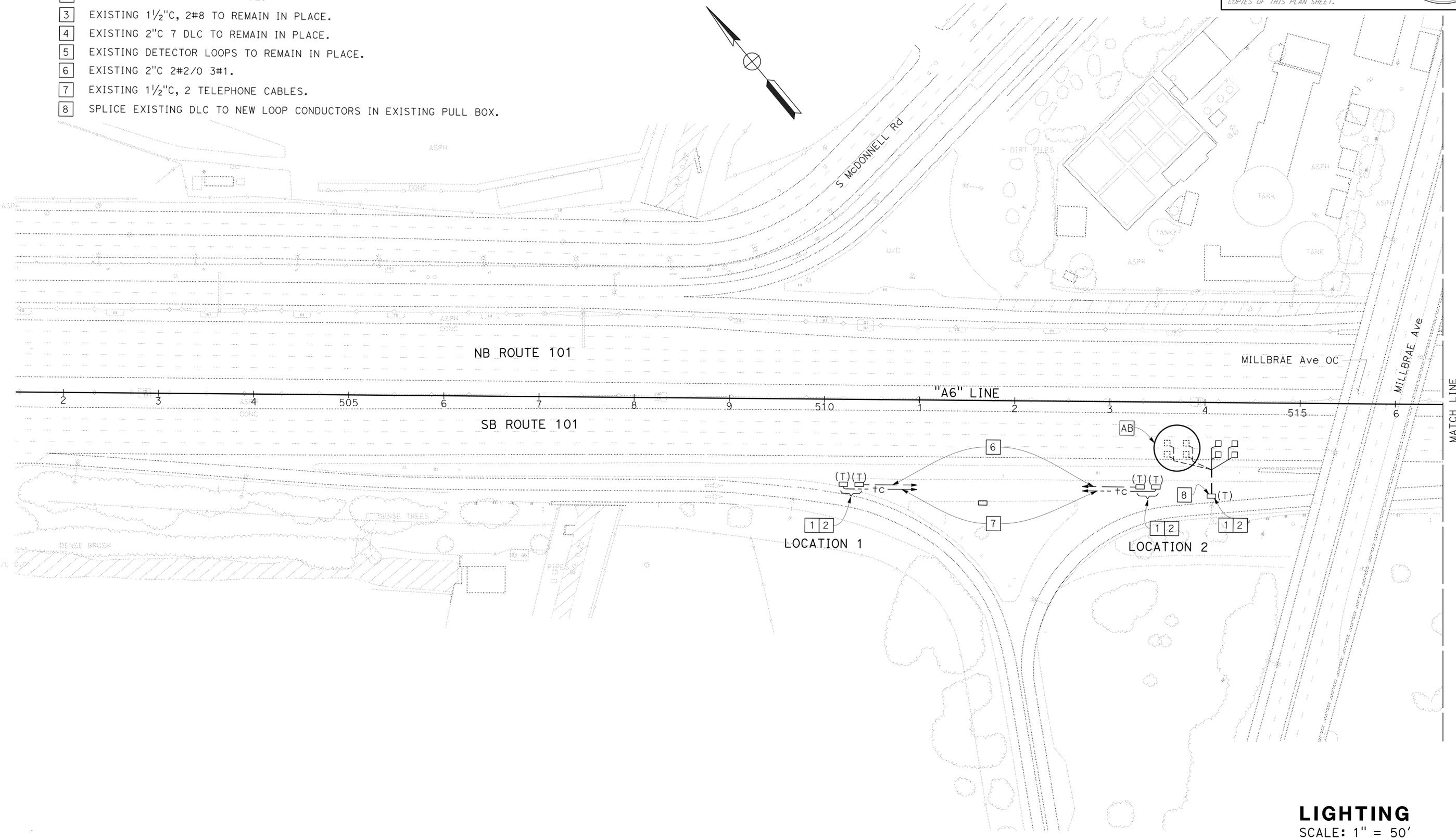
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	36	63

Kenneth Chan 1-22-16
 REGISTERED ELECTRICAL ENGINEER DATE

3-14-16
 PLANS APPROVAL DATE

Kenneth K. Chan
 No. 17098
 Exp. 9-30-17
 ELECTRICAL
 STATE OF CALIFORNIA

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LIGHTING
 SCALE: 1" = 50'

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

FUNCTIONAL SUPERVISOR: KENNETH Y. XU
 CALCULATED/DESIGNED BY: KENNETH CHAN
 CHECKED BY: KENNETH Y. XU
 REVISED BY: KENNETH CHAN
 DATE REVISED: 3-9-16
 KC
 3-9-16

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

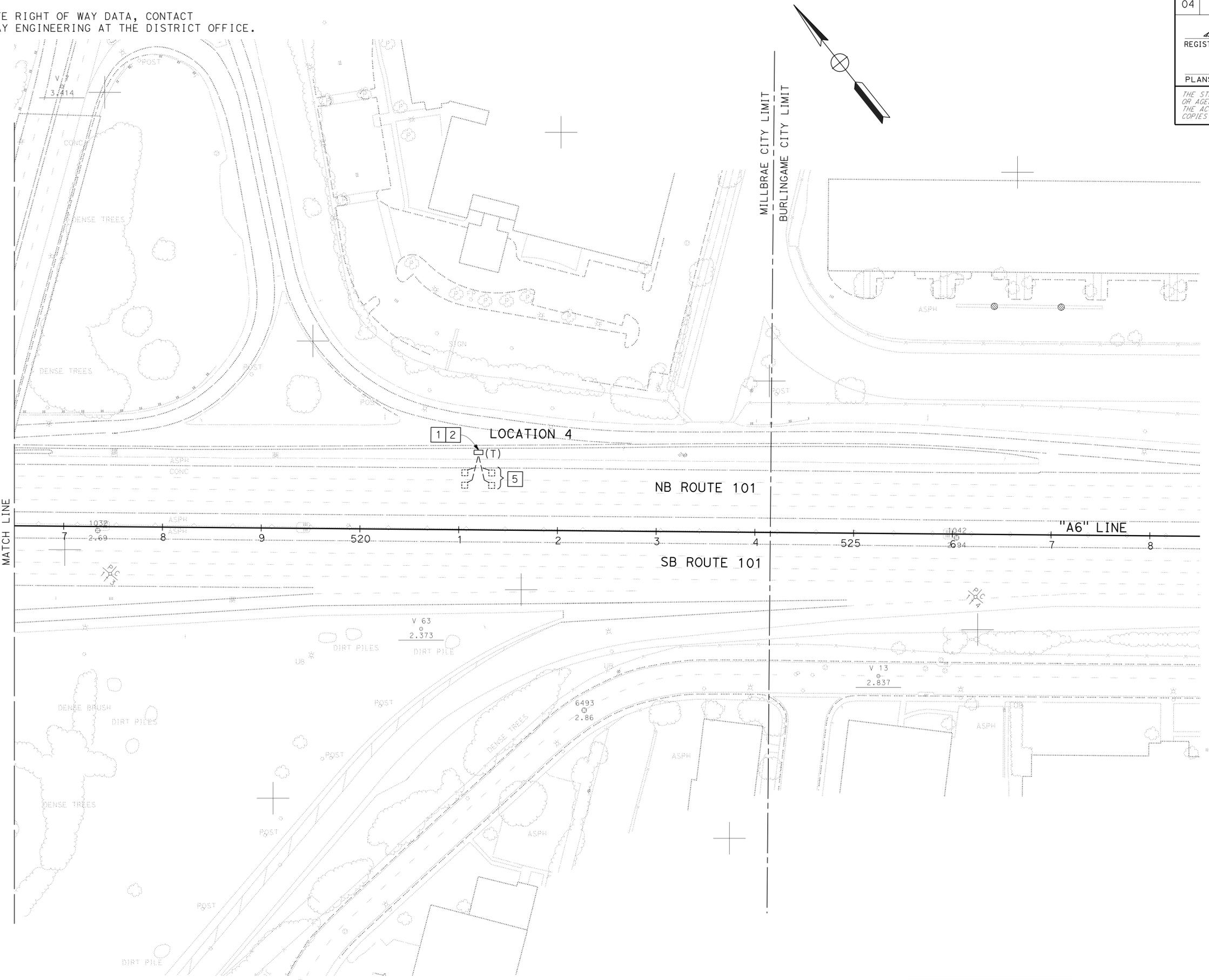
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	37	63

Kenneth Chan 1-22-16
 REGISTERED ELECTRICAL ENGINEER DATE

3-14-16
 PLANS APPROVAL DATE

Kenneth K. Chan
 No. 17098
 Exp. 9-30-17
 ELECTRICAL
 STATE OF CALIFORNIA

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APPROVED FOR ELECTRICAL WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1

LIGHTING
 SCALE: 1" = 50'

E-2

LAST REVISION DATE PLOTTED => 15-MAR-2016 03-09-16 TIME PLOTTED => 14:21

NOTE: v 906 / 2.712
 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
04	SM	101	0.9/17.9	38	63

Kenneth Chan 1-22-16
 REGISTERED ELECTRICAL ENGINEER DATE

3-14-16
 PLANS APPROVAL DATE

Kenneth K. Chan
 No. 17098
 Exp. 9-30-17
 ELECTRICAL
 STATE OF CALIFORNIA

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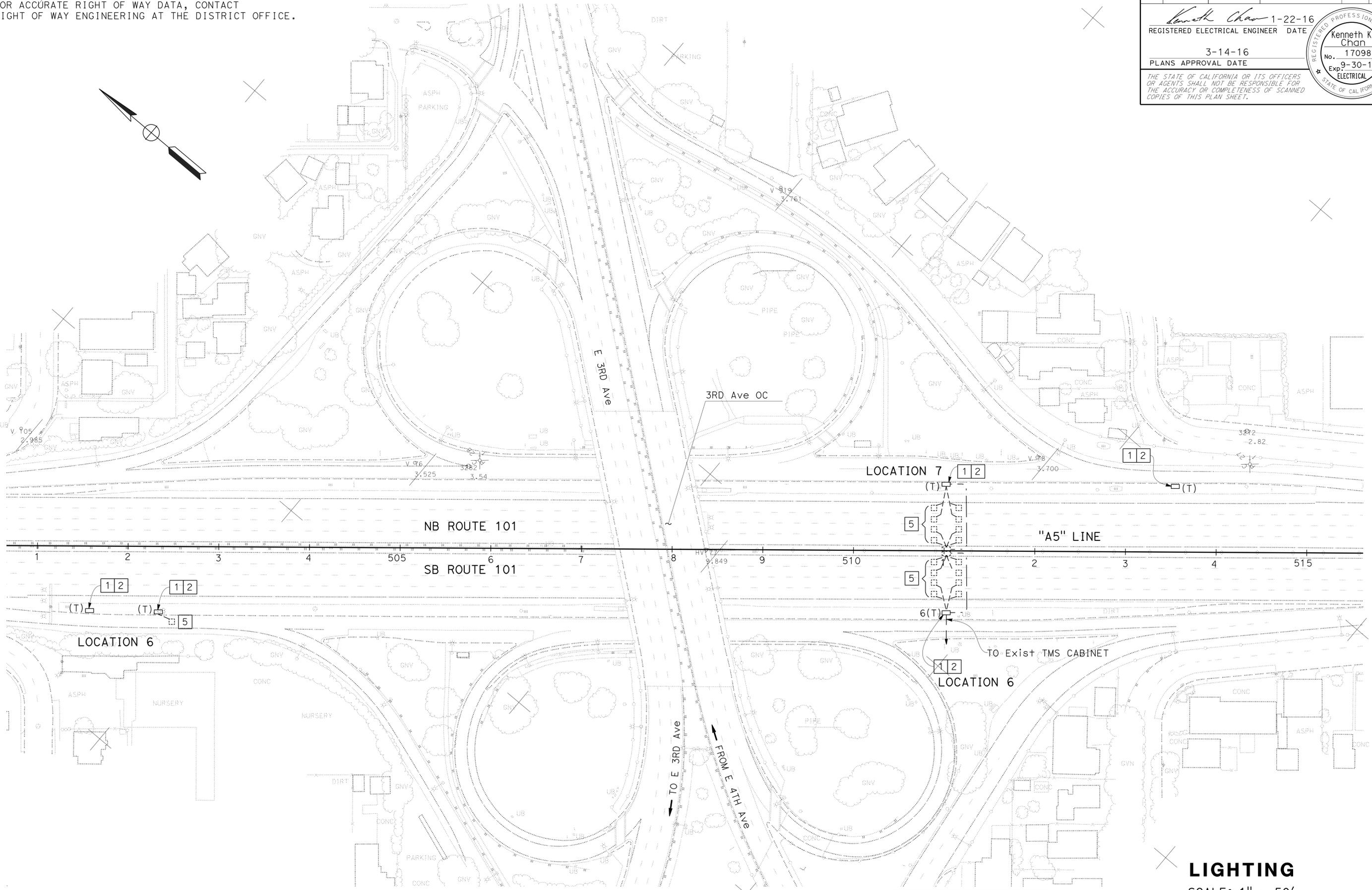
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL

FUNCTIONAL SUPERVISOR: KENNETH Y. XU

CALCULATED/DESIGNED BY: KENNETH CHAN
 CHECKED BY: KENNETH Y. XU

REVISED BY: KENNETH CHAN
 DATE REVISED: 3-9-16

KC
 3-9-16



APPROVED FOR ELECTRICAL WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1

LIGHTING
 SCALE: 1" = 50'

E-3

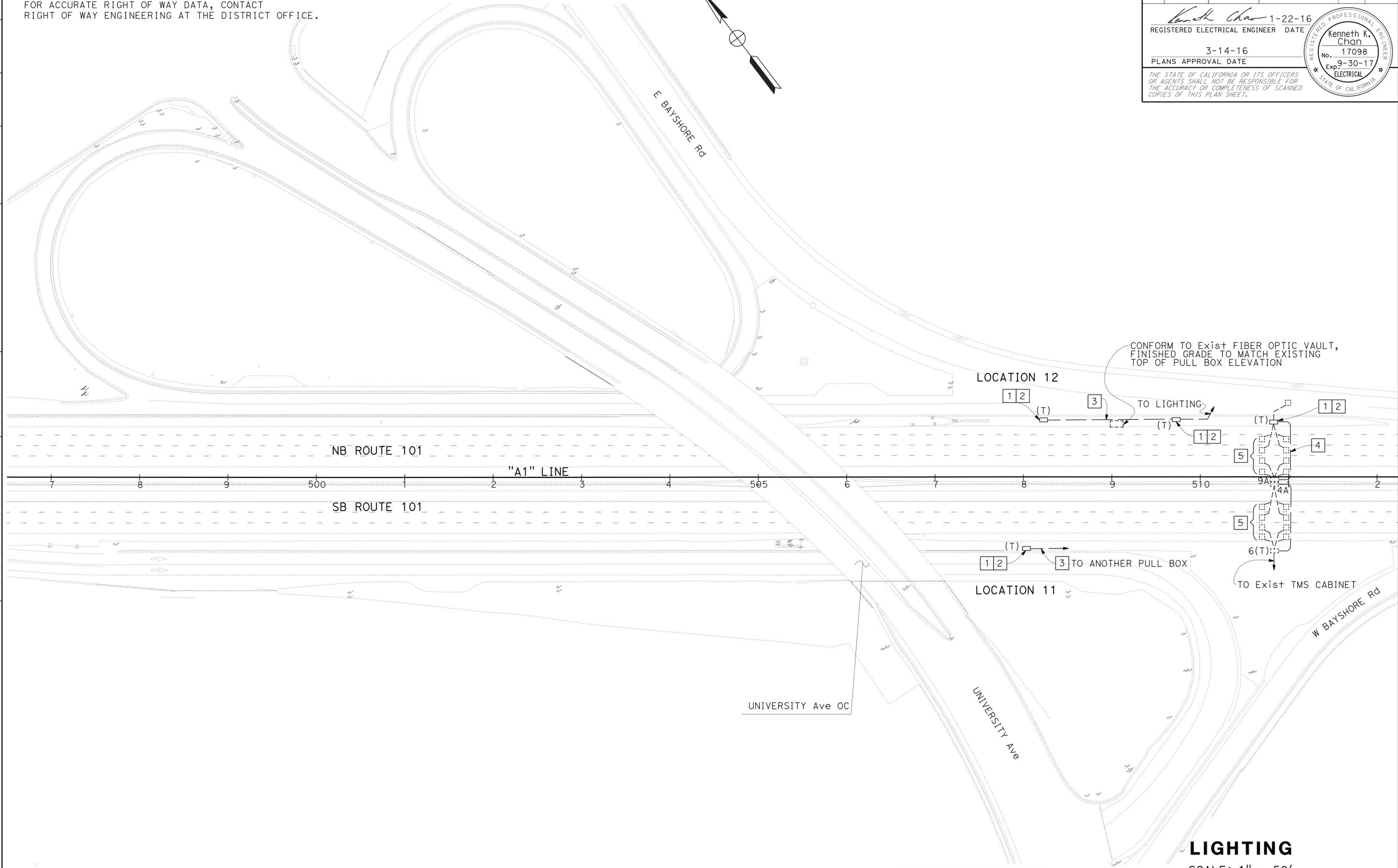
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

FUNCTIONAL SUPERVISOR KENNETH Y. XU	CALCULATED-DESIGNED BY KENNETH CHAN	REVISOR KENNETH CHAN	DATE 3-9-16
CHECKED BY	DATE 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
04	SM	101	0.9/17.9	39	63

Kenneth Chan 1-22-16
 REGISTERED ELECTRICAL ENGINEER DATE
 3-14-16
 PLANS APPROVAL DATE
 Kenneth K. Chan
 No. 17098
 Exp. 9-30-17
 ELECTRICAL
 STATE OF CALIFORNIA
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LIGHTING
 SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1

APPROVED FOR ELECTRICAL WORK ONLY

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

FUNCTIONAL SUPERVISOR
 KENNETH Y. XU

CALCULATED-DESIGNED BY
 CHECKED BY

KENNETH CHAN
 KENNETH Y. XU

REVISED BY
 DATE REVISED

KC
 3-9-16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	40	63

Kenneth Chan 1-22-16
 REGISTERED ELECTRICAL ENGINEER DATE

3-14-16
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Kenneth K. Chan
 No. 17098
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 ELECTRICAL

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TOS, LIGHTING SIGN ILLUMINATION

SHEET No.	DETECTOR LOOPS (TYPE D)	TRAFFIC PULL BOX (T)
		EA
E-1	4	5
E-2		1
E-3		5
E-4		4

ITEMS SHOWN IN THIS TABLE ARE NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

ELECTRICAL QUANTITIES

E-5

	M
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
	N
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
	O
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
	P
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

	P continued
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
	Q
Qty	QUANTITY
	R
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

	S
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
	T
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

	T continued
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
Typ	TYPICAL
	U
UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
	V
V	VALVE, DESIGN SPEED
Var	VARIABLE, VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME
	W
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
	X
X Sec	CROSS SECTION
Xing	CROSSING
	Y
Yr	YEAR
Yrs	YEARS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	41	63

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 3-14-16

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 ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

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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
04	SM	101	0.9/17.9	42	63

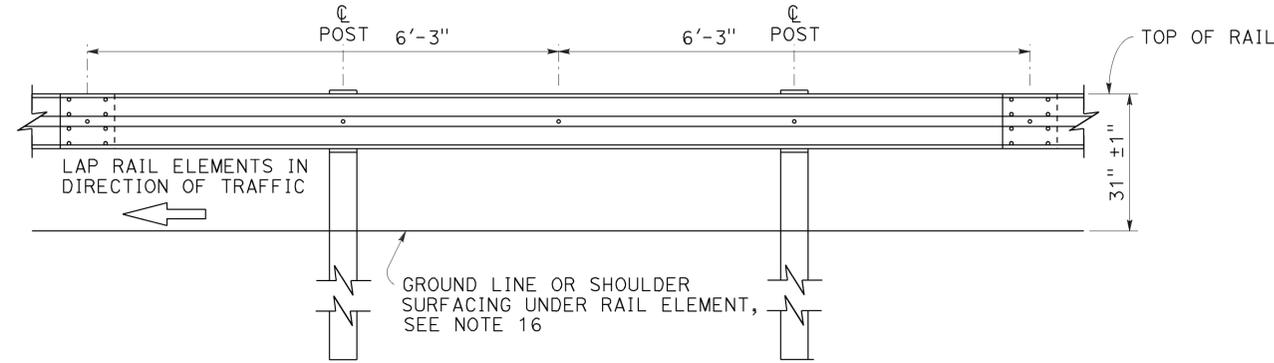
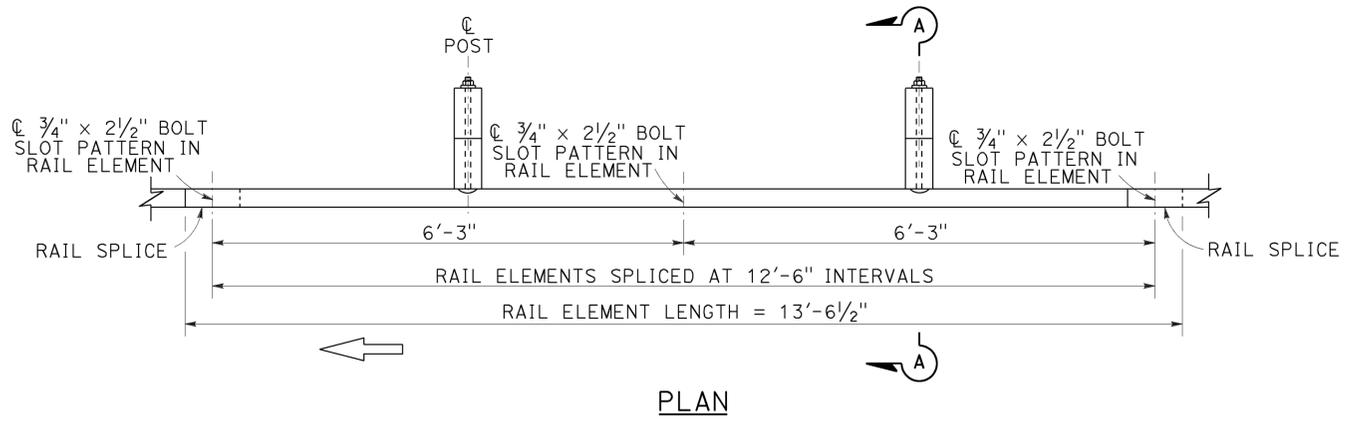
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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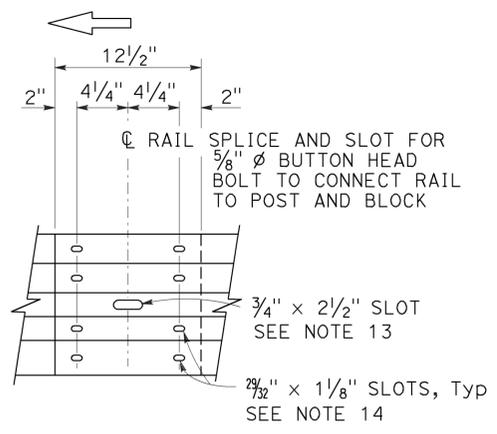
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
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STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 3-14-16



ELEVATION

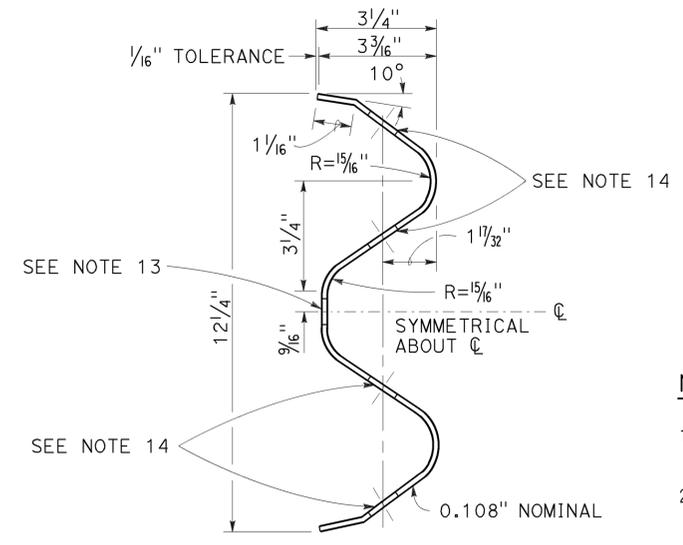
MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS



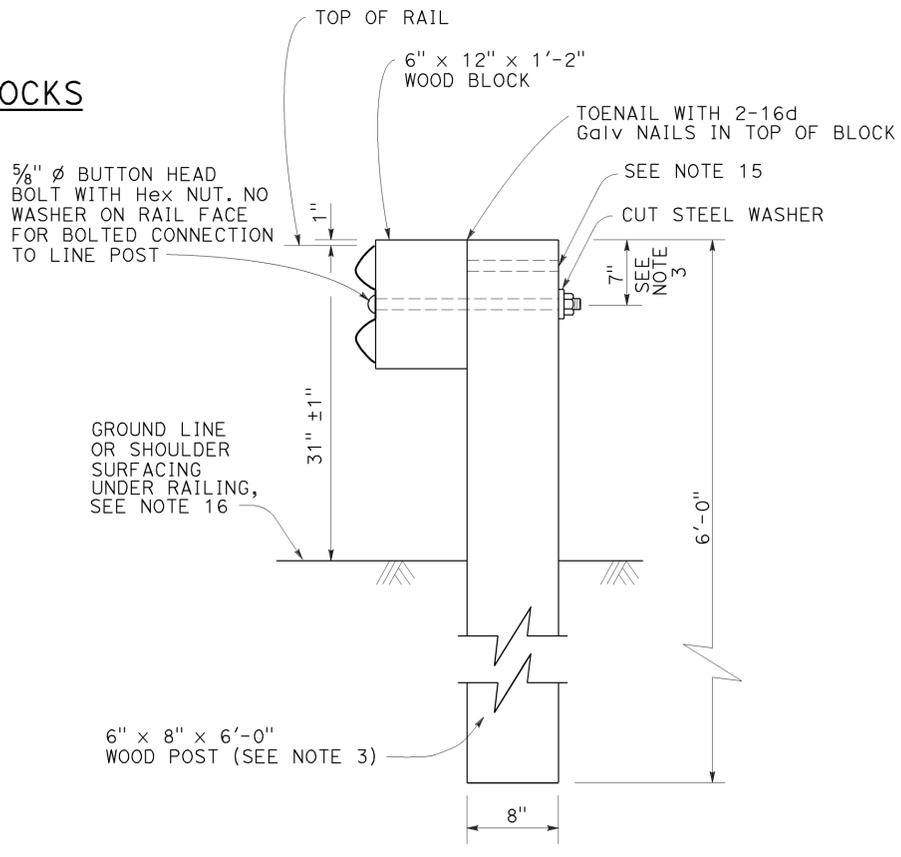
ELEVATION

RAIL ELEMENT SPLICE DETAIL

- Connect the over lapped end of the rail elements with $\frac{5}{8}$ " ϕ 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 $\frac{5}{8}$ " ϕ 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 MGS 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

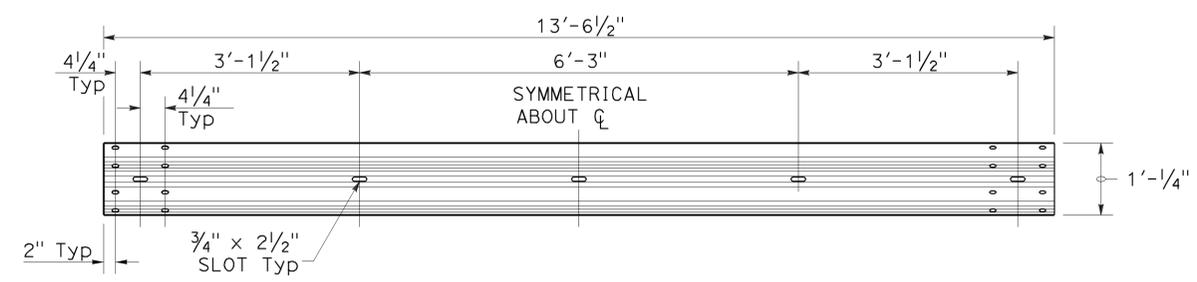
RSP A77L1 DATED JULY 19, 2013 SUPPLEMENTS STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L1

2010 REVISED STANDARD PLAN RSP A77L1



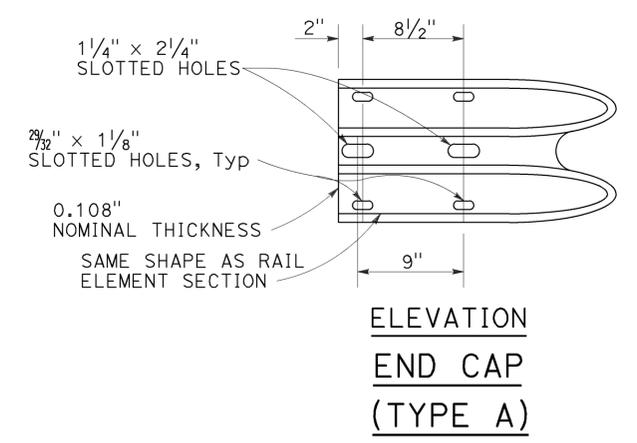
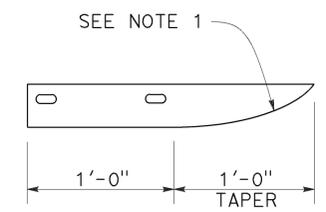
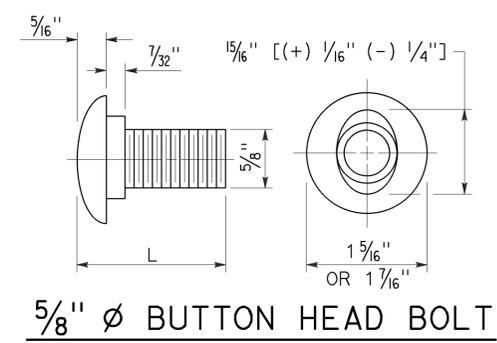
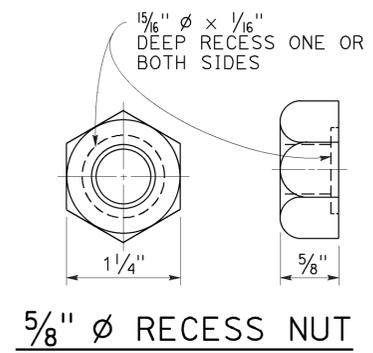
TO ACCOMPANY PLANS DATED 3-14-16



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.

STATE OF CALIFORNIA
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**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
04	SM	101	0.9/17.9	44	63

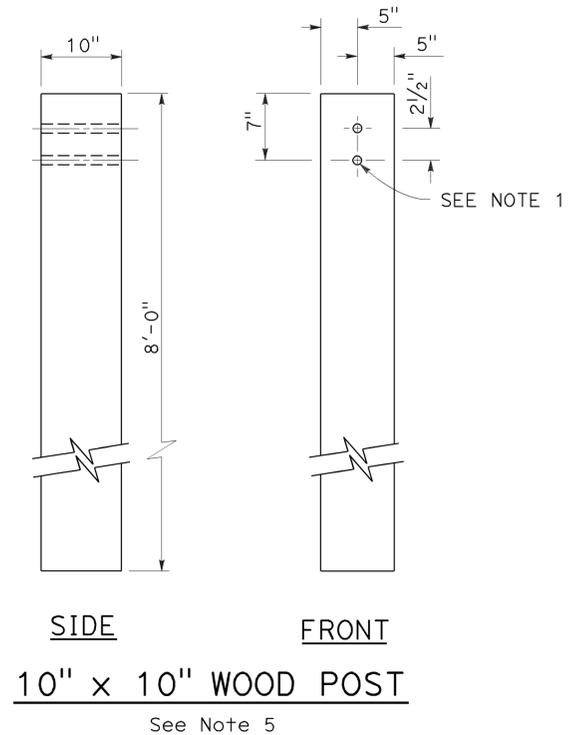
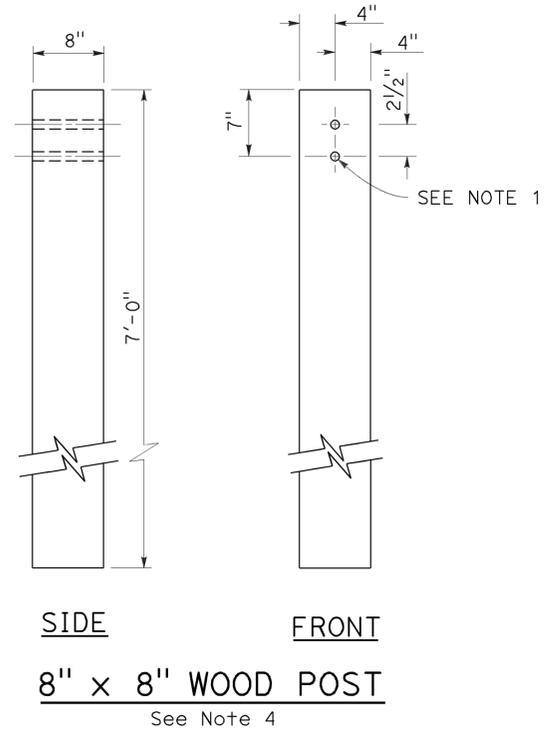
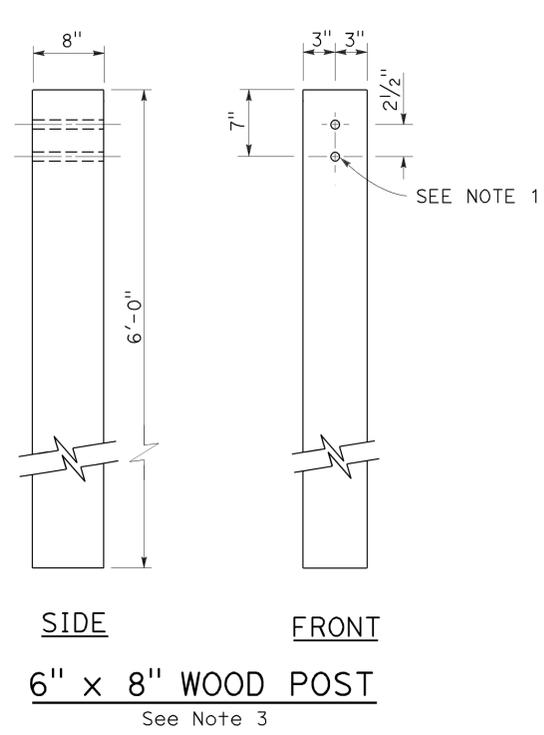
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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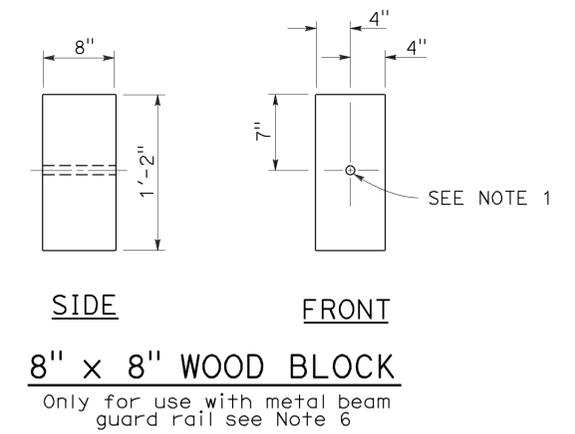
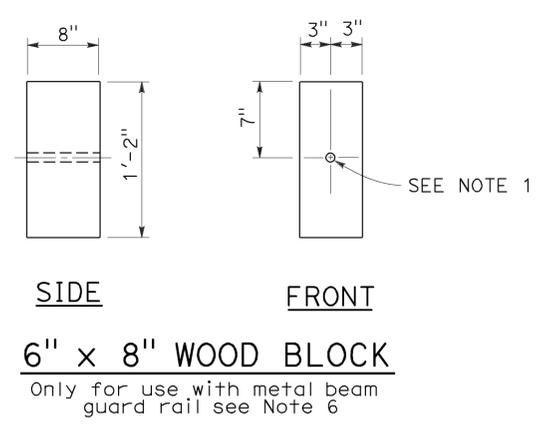
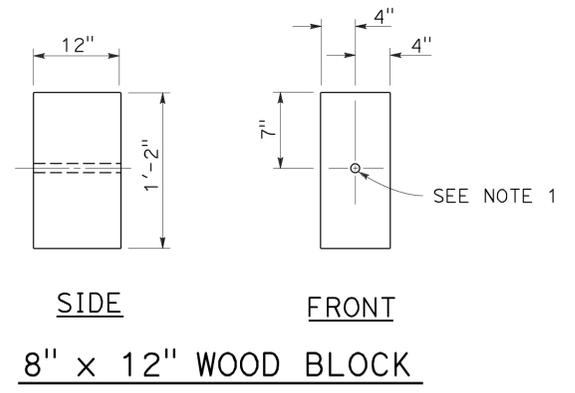
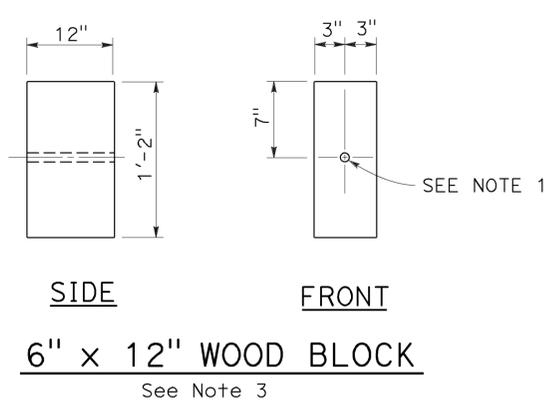
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 3-14-16



NOTES:

1. All holes in wood posts and blocks shall be 3/4" Dia ± 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
DEPARTMENT OF TRANSPORTATION

**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

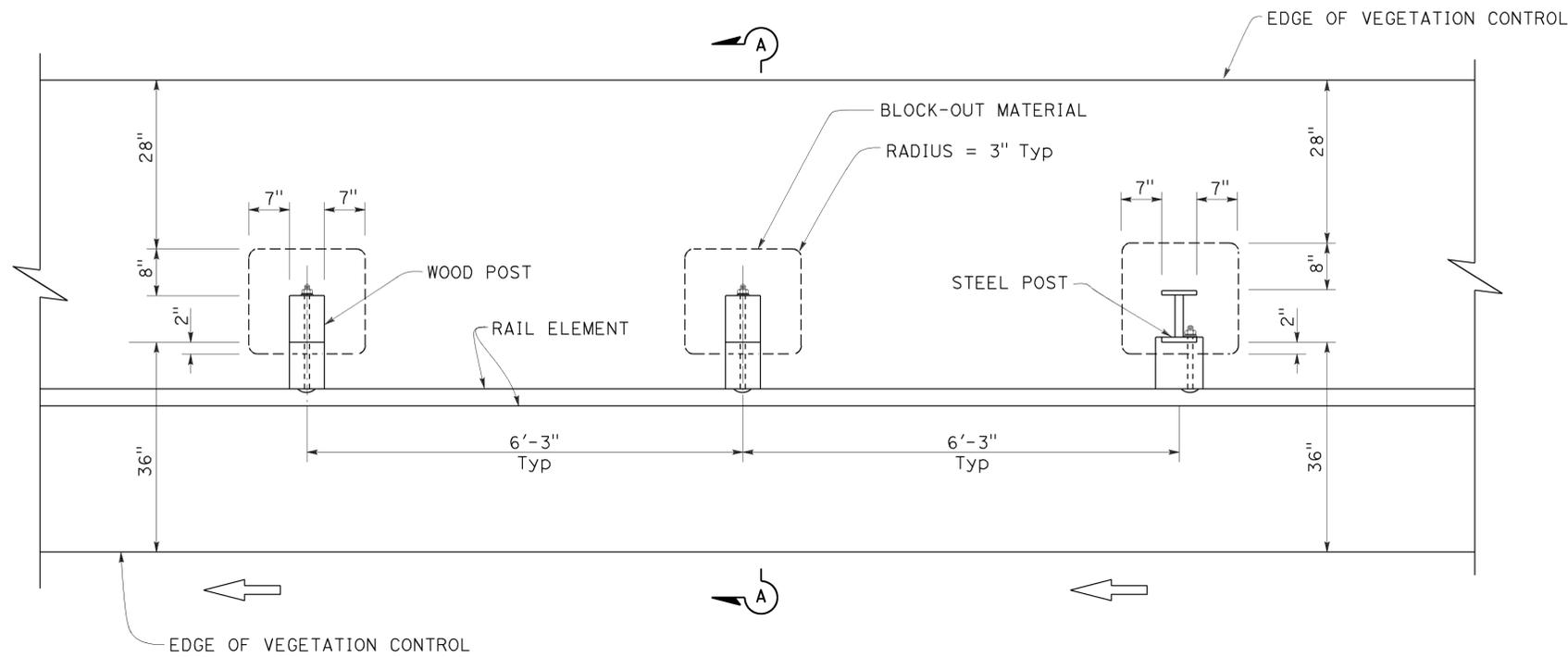
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	45	63

Randell D. Hiatt
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July 19, 2013
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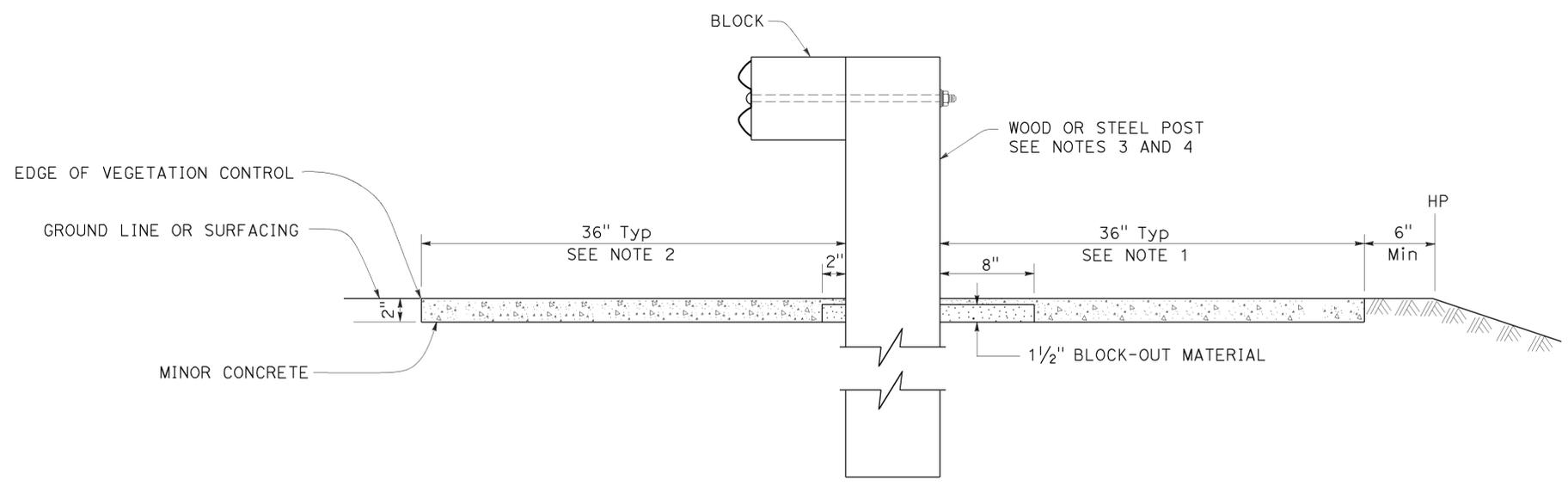
TO ACCOMPANY PLANS DATED 3-14-16



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

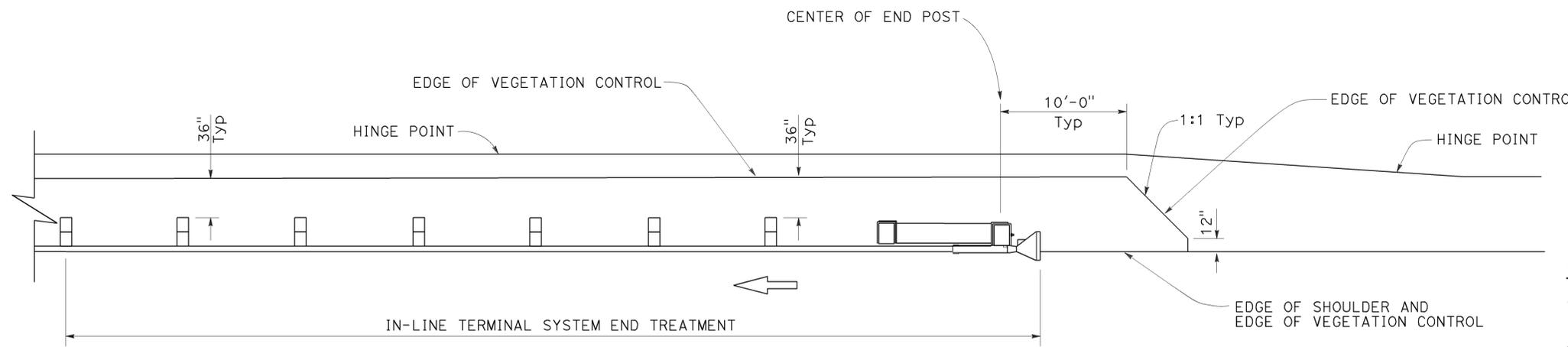
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	46	63

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
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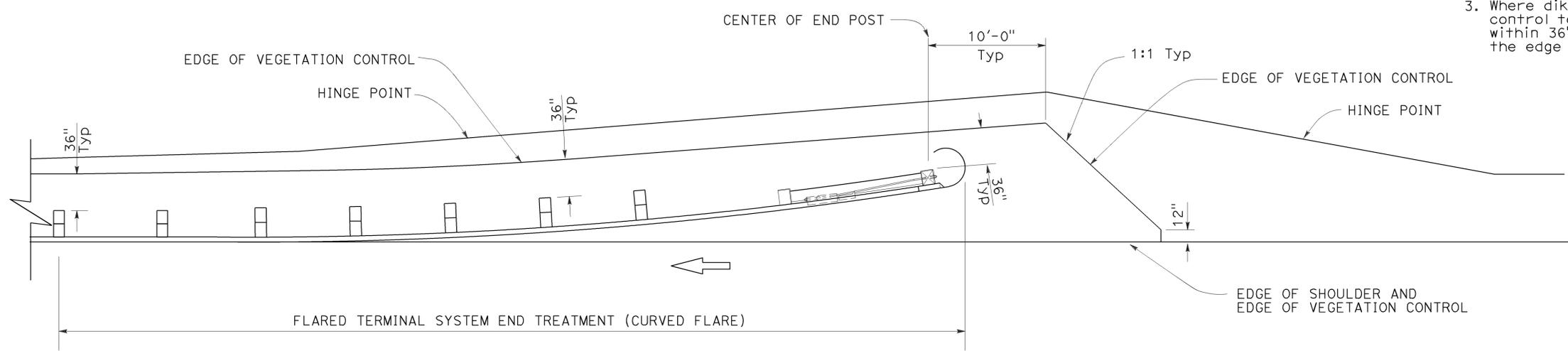
TO ACCOMPANY PLANS DATED 3-14-16



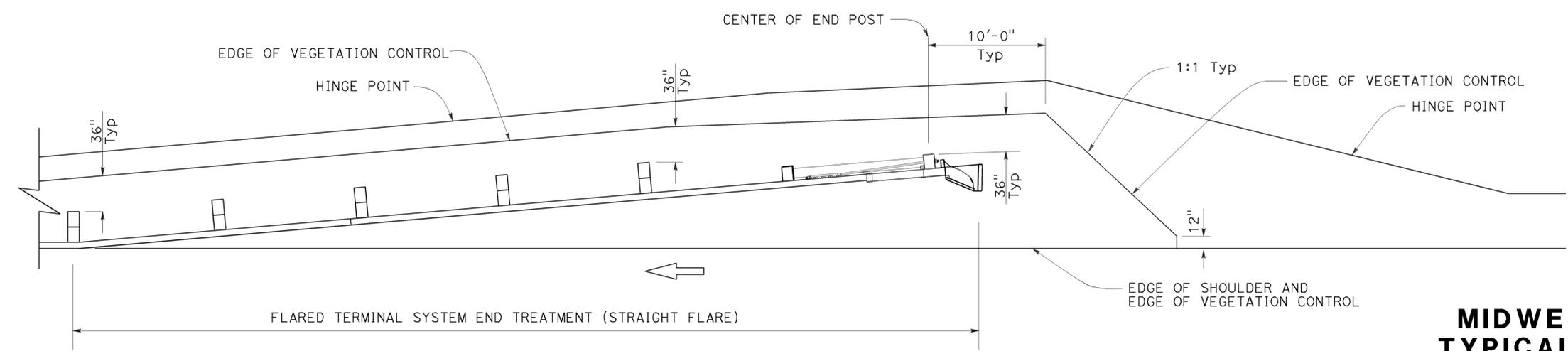
PLAN

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
04	SM	101	0.9/17.9	47	63

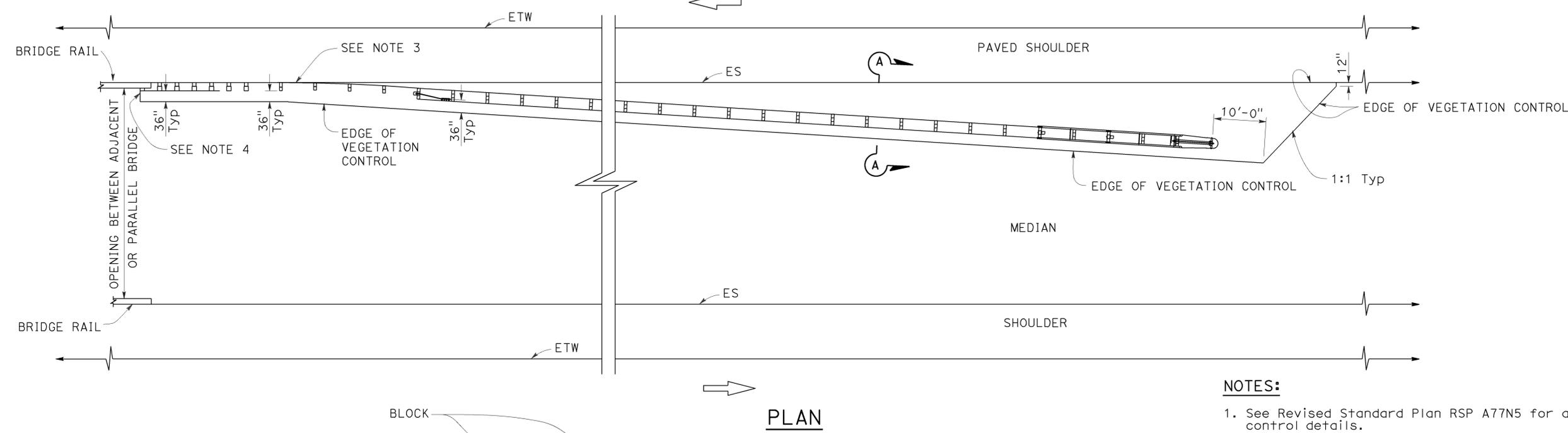
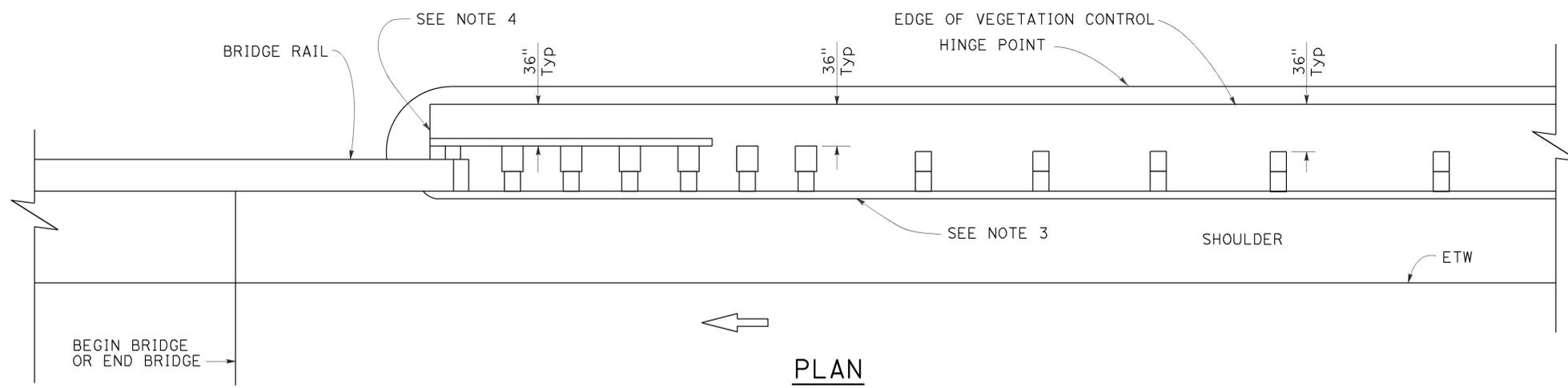
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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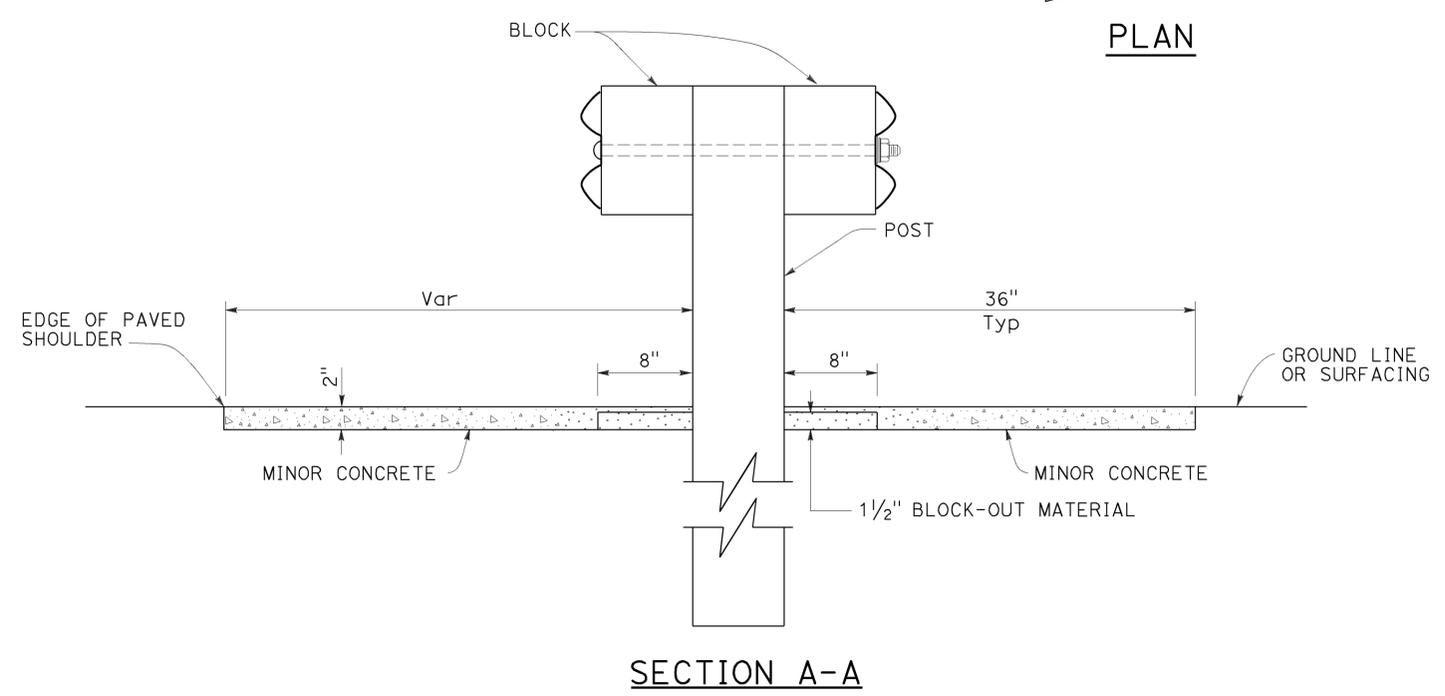
TO ACCOMPANY PLANS DATED 3-14-16

2010 REVISED STANDARD PLAN RSP A77N7



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.
4. End vegetation control at end of backside rail element.



STATE OF CALIFORNIA
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**MIDWEST GUARDRAIL SYSTEM
TYPICAL VEGETATION CONTROL
AT STRUCTURE APPROACH**

NO SCALE

RSP A77N7 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N7

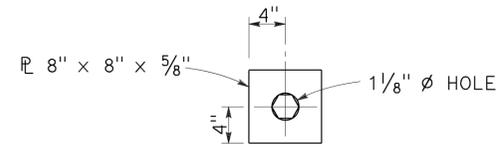
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	48	63

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

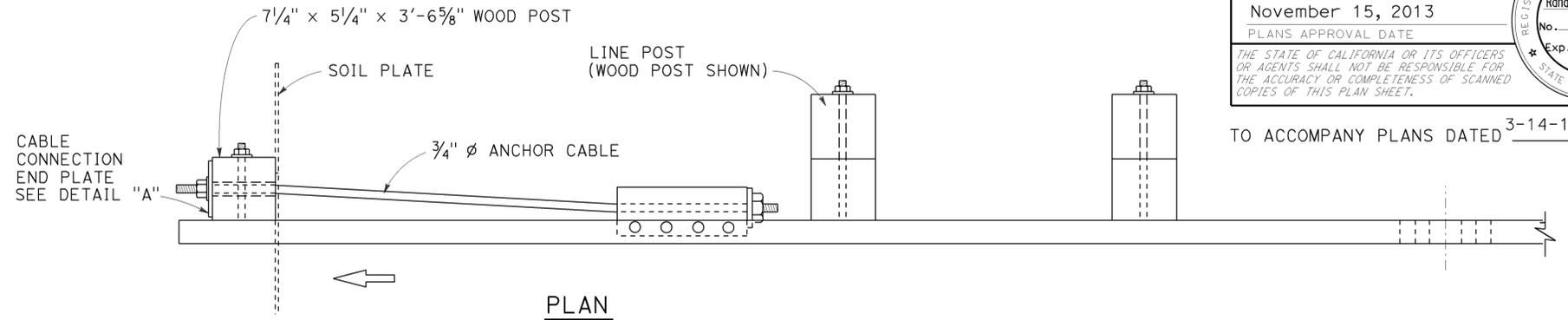
November 15, 2013
PLANS APPROVAL DATE

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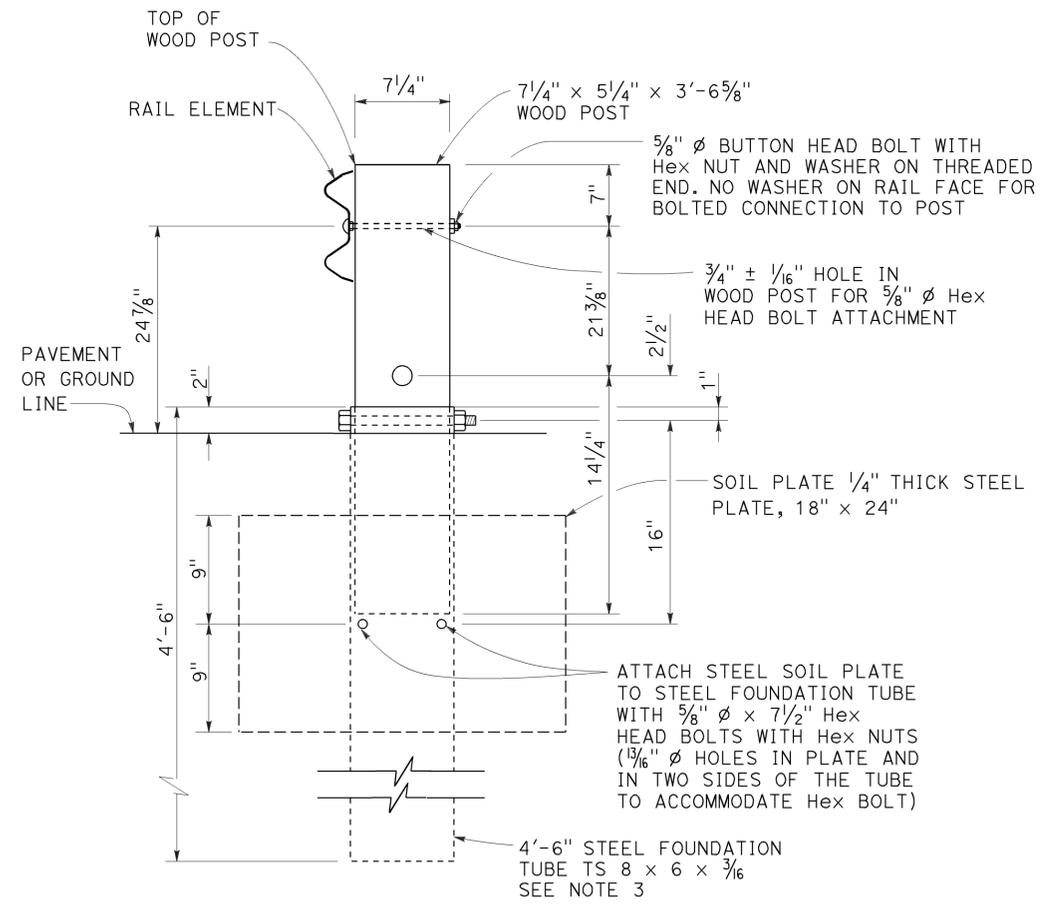
TO ACCOMPANY PLANS DATED 3-14-16



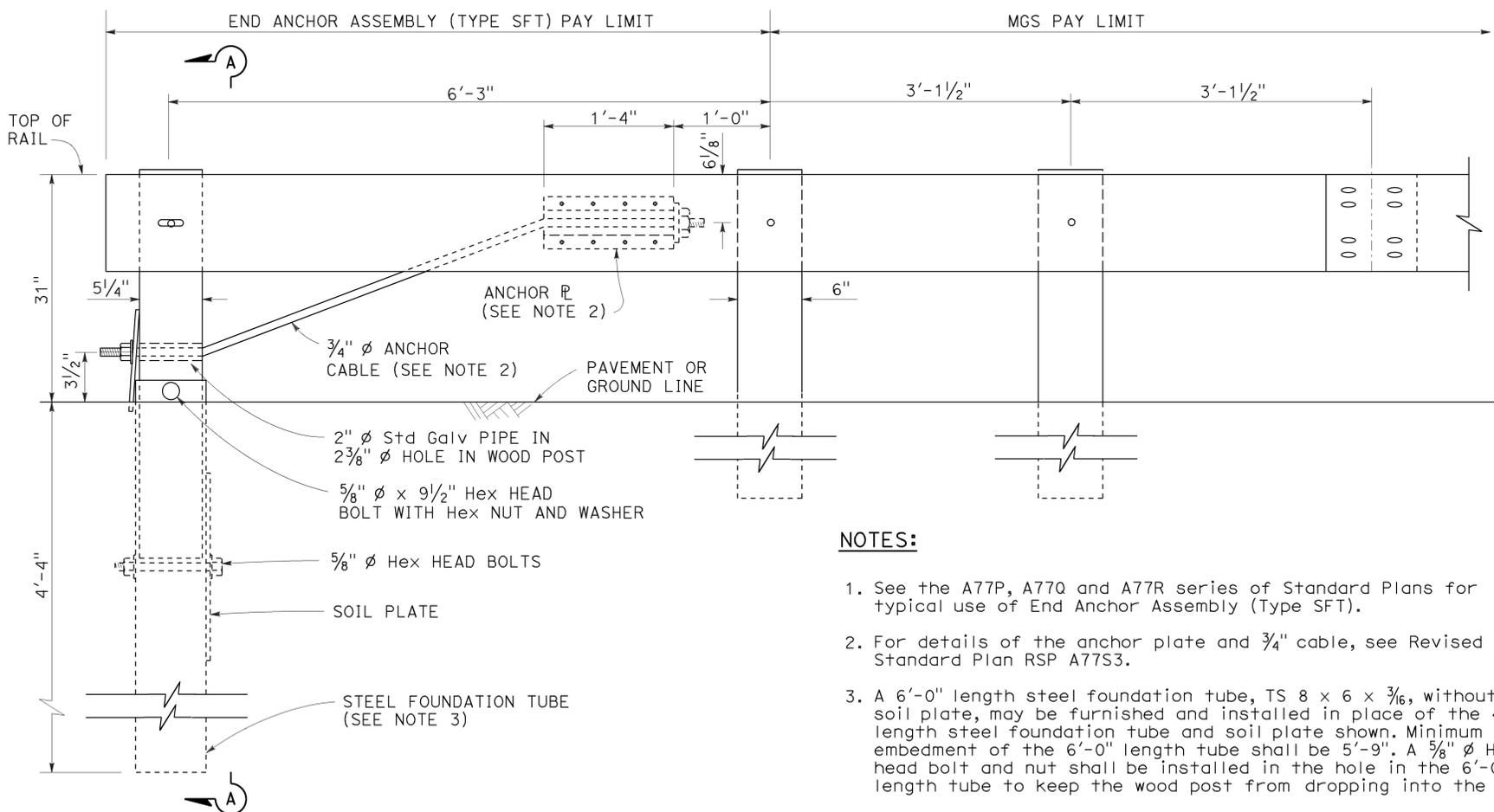
DETAIL "A"
CABLE CONNECTION
END PLATE



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" 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" 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
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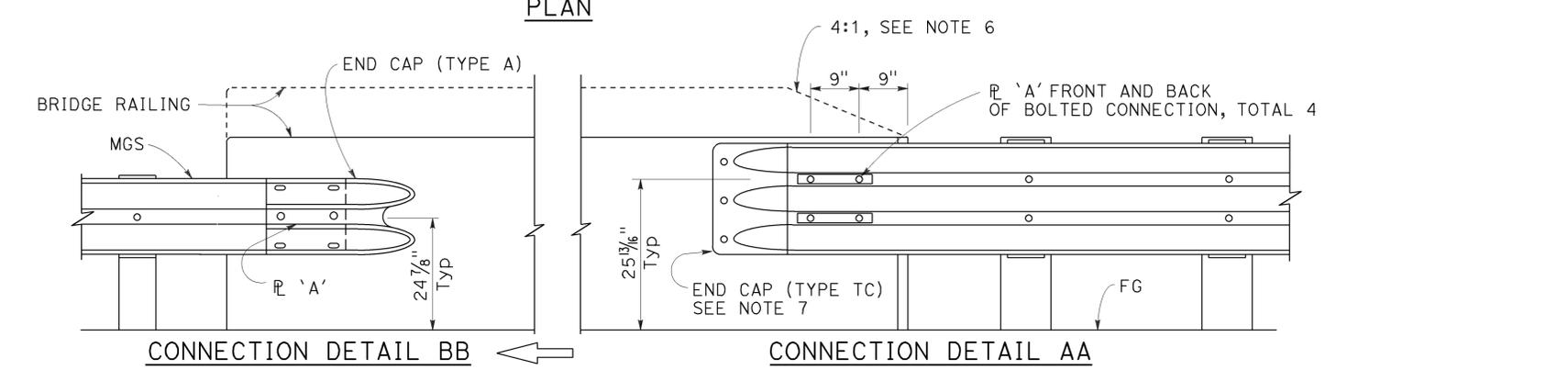
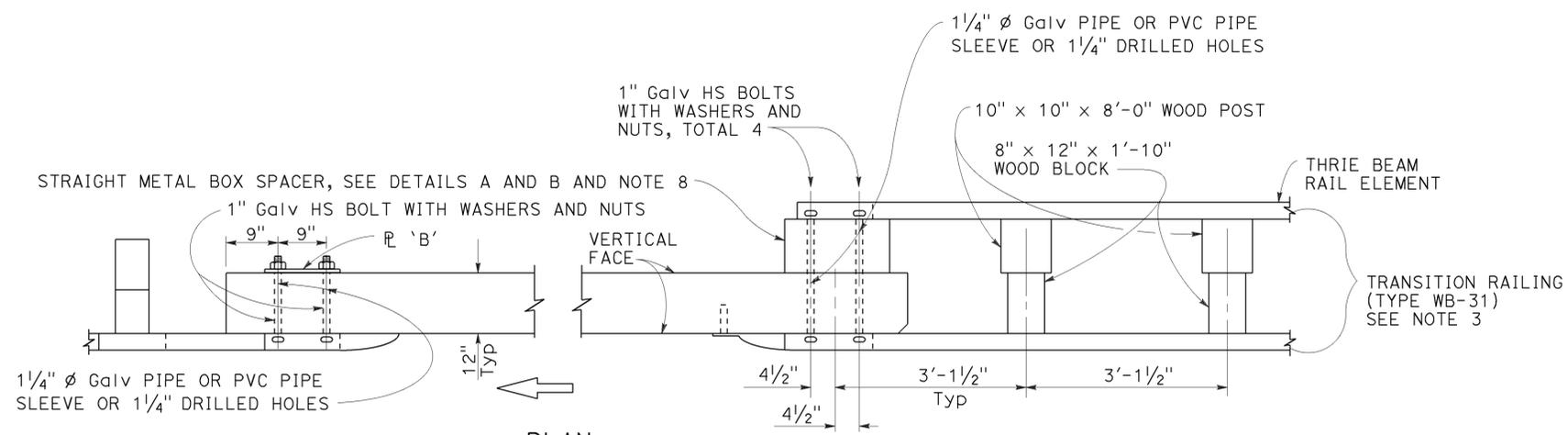
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

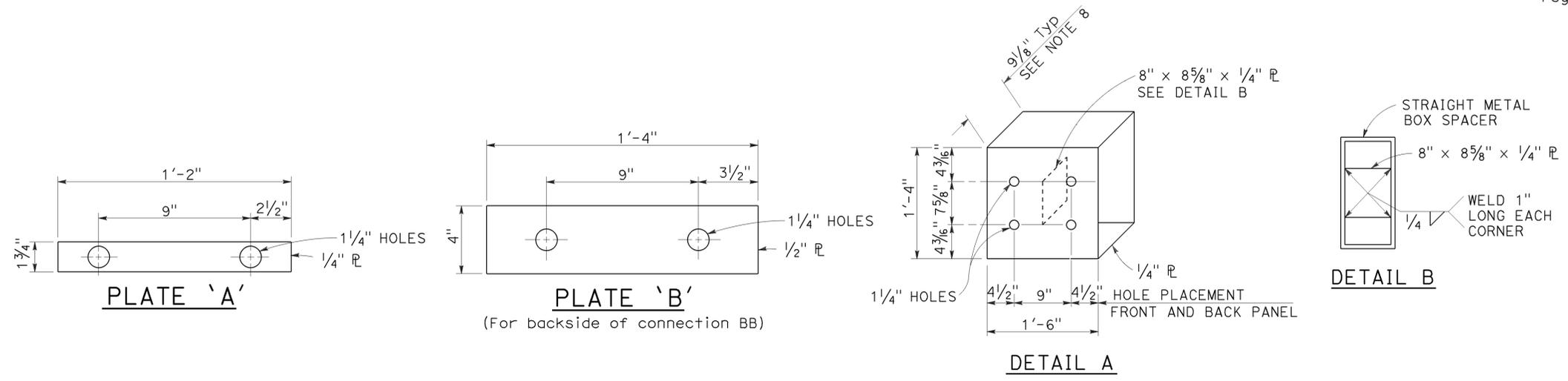
TO ACCOMPANY PLANS DATED 3-14-16



MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77U2 for additional connection details to bridges without sidewalks.
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 bridge railing.
4. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1, Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2, and Layout Type 12E on Revised Standard Plan RSP A77Q3.
5. For typical use of Connection Detail BB, see Layout Type 12D (structure departure railing connection) on Revised Standard Plan RSP A77Q2 and Layout Type 12DD on Revised Standard Plan RSP A77Q5.
6. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail.
7. For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
8. See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS
DETAILS No. 1

NO SCALE

RSP A77U1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U1

2010 REVISED STANDARD PLAN RSP A77U1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	50	63

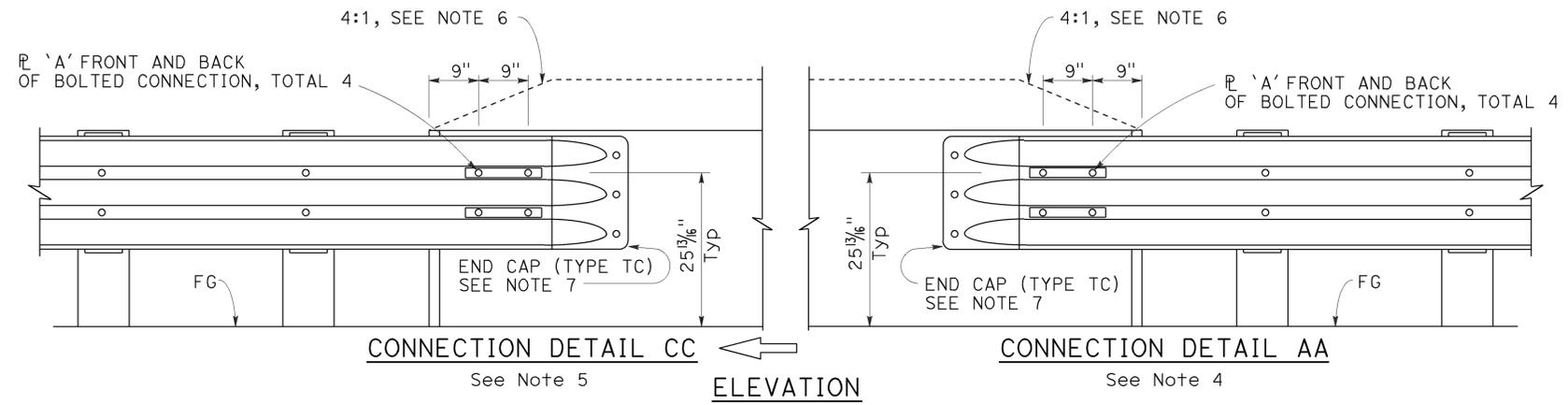
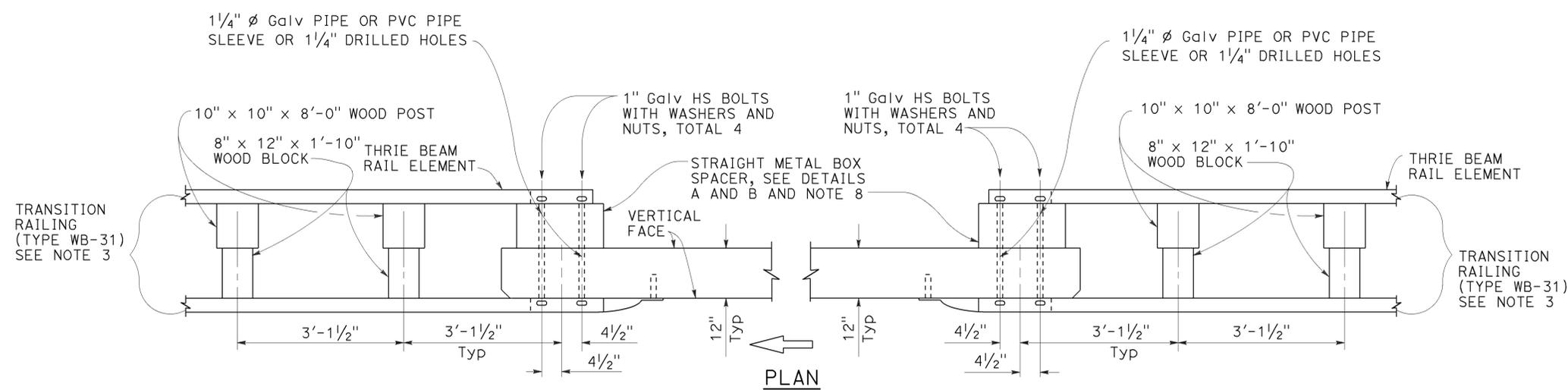
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

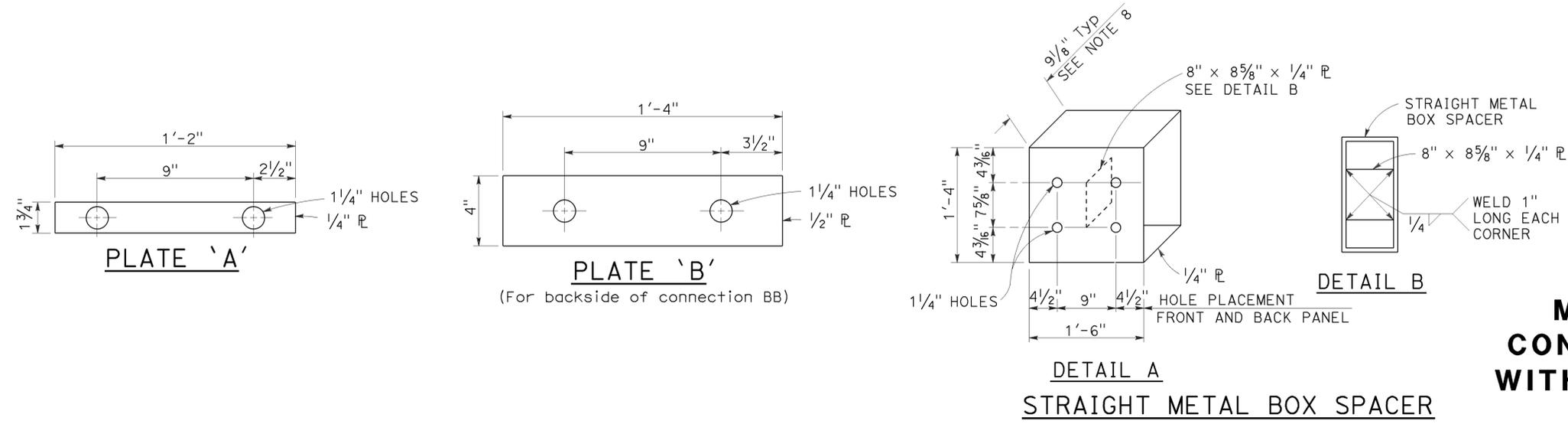
TO ACCOMPANY PLANS DATED 3-14-16



MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77U1 for additional connection details to bridges without sidewalks.
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 bridge railing.
4. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1, Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2, and Layout Type 12E on Revised Standard Plan RSP A77Q3.
5. For typical use of Connection Detail CC, see Layout Types 12AA and 12BB on Revised Standard Plan RSP A77Q4 and Layout Type 12CC on Revised Standard Plan RSP A77Q5.
6. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA and connection Detail CC, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
7. For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
8. See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
CONNECTIONS TO BRIDGE RAILINGS
WITHOUT SIDEWALKS DETAILS No. 2**

NO SCALE

RSP A77U2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U2

2010 REVISED STANDARD PLAN RSP A77U2

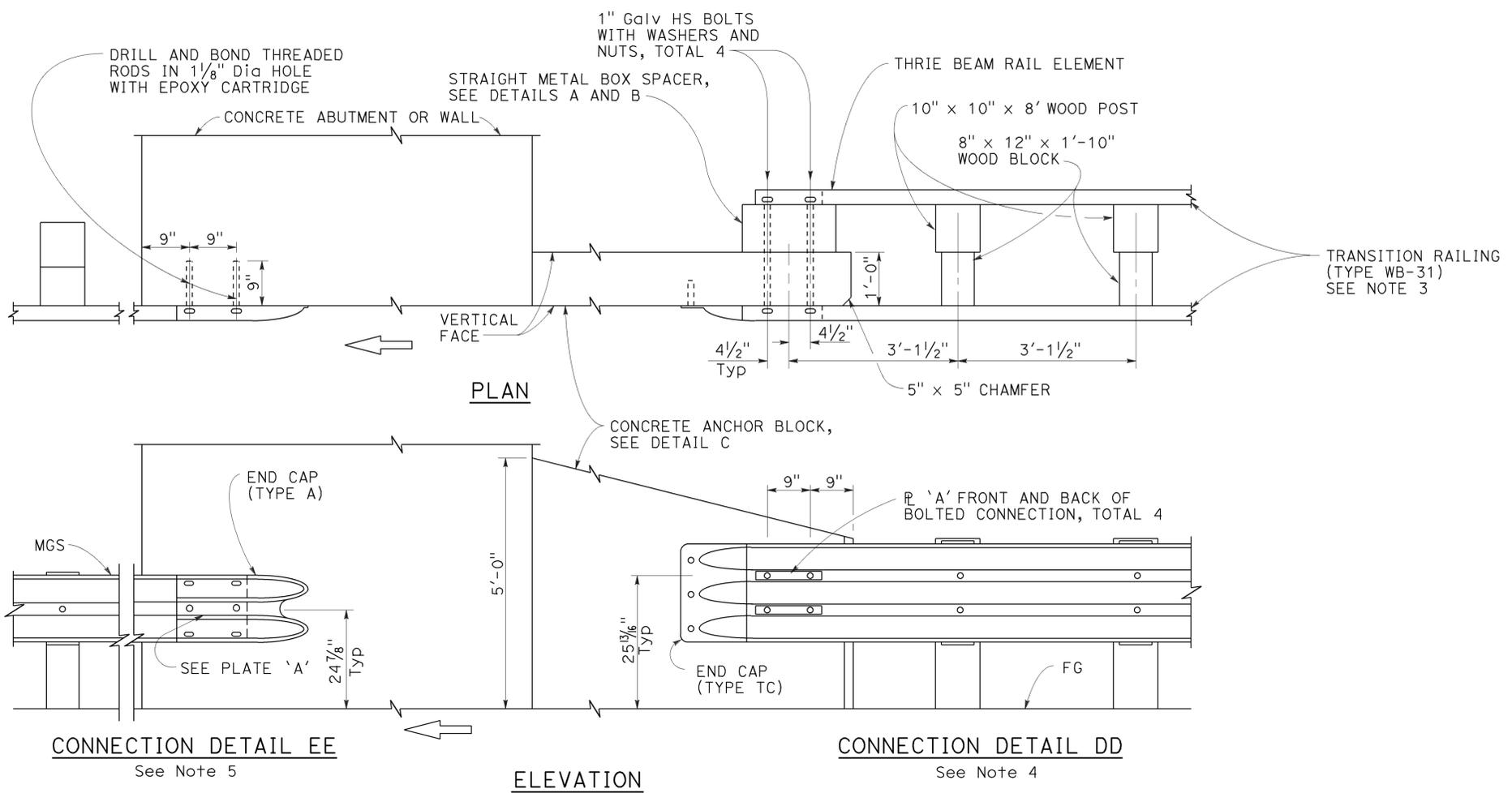
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	51	63

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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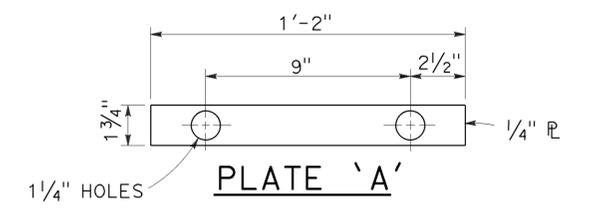
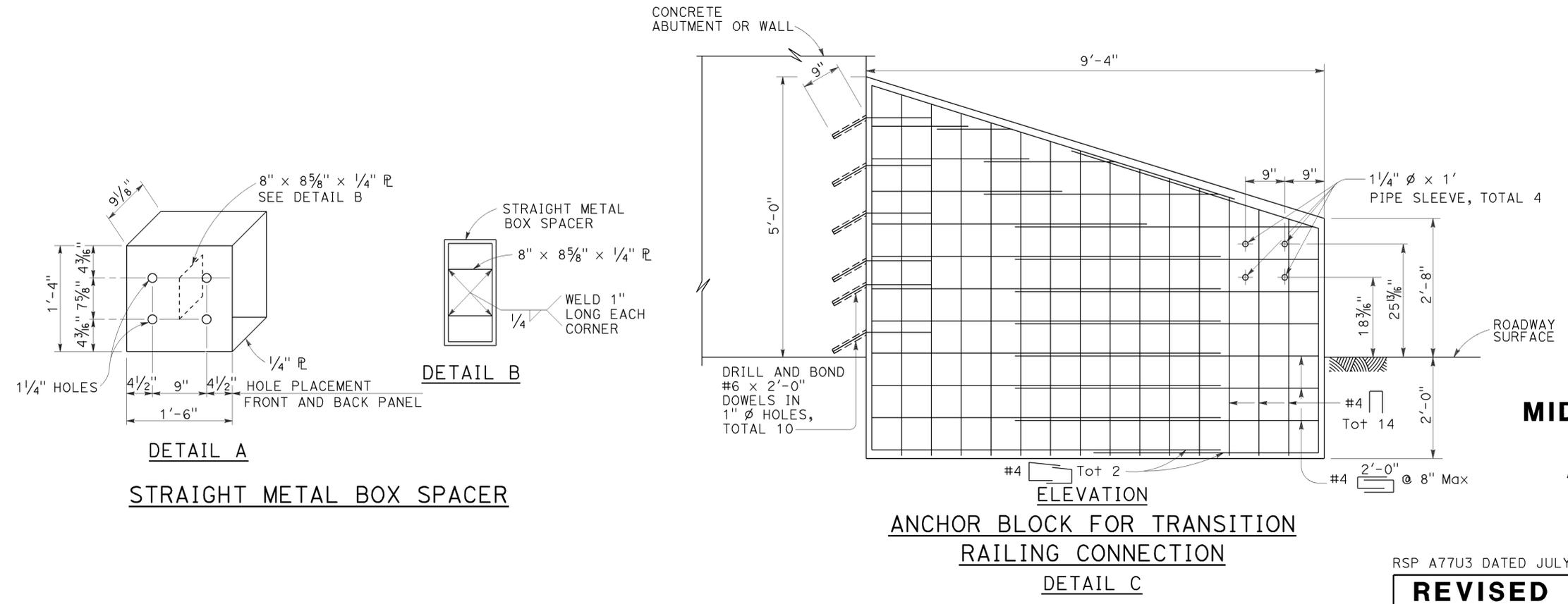
TO ACCOMPANY PLANS DATED 3-14-16



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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

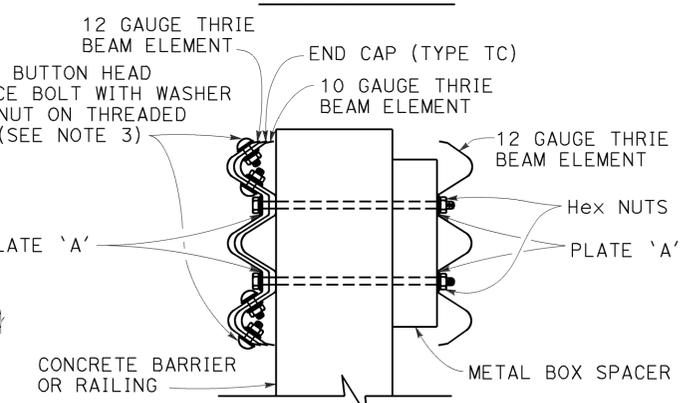
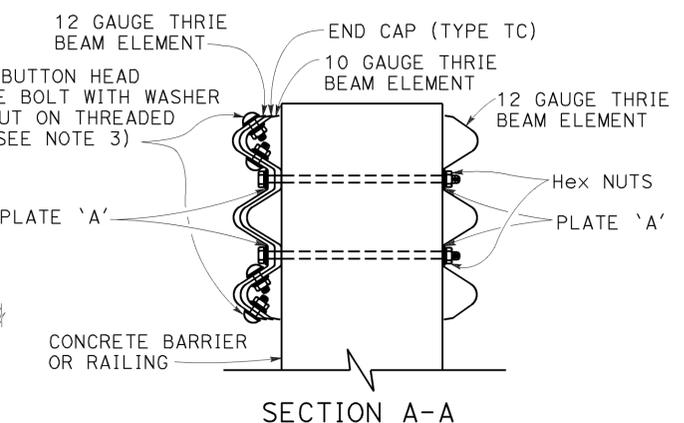
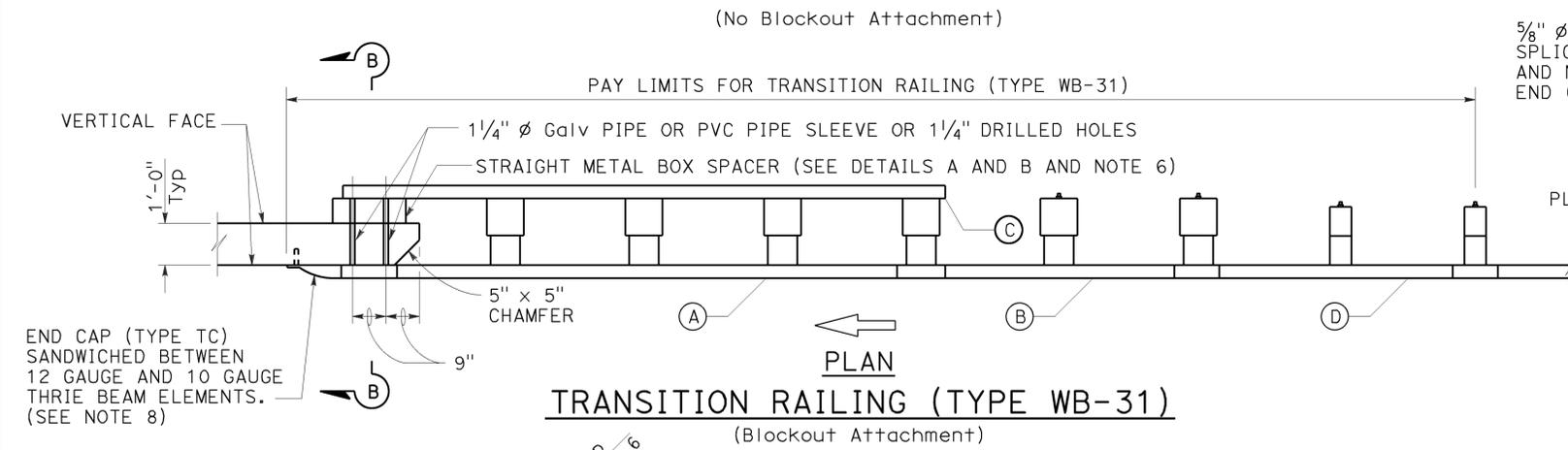
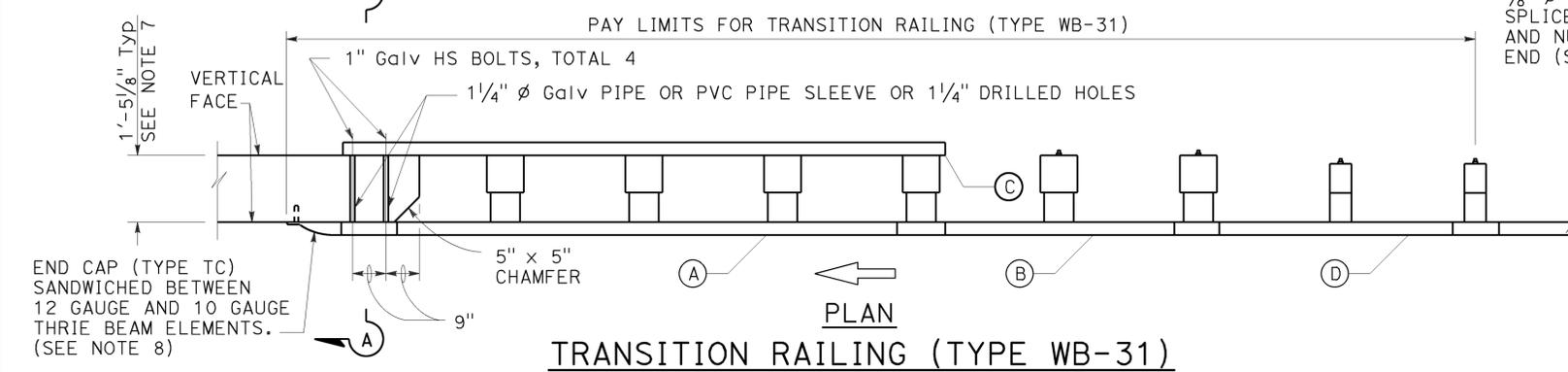
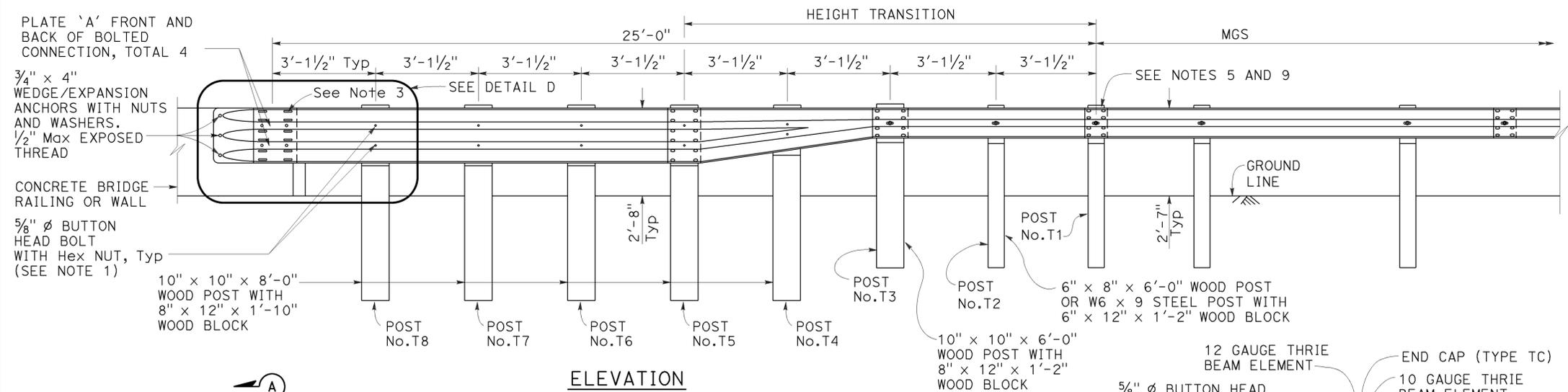
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	52	63

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

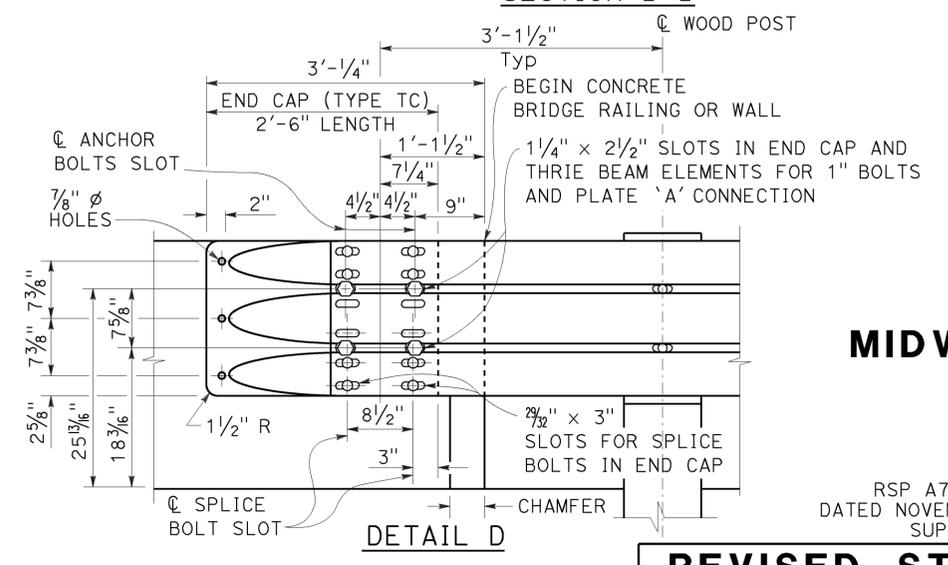
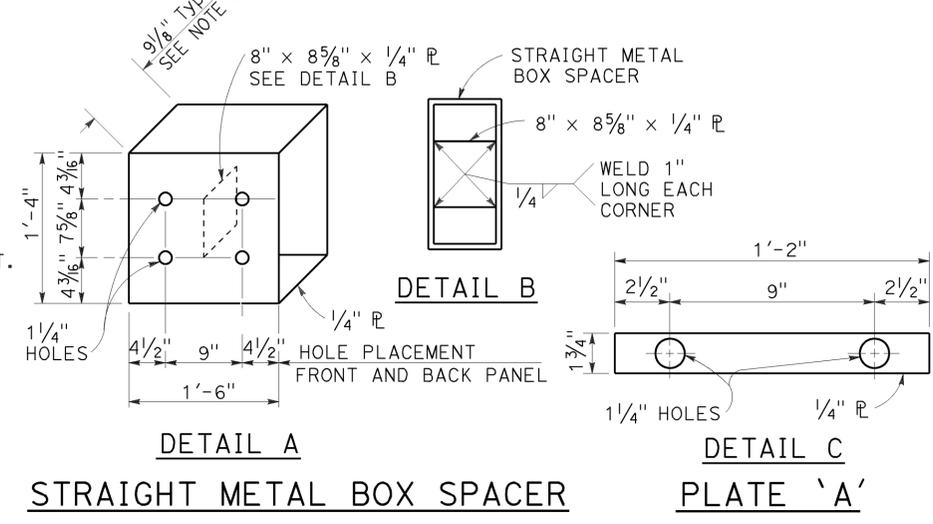
January 23, 2015
PLANS APPROVAL DATE

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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 3-14-16
1. Use 5/8" Ø 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" Ø. 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
04	SM	101	0.9/17.9	53	63

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

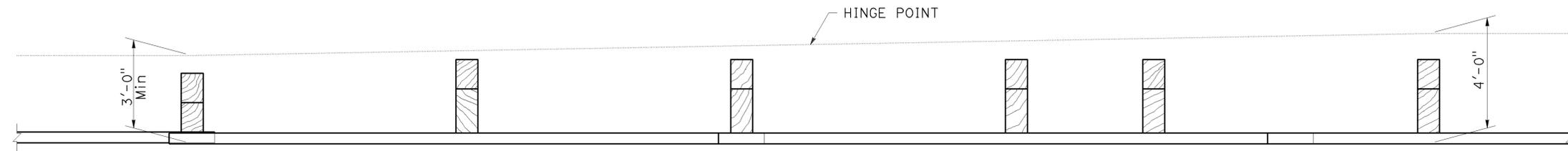
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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

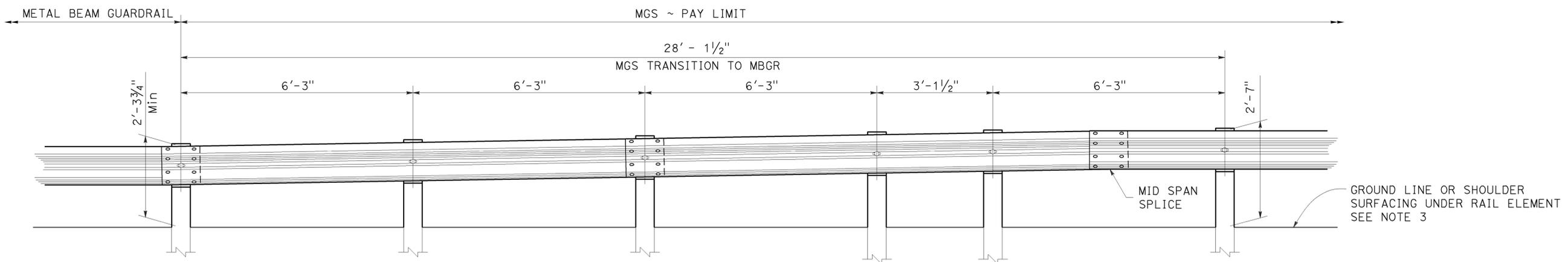
TO ACCOMPANY PLANS DATED 3-14-16

NOTES:

1. Refer to Revised Standard Plans RSP A77L1 and RSP A77L2 for component details for MGS not shown on this plan.
2. All posts for any standard barrier run shall be of the same type: Wood or Steel.
3. Install posts in soil.



PLAN



ELEVATION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TRANSITION TO METAL BEAM GUARDRAIL**

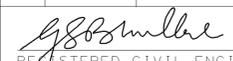
NO SCALE

RSP A77U5 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U5

2010 REVISED STANDARD PLAN RSP A77U5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	54	63


 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 3-14-16

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.

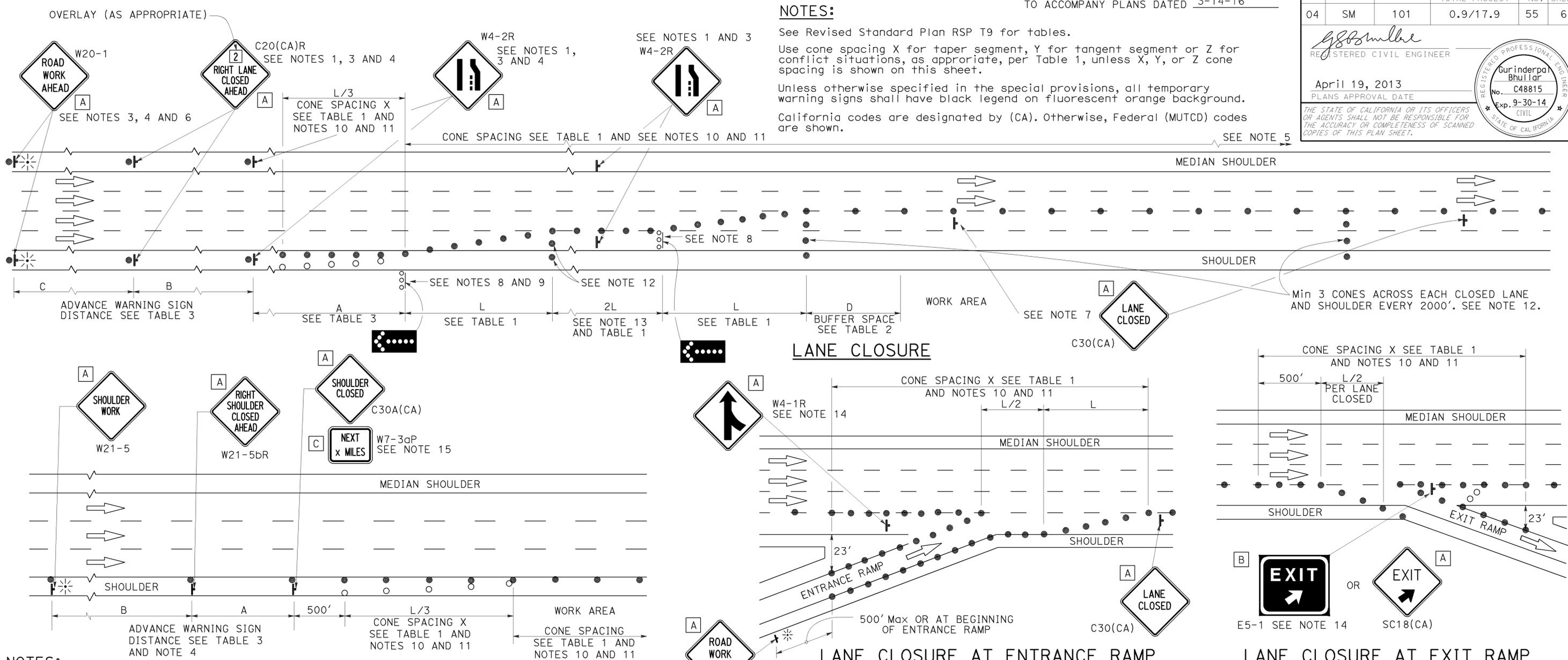
2010 REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	55	63

REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE

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2010 REVISED STANDARD PLAN RSP T10



- NOTES:**
1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
 2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
 3. Duplicate sign installations are not required:
 - a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
 - b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
 4. 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.
 5. 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**
6. 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.
 7. Place a C30(CA) sign every 2000' throughout length of lane closure.
 8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
 9. 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.
 10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
 11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

- LANE CLOSURE AT ENTRANCE RAMP**
12. 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.
 13. 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.
 14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
 15. A W7-3aP "NEXT _____ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ⚡ PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**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

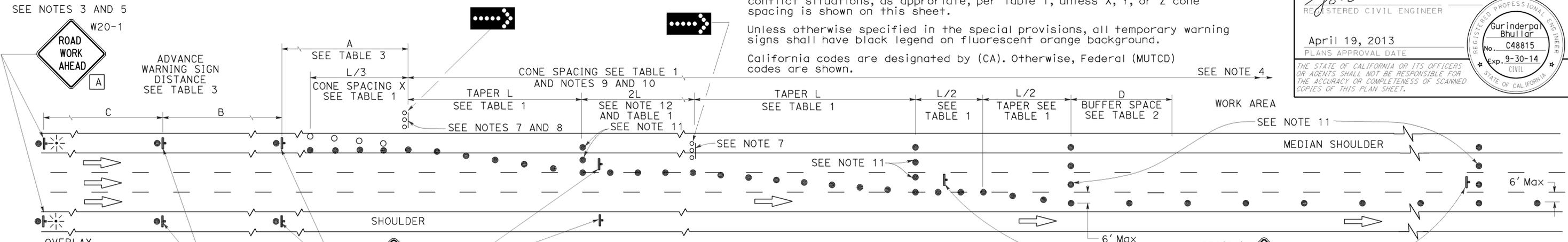
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	56	63

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

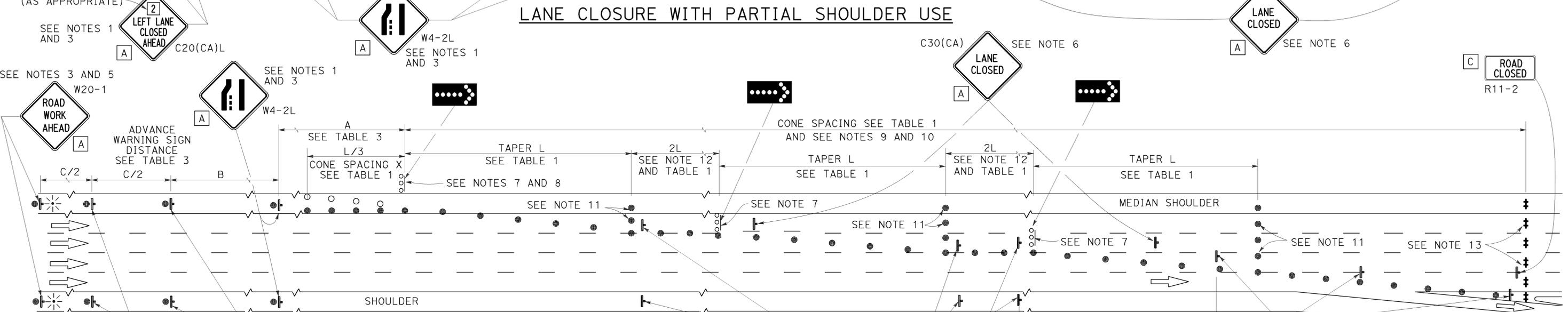
April 19, 2013
 PLANS APPROVAL DATE

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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.



LANE CLOSURE WITH PARTIAL SHOULDER USE



COMPLETE CLOSURE

NOTES:

- Lane closures on the right side using partial median shoulder as a traffic lane shall conform to the details as shown except that C20(CA)R and W4-2R signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
- 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.
- 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) sign for the first advance warning sign.
- 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 the 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.
- 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 With Partial Shoulder Use" 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.
- A minimum of Two Type II or III barricades shall be placed across each closed lane and shoulder at the location shown and every 2000' within the complete closure area. Within the complete closure area, the transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- When specified in the special provisions, a W20-2 "DETOUR AHEAD" sign is to be used in place of the W20-3 "FREEWAY CLOSED AHEAD" sign.

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 18"
- C 48" x 30"

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ⊛ PORTABLE FLASHING BEACON

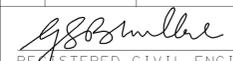
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURES ON
 FREEWAYS AND EXPRESSWAYS**
 NO SCALE

RSP T10A DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10A
 DATED MAY 20, 2011 - PAGE 238 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10A

2010 REVISED STANDARD PLAN RSP T10A

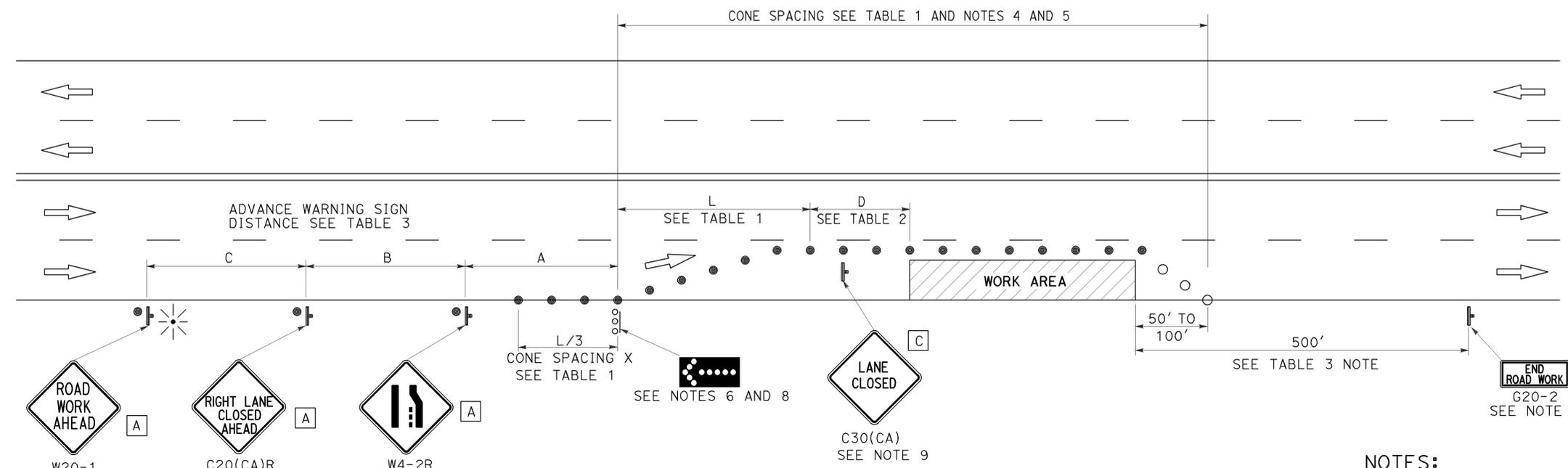
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	57	63


 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 3-14-16



TYPICAL LANE CLOSURE

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:

- Each advance warning 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. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, 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.
- 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) sign for the first advance warning sign.
- 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.
- Flashing arrow sign shall be either Type I or Type II.
- For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
- 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 the top of crest vertical curve or on a horizontal curve.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- 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 closure unless, otherwise directed by the Engineer.

LEGEND

-  TRAFFIC CONE
-  TRAFFIC CONE (OPTIONAL TAPER)
-  TEMPORARY TRAFFIC CONTROL SIGN
-  FLASHING ARROW SIGN (FAS)
-  FAS SUPPORT OR TRAILER
-  PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

- A** 48" x 48"
- B** 36" x 18"
- C** 30" x 30"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURE ON
 MULTILANE CONVENTIONAL
 HIGHWAYS**

NO SCALE

RSP T11 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T11
 DATED MAY 20, 2011 - PAGE 239 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T11

2010 REVISED STANDARD PLAN RSP T11

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
04	SM	101	0.9/17.9	58	63

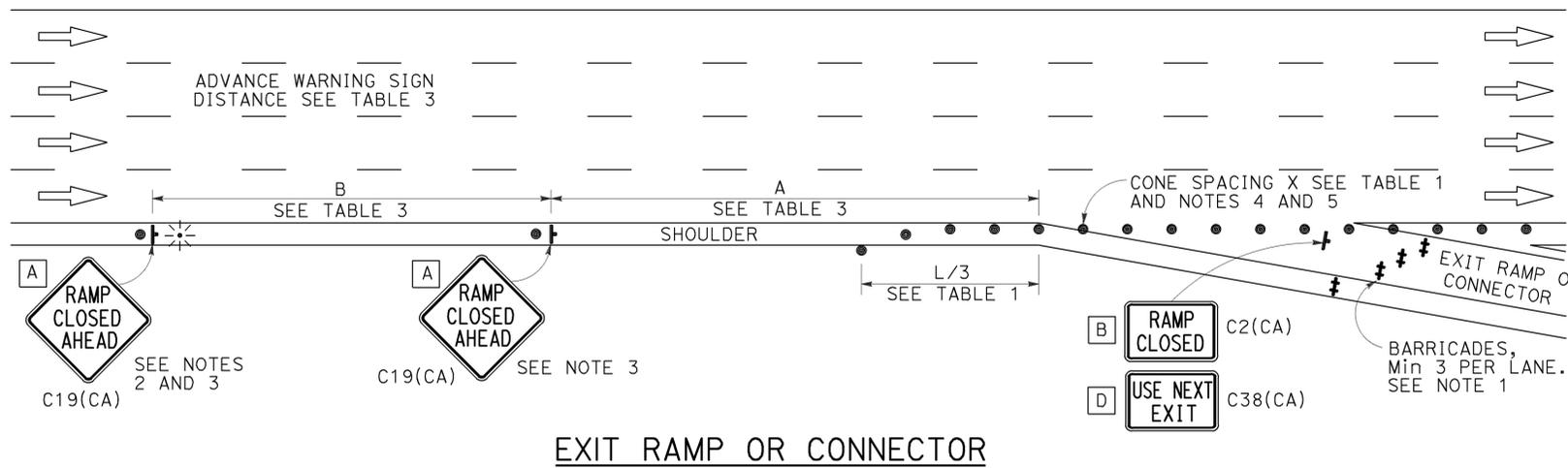
Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

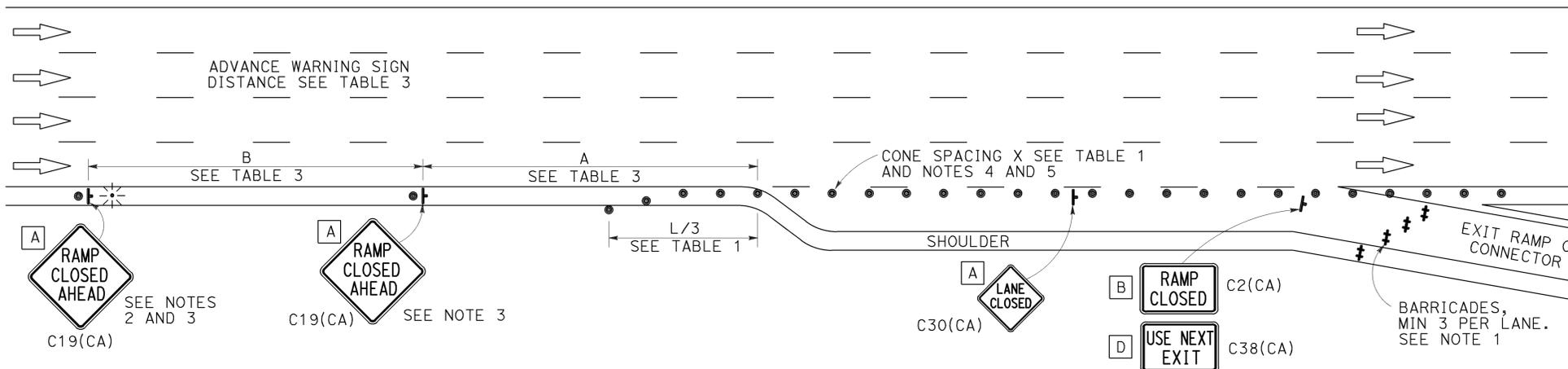
TO ACCOMPANY PLANS DATED 3-14-16

NOTES:

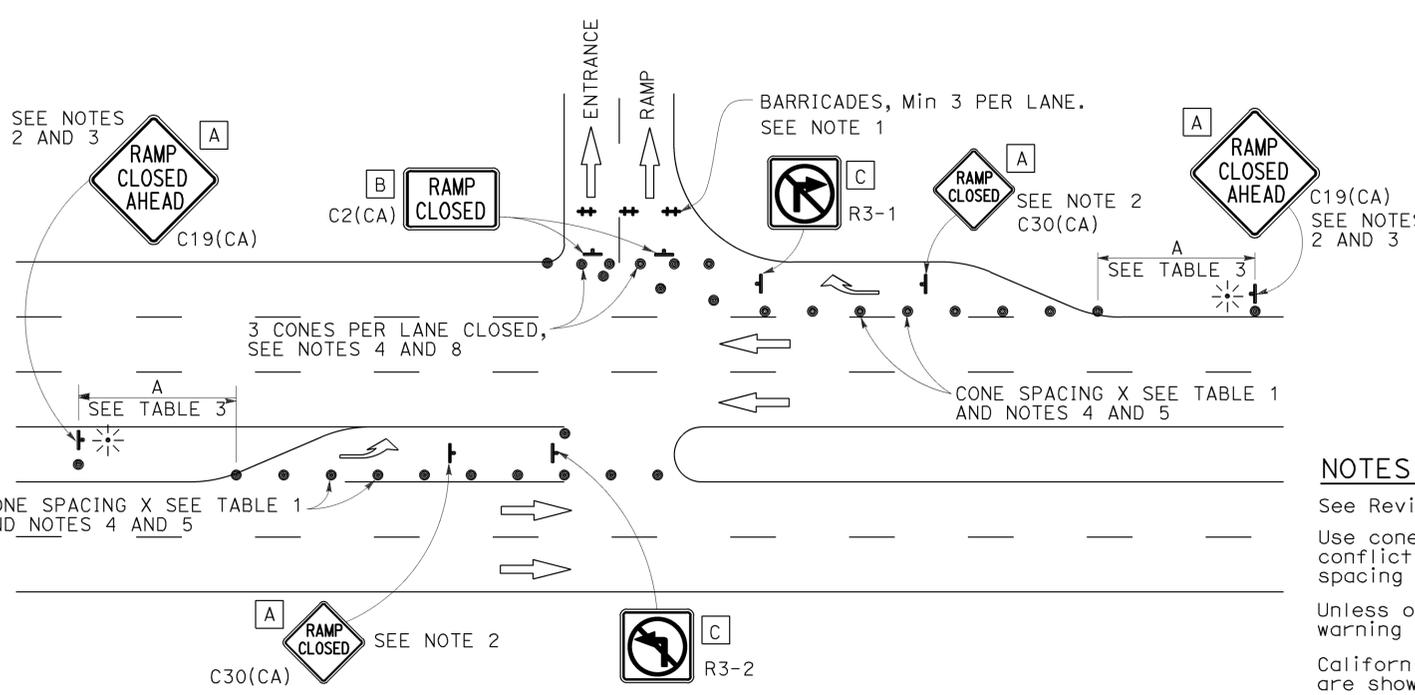
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed 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.



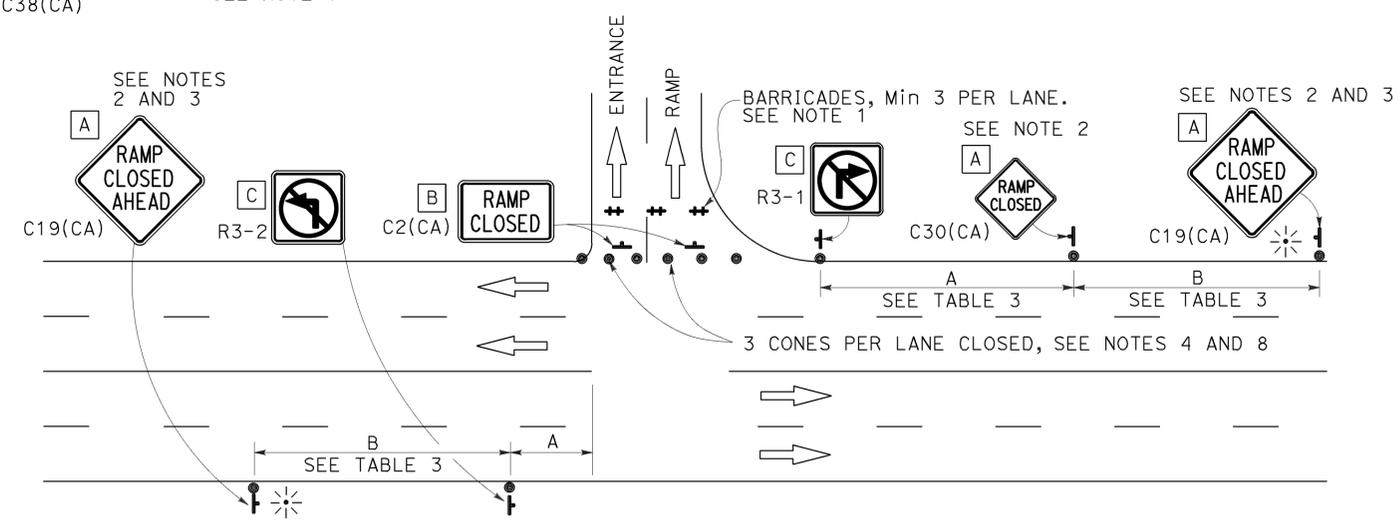
EXIT RAMP OR CONNECTOR



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

LEGEND:

AB	ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
BC	INSTALL PULL BOX IN EXISTING CONDUIT RUN
BP	PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN
CB	INSTALL CONDUIT INTO EXISTING PULL BOX
CC	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
CF	CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL TAPE
DH	DETECTOR HANDHOLE
FA	FOUNDATION TO BE ABANDONED
IS	INSTALL SIGN ON SIGNAL MAST ARM
NS	NO SLIP BASE ON STANDARD
PEC	PHOTOELECTRIC CONTROL
PEU	PHOTOELECTRIC UNIT
RC	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR
RE	REMOVE ELECTROLIER, FUSES AND BALLAST. TAPE ENDS OF CONDUCTORS
RL	RELOCATE EQUIPMENT
RR	REMOVE AND REUSE EQUIPMENT
RS	REMOVE AND SALVAGE EQUIPMENT
SC	SPLICE NEW TO EXISTING CONDUCTORS
SD	SERVICE DISCONNECT
TSP	TELEPHONE SERVICE POINT

ABBREVIATIONS

AC+	UNDERGROUNDED CONDUCTOR	MAT	MAST ARM MOUNTING TOP ATTACHMENT
APS	ACCESSIBLE PEDESTRIAN SIGNAL	MAS	MAST ARM MOUNTING SIDE ATTACHMENT
Batt	BATTERY	MBPS	MANUAL BYPASS SWITCH
BBS	BATTERY BACKUP SYSTEM	M/M	MULTIPLE TO MULTIPLE TRANSFORMER
BC	BOLT CIRCLE	Mtg	MOUNTING
BIK	BLACK	MV	MERCURY VAPOR LIGHTING FIXTURE
BP	BYPASS	MVDS	MICROWAVE VEHICLE DETECTION SYSTEM
BPB	BICYCLE PUSH BUTTON	N	NEUTRAL (GROUNDED CONDUCTOR)
C	CONDUIT	NB	NEUTRAL BUS
CB	CIRCUIT BREAKER	NC	NORMALLY CLOSE
CCTV	CLOSED CIRCUIT TELEVISION	NO	NORMALLY OPEN
Ckt	CIRCUIT	P	CIRCUIT BREAKER'S POLE
CMS	CHANGEABLE MESSAGE SIGN	PB	PULL BOX
Ctid	CALTRANS IDENTIFICATION	PBA	PUSH BUTTON ASSEMBLY
Comm	COMMUNICATION	PEC	PHOTOELECTRIC CONTROL
Cn+I	CONTROL	Ped	PEDESTRIAN
DF	DEPARTMENT-FURNISHED	PEU	PHOTOELECTRIC UNIT
DLC	LOOP DETECTOR LEAD-IN CABLE	PT	CONDUIT WITH PULL TAPE
EMS	EXTINGUISHABLE MESSAGE SIGN	PTR	POWER TRANSFER RELAY
EVUC	EMERGENCY VEHICLE UNIT CABLE	RE	RELOCATED EQUIPMENT
EVUD	EMERGENCY VEHICLE UNIT DETECTOR	RM	RAMP METERING
FB	FLASHING BEACON	RWIS	ROADSIDE WEATHER INFORMATION SYSTEM
FBCA	FLASHING BEACON CONTROL ASSEMBLY	SB	SLIP BASE
FBS	FLASHING BEACON WITH SLIP BASE	SIC	SIGNAL INTERCONNECT CABLE
FO	FIBER OPTIC	Sig	SIGNAL
G	EQUIPMENT GROUNDING CONDUCTOR	SMA	SIGNAL MAST ARM
GB	GROUND BUS	SNS	STREET NAME SIGN
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SP	SERVICE POINT
Grn	GREEN	TB	TERMINAL BOARD
HAR	HIGHWAY ADVISORY RADIO	TDC	TELEPHONE DEMARCATION CABINET
Hex	HEXAGONAL	Temp	TEMPERATURE
HPS	HIGH PRESSURE SODIUM	TMS	TRAFFIC MONITORING STATION
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN	TOS	TRAFFIC OPERATIONS SYSTEM
ISL	INDUCTION SIGN LIGHTING	UPS	UNINTERRUPTABLE POWER SUPPLY
LED	LIGHT EMITTING DIODE	UPSC	UNINTERRUPTABLE POWER SUPPLY CONTROLLER
LMA	LUMINAIRE MAST ARM	Veh	VEHICLE
LPS	LOW PRESSURE SODIUM	VIVDS	VIDEO IMAGE VEHICLE DETECTION SYSTEM
Ltg	LIGHTING	Wh+	WHITE
Lum	LUMINAIRE	WIM	WEIGH-IN-MOTION
M	METERED	Xfmr	TRANSFORMER

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	59	63

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

Theresa
Aziz Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL

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 3-14-16

SOFFIT AND WALL-MOUNTED LUMINAIRES

- PENDANT SOFFIT LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- FLUSH-MOUNTED SOFFIT LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- WALL-MOUNTED LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO REMAIN UNMODIFIED
- EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO BE MODIFIED AS SPECIFIED

NOTE:
Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL	DEFINITIONS
Ω	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V(dc)	VOLT (DIRECT CURRENT)
V(ac)	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
μ	MICRO
P	PICO
Hz	HERTZ

MISCELLANEOUS ELECTROLIERS

NEW	EXISTING	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT LEGEND)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

- NOTES:**
- LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W when installed on other type standards or poles, unless otherwise specified.
 - Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.

STANDARD ELECTROLIER

NEW	EXISTING	STANDARD TYPE
		15
		150
		15 STRUCTURE
		150 STRUCTURE
		21
		210
		21 STRUCTURE
		210 STRUCTURE
		30
		31
		32

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1A DATED JULY 19, 2013 AND STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1A

2010 REVISED STANDARD PLAN RSP ES-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	60	63

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

Theresa
Aziz Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 3-14-16

CONDUIT

SIGNAL EQUIPMENT

NEW	EXISTING	
---	---	LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
---	---	TRAFFIC SIGNAL CONDUIT
---C---	---c---	COMMUNICATION CONDUIT
---T---	---t---	TELEPHONE CONDUIT
---F---	---f---	FIRE ALARM CONDUIT
---FO---	---fo---	FIBER OPTIC CONDUIT
---	---	CONDUIT TERMINATION
		CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)

SIGNAL EQUIPMENT Cont

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION

SERVICE EQUIPMENT

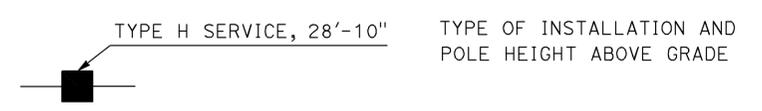
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.

POLE-MOUNTED SERVICE DESIGNATION



FLASHING BEACON

NEW	EXISTING	
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

ILLUMINATED OVERHEAD SIGN

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

NO SCALE

RSP ES-1B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1B DATED JULY 19, 2013 AND STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1B

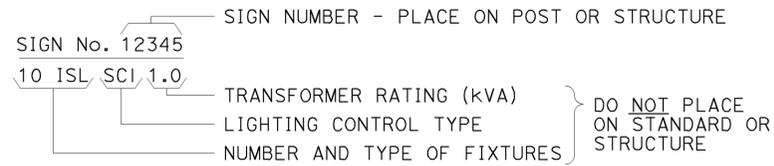
2010 REVISED STANDARD PLAN RSP ES-1B



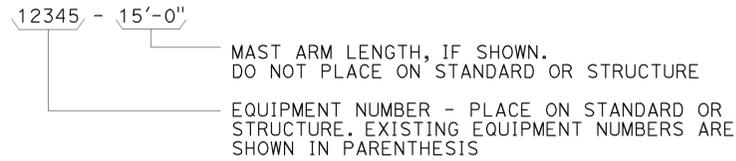
TO ACCOMPANY PLANS DATED 3-14-16

EQUIPMENT IDENTIFICATION

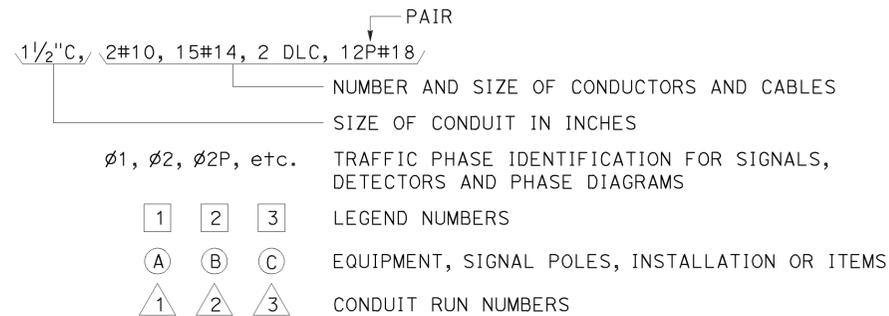
ILLUMINATED SIGN IDENTIFICATION NUMBER:



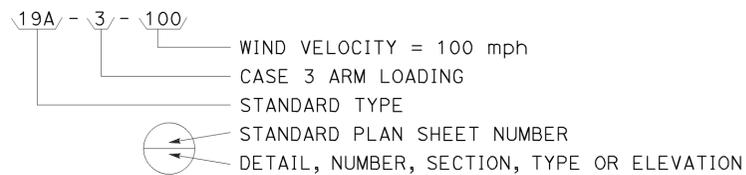
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



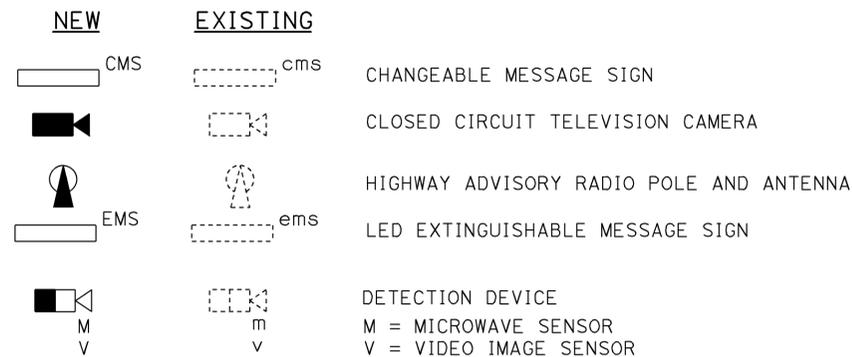
CONDUIT AND CONDUCTOR IDENTIFICATION:



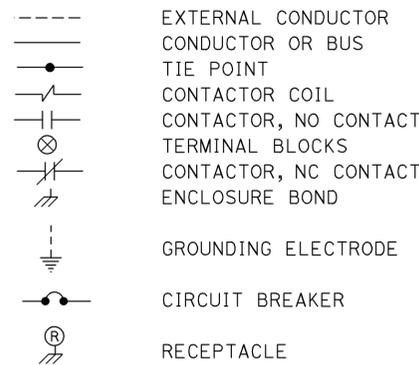
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



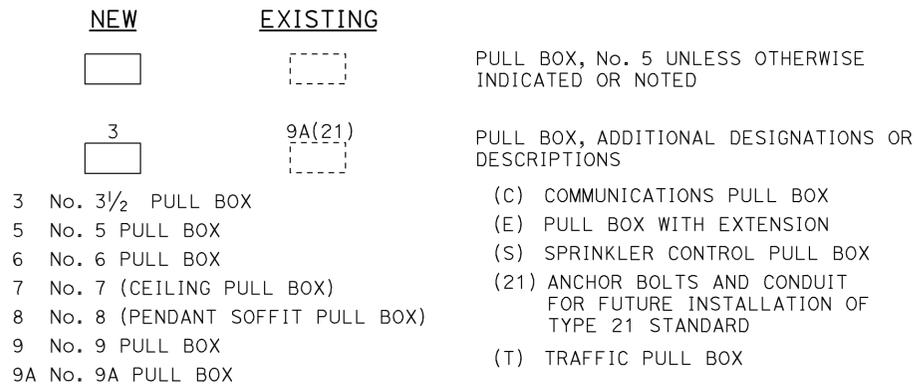
MISCELLANEOUS EQUIPMENT



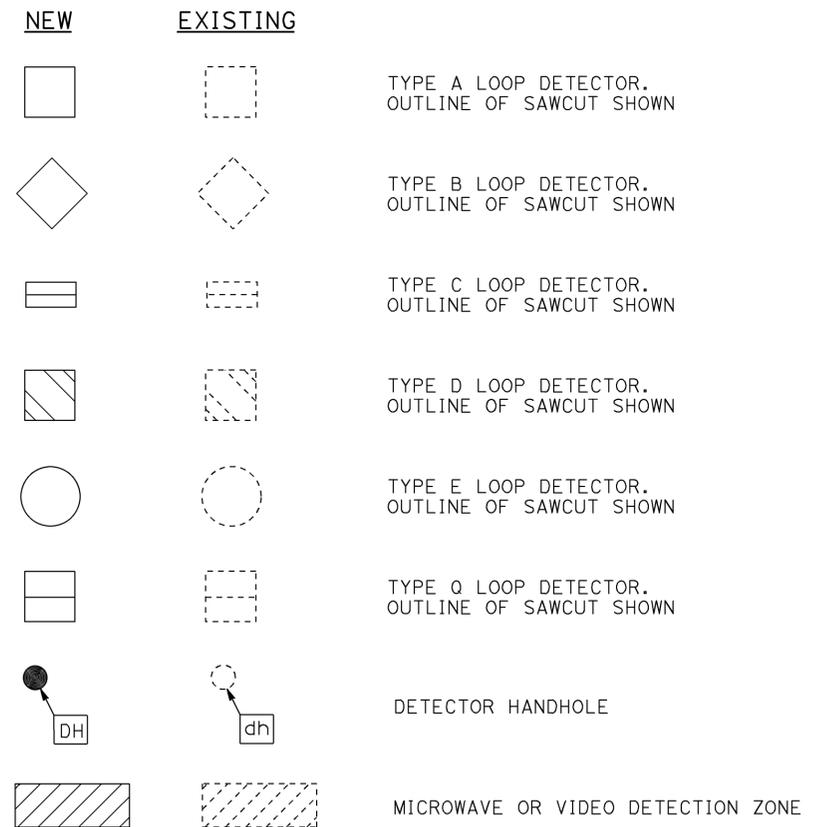
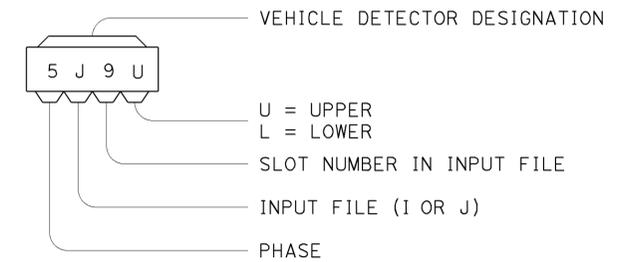
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1C DATED JULY 19, 2013 AND STANDARD PLAN ES-1C DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1C

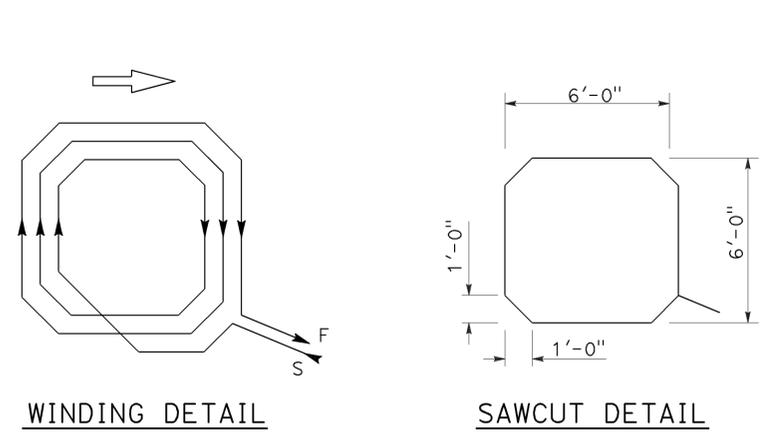
2010 REVISED STANDARD PLAN RSP ES-1C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	0.9/17.9	62	63

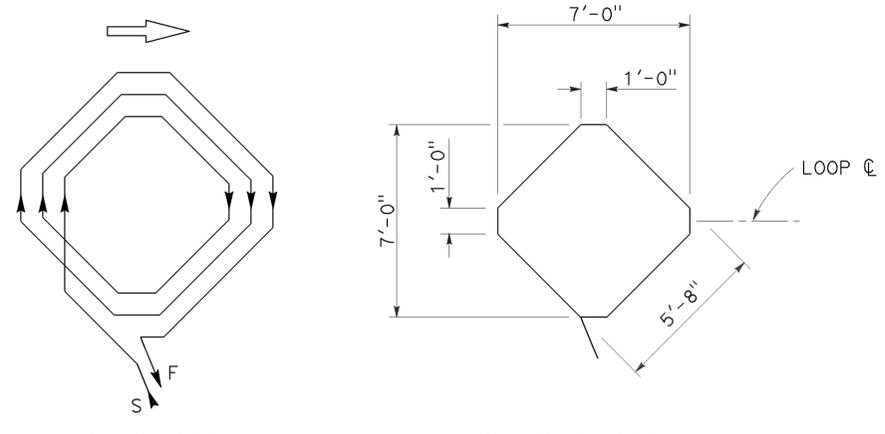
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

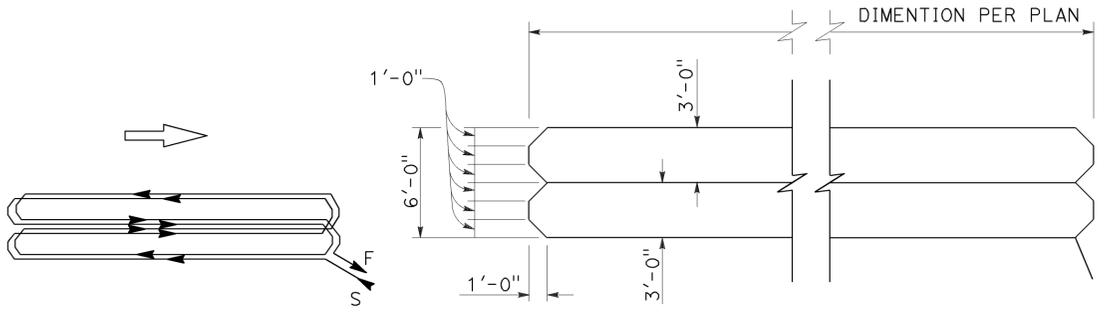
TO ACCOMPANY PLANS DATED 3-14-16



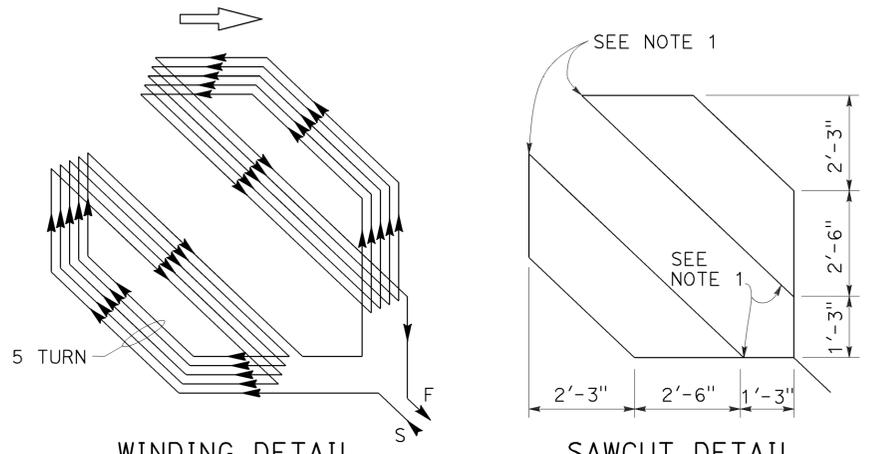
WINDING DETAIL
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



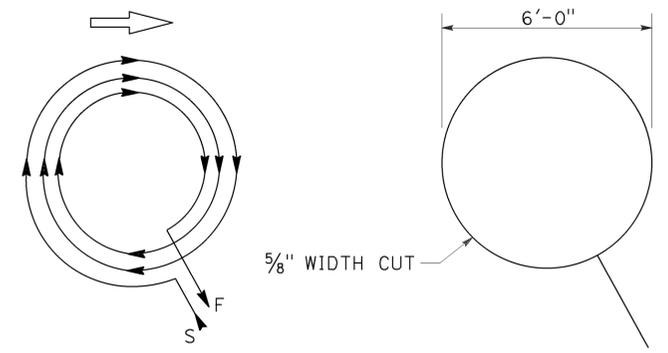
WINDING DETAIL
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



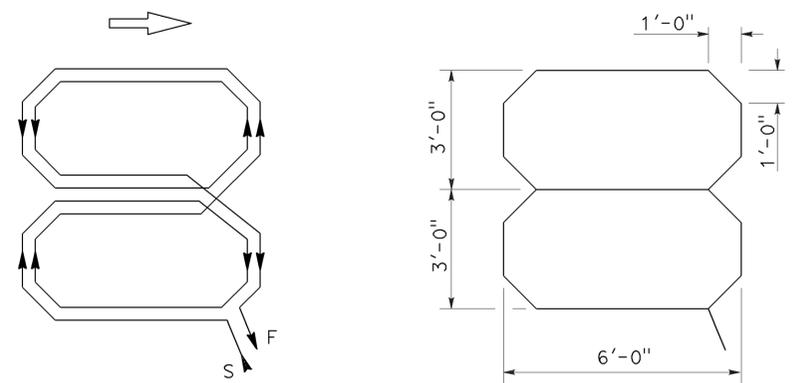
WINDING DETAIL
SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



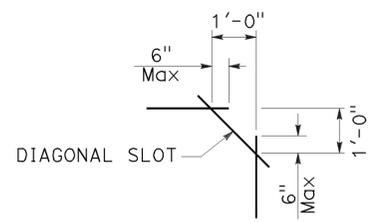
WINDING DETAIL
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



**PLAN VIEW OF
DIAGONAL SLOT
AT CORNERS**

- NOTES:**
1. Round corners of acute angle sawcuts to prevent damage to conductors.
 2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.
 3. Use Type D loops for limit line detector installations in left turn and bicycle lanes.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(DETECTORS)**
NO SCALE

RSP ES-5B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-5B DATED JULY 19, 2013 AND STANDARD PLAN ES-5B DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-5B

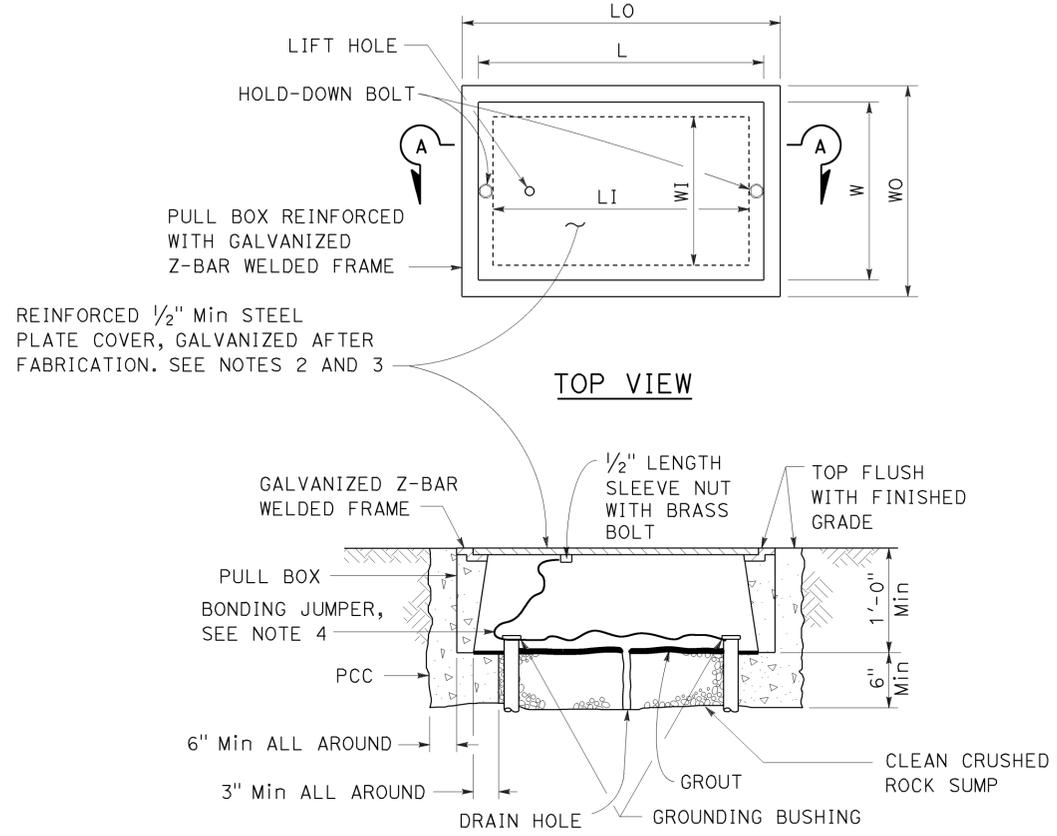
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	101	0.9/17.9	63	63

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE

Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 3-14-16



SECTION A-A
**No. 3 1/2(T), No. 5(T) AND
 No. 6(T) TRAFFIC PULL BOX**

NOTES:

- Traffic pull box shall be provided with steel cover and special concrete footing. Steel cover shall have embossed non-skid pattern.
- Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.
- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" Sprinkler control circuits, 50 V or less; "CALTRANS" On all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service.
 - No. 3 1/2(T) pull box.
 - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - No. 5(T) or 6(T) pull box.
 - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
 - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - "RAMP METER" - Ramp meter circuits.
 - "COUNT STATION" - Count or speed monitor circuits.
 - "COMMUNICATION" - Communication circuits.
 - "TOS COMMUNICATIONS" - TOS communications line.
 - "TOS POWER" - TOS power.
 - "TDC POWER" - Telephone demarcation cabinet power.
 - "CCTV" - Closed circuit television circuits.
 - "TMS" - Traffic monitoring station circuits.
 - "CMS" - Changeable message sign circuits.
 - "HAR" - Highway advisory radio circuits.
 - "BOOSTER PUMP" - Booster pump circuit.
- Bonding jumper for metal covers shall be 3' long, minimum.
- The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8".

PULL BOX	PULL BOX				COVER			
	MINIMUM * THICKNESS	MINIMUM DEPTH BOX AND EXTENSION	LO	LI	WO	WI	L **	W **
No. 3 1/2(T)	1 1/2"	1'-0"	1'-10" - 1'-11"	1'-5" - 1'-6 1/2"	1'-3" - 1'-4"	10" - 1'-0"	1'-8" - 1'-8 1/2"	1'-1" - 1'-2"
No. 5(T)	1 3/4"	1'-0"	2'-5" - 2'-6"	2'-0" - 2'-1"	1'-6" - 1'-7"	1'-1" - 1'-2"	2'-3" - 2'-3 1/2"	1'-4" - 1'-4 1/2"
No. 6(T)	2"	1'-0"	2'-11" - 3'-1"	2'-6" - 2'-7"	1'-10" - 2'-0"	1'-5" - 1'-6"	2'-9" - 2'-9 1/2"	1'-8" - 1'-8 1/2"

* EXCLUDING CONDUIT WEB ** TOP DIMENSION

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (TRAFFIC PULL BOX)**
 NO SCALE

RSP ES-8B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-8B DATED JULY 19, 2013 AND RSP ES-8B DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8B

2010 REVISED STANDARD PLAN RSP ES-8B